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ELECTRICITY INFORMATION

2010



International
Energy Agency

ELECTRICITY INFORMATION

2010

Electricity Information provides a comprehensive review of historical and current market trends in the OECD electricity sector, including 2009 preliminary data. This reference document brings together essential statistics on electricity and heat. It therefore provides a strong foundation for policy and market analysis, which in turn can better inform the policy decision process toward selecting policy instruments best suited to meet domestic and international objectives.

Part II of the publication provides an overview of the world electricity developments in 2008, covering world electricity and heat production, input fuel mix, supply and consumption, and electricity imports and exports. A greater focus is given to OECD countries with more detailed information covering production, installed capacity, input energy mix to electricity and heat production, consumption, electricity trades, input fuel prices and end-user electricity prices.

Part III of the publication provides a corresponding statistical overview of developments in the world and OECD electricity and heat market, as well as monthly OECD production and trade electricity data for 2009.

Part IV provides, in tabular form, detailed and comprehensive statistical coverage of the power and heat industry developments for each OECD member country and for OECD and IEA regional aggregates. It provides comprehensive statistical details on overall energy consumption, economic indicators, electricity and heat production by energy form and plant type, electricity imports and exports, sectoral energy and electricity consumption as well as prices for electricity and electricity input fuels for each country and regional aggregate.

Electricity Information is one of a series of annual IEA statistical publications on major energy sources; other reports are *Coal Information*, *Natural Gas Information*, *Oil Information* and *Renewables Information*.

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ELECTRICITY INFORMATION

2010
with 2009 data



INTERNATIONAL ENERGY AGENCY

The International Energy Agency (IEA), an autonomous agency, was established in November 1974. Its mandate is two-fold: to promote energy security amongst its member countries through collective response to physical disruptions in oil supply and to advise member countries on sound energy policy.

The IEA carries out a comprehensive programme of energy co-operation among 28 advanced economies, each of which is obliged to hold oil stocks equivalent to 90 days of its net imports. The Agency aims to:

- Secure member countries' access to reliable and ample supplies of all forms of energy; in particular, through maintaining effective emergency response capabilities in case of oil supply disruptions.
- Promote sustainable energy policies that spur economic growth and environmental protection in a global context – particularly in terms of reducing greenhouse-gas emissions that contribute to climate change.
- Improve transparency of international markets through collection and analysis of energy data.
- Support global collaboration on energy technology to secure future energy supplies and mitigate their environmental impact, including through improved energy efficiency and development and deployment of low-carbon technologies.
 - Find solutions to global energy challenges through engagement and dialogue with non-member countries, industry, international organisations and other stakeholders.

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Units and technical abbreviations

| | | |
|------|---|--|
| toe | : | tonne of oil equivalent (1 toe = 41.868 GJ = 10 ⁷ kCal) |
| Mtoe | : | million tonnes of oil equivalent |
| kW | : | kilowatt (10 ³ watts) |
| kWh | : | kilowatt hour |
| MW | : | Megawatt (electric) (10 ⁶ watts) |
| MWh | : | Megawatt hour |
| GW | : | Gigawatt (10 ⁹ watts) |
| GWh | : | Gigawatt hour (1 GWh = 3.6 TJ) |
| TW | : | Terawatt (10 ¹² watts) |
| TWh | : | Terawatt hour (1 TWh = 3.6 PJ) |
| kcal | : | kilocalories (10 ³ calories) |
| KJ | : | kilojoule (10 ³ joules) |
| GJ | : | Gigajoule (10 ⁹ joules) |
| TJ | : | Terajoule (10 ¹² joules) |
| t | : | metric ton = tonne (1 t = 1000 kg) |
| Mt | : | million tonnes |
| GCV | : | Gross calorific value |
| NCV | : | Net calorific value |
| TFC | : | Total final consumption |
| TPES | : | Total primary energy supply |
| \$ | : | U.S. dollars (unless otherwise specified) |
| .. | : | not available |
| e | : | estimated or preliminary data |
| c | : | confidential data |
| x | : | not applicable |

PART I

INTRODUCTORY INFORMATION

1. INTRODUCTION

IEA *Electricity Information 2010* is the latest edition of an annual publication intended to provide sound market information on electricity and heat to policy and market analysts, and those employed in all sectors of the electricity industry.

This monitoring and reporting of historical trends and current energy market situation provides a strong foundation for policy and market analysis, to better inform the policy decision process toward selecting policy instruments that are best suited to meet domestic and/or international objectives.

IEA *Electricity Information 2010* brings together in one volume the basic statistics compiled by the IEA on electricity and heat production. It also includes information on installed capacity, consumption, trade and prices.

This introduction is followed by important information that will assist the reader in correctly using the data in this publication. In addition, calorific values used for preparing national energy balances are presented.

This information is structured as follows:

- Definitions
- Sources and notes
- Country notes
- Geographical coverage
- Conversion factors and calorific values

Part II of the publication provides a short overview of world electricity developments in 2008, covering world electricity and heat production, input fuel mix, supply and consumption, and electricity imports and exports. A greater focus, with preliminary 2009 data, is given to OECD countries with more detailed information covering production, installed capacity, input energy mix to electricity and heat production, consumption,

electricity trades, input fuel prices and end-user electricity prices.

This edition of *Electricity Information* will also acquaint the reader with developments in the concept of smart grids by reproducing a section of the recent IEA publication “Energy Technology Perspectives 2010”.

Part III of the publication provides a corresponding statistical overview of developments in the world and OECD electricity and heat markets. Included is a synthesis of the 2009 monthly electricity statistics of OECD countries from the Monthly Electricity Statistics report.

Part IV provides, in tabular form, a more detailed and comprehensive picture of the power and heat industry developments for 30 OECD Member countries.

OECD data are taken from IEA/OECD databases of Energy Statistics that are based on annual submissions from OECD Member countries to the Secretariat. The Energy Statistics Division of the IEA Secretariat works closely with national administrations to secure consistency in time series and with IEA product definitions and reporting conventions. The finalized data provide the basis for IEA/OECD *Energy Balances of OECD Countries* and *Energy Statistics of OECD Countries*.

Price data in Part IV are derived from IEA/OECD *Energy Prices and Taxes*. Readers should consult this publication for detailed information on data coverage and sources.

The non-OECD data are based upon information collected by the IEA Secretariat, national submissions to the United Nations in Geneva and New York, and national energy publications. The resulting synthesis is published in *Energy Balances of Non-OECD Countries* and *Energy Statistics of Non-OECD Countries*. Users of this publication are directed to the Methodology Section of those publications for more detail on individual non-Member countries covered in the publication.

World electricity and heat production, supply and consumption is available on CD-ROM, which also provide for each of the 30 OECD member countries details on installed capacity, input energy mix to electricity and heat production and electricity trade. Information on ordering the CD-ROM and other energy statistics publications is available at the end of this book, and on the IEA website at <http://www.iea.org>.

In addition, a data service is available on the internet. It includes unlimited access through an annual subscription as well as the possibility to obtain data on a pay-per-view basis. Details are available at <http://data.iea.org>.

Further information on reporting methodologies is also available on the IEA Web site.

Annual energy data are collected by the Energy Statistics Division (ESD) of the IEA Secretariat, headed by Mr. Jean-Yves Garnier. OECD electricity statistics in ESD were the responsibility of Mr. Robert Powell. Mr. Robert Schnapp had overall responsibility for this publication.

Also in the IEA Secretariat, thanks are due to the non-OECD Member countries section headed by Ms. Roberta Quadrelli, to the OECD Balances section headed by Ms. Karen Tréanton, and to the Energy Technology Policy division for their contribution to Part II of this publication.

Editorial and desktop publishing support from Ms. Sharon Burghgraeve is also gratefully acknowledged.

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2. DEFINITIONS

Electricity and heat

Gross and net electricity production

Gross electricity production is measured at the terminals of all alternator sets in a station; it therefore includes the energy taken by station auxiliaries and losses in transformers that are considered integral parts of the station. Net electricity production is defined as gross production less own use of power plants. Net electricity production is measured at the station busbars, after deduction of electricity consumed within the station.

The difference between gross and net production is generally observed to be about 7% for conventional thermal stations, 1% for hydro stations and 6% for nuclear.

Hydroelectric stations' production (gross and net) includes production from pumped storage plants.

Electricity and heat data are organised by the type of producer and the type of plant. These are defined as follows:

Types of producers

Producers are classified according to the purpose of production:

Main activity producers generate electricity and/or heat for sale to third parties, as their primary activity. They may be privately or publicly owned. Note that the sale need not take place through the public grid.

Autoproducers generate electricity and/or heat, wholly or partly for their own use as an activity which supports their primary activity.

Autoproducers heat production includes only heat sold to third parties. The input fuels should correspond to

the quantity of fuels used to produce the heat sold. The use of fuels for heat which is not sold is recorded in the sectors in which the fuel use occurs.

Types of plants

Electricity plants refer to plants which are designed to produce electricity only.

Combined heat and power plants (CHP) refers to plants which are designed to produce both heat and electricity (sometimes referred to as co-generation power stations). Where possible, fuel inputs and electricity/heat outputs are reported on a unit basis rather than on a plant basis.

Heat plants refers to plants designed to produce heat only.

Heat delivered from CHP or heat plants may be used for process or space heating purposes in any sector of economic activity including the residential sector.

It should be noted that the reporting of data on fuel use and electricity and heat production according to plant type is normally conducted at the level of the plant. It is assumed that if a plant comprises at least one CHP unit then the entire plant is considered a CHP plant.

Electricity import and export

Electricity is considered to be imported or exported when it has crossed the national territorial boundaries of the country. If electricity is "wheeled" or transited through a country, the amount is shown as both an import and an export.

Net maximum capacity

Net maximum capacity is defined as the sum of the net maximum capacities of all stations taken individually

at a given period of operation. It is the maximum active power that can be supplied, continuously, with all plants running, at the point of outlet to the network. It is assumed that all equipment is in full working order, that the power produced can be disposed of without any restrictions and that optimum conditions prevail as regards primary sources (*i.e.* flow and head in the case of hydroelectric plants; grades and quantity of fuel in hand and water supply, temperature and purity, in the case of combustible fuel-fired plants and assuming that the output and method of production in CHP plants are those which contribute to maximum electricity production). It represents the sum of all individual plants' maximum capacities available to run continuously throughout a prolonged period of operation in a day.

The capacity is net in the sense that it is the output capacity measured at the station busbars, *i.e.* after deducting the power consumed by station auxiliaries and losses in station transformers.

Single-fired capacity refers to units equipped to burn only one fuel type on a continuous basis. The conventional thermal fuel types are the following:

- Coal and Coal Products: including all types of coal, blast furnace gas and coke oven gas.
- Liquids: including crude oil and oil products, refinery gas, and other fossil liquid fuels.
- Natural Gas: natural gas and gas works gas.
- Combustible Renewables and Waste: covers biomass and waste.

Multi-fired capacity refers to units that can burn more than one fuel individually and/or a combination of fuels on a continuous basis. A multi-fired unit can have either one boiler which can use more than one fuel, or two boilers each utilising a single fuel, but which feed the same generator either singly or together. The unit is capable of generating its net maximum capacity or a large proportion of its maximum capacity using any one of the fuels nominated.

Heat

Data collected on heat has been expanded to obtain more disaggregated data on inputs and outputs of 'combined heat and power plants' and on 'heat only plants'. Data on heat became available in different years for different countries and thus aggregated country data should be used with caution.

Coal

Coal is a family name for a variety of solid organic fuels and refers to a whole range of combustible sedimentary rock materials spanning a continuous quality scale. For convenience, this continuous series is often divided into four categories:

- Anthracite
- Bituminous coal
- Sub-bituminous coal
- Lignite

However, coal quality can vary and it is not always possible to ensure that available descriptive and analytical information is truly representative of the body of coal to which it refers.

The International Coal Classification of the Economic Commission for Europe (UN/ECE) recognises two broad categories of coal:

- i) **Hard coal** - Coal of gross calorific value greater than 5 700 kcal/kg (23.9 GJ/t) on an ash-free but moist basis and with a mean random reflectance of vitrinite of at least 0.6.
- ii) **Brown coal** - Non-agglomerating coal with a gross calorific value less than 5 700 kcal/kg (23.9 GJ/t) containing more than 31% volatile matter on a dry mineral matter free basis.

The IEA has adopted this definition of hard coal and brown coal in this book and in other publications.

It should be stressed that this classification system is based on the inherent qualities of the coal in question and not on the final use of the coal. In this way the classification system attempts to be objective and simple to apply.

In this context hard coal normally corresponds to anthracite and bituminous coal. However for the countries listed below, hard coal also includes sub-bituminous coal - Australia, Belgium, Finland, France, Iceland, Japan, Korea, Mexico, New Zealand, Portugal and the United States.

Except for these 11 countries, brown coal is equivalent to sub-bituminous coal and lignite. In this publication coke oven coke, gas coke and patent fuel used for electricity generation or heat production are included in hard coal, while coal tar and brown coal briquettes (BKB) are included in brown coal.

In tables where data are presented in Mtoe in this book and sourced to OECD/IEA *Energy Balances*, the term "Coal" includes all primary coal types (including hard coal and brown coal), peat and coal products (including patent fuel, coke oven coke, gas coke, BKB, coal tar, coke oven gas, blast furnace gas, and oxygen steel furnace gas). In some tables "Coal Gases" are reported separately. In such cases "Coal" does not include these gases.

Peat is defined as a combustible soft, porous or compressed fossil sedimentary deposit of plant origin with high water content (up to 90% in the raw state), easily cut and of light to dark brown colour.

Coal gases

Derived gaseous fuels are products resulting from the transformation or manufacturing of hard coal, brown coal or other primary solid fuels, sometimes with the addition of other materials. Included in this category are coke oven gas, blast furnace gas and oxygen steel furnace gas. To calculate the net heat content of a coal gas, its gross heat content is multiplied by the following factors:

| Product | Gross to net ratio |
|--------------------------|--------------------|
| Coke oven gas | 0.9 |
| Blast furnace gas | 1.0 |
| Oxygen steel furnace gas | 1.0 |

Combustible renewables and waste

This category refers to combustible fuels other than coal, oil and natural gas that are used for electricity and/or heat generation and covers biomass and wastes. Specific products included are: solid biomass and original products, gases/liquids from biomass, industrial waste and municipal waste.

Oil

In this publication, oil includes crude oil, refinery feedstocks, natural gas liquids, hydrocarbons not of crude oil origin and all petroleum products: LPG, refinery gas, aviation gasoline, motor gasoline, jet fuel, kerosene, gas/diesel oil, residual (heavy) fuel oil, naphtha, white spirit, lubricants, bitumen, paraffin waxes, petroleum coke and other petroleum products.

Gas

In this publication, gas includes natural gas (excluding natural gas liquids) and gas works gas (town gas).

3. SOURCES AND NOTES

General notes

Energy data for OECD countries are submitted to the IEA Secretariat in a common reporting format and methodology to allow for international comparisons to be made. These data begin in 1960 with the following exceptions for electricity: for Hungary data begin in 1962, and for the Czech Republic, Korea, Mexico, and the Slovak Republic data are available from 1971.

Prior to 1970, German statistics refer to the former Federal Republic of Germany. Data from 1971 include the new federal states of Germany.

Energy data reported for 2009 (shown as 2009e) are preliminary estimates based on submissions received in early 2010 and on monthly submissions to the IEA from member countries.

Statistics of non-OECD countries presented in this publication are based on available data at time of publishing and may differ from the final non-OECD data to be published in *Energy Statistics of Non-OECD Countries*.

Additional information on methodologies and reporting conventions are included in the notes in *Energy Balances of OECD Countries 2010 Edition* and *Energy Statistics of OECD Countries 2010 Edition*.

Qualifiers

Data marked as 'e' are the estimates of the IEA secretariat. Data marked as 'c' means that data are confidential due to country specific regulations. Data marked as '.' means that data are not available (either not collected or not submitted by national government). Data marked as 'x' means that the data point is not applicable, there is no meaningful explanation of a value there (for example we can not show unit price if there was no trade).

Data sources

Historical data (1960-2008)

The annual historical data in Part II of this report are taken from the IEA/OECD databases of Energy Statistics which are based on annual submissions from all OECD member countries.

i) IEA/OECD Electricity Statistics.

This database of annual statistics for OECD countries covers generating capacity and electricity production from main activity producer and autoproducer plants. It includes information on electricity and heat production by fuel type and supply/demand balances for electricity and heat from different types of power and heat plants.

The main data from this system are published annually in this IEA/OECD publication, *Electricity Information*.

ii) IEA/OECD Coal Statistics

This database of annual statistics for OECD countries covers all primary solid fuels, derived fuels and related manufactured gases. It contains detailed supply/demand balances for each fuel, as well as information on coal trade by origin and destination.

The main data from this system are published annually in the IEA/OECD publication *Coal Information*.

iii) IEA/OECD Oil and Gas Statistics.

This database of annual statistics for OECD countries covers crude oil, NGL, refinery feedstocks and natural gas, as well as derived petroleum products. It includes detailed supply/demand balances, trade by origin and destination and stock levels and changes.

The main data from this system are published annually in the IEA/OECD publications *Oil Information* and *Natural Gas Information*.

iv) IEA/OECD Renewables Statistics.

This database of annual statistics for OECD countries covers hydroelectricity, solid biomass, geothermal, renewable municipal waste, wind, gas from biomass, liquid biofuels, solar photovoltaics, solar thermal, tide/wave/ocean, non-renewable municipal waste and industrial waste. It includes electricity and heat production from renewable sources, and a supply/demand balances of renewable and waste products.

The main data from this system are published annually in the IEA/OECD publication *Renewables Information*.

v) IEA/OECD Energy Statistics.

This annual database integrates data from the four IEA/OECD statistical database systems listed above to provide a summary of energy supply and demand for each OECD country. It includes detailed statistics on production, trade and consumption for each source of energy, expressed in original units (*e.g.* tonne, TJ, GWh).

The main data from this data system are published annually in the IEA/OECD *Energy Statistics of OECD Countries*. Detailed country notes referring to historical data can be found in this publication.

vi) IEA/OECD Energy Balances.

Overall energy balances are constructed annually for all OECD countries from the basic energy statistics described above. The overall energy balance data are expressed in a common energy unit of tonne of oil equivalent (toe) and presented in a standard matrix format. The balances are published annually in the IEA/OECD publication *Energy Balances of OECD Countries* in which detailed country notes referring to historical data can be found.

vii) IEA/OECD Energy Prices and Taxes.

The prices and taxes are published quarterly in IEA/OECD *Energy Prices and Taxes*.

viii) OECD Main Economic Indicators

OECD Main Economic Indicators is a monthly compilation of a range of indicators on recent economic developments for the 30 OECD member countries. Please refer to this publication for detailed notes regarding the selected indicators.

Latest year data: 2009

Data reported for 2009 in this publication are submitted to the Secretariat by member countries as preliminary data and are shown in this book as 2009e. Final 2009 data on electricity and heat will be submitted by OECD member countries to the Secretariat in Annual Questionnaires in late 2010. As a result, final data for 2009 and preliminary 2010 data will be published in the 2011 edition of *Electricity Information*.

Price data

Prices are published quarterly in IEA/OECD *Energy Prices and Taxes*, where complete notes on prices may be obtained.

Indices of real energy end-use prices

The methodology for calculating the real and nominal indices of real energy end-use prices is as follows:

For products where more than one price is available, a representative series is created for each country. The representative heavy fuel oil price is a combination of high sulphur fuel oil and low sulphur fuel oil. The representative motor gasoline price is a combination of the most consumed unleaded gasoline for recent time periods and leaded gasoline for earlier time periods.

For oil, the industry index includes representative heavy fuel oil, light fuel oil and automotive diesel, but not fuels used for electricity generation. The household index includes representative gasoline and light fuel oil.

Indices with the base year 2005=100 were computed for each price series from prices in national currencies and then aggregated over product groups, sectors and countries. The Paasche formula was used for index computation. The weights used were the physical quantities consumed, as published in the OECD/IEA *Energy Statistics of OECD countries*. To calculate the real price index, the nominal prices were deflated with country-specific producer price indices (2005=100) for the industry sector and with country-specific consumer price indices (2005=100) for the household sector. The regional aggregates were calculated as the weighted averages of country specific indices, using consumption quantities as the weights.

Energy end-user prices, taxes and price in national currencies

General definitions:

In general, end-use prices:

- Include transport costs to the consumer;
- Are prices actually paid (*i.e.* net of rebates); and
- Include taxes which have to be paid by the consumer as part of the transaction and which are not refundable. This excludes value added tax (VAT) paid in many European countries by industry (including electric power stations) and commercial end-users for all goods and services (including energy). In these cases VAT is refunded to the customer, usually in the form of a tax credit. Therefore, it is not included in the prices and taxes columns in the tables. This also applies to automotive diesel for the EU countries. The VAT percentages shown in the country notes refer to a pre-VAT price that includes all other taxes.

The major exception to the above rules is the United States due to lack of information. Although all energy products are subject to non-refundable taxes at least at the state and local level, only gasoline and automotive diesel include total average taxes. All other energy product prices shown exclude taxes since the national average of local taxes remains unknown and price data are collected on an ex-tax basis.

Conversion to euro

Prices and taxes prior to the date of entry into the Economic and Monetary Union (EMU) have been converted from the former national currency using the appropriate irrevocable conversion rate. The irrevocable conversion rate on 1 January 1999 was used for all countries, except Greece (fixed rate as of 1 January 2001) and the Slovak Republic (fixed rate as of 1 January 2009).

| Country | Rate | Country | Rate |
|---------|----------|-----------------|---------|
| Austria | 13.7603 | Italy | 1936.27 |
| Belgium | 40.3399 | Luxembourg | 40.3399 |
| Cyprus | 0.585274 | Malta | 0.4293 |
| Finland | 5.94573 | Netherlands | 2.20371 |
| France | 6.55957 | Portugal | 200.482 |
| Germany | 1.95583 | Slovak Republic | 30.126 |
| Greece | 340.75 | Slovenia | 239.64 |
| Ireland | 0.787564 | Spain | 166.386 |

This methodology facilitates comparisons within a country over time and ensures that the historical evolution (*i.e.* growth rate) is preserved. However, pre-EMU Euro are a notional unit and are not normally suitable to form area aggregates or to carry out cross-country comparisons.

Sources

Most of the prices are submitted on a quarterly basis to the IEA Secretariat by Administrations; others are taken from national publications or web sites.

Oil products

By decision dated 26 January 1977, the European Commission initiated a weekly reporting system of end-use prices and taxes for the following products: Residual (Heavy) Fuel Oil RFO 1 (sulphur content $\leq 1\%$); RFO 2 (sulphur content $< 2\%$); heating gas oil (delivery size of 2-5 kl per transaction); automotive diesel oil, and Euro super 95 and leaded premium gasoline (pump prices). Prices are reported to the Commission as delivered prices and exclude rebates.

For some EU countries, no special series are available on heavy fuel oil prices for electricity generation and on light fuel oil for industry. They have been approximated as the ex-VAT prices for heavy fuel oil for industry and light fuel oil for households, respectively.

Coal

Given the great variety of coal qualities in domestic and international coal trade, a selection of a standard coal quality for international comparisons of end-use prices is not possible. Therefore, prices refer to the most common qualities for each country and are not necessarily comparable between countries. This is especially true for prices shown under the heading "Steam Coal for Households", where prices shown may refer to bituminous steam coal, anthracite, lignite or even coke.

Natural gas and electricity

For studies on price behaviour and policies in the field of natural gas and electricity, the concept of average unit value is also of particular importance. These two forms of energy are supplied under a multitude of contract or tariff conditions which link the prices to the quantity delivered, the continuity of the supply, load factors and the diurnal pattern of use. The contracts or tariffs may also include a fixed charge component.

However, when seeking a representative overall price of electricity and natural gas for broad sectors such as industry and households, the average unit value is the most appropriate. It is obtained either from utilities as average revenue per unit delivered or from industry or households as average expenditure per unit purchased. Most of the average unit values are only available on an annual basis.

The prices for natural gas refer to 10⁷ kcal using the gross calorific value of the gas. Prices for 10⁷ kcal using the net calorific value would be approximately 11% higher.

Prices per heat equivalent of 1 metric ton of oil

The prices expressed in terms of the heat content of the fuel have been derived from those shown for the original physical units by applying heat conversion factors. These factors reflect the average net heat content of a given fuel in a given country. See the note on electricity.

Energy end-user prices in US dollars

In general, country differentials between national end-use prices expressed in U.S. dollars are heavily influenced by exchange rate differentials. However, world market prices of primary fuels in U.S. dollars are an important parameter for the pricing of final energy consumption, particularly for countries which rely heavily on energy imports.

The difference between world market prices and national end-use prices in U.S. dollars correspond to the remaining pricing parameters, *i.e.* transformation and distribution costs, non-internationally tradable energy sources (mainly hydro-power, but also natural gas), market structures (*e.g.* mix of large- and small-purchase lots), and the pricing policies of central or local authorities, which naturally include the national tax policies.

Household energy prices in US dollars: purchasing power parities versus exchange rates

In recent years, there have been wide fluctuations in exchange rates and there has been some concern regarding international price comparisons based on exchange rates which may not reflect the relative purchasing power of different currencies.

An alternative method of comparison is provided by Purchasing Power Parities (PPP) which are the rates of currency conversion that equalise the purchasing power of different currencies. A given sum of money, when converted into different currencies at the PPP rates, buys the same basket of goods and services in all countries. In other words, PPP's are the rates of currency conversion which eliminate the differences in price levels between different countries.

Purchasing Power Parities used here were developed jointly by the Economics and Statistics Division of the OECD and the Statistical Office of the European Communities (EUROSTAT) to enable international price comparisons to be made for GDP and its components. (For more information on the methodology, see <http://www.oecd.org/std/ppp>.)

Quarterly energy statistics

Readers who are interested in recent quarterly data should consult the OECD/IEA publication *Oil, Gas Coal and Electricity Quarterly Statistics* which is published in January, March, June and September each year.

This book provides rapid, accurate and detailed statistics on quarterly production, supply and demand and trade of the major energy forms mainly in, but not limited to, the OECD area.

The information contained in this publication consists of:

Oil

- Production of crude oil and NGL for the major producers in the world.
- Refinery balances for crude oil, NGL, refinery feedstocks, and total (including inputs of origin other than crude oil and NGL);
- Complete product balances of production, trade, refinery intake and output, final consumption, stock levels and changes;
- Crude, NGL and feedstock imports from 47 origins and exports to 24 destinations; and
- Trade data for main product groups, LPG and naphtha; imports from 44 origins and exports to 30 destinations;

Natural gas

- Balances of supply and consumption of OECD member countries; and
- Imports from 28 origins and exports to 20 destinations;

Coal

- World hard coal and brown coal production;
- World steam coal and coking coal trade; and
- Coking coal and steam coal imports and exports for major OECD countries;

Electricity

- Electricity net production, (separately from combustible fuels, nuclear, hydroelectricity, geothermal and other sources) in each of the 30 OECD member countries; and
- Imports, exports and (apparent) consumption in each of the 30 OECD member countries.

Monthly electricity statistics

Readers who are interested in timely monthly electricity production and trade data for all OECD countries should consult the OECD/IEA on-line publication *Monthly Electricity Statistics*, which is published in the middle of every month on the IEA website.

The *Monthly Electricity Statistics* provides up-to-date information fully reconciled to the definitions used for the annual reporting. It contains an online archive of the monthly data that goes back to the year 2000.

The information contained in the *Monthly Electricity Statistics* consists of:

- Net electricity production, (combustible fuels, nuclear, hydroelectricity, and geothermal/wind/solar/other); and
- Total imports, exports and electricity supplied.

4. COUNTRY NOTES

General notes applicable to all countries

These notes refer to data from 1960 to 2008. As a general rule, most series show a more detailed breakdown from 1970, due to limited availability of data prior to that year. Data on inputs to and output from combined heat and power plants and from heat plants may have been estimated by the Secretariat.

Prior to 1974, there is no split available between main activity producer and autoproducer electricity plants for any country.

Australia

Data refer to fiscal year (*e.g.* July 2007 to June 2008 for 2008).

Prior to 2007, electricity consumption in the mining and quarrying sector includes consumption in liquefaction/regasification plants.

In 2002, the Australian Administration started to use a new survey methodology and reclassified the types of plants between main activity producers and autoproducers. The production of electricity from wind is available from 1994. Electricity production from solar PV starts in 1992 and from solar thermal in 2003. Prior to 1995, electricity production from biogas is included with natural gas. In the 2010 edition, inputs of landfill gas and outputs of electricity production were revised between 2001 and 2007 to reallocate amounts previously allocated to natural gas.

Heat data are not available from 1992 onwards. Inputs to and outputs from autoproducer CHP plants are not available prior to 1986. Fuels used for generation by autoproducers are for single-fuel-fired units only. The use of fuel in multi-fired units operated by autoproducers is included in industry consumption.

Electricity consumption in the wood and wood products sector is included together with paper, pulp and printing. Prior to 1971 electricity consumption in the commercial and public services sector is included in industry. Prior to 1974, the breakdown of electricity consumption in industry and energy sub-sectors is not available and energy industry consumption is included in industry.

Electricity consumption in coke ovens has been estimated by the Australian Administration from 1974 to 1999.

The direct use of solar energy (mostly domestic solar panels) is available from 1974.

Capacity refers to net maximum capacity on 30 June.

Austria

Breaks in the series from 1995 to 1996 and from 1998 to 1999 are due to different methods of survey.

Electricity plants data includes CHP plants operating in electricity only mode. Prior to 1981, all electricity production by CHP plants is included in electricity plants, and only production from combustible fuel sources is taken into account.

Prior to 1981, autoproducer CHP heat production is included in main activity producer CHP plants. For heat, own use is included in distribution losses.

Inputs to main activity producer electricity plants include inputs to CHP plants prior to 1981.

Electricity consumption in petroleum refineries includes consumption in gas works prior to 1991. Also prior to 1991, electricity consumption in the iron and steel industry includes consumption in coke ovens and blast furnaces.

Prior to 1991, consumption in commercial and public services includes small industries, offices in the tertiary

sector and electricity use in electricity supply, district heating and water supply companies. From 1991, consumption in electricity supply, district heating and water supply companies is included in other energy sector. Starting in 1990, small amounts of electricity used in heat pumps have been included in the residential sector.

Only gross maximum electrical capacity is available. The breakdown of capacity by type of generation and fuel for autoproducer plants is not available from 1988 to 1992.

Belgium

The federal authorities changed their method of collecting data: instead of receiving data from the “Fédération des Producteurs d’Électricité” (FEP), the operators in the relevant sectors are surveyed by the Ministry of Economic Affairs according to a survey based on that of the IEA. Moreover the “Institut de Conseil et d’Études en Développement Durable” (ICEDD), through its co-ordinating role with respect to the regional authorities, provides complementary information (such as small off-grid power stations, and data on heat from renewable sources) which may not be collected by the FEP.

Breaks in the series may exist between 2007 and 2008 due to revisions of NACE classifications.

There is no heat consumption from 2007 in the iron and steel industry because the installation concerned became an autoproducer in July 2006 and the heat is no longer sold.

Prior to 1982, electricity production in main activity producer CHP plants is included in production from electricity plants. Also, inputs of fuels for electricity generation in main activity producer electricity plants include inputs for heat production in CHP plants.

For 1998 and 1999, electricity production at main activity producer CHP plants with annual heat output below 0.5 TJ is reported with main activity producer electricity only plants.

In 2000, autoproducer electricity plants were reclassified as autoproducer CHP plants. No heat output is reported as it is all used for internal industrial processes and is not sold to third parties. Heat from chemical processes used for electricity production is available from 2005.

Heat output from CHP plants is not available prior to 1973.

The production of electricity from wind is available from 1987. Prior to 1982, data on electrical capacity by type of generation are not available.

Canada

The breakdown of electricity and heat generation between natural gas and petroleum products in main activity producer CHP plants has been estimated by the Canadian Administration starting in 1990. This may cause breaks in the time series between 1989 and 1990. For autoproducers generating electricity with process steam produced from combustible renewables and waste, the energy required to produce the initial steam is not taken into account by the Canadian Administration and as a result, the efficiencies are overstated. Net electricity production by autoproducers prior to 1990 includes production from combustible fuel sources only.

Heat production includes heat produced by nuclear power stations for distribution to other consumers.

Secretariat estimates have been made for certain inputs to CHP production based on output. However, incompatibility of data for inputs to and output from thermal production of autoproducers may result in variable efficiency rates. Inputs of fuels to heat plants are not available for 1979 to 1987.

Breaks in the series occur between 1973 and 1974 in agriculture, and between 1987 and 1988 in the industry sector. Consumption of electricity in coal mines is not available between 1982 and 1986. Consumption of electricity in oil and gas extraction is not available prior to 1987. In the 2010 edition, the Canadian Administration revised heat consumption data, giving statistical differences. Revisions to production are pending.

Only gross maximum electrical capacity is available. From 2000 to 2002, data on capacity were estimated by the Secretariat based on Statistics Canada’s “Electric Power Generating Stations” publication. Prior to 1981, data on electrical capacity by type of generation are not available.

Czech Republic

Data are available from 1971.

Electricity statistics from 1971 to 1989 have been estimated by the Secretariat, except for final consumption and trade which were submitted by the Czech

Administration. Data from 1990 onwards have been officially submitted by the Czech Administration. This may lead to breaks in the series between 1989 and 1990. Prior to 1990, electricity production in main activity producer and autoproducer CHP plants is included in main activity producer electricity plants. The breakdown of net electricity production by source is not available prior to 1990. In 1999 and 2000 various big enterprises were divided, sold and merged. This causes breaks in the time series of all types of plants. The new reporting methodology used by the Czech Administration for combustible renewables and wastes causes some breaks in the time series between 2002 and 2003.

Recovered waste heat from the glass industry is reported in other sources. Electricity generated from waste heat in CHP plants is included with the total production from combustible fuels.

Heat produced from heat pumps is reported from 2007, but the electricity inputs are not available.

Data on heat production, and the corresponding fuel inputs, have been estimated from 1980 to 1989 based on consumption in the residential and commercial/public services sectors. Prior to that, inputs are included in industry. Heat production prior to 1990 excludes heat sold by industry. The breakdown of heat production between main activity producer CHP and heat plants is not available prior to 1990. Accordingly, all heat production is reported in main activity producer heat plants.

Industrial waste use in main activity producer electricity plants is included with solid biomass from 1996. Data on biogas and waste used in main activity producer CHP and autoproducer heat plants start in 1993.

From 1999 onwards, small amounts of heat have been exported to Slovak Republic.

The direct use of solar energy is available from 2004.

The breakdown of generating capacity is not available prior to 1990. Starting in 2000, the peak load data reported in main activity producers include the autoproducers value.

Denmark

The production of electricity from wind is available from 1978.

Heat data are not available prior to 1976. Geothermal and solar heat production for sale is available from

1989. Heat produced for sale in heat pumps starts in 1994.

From 1984 onwards, small amounts of heat have been imported from Germany.

The amount of heat reported under other sources is heat recovered from industrial processes and sold for district heating.

Electricity consumption in non-specified energy industry includes consumption in district heating plants and use for the distribution of electricity.

The direct use of solar thermal energy is available from 1978.

Prior to 1981 for main activity producers, to 1994 for autoproducers, data on electrical capacity by type of generation are not available.

Finland

A new survey system and a reclassification of the data led to breaks in the time series between 1999 and 2000.

Electricity production from combustible renewables and waste is not available between 1974 and 1976. Electricity and heat production from biogas are available from 1996. Breakdown of net electricity production by autoproducers is not available before 1999.

The decrease in electricity production in 2005 is mainly due to lower generation from coal and peat which was offset by increased electricity imports from Sweden.

Heat output from autoproducer CHP plants is available starting in 1996 and from autoproducer heat plants starting in 2000; corresponding inputs may be under-reported. Heat from chemical processes and associated electricity generation are available from 2004. The amount of heat reported under other sources is waste heat and steam from hydrogen in industrial processes.

The increasing heat production from heat pumps in 2007 and 2008 is from the new Katri Vala district heating and cooling plant.

Inputs of liquid fuels and natural gas to CHP plants are included with the inputs of these fuels to main activity producer electricity only and heat only plants prior to 1978. Consumption of electricity in the industry sub-sector machinery includes consumption in transport equipment prior to 1995. Consumption of

electricity in non-specified transport corresponds to use for urban transport systems.

Consumption of heat in residential includes consumption in commercial and public services and agriculture.

Net maximum electrical capacity data are not available prior to 1974. Prior to 2000, capacity reported in autoproducers steam generation includes all types of generation.

France

A new method of survey and a reclassification between main activity producer electricity plants and autoproducer electricity plants may cause breaks in the series for other bituminous coal between 1998 and 1999. From 2001, there are further classification problems for inputs of, and outputs of electricity from oil. The French Administration is working to reconcile their data collection methods for the inputs and the outputs for electricity generation. Plants using municipal waste were reclassified as autoproducer CHP plants from 1995, which leads to a break in the time series.

Net electricity production by autoproducers prior to 1983 includes production from combustible fuel sources only. Net electricity production by autoproducer CHP plants is available from 1989. Electricity production from wind is available from 1993.

Due to a new survey, for the 2007 edition the French Administration revised the heat data back to 2000 and included heat produced from fossil fuels in CHP plants. Data for heat produced from fossil fuels in heat only plants is not available. Unfortunately it is not possible to separate out the amount of heat not sold in autoproducer plants so these amounts are included. However, no double counting occurs since the corresponding inputs have not been included in final consumption. In 2005, autoproducer CHP efficiencies for other biogas drop due to the opening of a larger, less efficient plant.

There are major breaks in the series in 1965 when more detailed breakdown of data on electricity consumption became available. The industry classifications used by the French Administration were changed in 1986.

A large part of electricity consumption in the category non-specified energy industry is consumption in uranium treatment plants; this electricity consumption is not available prior to 1980. Consumption of electricity in the nuclear industry is not available prior to 1980.

Consumption of electricity in oil refineries is included in oil and gas extraction from 1988 to 2000. Total energy industry includes the statistical differences from 1992. Consumption of electricity in non-specified includes exports to Monaco prior to 1992.

From 1995, due to a change in the economic activity classification, data have been reported in non-specified other sectors.

Prior to 1981 and after 1998, data on electrical capacity by type of generation and fuel are not available.

Germany

Data for Germany include the new federal German states from 1970, but only the former Federal Republic of Germany from 1960 to 1969. A new survey for the renewable products can cause breaks in the time series between 1998 and 1999.

GDP figures prior to 1991 are based on conversions made by the German Institute for Economic Research (*Deutsches Institut für Wirtschaftsforschung*) and the former Statistical Office of the GDR (*Statistisches Amt der DDR*). These conversions are calculations which are highly dependent on specific hypotheses and do not necessarily reflect economic realities.

Electricity production in electricity plants includes production from CHP plants prior to 2003. In 2007, many main activity CHP plants that burn combustible renewables and waste were reclassified as electricity only which results in breaks in the time series between 2006 and 2007. Data on electricity production from wind and solar are available from 1986 and 1990 respectively. In some instances, electricity generation from nuclear, hydroelectric, solar and wind in autoproducer electricity plants are confidential or non-available and, therefore, included in main activity producer electricity plants. The same applies to biogas from 1999. For 2002 and 2003, the German Administration did not submit the breakdown of electricity and heat production from combustible fuels. The data were estimated by the Secretariat as follows: renewables and waste were taken from the Renewables and Waste questionnaire and the other combustible fuels were estimated pro rata based on 2001 estimates. The German Administration started reporting near the surface geothermal energy in 1995, which leads to a break in the time series with 1994, where only deep geothermal energy is reported. From 1999 onwards, small amounts of electricity generation that are not accounted for in the data submission have been attributed to various combustible fuels.

Due to the implementation of the Energy Statistics Act, data collection concerning heat produced in heat plants and district heating plants became more efficient and more complete. This leads to breaks in the series between 2002 and 2003 and between 2003 and 2004. Detailed data by fuel are not available for total heat production. The non-allocated part is reported as "heat production from non-specified combustible fuels". Starting in the 2010 edition, the German Administration changed their methodology for reporting heat. From 2007 onwards all heat production in autoproducers is considered as non-sold (*i.e.* for self-use) and, therefore, not reported. Inputs for this heat production are no longer reported in the transformation sector. Also, more information on district heat has become available. This causes breaks in the series between 2006 and 2007. Prior to 1993, all heat production from BKB/peat briquettes is included in main activity CHP plants.

Heat production and consumption prior to 1970, have been estimated by the Secretariat based on *Energiebilanz der Bundesrepublik für das Jahr 1990* provided by the German Institute for Economic Research.

Prior to 1991, electricity trade data includes only trade of the Former Federal Republic of Germany.

Starting in 1984, small amounts of heat have been exported to Denmark.

Between 1971 and 1980 electricity consumption in coal mines includes consumption in coke ovens and BKB plants. The German Federal Statistics Office reclassified some industrial branches which may cause a break in the series in industry sub-sectors of industry between 1994 and 1995.

The breakdown of heat consumption is not available for 2003 to 2006. The data for that period were estimated as follows: the transformation and distribution losses were estimated based on previous years, the heat produced by autoproducers was included in non-specified industry, and the remaining consumption included in non-specified other.

Prior to 1974, data on electrical capacity by type of generation are not available. Electricity generating capacity before 1991 is for the Former Federal Republic.

Greece

No production of solar heat is reported. Production or consumption of distributed heat (heat sold) that is produced from lignite is available from 1997.

In 2008 a new plant using refinery gas started operating in an experimental phase. For this reason the efficiency is low.

Electricity consumption in iron and steel and in the non-ferrous metals industry prior to 1971 has been estimated by the Secretariat. There is a break in the series between 1991 and 1992 for electricity consumption in transport. Prior to 1981, data on electrical capacity by type of generation are not available.

Hungary

Data are available from 1965.

The Hungarian Administration reclassified some of their plants in 1996 and 2000 which may lead to breaks in the time series.

The electricity and heat statistics were revised by the Hungarian Administration in early 2000. The revision of heat production data to conform to IEA reporting methodologies may result in a mismatch of fuel inputs with electricity and heat outputs by plant type, causing high efficiencies.

Prior to 2000, electricity output from sub-bituminous coal is included with lignite. Nuclear electricity production in main activity producer electricity plants is available from 1983. Electricity and heat production from solid biomass in autoproducer CHP plants is available from 1995. Geothermal heat production in main activity producer heat plants is also available from 1995.

Direct use of geothermal heat is available from 1990. Direct use of solar thermal heat is available from 2001.

Iceland

Electricity production from geothermal sources in main activity producer CHP plants is available from 1992. In 1998, 60 MW of generating capacity was installed in the geothermal CHP plant at Nesjavellir. Since the plant was inoperable for four months, production of geothermal heat decreased compared to 1997. The extra electricity capacity caused electricity production from geothermal to almost double over the same period.

Heat production from municipal waste is available from 1993. In 2002, the increase of heat produced by geothermal was due to the installation of a third unit

at the Nesjavellir CHP power plant. The increase in hydro and geothermal electricity production from 2007 is due to expansion of the aluminium industry.

Energy industry consumption of electricity refers mainly to the use of electricity by the geothermal industry to pump hot water from underground sources. From 1991, it includes electricity used for the transport by pipeline of hot water from Nesjavellir to Reykjavik. Prior to 1970, total final consumption includes inputs to and outputs from heat production and non-energy use. After 1970, data on inputs and outputs in CHP plants and in main activity producer heat plants (district heat plants), and for non-energy use are separately specified. The consumption of electricity reported in non-specified other sectors corresponds to a NATO base at Keflavik airport which closed in 2005. Residential sector includes agriculture prior to 1983. The industrial classifications used by the Icelandic Administration changed in 1987. The increase of electricity consumption in the construction sector from 2003 to 2006 is due to the drilling of tunnels for the Kárahnjúkar power plant. Prior to 2008, all heat for space heating was reported in residential. From 2008 a portion is estimated by the Iceland Administration to be consumed in commercial and public services.

Ireland

Electricity production from wind begins in 1992 and from landfill gas in 1996.

Fuels used by autoproducers have been estimated by the Irish Administration for 1991 and 1992. Inputs of peat in kilo tonnes (kt) for electricity production have been estimated by the Secretariat prior to 1992 based on data submitted in terajoules (TJ) by the Irish Administration. Inputs of hard coal in autoproducer CHP plants have been estimated by the Secretariat from 1984 to 1989.

Prior to 1990, electricity consumption in agriculture is included with residential. Electricity consumption in the iron and steel industry includes consumption in the non-ferrous metals industry prior to 1990. The decrease of electricity consumption in the iron and steel industry from 2001 onwards is due to the fact that the main steel plant in Ireland ceased production. Electricity used for urban transport is included in non-specified transport. The increase in 2004 is due to the new light rail transit system in Dublin.

Direct use of geothermal heat and solar thermal heat is available from 1989 and 1990 respectively.

Prior to 1981, data on electrical capacity by type of generation are not available for main activity producers.

Capacity reported under other sources corresponds to cross-border transmission capacity with Northern Ireland.

Italy

From 2000 onwards, the Italian Administration defines electricity and heat production from autoproducers as including generation from producers that consume more than 70% of their own electricity production. However, for the 2000 to 2002 period, all electricity production from autoproducers is reported with main activity producers.

Prior to 2004, electricity production from orimulsion is confidential and is included with residual fuel oil. The production of electricity reported under other sources refers to electricity produced from the regasification of LNG or heat recovered from industrial processes. Prior to 1984, net electricity production by autoproducers includes production from combustible fuel sources only. From 1989, not all outputs are reported for industrial waste used in autoproducer CHP plants.

From 2000 onwards, electricity generation from synthetic gas produced in the oil tar gasification process is included under generation from oil products. Heat production is reported starting in 2004 and includes self-generation in industry. With the introduction of a new survey in 2008, amounts of naphtha and other kerosene that were previously included in other oil products have been reported separately in autoproducer CHP plants.

The breakdown of renewables and waste inputs into electricity, heat and CHP plants is available from 1989 only. Prior to that year, the total of the different fuels involved is reported as non-specified renewables.

Consumption of electricity in transport includes electricity used for pumping in oil pipelines from 1981. Other energy industry includes electricity consumption for blast furnaces. From 2000 it also includes consumption for the distribution of gas, and prior to 1989 consumption of electricity used for uranium extraction. The breakdown of heat consumption by sector has been estimated by the Italian Administration.

Prior to 1981, data on electrical capacity by type of generation are not available.

Japan

Data for the entire time series refer to fiscal year.

Fuels used and corresponding electricity and heat produced in CHP plants are not included in the data series. Inputs of combustible renewables and waste for electricity production, and related outputs, are available from 1982. Net electricity production by autoproducers prior to 1982 includes production from combustible fuel sources only. Net electricity production by autoproducers in the transport sector is included in non-specified prior to 1982. Net electricity production by autoproducers in the energy industry is not available prior to 1982.

The production of electricity from wind began in 1993. The IEA Secretariat estimated the photovoltaic (PV) electricity generation from autoproducers starting in 1992 based on an average capacity factor of 12% and capacity data for autoproducers. Autoproducer PV capacity is derived from data from the Japanese Administration as well as the IEA Photovoltaic Power Systems Programme (IEA-PVPS) report, "Trends in Photovoltaic Applications" published in 2009. The capacity factor was based on the report "National survey report of PV Power Applications in Japan 2007", published in 2007 by IEA-PVPS. The corresponding electricity consumption has been included with non-specified other consumption. Prior to 1998, the electricity produced using TRT technology (Top pressure Recovery Turbines) was included with electricity generated from solid biomass. Starting in 1998, it is included with electricity generated from coal gases.

Fuels used and heat produced for sale by autoproducers from heat plants are not available. Heat production from geothermal and solar thermal sources in Japan is not reported by the Japanese Administration. Heat produced for sale in main activity heat plants is not available prior to 1972. Heat produced for sale in main activity producer heat plants from waste heat and from electric boilers is available from 1977 and 1983 respectively.

Between 1972 and 1976, the use of combustible fuels in main activity producer heat plants is included in non-specified. Fuels used to produce heat for sale in heat plants are not available prior to 1977.

Consumption of electricity in non-specified industry includes wood and wood products and construction

prior to 1982. Electricity consumption in urban transport systems is included with rail.

Prior to 1981, data on electrical capacity by type of generation are not available for main activity producer plants. Prior to 1974, data on electrical capacity by type of fuel are not available for autoproducer plants. Electricity generation capacity for nuclear power increased in 1997 due to the commissioning of two nuclear plants.

Korea

Data are available from 1971.

Electricity statistics from 1971 to 1993 are estimated by the Secretariat based on the Korean National Statistics. Data from 1994 onwards have been submitted by the Korean Administration. This leads to breaks in the series between 1993 and 1994.

Before 1994, electricity production from main activity producer CHP plants is included with main activity producer electricity only plants. In 2002 the Korean Administration started to report electricity and heat production by autoproducers using natural gas and petroleum products which were not reported before. Electricity generation reported under other sources is from fuel cells. Electricity production using heat from chemical processes in copper and zinc plants is available from 2005; the corresponding heat inputs are estimated. Heat from chemical processes that is sold is available from 2008.

Heat data are available from 1993. For 1993 to 1999, the breakdown of heat output by type of fuel has been estimated by the Secretariat. The breakdown by sector of heat production in autoproducers is estimated by the Korean Administration based on consumption data of purchasing companies. Heat consumption by sector is available from 2000.

Prior to 2007, production and consumption of electricity and heat in oil refineries and LNG liquefaction/regasification plants are included in the industry sector. Prior to 2008, sales of electricity by Korea's main electricity distributor, KEPCO, to the non-ferrous metals sector are included in iron and steel consumption. Data for electricity consumption in the transport equipment sector are available from 1994 and are included in the machinery sector until 2001.

The breakdown of generating capacity by fuel is not available prior to 1994.

Luxembourg

Most of the hydro production shown for Luxembourg is from the Vianden pumped storage plant and is exported directly to Germany. For 1989, the electricity production by autoproducers by fuel was estimated by the Secretariat based on fuel inputs submitted by the Luxembourg Administration. Net electricity production by autoproducers prior to 1990 includes production from combustible fuel sources only. Electricity and heat production from natural gas, for autoproducer CHP plants, are available from 1995. Electricity and heat production from biogas are available from 1999. The increase in electricity production in 2002 is due to a new natural gas combined cycle power plant.

Prior to 1995, data on electrical capacity by type of generation are not available for autoproducers. Due to the lack of blast furnace gas, the iron and steel industry stopped generating electricity at the end of 1997. Therefore, electrical capacity by combustible fuels source has decreased.

Mexico

Electricity statistics are available from 1971.

The breakdown of net electricity production by autoproducers is available from 1993. Electricity production from wind and solar photovoltaic is available from 1990. Electricity output from combustible renewables and waste is available from 1998. New autoproducer electricity plants fuelled with coal gases were put on line in 1999. In the 2010 edition more detailed information from CFE (Comisión Federal de Electricidad), Pemex and autoproducers, has led to revisions to the electricity generation data, causing statistical differences from 1990 to 2004. Revisions to consumption data are pending.

Some electricity consumption in the energy industry is included in the industry sub-sector where it was generated (*e.g.* the chemical industry, as well as in non-specified industry).

Net maximum electrical capacity for autoproducers is not available prior to 1974. The breakdown of generating capacity for main activity producer electricity plants by combustible fuels is not available prior to 1982. Production and generating capacity of main activity producer electricity plants from wind is available from 1994.

Netherlands

Electricity from other sources includes generation from chemical waste gases and heat bought from other industries. For 1970 to 1973, electricity output from autoproducer CHP plants has been included with main activity producer CHP plants. Electricity production from and inputs to main activity producer CHP plants are included with main activity producer electricity plants prior to 1982. Net electricity production by autoproducers prior to 1988 includes production from combustible fuel sources only. Electricity production from solar photovoltaic is available from 1992. Net electricity production by autoproducers in the energy industry is not available prior to 1993. The decrease in electricity produced from nuclear in 1997 is due to the closure for five months of one nuclear power plant. For the 2007 edition, the Dutch Administration implemented a reporting methodology which causes some breaks between 2004 and 2005.

Heat production from main activity producer CHP plants and heat plants is available from 1982. Heat production by fuel in heat plants prior to 1987 are estimated by the Secretariat based on fuel inputs submitted by the Dutch Administration. Heat produced from combustible renewables is available from 1990.

Heat production in commercial and public services includes production in agriculture.

Inputs of hard coal for electricity production from 1981 to 1989 in terajoules (TJ) are estimated by the Secretariat based on data submitted in kilotonnes (kt) by the Dutch Administration. Prior to 2008 a few small autoproducer electricity plants using solid biomass were included with main activity plants for reasons of confidentiality.

The strong increase in electricity trade in 1999 is caused by the liberalization of the Dutch electricity market. Until 2003 trade data are based on contracted quantities instead of physical flows,

Electricity consumption in commercial and public services includes small users in other sectors. Electricity consumption in non-specified transport corresponds to consumption for road traffic. Increasing electricity consumption in agriculture is due to the expansion of the greenhouse farming sector. Prior to 1979, electricity consumption in agriculture is included in commercial and public services.

Data on direct use of solar thermal are available from 1988.

Prior to 1981 for main activity producer plants and 1982 for autoproducers, data on electrical capacity by type of generation are not available.

New Zealand

There are several breaks in the series between 1987 and 1988 due to a reorganisation of government departments during 1987. The industry classifications used by the Administration of New Zealand were changed in 1991.

Prior to 1990, data refer to fiscal year (April 1989 to March 1990 for 1989). From 1990 data refer to calendar year. As a result, there are breaks in the series between 1989 and 1990.

Electricity production by autoproducers from natural gas and from oil has been estimated by the Secretariat from 1970 to 1973. Electricity production by autoproducers from geothermal is available from 1990. In 1999, a reclassification of autoproducer plants causes some breaks in the time series. For 2002 and 2003, natural gas autoproducer electricity includes generation of electricity from on-site heat/steam recovery during the combustion of carbon monoxide (CO) gas from the iron making reduction and melting process.

Heat from chemical processes used for electricity production is available from 2004 and corresponds to acid plants in the fertiliser industry where sulphur is the main input.

Until 2001, sub-bituminous coal inputs into autoproducer CHP refers to coal that is merged with iron sands and limestone to form the inputs for the multi-hearth-furnaces, kilns and melters to produce direct reduced iron (Glenbrook Steel Site), with off-gases driving the CHP plants.

From 1974 to 1993 distribution losses include the statistical differences. Electricity consumption in pulp, paper and printing is included in wood and wood products prior to 1991. There are breaks in the series between 1996 and 1997 for electricity consumption due to a new NZ Standard Industrial Classification (NZSIC).

Prior to 1981, data on electrical capacity by type of generation are not available. Generating capacity for autoproducers is available from 1994.

Norway

No data on electricity production from solar energy are submitted to the IEA by the Norwegian Administration. Prior to 1991, net electricity production by autoproducers by industry sub-sector was estimated by the Secretariat based on data submitted by the Norwegian Administration. Electricity production from wind is available from 1992. Breaks in the series between 1996 and 1997 and between 2001 and 2002 are due to a reclassification of main activity producers and of autoproducers. Electricity generated from waste heat is shown separately from 1990.

Own use of electricity in 2008 is based on preliminary monthly statistics as opposed to final annual data for previous years.

The increase in gas-fired generating capacity and the associated production of electricity in 2007 is due to the opening of a new plant at Kårstø in late 2007.

Heat production is not available prior to 1983. Heat production from heat pumps and electric boilers (and the electricity used for this production) are available from 1989. From 2008 this heat production in main activity producers is reported in heat plants, as it corresponds to a separate heat only unit of a CHP plant. Heat production from biogas is available from 1995. Heat produced in autoproducer heat plants from chemical processes and from other sources and used for electricity production was estimated by the Secretariat for the period 1990 to 2006.

Data on inputs and outputs in heat plants are not available prior to 1983 for main activity heat plants and prior to 1988 for autoproducer heat plants.

Distribution losses may include statistical differences. The breakdown of heat consumption by industry sub-sector was expanded in 1992, reclassified in 1994 and collected by a new reporting system in 1997.

Consumption of electricity for pipeline transport is included in oil and gas extraction. Prior to 1990, electricity consumption in wood and wood products includes consumption for the manufacture of furniture. Also prior to 1990, electricity consumption for post and telecommunications and supporting and auxiliary transport activities is included in non-specified transport.

Electricity trade with the Netherlands begins in 2008 with the operation of a cross-sea cable interconnection between the two countries.

Net maximum capacities for 2009 have been estimated by the secretariat based on data published by NORDEL.

Net maximum electrical capacity of pumped storage plants is not available from 1970 to 1972.

Poland

Electricity production in autoproducer electricity plants is available from 1986.

The Polish Administration adopted new methods to estimate the production of heat sold in autoproducer heat plants (1993) and in autoproducer CHP plants (1995). This causes breaks between 1992 and 1993, and between 1994 and 1995 for heat production and fuel inputs in these plants and for heat consumption in industry sub-sectors. Data for direct use of geothermal heat become available in 2000 and direct use of solar thermal heat in 2002. In 2008, a number of CHP plants were reclassified from autoproducer to main activity producer due to industry re-organisation.

Prior to 1995, heat consumption in the energy industry includes process heat not sold.

Portugal

Production of electricity in main activity producer CHP plants and the associated fuel inputs are not available prior to 1980. Production of electricity from solar photovoltaic and wind are available from 1989. Net electricity production by autoproducers prior to 1992 includes production from combustible fuel sources only. New plants fuelled by municipal waste started in 1999.

To conform to the IEA methodology, heat produced from combustible renewables and waste (mainly black liquor) in autoproducer CHP plants is not accounted for since it is not sold, while the electricity produced in these plants is included. In 2007, some power plants that were previously reported as main activity CHP were reclassified as autoproducer CHP. The power station that burns industrial waste started to work as a CHP plant in 2007, whereas previously it was only producing electricity.

Data on direct use of solar thermal heat and geothermal heat are available from 1989 and 1994 respectively.

Peak load for main activity producer plants includes the autoproducers data and is not available prior to 1986.

Slovak Republic

Data are available from 1971.

Electricity and heat production from combustible fuels from 1990 to 2000 have been estimated by the Secretariat based on the data on fuel used for electricity and heat plants reported in the annual fuel questionnaires. Prior to 2001, electricity generation from primary solid biomass, municipal waste and biogas are included with industrial waste.

The breakdown of net electricity and heat production by source has been estimated by the Secretariat for the period 1990-2000.

The breakdown of trade by origin and destination is available from 1993.

Direct use of geothermal heat is available from 2001 and of solar thermal heat from 2005.

The low electricity consumption in petroleum refineries in 2003 and 2004 is due to a change in ownership and work carried out on a refinery.

Data for generating capacity are not available prior to 1995. The breakdown of installed capacity by type of generation/fuel are available from 2001.

Spain

Prior to 1983, net electricity production by autoproducers includes production from combustible fuel sources only and net electricity production by autoproducer CHP plants is included in electricity plants. From 1983, net electricity production by autoproducers has been estimated by the Spanish Administration. Prior to 1987 electricity production in main activity producer CHP plants is included with production from main activity producer electricity plants. Prior to 1989 inputs and outputs from the use of combustible renewables and waste to generate electricity and/or heat (*i.e.* comprising solid and liquid biomass, industrial waste, municipal waste and biogas) are reported under non-specified combustible renewables and waste. Electricity production from wind and solar are reported from 1989 when data became available. Production by autoproducer CHP is included with autoproducer electricity for petroleum products prior to 1990. The large increase in electricity output from

main activity producer electricity plants fuelled by natural gas in 1997 is due to the opening of a new plant. Electricity from solar thermal plants is available from 2007. Electricity reported under other sources is from waste heat.

Direct use of solar thermal heat and geothermal heat are available from 1994.

Prior to 1980, data on electrical capacity by type of generation are not available and from 2003 no breakdown of capacity by type of fuel/generation is available. From 2004, capacity of autoproducers is included with main activity producers.

Sweden

Prior to 1987 net electricity production by autoproducer plants includes data for CHP plants only. From 1987, the breakdown of net electricity production by industry for autoproducer electricity plants is available. Prior to 1992, electricity production from biogas is included with wood/wood waste.

Heat produced in main activity producer CHP plants is not available prior to 1974; heat produced in main activity producer heat plants is not available prior to 1980. Heat produced for sale by autoproducer heat plants is available from 1992. Heat produced for sale from heat pumps and electric boilers is reported from 1992. Heat production from petroleum products in main activity producer CHP plants includes heat recovered from flue-gas condensing for 1997 and 1998.

Consumption of heat in industry and other sectors is available from 1984. Consumption of electricity for distribution of district heat is included in other energy industry.

Data on direct use of solar thermal are available from 1989.

The breakdown of generating capacity of main activity producer and autoproducer electricity plants by fuel is not available from 1990 to 2003 and from 2006 onwards. Peak load data for main activity producer plants includes data for autoproducer plants from 1992. Generating capacity of main activity producer electricity plants includes autoproducer plants prior to 1984. Prior to 1981, data on electrical capacity by type of generation are not available for main activity producer plants.

Switzerland

The allocation of electricity production in main activity producer electricity only and CHP plants between 1967 and 1973, and in main activity producer CHP and autoproducer CHP plants in 1974 are Secretariat estimates. Solar electricity production by autoproducers is available from 1990. Data for pumped hydro electricity production by autoproducers data are available from 1996.

Heat production includes heat sold by nuclear power stations and distributed to other consumers. Prior to 1978, heat output from CHP plants is not available. In the 2010 edition, data for an autoproducer heat pump plant that sells heat has been included for 1999 onwards. A decrease in the use of natural gas in main activity CHP plants in 2007 is caused by the reduced operation of one plant after the start-up of a new waste-incineration plant and the shutting down of another plant. Use increases again in 2008 due to the re-starting of a district heating plant

Electricity consumption in the transport equipment industry is included in the machinery sub-sector. The breakdown of final consumption of electricity in the industry sector from 2000 to 2001 and final consumption of heat in the industry sector from 2000 to 2008 were estimated by the Secretariat.

Direct use of solar thermal heat and geothermal heat is available from 1990. Geothermal direct use is overstated as it refers to heat production by geothermal heat pumps, which include inputs from electricity and/or gas in the transformation process.

Electricity generating capacity for liquid fuels in main activity producer plants includes all combustible fuels prior to 1990. For 1990 to 2007 the split of hydro and pumped hydro capacity between main activity producers and autoproducers is estimated based on the split of capacity at peak load.

Turkey

Data on electricity generated from combustible renewables and waste are available from 1991. In 1995, the Turkish Administration reclassified autoproducer plants by type and source to be consistent with IEA definitions. This causes breaks in the series between 1994 and 1995 for electricity production in these plants. Electricity production from wind is available starting in 1998.

A new gas fired main activity producer CHP plant was put into operation in 1999 and a new autoproducer electricity plant fuelled with coking coal started in 2000. In the 2006 edition, the Turkish Statistical Office started providing electricity and heat output on the basis of a new survey that allowed for the revision of the time series back to 2000. This causes breaks in the time series between 1999 and 2000.

Comprehensive data on electricity consumption are available from 1973. This causes a break in the series between 1972 and 1973. Consumption in the machinery sector includes transport equipment. Prior to 1998, electricity consumption in wood and wood products sub-sector includes that of pulp, paper, and printing industry.

Data on direct use of solar thermal is available from 1986.

Net electricity generating capacity by type of generation for both main activity producers and autoproducers is not available prior to 1999. Generating capacity reported in other type of generation corresponds to gas engines.

Imports of electricity from Turkmenistan are not physical quantities, but contracted quantities that are imported via Iran.

United Kingdom

The reorganisation, and subsequent privatisation, of the electricity supply industry in 1990 results in some breaks in the time series. In 1996, the break in the electricity production from nuclear time series is due to the reclassification of plants from autoproducer to main activity producer plants. Data on electricity production from solar is available from 1999 and electricity production from wind is available from 1989.

For the United Kingdom, it was necessary to combine figures for main activity producers and autoproducers in order to prevent the disclosure of information relating to less than three electricity generating companies, since this information is considered confidential. For this reason data for main activity producer CHP plants have been included with autoproducer CHP plants from 1988. Also, inputs of and output from natural gas in main activity producer electricity plants are included in autoproducer electricity plants for 1990. Prior to 1988, electricity output from CHP plants was included with main activity producer electricity plants. Prior to 2003, all outputs of electricity and heat from oil products are reported in the other oil products

category. Heat production from autoproducers is available starting in 1999.

From 1984 onwards, the electricity consumption in the industry non-specified sub-sector includes that of the wood and wood products sub-sector and unallocated consumption. Electricity consumption in coal mines includes consumption in patent fuel plants. Consumption in gas works includes electricity use in the transmission/distribution of public supply gas. Consumption in the machinery sub-sector includes that of the transport equipment industry before 1996. Consumption in the non-metallic mineral products sub-sector includes mining and quarrying. Electricity used for urban transport systems is included in non-specified transport. Starting in 1990, small amounts of electricity used in heat pumps have been included in the residential sector.

Prior to 1981 for main activity producer plants, to 1983 for autoproducers, data on electrical capacity by type of generation are not available.

United States

There are breaks in the series concerning the total production of electricity and heat in the United States. Prior to 1989, there are no data available for autoproducers. Electricity production in main activity producer CHP plants is available from 1991. Comprehensive data on electricity and heat production and consumption in main activity producer electricity, CHP and heat plants and autoproducer electricity and CHP plants are not available for all years. The selling of main activity producer plants to autoproducers may cause breaks in the series between 1998 and 2000. Data on electricity used for pumping and electricity production from pumped storage plants is available from 1987.

For the 2003 edition the US Administration changed the definition of what it reports under autoproducers. Prior to 2000, autoproducers include small and independent power producers which under IEA definitions are considered as main activity producers. Production from these small and independent power producers accounts for about 25% of reported production of electricity by autoproducers in the United States. This reclassification causes more breaks between 1999 and 2000. For the 2009 edition the US Administration changed their methodology for calculating heat production in CHP plants, and revised data back to 2006. This leads to breaks in the series between 2005 and 2006. Historical revisions are pending. Electricity generation reported under other sources is from purchased

steam. From 2007, the industrial waste category includes recovered heat from industrial processes. Accurate accounting of coke oven gas and refinery gas inputs is not always possible and can lead to efficiencies of over 100% in main activity producer CHP plants.

Data for heat produced in main activity producer heat plants is available from 1992. Since 1995, heat data are no longer collected and have been estimated by the US Administration, which causes breaks in the time series between 1994 and 1995.

Sub-bituminous coal inputs for electricity and heat production are included in hard coal before 1983. Prior to 1991 some of the fuel inputs to electricity and heat production reported for autoproducer plants are reported as final consumption in the particular economic sector in which the autoproducer is operating. Data for peat are confidential between 1994 and 1998 and from 2000 are not reported. Prior to 2001, data on plants consuming other bituminous coal, sub-bituminous coal and lignite have been estimated by the Secretariat using information provided in the EIA's *Annual Electricity Generator Report – Utility*.

The breakdown of fuel used and production of heat in main activity producer heat plants have been estimated by the Secretariat for 1992 and 1993.

A new survey for electricity consumption may cause breaks in the time series for 2003 and 2004, especially in the industry, transport, commercial and residential sectors. There are breaks in the series concerning the total consumption of heat sold to third parties. The

consumption of heat sold in industry is available from 1991 and in the energy industry from 1992. Prior to 1991, total consumption of heat sold only referred to consumption in commercial and public services. No heat is reported as being sold to the residential or agriculture sectors.

From 2000 onwards, the United States assumes that autoproducer CHP plants use all of the heat produced themselves and sell none to third parties. Therefore, this may underestimate the heat sold to third parties.

Direct use of heat in heat pumps (mainly in residential and industry) is not available. Direct use of solar thermal heat in residential is available from 1999. Prior to 1999, solar thermal electricity production includes generation from natural gas because some natural gas units are attached to solar thermal plants and their production cannot be separated. The IEA Secretariat estimated US photovoltaic (PV) electricity generation from autoproducers starting in 1999 by multiplying the dispersed and distributed PV capacity estimated by the EIA by an average capacity factor of 12%. The capacity factor was based on a report published in 2007 by the IEA Photovoltaic Power Systems Programme, *Cost and Performance Trends in Grid-Connected Photovoltaic Systems and Case Studies*. The corresponding electricity consumption has been included with non-specified other consumption.

Capacity is net summer capacity. The breakdown of capacity by fuel type for 1989 is a Secretariat estimate. Capacity by type of generation is not reported prior to 1981. Data on electrical capacity for autoproducers are available from 1989.

5. GEOGRAPHICAL COVERAGE

Australia excludes the overseas territories.

Denmark excludes the Danish Faroes and Greenland.

France includes Monaco but excludes the French overseas territories Guadeloupe, Martinique, Guyane, Reunion, St.-Pierre and Miquelon, New Caledonia and French Polynesia.

Italy includes San Marino and the Vatican.

Japan includes Okinawa.

The Netherlands excludes Suriname and the Netherlands Antilles.

Portugal includes the Açores and Madeira.

Spain includes the Canary Islands.

Switzerland does not include Liechtenstein.

United States includes 50 States and the District of Columbia.

OECD Total¹ comprises Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.

With the exception of Iceland and Mexico, all 30 OECD member countries are also member countries of the IEA.

The following countries are included in the regional aggregates. The OECD Total is the sum of the three regional aggregates.

IEA regional totals include only IEA Member countries and therefore exclude non-IEA Members, shown in italics below.

OECD North America comprises Canada, *Mexico* and the United States.

OECD Europe comprises Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, *Iceland*, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

OECD Pacific comprises Australia, Japan, Korea and New Zealand.

Please note that all OECD Pacific countries are also members of IEA and therefore we refer to it as OECD/IEA Pacific.

Africa includes Algeria, Angola, Benin, Botswana, Cameroon, Congo, Democratic Republic of Congo, Côte d'Ivoire, Egypt, Eritrea, Ethiopia, Gabon, Ghana, Kenya, Libyan Arab Jamahiriya, Morocco, Mozambique, Namibia, Nigeria, Senegal, South Africa, Sudan, United Republic of Tanzania, Togo, Tunisia, Zambia, Zimbabwe and Other Africa.

Other Africa includes Burkina Faso, Burundi, Cape Verde, Central African Republic, Chad, Comoros, Djibouti, Equatorial Guinea, Gambia, Guinea, Guinea-Bissau, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Niger, Reunion, Rwanda, Sao Tome and Principe, Seychelles, Sierra Leone, Somalia, Swaziland, Uganda and Western Sahara.

1. Chile became a member country of the OECD with effect from 7 May 2010. Since the preparation of the annual statistics publications was well on its way at that stage, data for Chile have not been included in OECD totals for the 2010 edition and will continue to be included in Latin America with the OECD non-member countries. The IEA Secretariat will work closely with the Chilean Administration, especially on the consistency of the time series, for incorporating Chile into OECD totals in the 2011 edition.

Latin America includes Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay, Venezuela and Other Latin America.

Other Latin America includes Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Dominica, Falkland Islands, French Guyana, Grenada, Guadeloupe, Guyana, Martinique, Montserrat, Puerto Rico, St. Kitts and Nevis, Saint Lucia, Saint Pierre et Miquelon, St. Vincent and the Grenadines, Suriname, and Turks and Caicos Islands.

Asia includes Bangladesh, Brunei Darussalam, Cambodia, Chinese Taipei, India, Indonesia, DPR of Korea, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, Vietnam and Other Asia.

Other Asia includes Afghanistan, Bhutan, Cook Islands, East Timor, Fiji, French Polynesia, Kiribati, Laos, Macau, Maldives, New Caledonia, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga and Vanuatu.

China includes the People's Republic of China and Hong Kong (China).

Non-OECD Europe includes Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus², Gibraltar, Former Yugoslav Republic of Macedonia (FYROM), Malta, Romania, Serbia³ and Slovenia.

Former Soviet Union includes Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

Middle East includes Bahrain, Islamic Republic of Iran, Iraq, Israel⁴, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates and Yemen.

2. Footnote by Turkey:

The information in this document with reference to "Cyprus" relates to the southern part of the island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the "Cyprus" issue.

Footnote by all the European Union Member States of the OECD and the European Commission:

The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this report relates to the area under the effective control of the Government of the Republic of Cyprus.

3. Data for Serbia include Montenegro until 2004 and Kosovo until 1999.

4. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

6. CONVERSION FACTORS AND CALORIFIC VALUES

Units and conversions

Conversion (to toe)

All units in this publication are metric units. Most IEA/OECD publications showing inter-fuel relations and projections present such information in a common energy unit, the tonne of oil equivalent (toe). A tonne of oil equivalent is defined as 10^7 kcal (41.868 GJ), a convenient measure because it is approximately the net heat content of one tonne of average crude oil. This unit is used by the IEA/OECD in its energy balances. Note also that totals may not be the sum of their components due to independent rounding.

The change from using the original unit to tonne of oil equivalent implies choosing coefficients of equivalence between different forms and sources of energy. This problem can be approached in many different ways. For example one could adopt a single equivalence for each major primary energy source in all countries, *e.g.* 29 307 kJ/kg (7 000 kcal/kg) for hard coal, 41 868 kJ/kg (10 000 kcal/kg) for oil, etc.

The main objection to this method is that it results in distortions since there is a wide spread in calorific values between types of coal and individual coal products, and between calorific values of these fuels in different countries.

The Secretariat has therefore adopted specific calorific factors supplied by the national administrations for the main categories of each quality of coal and for each flow or use (*i.e.* production, imports, exports, electricity generation, coke ovens, blast furnaces and industry). For crude oil, specific factors have been used based on consultations with experts from the national administrations, while for petroleum products regional conversion factors have been used.

The balances are expressed in terms of "net" calorific value. The difference between the "net" and the "gross" calorific value for each fuel is the latent heat of vaporisation of the water produced during combustion of the fuel. For coal and oil, net calorific value is usually around 5% less than gross, for most forms of natural and manufactured gas the difference is 9-10%, while for electricity there is no difference as the concept has no meaning in this case. The use of the net calorific value is consistent with the practice of the Statistical Offices of the European Communities and the United Nations.

Electricity data are converted from original units of gigawatt hours to million tonnes of oil equivalent using the relationship:

$$1 \text{ TWh} = 0.086 \text{ Mtoe.}$$

Complete listings of net calorific values to convert energy sources from basic units to tonne of oil equivalent are reported in section IV and can be found at the end of this Chapter.

Electricity

All electricity data are reported to the IEA in GWh (for generation) or MW (for capacity).

Figures for the energy equivalent of electricity production, trade, and final consumption are calculated using the energy content of the electricity, *i.e.* at a rate of $1 \text{ TWh} = 0.086 \text{ Mtoe}$. Hydroelectricity production (excluding pumped storage) and electricity produced by other non-thermal means (wind, tide, photovoltaic, etc.), are accounted for similarly using $1 \text{ TWh} = 0.086 \text{ Mtoe}$.

However, the primary energy equivalent of nuclear electricity is calculated from the gross generation by assuming a 33% conversion efficiency, *i.e.* $1 \text{ TWh} = (0.086 \div 0.33) \text{ Mtoe}$. The 33% figure is based on

empirical data obtained by Eurostat on conversion efficiencies in nuclear plants in the European Union.

In the case of electricity produced from geothermal heat, the primary equivalent is calculated assuming an efficiency of 10%, when the geothermal energy input is not submitted by a country

$$1 \text{ TWh} = (0.086 \div 0.1) \text{ Mtoe.}$$

Heat

Information on heat is supplied in Terajoules (TJ).
 $1 \text{ TJ} = 2.388 \cdot 10^{-5} \text{ Mtoe.}$

In the case of geothermal heat, the primary equivalent is calculated assuming an average thermal efficiency of 50%, when the geothermal energy input is not submitted by a country.

$$1 \text{ TJ} = (2.388 \cdot 10^{-5} \div 0.5) \text{ Mtoe.}$$

Gas

In this publication, gas includes natural gas (excluding natural gas liquids) and gas works gas (town gas). To calculate the net heat content of a gas, its gross heat content is multiplied by the following factors:

| Product | Gross to Net Ratio |
|---------------|--------------------|
| Natural gas | 0.9 |
| Gas works gas | 0.9 |

Oil

The IEA applies regional conversion factors (in conjunction with Eurostat for the European countries) for the petroleum products:

Regional net calorific values for petroleum products

| Petroleum products | Europe | North America | Pacific |
|----------------------------------|--------|---------------|---------|
| | kJ/kg | kJ/kg | kJ/kg |
| Refinery gas | 49 500 | 48 100 | 48 100 |
| Ethane | 49 500 | 49 400 | 49 400 |
| Liquefied petroleum gases | 46 000 | 47 300 | 47 700 |
| Motor gasoline | 44 000 | 44 800 | 44 600 |
| Aviation gasoline | 44 000 | 44 800 | 44 600 |
| Gasoline type jet fuel | 43 000 | 44 800 | 44 600 |
| Kerosene type jet fuel | 43 000 | 44 600 | 44 500 |
| Kerosene | 43 000 | 43 800 | 42 900 |
| Gas/diesel oil | 42 600 | 42 600 | 42 600 |
| Residual fuel oil | 40 000 | 40 200 | 42 600 |
| Naphtha | 44 000 | 45 000 | 43 200 |
| White spirit | 43 600 | 43 000 | 43 000 |
| Lubricants | 42 000 | 42 000 | 42 900 |
| Bitumen | 39 000 | 40 000 | 38 800 |
| Paraffin waxes | 40 000 | | |
| Petroleum coke | 32 000 | 32 000 | 33 800 |
| Non-specified petroleum products | 40 000 | | |

General conversion factors for energy

| To: | TJ | Gcal | Mtoe | MBtu | GWh |
|-------------|-------------------------|--------|------------------------|---------------------|------------------------|
| From: | multiply by: | | | | |
| TJ | 1 | 238.8 | 2.388×10^{-5} | 947.8 | 0.2778 |
| Gcal | 4.1868×10^{-3} | 1 | 10^{-7} | 3.968 | 1.163×10^{-3} |
| Mtoe | 4.1868×10^4 | 10^7 | 1 | 3.968×10^7 | 11630 |
| MBtu | 1.0551×10^{-3} | 0.252 | 2.52×10^{-8} | 1 | 2.931×10^{-4} |
| GWh | 3.6 | 860 | 8.6×10^{-5} | 3412 | 1 |

Conversion factors for mass

| To: | kg | t | lt | st | lb |
|------------------------|--------------|-----------------------|-----------------------|------------------------|--------|
| From: | multiply by: | | | | |
| kilogramme (kg) | 1 | 0.001 | 9.84×10^{-4} | 1.102×10^{-3} | 2.2046 |
| tonne (t) | 1000 | 1 | 0.984 | 1.1023 | 2204.6 |
| long ton (lt) | 1016 | 1.016 | 1 | 1.120 | 2240.0 |
| short ton (st) | 907.2 | 0.9072 | 0.893 | 1 | 2000.0 |
| pound (lb) | 0.454 | 4.54×10^{-4} | 4.46×10^{-4} | 5.0×10^{-4} | 1 |

Conversion factors for volume

| To: | gal U.S. | gal U.K. | bbl | ft ³ | l | m ³ |
|------------------------------------|--------------|----------|---------|-----------------|--------|----------------|
| From: | multiply by: | | | | | |
| U.S. gallon (gal) | 1 | 0.8327 | 0.02381 | 0.1337 | 3.785 | 0.0038 |
| U.K. gallon (gal) | 1.201 | 1 | 0.02859 | 0.1605 | 4.546 | 0.0045 |
| Barrel (bbl) | 42.0 | 34.97 | 1 | 5.615 | 159.0 | 0.159 |
| Cubic foot (ft³) | 7.48 | 6.229 | 0.1781 | 1 | 28.3 | 0.0283 |
| Litre (l) | 0.2642 | 0.220 | 0.0063 | 0.0353 | 1 | 0.001 |
| Cubic metre (m³) | 264.2 | 220.0 | 6.289 | 35.3147 | 1000.0 | 1 |

Decimal prefixes

| | | | |
|-----------|-----------|------------|-----------------|
| 10^1 | deca (da) | 10^{-1} | deci (d) |
| 10^2 | hecto (h) | 10^{-2} | centi (c) |
| 10^3 | kilo (k) | 10^{-3} | milli (m) |
| 10^6 | mega (M) | 10^{-6} | micro (μ) |
| 10^9 | giga (G) | 10^{-9} | nano (n) |
| 10^{12} | tera (T) | 10^{-12} | pico (p) |
| 10^{15} | peta (P) | 10^{-15} | femto (f) |
| 10^{18} | exa (E) | 10^{-18} | atto (a) |

Country specific net calorific values (kilojoule per kilogramme)

2008

| | Australia | Austria | Belgium | Canada | Czech Republic | Denmark | Finland | France | Germany | Greece |
|--------------------------------|-----------|---------|---------|--------|----------------|---------|---------|--------|---------|--------|
| Crude oil | | | | | | | | | | |
| Production | 43985 | 42500 | - | 42790 | 42000 | 43000 | - | 41855 | 42757 | 38158 |
| Imports | 42655 | 42500 | 42750 | 42790 | 42365 | 43000 | 41830 | 41855 | 42757 | 41540 |
| Exports | 43985 | - | - | 42790 | 42300 | 43000 | - | - | 42757 | 41860 |
| Average | 43282 | 42500 | 42750 | 42790 | 42357 | 43000 | 41830 | 41855 | 42757 | 41228 |
| NGL | 45410 | 42500 | - | 45220 | - | - | 45217 | 42000 | - | 41555 |
| Refinery feedstocks | 43282 | 42311 | 42500 | 42500 | 41868 | 42700 | 42496 | 41855 | 42496 | 41318 |
| Additives | - | - | 25100 | - | 25120 | - | 25121 | 25120 | 25121 | 41318 |
| Other hydrocarbons | - | - | - | 41868 | 41868 | - | 41868 | - | - | - |
| Biogasoline | 26800 | 26700 | 26860 | 26800 | 27000 | 26700 | 27500 | 26805 | 26660 | - |
| Biodiesel | 36800 | 36600 | 38052 | 36800 | 37100 | 37600 | 36800 | 37400 | 37140 | 37980 |
| Other liquid biofuels | - | 33365 | 37000 | - | - | 36800 | - | - | 20900 | - |
| Anthracite | | | | | | | | | | |
| Production | 26700 | - | - | - | - | - | - | - | 29030 | - |
| Imports | - | 32363 | 25184 | 27700 | 30000 | - | - | - | 29030 | - |
| Exports | 26700 | 28033 | 25184 | - | 30000 | - | - | - | 30100 | - |
| Main activity elec. generation | - | - | - | - | - | - | - | - | 29710 | - |
| Industry | - | 32415 | 25184 | 27700 | 30000 | - | - | - | 29710 | - |
| Other uses | 26700 | 28033 | 25184 | 27700 | 30000 | - | - | - | 29710 | - |
| Coking coal | | | | | | | | | | |
| Production | 28500 | - | - | 24890 | 28584 | - | - | - | 29000 | - |
| Imports | - | 29073 | 29308 | 28329 | 29000 | - | 29300 | 30500 | 29000 | - |
| Exports | 28500 | - | - | 24890 | 28165 | - | - | 30500 | - | - |
| Coke ovens | 28500 | 29073 | 29308 | 28329 | 29326 | - | 29300 | 30500 | 29000 | - |
| Main activity elec. generation | - | - | - | - | - | - | - | - | 29000 | - |
| Industry | - | - | - | - | - | - | - | - | 29000 | - |
| Other uses | 28000 | 29073 | 29308 | 28329 | 28534 | - | 29300 | 30500 | 29000 | - |
| Other bituminous coal | | | | | | | | | | |
| Production | 28837 | - | - | 25514 | 26089 | - | - | 26000 | 23850 | - |
| Imports | - | 28453 | 25781 | 25514 | 22900 | 24419 | 25200 | 26000 | 26090 | 26044 |
| Exports | 28837 | 28343 | 25781 | 25514 | 25000 | 24427 | - | 26000 | 30130 | 26044 |
| Coke ovens | - | - | - | - | - | - | - | - | - | - |
| Main activity elec. generation | 28836 | 27985 | 27759 | 29074 | 22507 | 24305 | 24647 | 25999 | 25634 | - |
| Industry | 28837 | 30483 | 29308 | 25514 | 23306 | 26500 | 25200 | 26000 | 25634 | 26044 |
| Other uses | 28836 | 29382 | 25781 | 25514 | 23348 | 24425 | 25200 | 26000 | 25000 | 26044 |
| Sub-bituminous coal | | | | | | | | | | |
| Production | 20698 | - | 21967 | 17799 | - | - | - | - | - | - |
| Imports | - | 22200 | 22554 | 17799 | - | - | - | - | - | - |
| Exports | - | - | - | 17799 | - | - | - | - | - | - |
| Main activity elec. generation | 20698 | - | - | 18300 | - | - | - | - | - | - |
| Industry | 20698 | 22200 | - | - | - | - | - | - | - | - |
| Other uses | 20698 | 22200 | 21967 | 17799 | - | - | - | - | - | - |
| Lignite | | | | | | | | | | |
| Production | 9310 | - | - | 14464 | 12724 | - | - | - | 8992 | 5179 |
| Imports | - | 9015 | 8370 | 14464 | 15371 | - | - | 17000 | 16412 | 5179 |
| Exports | - | - | - | 14464 | 15754 | - | - | - | 9726 | - |
| Main activity elec. generation | 10011 | - | - | 15000 | 12434 | - | - | - | 8879 | 5179 |
| Industry | 9310 | 10004 | 8370 | - | 12319 | - | - | 17000 | 10312 | 8025 |
| Other uses | 9310 | 9158 | 8370 | 14464 | 13503 | - | - | 17000 | 10313 | 5179 |
| Patent fuel | - | 31003 | 29308 | - | - | - | - | 32000 | 31400 | - |
| Coke oven coke | 25650 | 29000 | 27696 | 27389 | 27304 | 29300 | 29300 | 28000 | 28650 | 30230 |
| Coal tar | 38519 | 41800 | - | - | 37000 | - | 37000 | 38000 | - | - |
| BKB | 22222 | 19303 | 20097 | - | 22000 | 18300 | - | - | 20450 | 14199 |
| Peat | - | 8800 | - | - | - | - | 10200 | - | - | - |
| Charcoal | - | 31000 | 30800 | - | - | - | - | - | - | 31000 |

Country specific net calorific values (kilojoule per kilogramme)

2008

| | Hungary | Iceland | Ireland | Italy | Japan | Korea | Luxem- bourg | Mexico | Nether- lands | New Zealand |
|--------------------------------|---------|---------|---------|-------|-------|-------|-----------------|--------|------------------|----------------|
| Crude oil | | | | | | | | | | |
| Production | 41810 | - | - | 41860 | 42415 | 42700 | - | 45256 | 42700 | 43620 |
| Imports | 41797 | - | 42830 | 41860 | 42415 | 42700 | - | - | 42700 | 41987 |
| Exports | 41800 | - | - | 41860 | - | - | - | 45256 | 42700 | 43682 |
| Average | 41796 | - | 42830 | 41860 | 42415 | 42700 | - | 45256 | 42700 | 43097 |
| NGL | 43000 | - | - | - | 43712 | - | - | 42661 | 44000 | 45618 |
| Refinery feedstocks | 41800 | - | 42500 | 41860 | 42500 | 44800 | - | - | 42496 | 43750 |
| Additives | - | - | - | 25121 | - | 41868 | - | 46015 | 25121 | - |
| Other hydrocarbons | 40000 | - | - | - | - | - | - | - | - | - |
| Biogasoline | 26600 | - | 24091 | 26800 | - | - | 27000 | - | 27700 | - |
| Biodiesel | 37500 | - | 37273 | 37400 | - | 38210 | 37000 | - | 37000 | - |
| Other liquid biofuels | - | - | 36364 | 36700 | - | - | 37000 | - | 36500 | - |
| Anthracite | | | | | | | | | | |
| Production | - | - | - | - | - | 19259 | - | - | - | - |
| Imports | - | - | 27842 | - | 26362 | 26796 | 29300 | - | 29300 | - |
| Exports | - | - | - | - | - | - | - | - | 29300 | - |
| Main activity elec. generation | - | - | - | - | - | 19263 | - | - | - | - |
| Industry | - | - | - | - | - | 26796 | 29300 | - | 29300 | - |
| Other uses | - | - | 27842 | - | 26362 | 19259 | 29300 | - | 29300 | - |
| Coking coal | | | | | | | | | | |
| Production | - | - | - | - | - | - | - | 23483 | - | 29420 |
| Imports | 31430 | 28050 | - | 30984 | 28130 | 28261 | - | - | 28671 | 29420 |
| Exports | 31430 | - | - | - | - | - | - | - | 28671 | 29420 |
| Coke ovens | 31430 | - | - | 30984 | 28227 | 28261 | - | 23483 | 28671 | - |
| Main activity elec. generation | - | - | - | - | - | - | - | - | - | - |
| Industry | - | 28050 | - | - | - | 28261 | - | - | - | - |
| Other uses | 31430 | 28050 | - | 30984 | 27354 | 28261 | - | 23483 | 28671 | 29420 |
| Other bituminous coal | | | | | | | | | | |
| Production | - | - | - | 26587 | - | - | - | - | - | 28230 |
| Imports | 24080 | 28050 | 27838 | 26587 | 24801 | 24911 | 29300 | 23483 | 24664 | 28230 |
| Exports | - | - | 27842 | - | 24801 | - | - | - | 24664 | - |
| Coke ovens | - | - | - | - | 24801 | - | - | 23483 | - | - |
| Main activity elec. generation | 22559 | - | 25931 | 25521 | 25058 | 24912 | - | - | 24682 | - |
| Industry | 24480 | 28050 | 27842 | 26587 | 24801 | 24911 | 29300 | - | - | 28230 |
| Other uses | 24000 | 28050 | 27842 | 26587 | 24801 | 24908 | 29300 | 23483 | 24664 | 28230 |
| Sub-bituminous coal | | | | | | | | | | |
| Production | - | - | - | - | - | - | - | 19405 | - | 20610 |
| Imports | 16550 | - | - | - | - | 20934 | - | 19405 | - | 20610 |
| Exports | 16640 | - | - | - | - | - | - | - | - | - |
| Main activity elec. generation | 16108 | - | - | - | - | 20933 | - | 19987 | - | 21976 |
| Industry | 16000 | - | - | - | - | 19259 | - | 19405 | - | 20610 |
| Other uses | 17870 | - | - | - | - | 20933 | - | 19405 | - | 20610 |
| Lignite | | | | | | | | | | |
| Production | 7540 | - | - | - | - | - | - | - | - | 13380 |
| Imports | - | - | 19820 | 10468 | - | - | - | 14100 | 20000 | 13380 |
| Exports | 8150 | - | 19820 | - | - | - | - | - | - | - |
| Main activity elec. generation | 7384 | - | - | - | - | - | - | - | - | - |
| Industry | 13550 | - | - | 10468 | - | - | - | - | 20000 | 13380 |
| Other uses | 10820 | - | 19820 | 10468 | - | - | - | 14100 | 20000 | 13380 |
| Patent fuel | - | - | - | - | - | 19259 | - | - | 29300 | - |
| Coke oven coke | 29480 | 26670 | - | 29000 | 29400 | 29308 | - | 26521 | 28500 | 29500 |
| Coal tar | 38000 | - | - | - | 35393 | 37000 | - | - | 41900 | - |
| BKB | 20000 | - | 18548 | - | - | - | 20100 | - | - | - |
| Peat | - | - | 8743 | - | - | - | - | - | - | - |
| Charcoal | - | - | - | 30800 | 29300 | - | - | - | 30000 | - |

Country specific net calorific values (kilojoule per kilogramme)

2008

| | Norway | Poland | Portugal | Slovak Republic | Spain | Sweden | Switzerland | Turkey | United Kingdom | United States |
|--------------------------------|--------|--------|----------|-----------------|-------|--------|-------------|--------|----------------|---------------|
| Crude oil | | | | | | | | | | |
| Production | 42665 | 42743 | - | 41200 | 42665 | - | - | 41370 | 43371 | 43261 |
| Imports | 42665 | 42500 | 42915 | 41999 | 42665 | 42161 | 43225 | 41570 | 43371 | 43150 |
| Exports | 42665 | 42743 | - | 41694 | - | - | - | - | 43371 | 43261 |
| Average | 42665 | 42506 | 42915 | 41994 | 42665 | 42161 | 43225 | 41520 | 43371 | 43095 |
| NGL | 43795 | - | - | 41200 | - | - | - | - | 45910 | 46378 |
| Refinery feedstocks | 42300 | 42496 | 43996 | 43860 | 42500 | 44244 | - | 42500 | 42496 | 43822 |
| Additives | - | 34364 | - | 43764 | 25100 | 25121 | 41325 | - | - | 25121 |
| Other hydrocarbons | - | 42500 | - | 41500 | - | - | - | - | - | 51004 |
| Biogasoline | - | 26700 | - | 21485 | 26795 | 26886 | 26524 | 26800 | 26800 | 26747 |
| Biodiesel | 36800 | 37700 | 37000 | 40155 | 36844 | 37513 | 32040 | 37046 | 36800 | 40933 |
| Other liquid biofuels | - | 37700 | 36800 | - | - | 42095 | - | - | - | 21583 |
| Anthracite | | | | | | | | | | |
| Production | - | - | - | - | 18440 | - | - | - | - | 28796 |
| Imports | - | - | 27238 | 27446 | 26219 | - | 28100 | - | - | 29028 |
| Exports | - | - | 27238 | - | 25300 | - | - | - | - | 28796 |
| Main activity elec. generation | - | - | - | 25620 | 20889 | - | - | - | - | 13241 |
| Industry | - | - | 27238 | 27446 | 25250 | - | 28100 | - | - | 20328 |
| Other uses | - | - | 27238 | 27446 | 26900 | - | 28100 | - | - | 22892 |
| Coking coal | | | | | | | | | | |
| Production | - | 29560 | - | - | - | - | - | 26260 | 30400 | 28288 |
| Imports | - | 29580 | - | 27931 | 30009 | 30000 | - | 28829 | 28900 | 28203 |
| Exports | - | 29640 | - | - | - | - | - | - | 30400 | 27567 |
| Coke ovens | - | 29598 | - | 27931 | 30009 | 30000 | - | 29194 | 31000 | 29648 |
| Main activity elec. generation | - | 28004 | - | - | - | - | - | - | - | - |
| Industry | - | 29052 | - | - | - | - | - | 26878 | 30400 | - |
| Other uses | - | 29584 | - | 27931 | 30009 | 30000 | - | 27011 | 30400 | 28532 |
| Other bituminous coal | | | | | | | | | | |
| Production | 28100 | 22980 | - | - | 19215 | - | - | 16000 | 25000 | 26840 |
| Imports | 28100 | 24170 | 25389 | 25853 | 23610 | 27400 | 28100 | 26616 | 25200 | 25913 |
| Exports | 28100 | 27750 | 25608 | - | 24011 | 27400 | - | - | 30600 | 27443 |
| Coke ovens | - | - | - | - | - | - | - | - | - | - |
| Main activity elec. generation | 28100 | 21553 | 25386 | 25197 | 23045 | 27900 | - | 21610 | 24855 | 25776 |
| Industry | 28100 | 23027 | 25826 | 25853 | 24200 | 26860 | 28100 | 27128 | 25700 | 27282 |
| Other uses | 28100 | 25592 | 25826 | 25853 | 26050 | 27400 | 28100 | 26941 | 24800 | 27293 |
| Sub-bituminous coal | | | | | | | | | | |
| Production | - | - | - | - | 13055 | - | - | 17585 | - | 19014 |
| Imports | - | - | - | - | - | - | - | - | - | 20049 |
| Exports | - | - | - | - | - | - | - | - | - | 18864 |
| Main activity elec. generation | - | - | - | - | 12672 | - | - | - | - | 19273 |
| Industry | - | - | - | - | - | - | - | 17585 | - | 19904 |
| Other uses | - | - | - | - | 13055 | - | - | 17585 | - | 18637 |
| Lignite | | | | | | | | | | |
| Production | - | 8930 | - | 10778 | - | - | - | 8358 | - | 13935 |
| Imports | - | 8670 | - | 14258 | - | - | 20100 | - | - | 13834 |
| Exports | - | 8921 | - | - | - | - | - | - | - | 13914 |
| Main activity elec. generation | - | 8887 | - | 10213 | - | - | - | 6700 | - | 14314 |
| Industry | - | 8936 | - | 11301 | - | - | 20100 | 20062 | - | 14749 |
| Other uses | - | 10262 | - | 11301 | - | - | 20100 | 18970 | - | 14884 |
| Patent fuel | - | 23163 | - | 28000 | - | - | - | - | 31000 | 22963 |
| Coke oven coke | 28500 | 27762 | 29643 | 27470 | 30139 | 28080 | 28100 | 28491 | 28300 | 28842 |
| Coal tar | - | 37720 | - | 33490 | 38519 | - | - | - | - | - |
| BKB | - | 17409 | - | 18500 | - | - | - | 18422 | - | - |
| Peat | - | - | - | - | - | 12500 | - | - | - | - |
| Charcoal | - | - | - | - | - | - | - | - | - | - |

Country specific net calorific values (tonne of oil equivalent per tonne)

2008

| | Australia | Austria | Belgium | Canada | Czech Republic | Denmark | Finland | France | Germany | Greece |
|--------------------------------|-----------|---------|---------|--------|----------------|---------|---------|--------|---------|--------|
| Crude oil | | | | | | | | | | |
| Production | 1.0506 | 1.0151 | - | 1.0220 | 1.0032 | 1.0270 | - | 0.9997 | 1.0212 | 0.9114 |
| Imports | 1.0188 | 1.0151 | 1.0211 | 1.0220 | 1.0119 | 1.0270 | 0.9991 | 0.9997 | 1.0212 | 0.9922 |
| Exports | 1.0506 | - | - | 1.0220 | 1.0103 | 1.0270 | - | - | 1.0212 | 0.9998 |
| Average | 1.0338 | 1.0151 | 1.0211 | 1.0220 | 1.0117 | 1.0270 | 0.9991 | 0.9997 | 1.0212 | 0.9847 |
| NGL | 1.0846 | 1.0151 | - | 1.0801 | - | - | 1.0800 | 1.0032 | - | 0.9925 |
| Refinery feedstocks | 1.0338 | 1.0106 | 1.0151 | 1.0151 | 1.0000 | 1.0199 | 1.0150 | 0.9997 | 1.0150 | 0.9869 |
| Additives | - | - | 0.5995 | - | 0.6000 | - | 0.6000 | 0.6000 | 0.6000 | 0.9869 |
| Other hydrocarbons | - | - | - | 1.0000 | 1.0000 | - | 1.0000 | - | - | - |
| Biogasoline | 0.6401 | 0.6377 | 0.6415 | 0.6401 | 0.6449 | 0.6377 | 0.6568 | 0.6402 | 0.6368 | - |
| Biodiesel | 0.8790 | 0.8742 | 0.9089 | 0.8790 | 0.8861 | 0.8981 | 0.8790 | 0.8933 | 0.8871 | 0.9071 |
| Other liquid biofuels | - | 0.7969 | 0.8837 | - | - | 0.8790 | - | - | 0.4992 | - |
| Anthracite | | | | | | | | | | |
| Production | 0.6377 | - | - | - | - | - | - | - | 0.6934 | - |
| Imports | - | 0.7730 | 0.6015 | 0.6616 | 0.7165 | - | - | - | 0.6934 | - |
| Exports | 0.6377 | 0.6696 | 0.6015 | - | 0.7165 | - | - | - | 0.7189 | - |
| Main activity elec. generation | - | - | - | - | - | - | - | - | 0.7096 | - |
| Industry | - | 0.7742 | 0.6015 | 0.6616 | 0.7165 | - | - | - | 0.7096 | - |
| Other uses | 0.6377 | 0.6696 | 0.6015 | 0.6616 | 0.7165 | - | - | - | 0.7096 | - |
| Coking coal | | | | | | | | | | |
| Production | 0.6807 | - | - | 0.5945 | 0.6827 | - | - | - | 0.6927 | - |
| Imports | - | 0.6944 | 0.7000 | 0.6766 | 0.6927 | - | 0.6998 | 0.7285 | 0.6927 | - |
| Exports | 0.6807 | - | - | 0.5945 | 0.6727 | - | - | 0.7285 | - | - |
| Coke ovens | 0.6807 | 0.6944 | 0.7000 | 0.6766 | 0.7004 | - | 0.6998 | 0.7285 | 0.6927 | - |
| Main activity elec. generation | - | - | - | - | - | - | - | - | 0.6927 | - |
| Industry | - | - | - | - | - | - | - | - | 0.6927 | - |
| Other uses | 0.6688 | 0.6944 | 0.7000 | 0.6766 | 0.6815 | - | 0.6998 | 0.7285 | 0.6927 | - |
| Other bituminous coal | | | | | | | | | | |
| Production | 0.6888 | - | - | 0.6094 | 0.6231 | - | - | 0.6210 | 0.5696 | - |
| Imports | - | 0.6796 | 0.6158 | 0.6094 | 0.5470 | 0.5832 | 0.6019 | 0.6210 | 0.6231 | 0.6221 |
| Exports | 0.6888 | 0.6770 | 0.6158 | 0.6094 | 0.5971 | 0.5834 | - | 0.6210 | 0.7196 | 0.6221 |
| Coke ovens | - | - | - | - | - | - | - | - | - | - |
| Main activity elec. generation | 0.6887 | 0.6684 | 0.6630 | 0.6944 | 0.5376 | 0.5805 | 0.5887 | 0.6210 | 0.6123 | - |
| Industry | 0.6888 | 0.7281 | 0.7000 | 0.6094 | 0.5567 | 0.6329 | 0.6019 | 0.6210 | 0.6123 | 0.6221 |
| Other uses | 0.6887 | 0.7018 | 0.6158 | 0.6094 | 0.5577 | 0.5834 | 0.6019 | 0.6210 | 0.5971 | 0.6221 |
| Sub-bituminous coal | | | | | | | | | | |
| Production | 0.4944 | - | 0.5247 | 0.4251 | - | - | - | - | - | - |
| Imports | - | 0.5302 | 0.5387 | 0.4251 | - | - | - | - | - | - |
| Exports | - | - | - | 0.4251 | - | - | - | - | - | - |
| Main activity elec. generation | 0.4944 | - | - | 0.4371 | - | - | - | - | - | - |
| Industry | 0.4944 | 0.5302 | - | - | - | - | - | - | - | - |
| Other uses | 0.4944 | 0.5302 | 0.5247 | 0.4251 | - | - | - | - | - | - |
| Lignite | | | | | | | | | | |
| Production | 0.2224 | - | - | 0.3455 | 0.3039 | - | - | - | 0.2148 | 0.1237 |
| Imports | - | 0.2153 | 0.1999 | 0.3455 | 0.3671 | - | - | 0.4060 | 0.3920 | 0.1237 |
| Exports | - | - | - | 0.3455 | 0.3763 | - | - | - | 0.2323 | - |
| Main activity elec. generation | 0.2391 | - | - | 0.3583 | 0.2970 | - | - | - | 0.2121 | 0.1237 |
| Industry | 0.2224 | 0.2389 | 0.1999 | - | 0.2942 | - | - | 0.4060 | 0.2463 | 0.1917 |
| Other uses | 0.2224 | 0.2187 | 0.1999 | 0.3455 | 0.3225 | - | - | 0.4060 | 0.2463 | 0.1237 |
| Patent fuel | - | 0.7405 | 0.7000 | - | - | - | - | 0.7643 | 0.7500 | - |
| Coke oven coke | 0.6126 | 0.6927 | 0.6615 | 0.6542 | 0.6521 | 0.6998 | 0.6998 | 0.6688 | 0.6843 | 0.7220 |
| Coal tar | 0.9200 | 0.9984 | - | - | 0.8837 | - | 0.8837 | 0.9076 | - | - |
| BKB | 0.5308 | 0.4610 | 0.4800 | - | 0.5255 | 0.4371 | - | - | 0.4884 | 0.3391 |
| Peat | - | 0.2102 | - | - | - | - | 0.2436 | - | - | - |
| Charcoal | - | 0.7404 | 0.7356 | - | - | - | - | - | - | 0.7404 |

Country specific net calorific values (tonne of oil equivalent per tonne)

2008

| | Hungary | Iceland | Ireland | Italy | Japan | Korea | Luxem- bourg | Mexico | Nether- lands | New Zealand |
|--------------------------------|---------|---------|---------|--------|--------|--------|-----------------|--------|------------------|----------------|
| Crude oil | | | | | | | | | | |
| Production | 0.9986 | - | - | 0.9998 | 1.0131 | 1.0199 | - | 1.0809 | 1.0199 | 1.0418 |
| Imports | 0.9983 | - | 1.0230 | 0.9998 | 1.0131 | 1.0199 | - | - | 1.0199 | 1.0028 |
| Exports | 0.9984 | - | - | 0.9998 | - | - | - | 1.0809 | 1.0199 | 1.0433 |
| Average | 0.9983 | - | 1.0230 | 0.9998 | 1.0131 | 1.0199 | - | 1.0809 | 1.0199 | 1.0294 |
| NGL | 1.0270 | - | - | - | 1.0440 | - | - | 1.0189 | 1.0509 | 1.0896 |
| Refinery feedstocks | 0.9984 | - | 1.0151 | 0.9998 | 1.0151 | 1.0700 | - | - | 1.0150 | 1.0450 |
| Additives | - | - | - | 0.6000 | - | 1.0000 | - | 1.0990 | 0.6000 | - |
| Other hydrocarbons | 0.9554 | - | - | - | - | - | - | - | - | - |
| Biogasoline | 0.6353 | - | 0.5754 | 0.6401 | - | - | 0.6449 | - | 0.6616 | - |
| Biodiesel | 0.8957 | - | 0.8903 | 0.8933 | - | 0.9126 | 0.8837 | - | 0.8837 | - |
| Other liquid biofuels | - | - | 0.8685 | 0.8766 | - | - | 0.8837 | - | 0.8718 | - |
| Anthracite | | | | | | | | | | |
| Production | - | - | - | - | - | 0.4600 | - | - | - | - |
| Imports | - | - | 0.6650 | - | 0.6296 | 0.6400 | 0.6998 | - | 0.6998 | - |
| Exports | - | - | - | - | - | - | - | - | 0.6998 | - |
| Main activity elec. generation | - | - | - | - | - | 0.4601 | - | - | - | - |
| Industry | - | - | - | - | - | 0.6400 | 0.6998 | - | 0.6998 | - |
| Other uses | - | - | 0.6650 | - | 0.6296 | 0.4600 | 0.6998 | - | 0.6998 | - |
| Coking coal | | | | | | | | | | |
| Production | - | - | - | - | - | - | - | 0.5609 | - | 0.7027 |
| Imports | 0.7507 | 0.6700 | - | 0.7400 | 0.6719 | 0.6750 | - | - | 0.6848 | 0.7027 |
| Exports | 0.7507 | - | - | - | - | - | - | - | 0.6848 | 0.7027 |
| Coke ovens | 0.7507 | - | - | 0.7400 | 0.6742 | 0.6750 | - | 0.5609 | 0.6848 | - |
| Main activity elec. generation | - | - | - | - | - | - | - | - | - | - |
| Industry | - | 0.6700 | - | - | - | 0.6750 | - | - | - | - |
| Other uses | 0.7507 | 0.6700 | - | 0.7400 | 0.6533 | 0.6750 | - | 0.5609 | 0.6848 | 0.7027 |
| Other bituminous coal | | | | | | | | | | |
| Production | - | - | - | 0.6350 | - | - | - | - | - | 0.6743 |
| Imports | 0.5751 | 0.6700 | 0.6649 | 0.6350 | 0.5924 | 0.5950 | 0.6998 | 0.5609 | 0.5891 | 0.6743 |
| Exports | - | - | 0.6650 | - | 0.5924 | - | - | - | 0.5891 | - |
| Coke ovens | - | - | - | - | 0.5924 | - | - | 0.5609 | - | - |
| Main activity elec. generation | 0.5388 | - | 0.6194 | 0.6096 | 0.5985 | 0.5950 | - | - | 0.5895 | - |
| Industry | 0.5847 | 0.6700 | 0.6650 | 0.6350 | 0.5924 | 0.5950 | 0.6998 | - | - | 0.6743 |
| Other uses | 0.5732 | 0.6700 | 0.6650 | 0.6350 | 0.5924 | 0.5949 | 0.6998 | 0.5609 | 0.5891 | 0.6743 |
| Sub-bituminous coal | | | | | | | | | | |
| Production | - | - | - | - | - | - | - | 0.4635 | - | 0.4923 |
| Imports | 0.3953 | - | - | - | - | 0.5000 | - | 0.4635 | - | 0.4923 |
| Exports | 0.3974 | - | - | - | - | - | - | - | - | - |
| Main activity elec. generation | 0.3847 | - | - | - | - | 0.5000 | - | 0.4774 | - | 0.5249 |
| Industry | 0.3822 | - | - | - | - | 0.4600 | - | 0.4635 | - | 0.4923 |
| Other uses | 0.4268 | - | - | - | - | 0.5000 | - | 0.4635 | - | 0.4923 |
| Lignite | | | | | | | | | | |
| Production | 0.1801 | - | - | - | - | - | - | - | - | 0.3196 |
| Imports | - | - | 0.4734 | 0.2500 | - | - | - | 0.3368 | 0.4777 | 0.3196 |
| Exports | 0.1947 | - | 0.4734 | - | - | - | - | - | - | - |
| Main activity elec. generation | 0.1764 | - | - | - | - | - | - | - | - | - |
| Industry | 0.3236 | - | - | 0.2500 | - | - | - | - | 0.4777 | 0.3196 |
| Other uses | 0.2584 | - | 0.4734 | 0.2500 | - | - | - | 0.3368 | 0.4777 | 0.3196 |
| Patent fuel | - | - | - | - | - | 0.4600 | - | - | 0.6998 | - |
| Coke oven coke | 0.7041 | 0.6370 | - | 0.6927 | 0.7022 | 0.7000 | - | 0.6334 | 0.6807 | 0.7046 |
| Coal tar | 0.9076 | - | - | - | 0.8453 | 0.8837 | - | - | 1.0008 | - |
| BKB | 0.4777 | - | 0.4430 | - | - | - | 0.4801 | - | - | - |
| Peat | - | - | 0.2088 | - | - | - | - | - | - | - |
| Charcoal | - | - | - | 0.7356 | 0.6998 | - | - | - | 0.7165 | - |

Country specific net calorific values (tonne of oil equivalent per tonne)

2008

| | Norway | Poland | Portugal | Slovak Republic | Spain | Sweden | Switzerland | Turkey | United Kingdom | United States |
|--------------------------------|--------|--------|----------|-----------------|--------|--------|-------------|--------|----------------|---------------|
| Crude oil | | | | | | | | | | |
| Production | 1.0190 | 1.0209 | - | 0.9840 | 1.0190 | - | - | 0.9881 | 1.0359 | 1.0333 |
| Imports | 1.0190 | 1.0151 | 1.0250 | 1.0031 | 1.0190 | 1.0070 | 1.0324 | 0.9929 | 1.0359 | 1.0306 |
| Exports | 1.0190 | 1.0209 | - | 0.9958 | - | - | - | - | 1.0359 | 1.0333 |
| Average | 1.0190 | 1.0152 | 1.0250 | 1.0030 | 1.0190 | 1.0070 | 1.0324 | 0.9917 | 1.0359 | 1.0293 |
| NGL | 1.0460 | - | - | 0.9840 | - | - | - | - | 1.0965 | 1.1077 |
| Refinery feedstocks | 1.0103 | 1.0150 | 1.0508 | 1.0476 | 1.0151 | 1.0567 | - | 1.0151 | 1.0150 | 1.0467 |
| Additives | - | 0.8208 | - | 1.0453 | 0.5995 | 0.6000 | 0.9870 | - | - | 0.6000 |
| Other hydrocarbons | - | 1.0151 | - | 0.9912 | - | - | - | - | - | 1.2182 |
| Biogasoline | - | 0.6377 | - | 0.5132 | 0.6400 | 0.6422 | 0.6335 | 0.6401 | 0.6401 | 0.6388 |
| Biodiesel | 0.8790 | 0.9004 | 0.8837 | 0.9591 | 0.8800 | 0.8960 | 0.7653 | 0.8848 | 0.8790 | 0.9777 |
| Other liquid biofuels | - | 0.9004 | 0.8790 | - | - | 1.0054 | - | - | - | 0.5155 |
| Anthracite | | | | | | | | | | |
| Production | - | - | - | - | 0.4404 | - | - | - | - | 0.6878 |
| Imports | - | - | 0.6506 | 0.6555 | 0.6262 | - | 0.6712 | - | - | 0.6933 |
| Exports | - | - | 0.6506 | - | 0.6043 | - | - | - | - | 0.6878 |
| Main activity elec. generation | - | - | - | 0.6119 | 0.4989 | - | - | - | - | 0.3163 |
| Industry | - | - | 0.6506 | 0.6555 | 0.6031 | - | 0.6712 | - | - | 0.4855 |
| Other uses | - | - | 0.6506 | 0.6555 | 0.6425 | - | 0.6712 | - | - | 0.5468 |
| Coking coal | | | | | | | | | | |
| Production | - | 0.7060 | - | - | - | - | - | 0.6272 | 0.7261 | 0.6756 |
| Imports | - | 0.7065 | - | 0.6671 | 0.7168 | 0.7165 | - | 0.6886 | 0.6903 | 0.6736 |
| Exports | - | 0.7079 | - | - | - | - | - | - | 0.7261 | 0.6584 |
| Coke ovens | - | 0.7069 | - | 0.6671 | 0.7168 | 0.7165 | - | 0.6973 | 0.7404 | 0.7081 |
| Main activity elec. generation | - | 0.6689 | - | - | - | - | - | - | - | - |
| Industry | - | 0.6939 | - | - | - | - | - | 0.6420 | 0.7261 | - |
| Other uses | - | 0.7066 | - | 0.6671 | 0.7168 | 0.7165 | - | 0.6451 | 0.7261 | 0.6815 |
| Other bituminous coal | | | | | | | | | | |
| Production | 0.6712 | 0.5489 | - | - | 0.4589 | - | - | 0.3822 | 0.5971 | 0.6411 |
| Imports | 0.6712 | 0.5773 | 0.6064 | 0.6175 | 0.5639 | 0.6544 | 0.6712 | 0.6357 | 0.6019 | 0.6189 |
| Exports | 0.6712 | 0.6628 | 0.6116 | - | 0.5735 | 0.6544 | - | - | 0.7309 | 0.6555 |
| Coke ovens | - | - | - | - | - | - | - | - | - | - |
| Main activity elec. generation | 0.6712 | 0.5148 | 0.6063 | 0.6018 | 0.5504 | 0.6664 | - | 0.5161 | 0.5937 | 0.6156 |
| Industry | 0.6712 | 0.5500 | 0.6168 | 0.6175 | 0.5780 | 0.6415 | 0.6712 | 0.6479 | 0.6138 | 0.6516 |
| Other uses | 0.6712 | 0.6113 | 0.6168 | 0.6175 | 0.6222 | 0.6544 | 0.6712 | 0.6435 | 0.5923 | 0.6519 |
| Sub-bituminous coal | | | | | | | | | | |
| Production | - | - | - | - | 0.3118 | - | - | 0.4200 | - | 0.4541 |
| Imports | - | - | - | - | - | - | - | - | - | 0.4789 |
| Exports | - | - | - | - | - | - | - | - | - | 0.4506 |
| Main activity elec. generation | - | - | - | - | 0.3027 | - | - | - | - | 0.4603 |
| Industry | - | - | - | - | - | - | - | 0.4200 | - | 0.4754 |
| Other uses | - | - | - | - | 0.3118 | - | - | 0.4200 | - | 0.4451 |
| Lignite | | | | | | | | | | |
| Production | - | 0.2133 | - | 0.2574 | - | - | - | 0.1996 | - | 0.3328 |
| Imports | - | 0.2071 | - | 0.3405 | - | - | 0.4801 | - | - | 0.3304 |
| Exports | - | 0.2131 | - | - | - | - | - | - | - | 0.3323 |
| Main activity elec. generation | - | 0.2123 | - | 0.2439 | - | - | - | 0.1600 | - | 0.3419 |
| Industry | - | 0.2134 | - | 0.2699 | - | - | 0.4801 | 0.4792 | - | 0.3523 |
| Other uses | - | 0.2451 | - | 0.2699 | - | - | 0.4801 | 0.4531 | - | 0.3555 |
| Patent fuel | - | 0.5532 | - | 0.6688 | - | - | - | - | 0.7404 | 0.5485 |
| Coke oven coke | 0.6807 | 0.6631 | 0.7080 | 0.6561 | 0.7199 | 0.6707 | 0.6712 | 0.6805 | 0.6759 | 0.6889 |
| Coal tar | - | 0.9009 | - | 0.7999 | 0.9200 | - | - | - | - | - |
| BKB | - | 0.4158 | - | 0.4419 | - | - | - | 0.4400 | - | - |
| Peat | - | - | - | - | - | 0.2986 | - | - | - | - |
| Charcoal | - | - | - | - | - | - | - | - | - | - |

PART II

WORLD ELECTRICITY DEVELOPMENTS

1 SUMMARY

Electricity demand in the OECD in 2009 saw the largest year-on-year decrease that has occurred since the IEA time series began in 1960. The 4.2% decline in gross electricity production reflects the overall OECD energy situation, with TPES decreasing by 4.6% in 2009. Though other factors may have contributed, the drop in electricity demand can to a large extent be explained by the global recession and slowdown in economic activity.

Production

Between 1973 and 2008, world electricity production increased from 6 129 TWh to 20 269 TWh, an average annual growth rate of 3.5%. In 1973, 72.9% of electricity production was in countries that are currently members of the OECD. By 2008, the share had declined to 53.0%.

The increasing share of Non-OECD countries in total world electricity production reflects the higher average growth rate which has prevailed since 1973. In the last 35 years, electricity production has increased at an average annual rate of 5.1% in Non-OECD countries, while in OECD countries the average annual growth rate during the same period is 2.5%.

In 2008, 67.5% of world electricity production was from generating plants burning fossil fuel. Hydroelectric plants provided 16.2%, nuclear plants 13.5%, combustible renewables and waste 1.3%, and geothermal, solar, wind and other sources made up the remaining 1.5% (Table 1.2).

World heat production, which was sold to third parties, was 13 261 PJ in 2008, a decline of 2.3% from the level reported in 2007. Of the reported 2008 world heat production, 23% was in OECD member countries.

OECD production

Gross electricity production in 2009 in the OECD (including generation from pumped storage plants) was 10 295 TWh, a decrease of 4.2% from the 2008 level, and the lowest level since 2004. Since the beginning of the IEA time series on OECD gross electricity production, there have been only three years when it has declined. This year, 2009, was the largest decline experience by the OECD in any of those years. (Tables 1.1 and 2.1).

Nuclear plants accounted for 21.7% of total gross electricity production, hydroelectric plants 13.1%, total combustible fuel¹ plants 62.4% (made up of 60.2% from fossil-fuel-fired plants and 2.2% from combustible renewables and waste plants) and geothermal, solar, wind and other plants 2.7% (Table 2.2).

Total OECD heat production in 2009 was 2 943 PJ, a decrease of 3.4% from the level reported in 2008, and the lowest level since 2002.

The majority of heat production came from combustible fuels, 81.6% coming from fossil fuels (45.7% from gas, 27.8% from coal and 8% from oil) and 16% coming from combustible renewables and waste.

Non-OECD production

While complete statistics are not available for electricity production in all Non-OECD countries for 2009, comprehensive data are available for 2008. Gross electricity production in 2008 in Non-OECD countries was 9 524 TWh (Table 1.1), an increase of 4.0% from

1. Combustible fuels refer to fuel that are capable of igniting or burning, *i.e.* reacting with oxygen to produce a significant rise in temperature. Fuels included are: coal and coal products, oil and oil products, natural gas and combustible renewables and waste including solid biomass and animal products, gas/liquids from biomass, industrial waste and municipal waste.

the 2007 level. OECD electricity production in 2008 increased 0.1% from the level reported in 2007.

In 2008, 74.1% of Non-OECD electricity production was generated from fossil fuels, 20.0% was provided by hydroelectric plants, 4.8% by nuclear plants and 1.1% by combustible renewables/waste and geothermal/solar/wind capacity (Table 1.2).

In 2008, total Non-OECD heat production was 10 215 PJ - a decrease of 2.7% from the 2007 reported level. Around 77% of the reported world heat production in 2008 was in Non-OECD countries, with the Russian Federation accounting for almost 45%.

Consumption

OECD consumption

In 2008, final electricity consumption was 9 244 TWh, a small increase from 2007.

Based on preliminary data, 2009 apparent consumption of electricity (gross production plus imports minus exports) in the OECD was 10 308 TWh. The corresponding figure for 2008 was 10 756 TWh, indicating a 4.2% decline in apparent electricity consumption in OECD countries in 2009, and the lowest level since 2004. It was also the largest decrease in consumption that has occurred since the time series began in 1960.

Non-OECD consumption

In 2008, calculated *final* electricity consumption, which is equal to production plus imports minus exports, own use, other use, transmission losses and energy sector consumption, in Non-OECD countries was 7 572 TWh (Table 1.1). This represents an increase of 4.6% over the observed *final* consumption in 2007.

Trade

Often when reporting electricity flows, countries use electricity trade as a “balancing” item. This leads to some distortion of the import and export data. In addition, the transmission and distribution line losses

between net importers and net exporters is difficult to determine. Both of these factors lead to differences between reported net imports for OECD countries and reported net exports for Non-OECD countries.

OECD trade

OECD countries imported 401 TWh of electricity (including from other OECD countries) in 2008 and exported 390 TWh (including to other OECD countries). Accordingly, net imports of electricity in 2008 amounted to 11.1 TWh (Table 1.1).

Preliminary data suggest that in 2009, OECD countries imported 372 TWh, and exported 360 TWh, resulting in net imports of 12.2 TWh (Table 2.1).

Non-OECD trade

In 2008, Non-OECD countries imported 213 TWh and exported 226 TWh of electricity. The resulting net exports amounted to 12.8 TWh.

OECD prices

Average real electricity price (as measured by the indices of real energy prices) in the OECD increased by 3.3% in 2009 from 2008 levels. Prices for industry increased by 6.2% and prices for households increased by 1.7% (Table 3.1).

Electricity prices for industrial consumers vary widely across OECD countries. Based on available 2009 data, prices were the lowest in Korea (5.8 US cents per kWh), while they were the highest in Italy (27.6 US cents per kWh) (Table 3.5). In 2009, based on available data, the average industry price for electricity in OECD countries was 12.9 US cents per kWh.

Electricity prices for residential consumers also vary widely across OECD countries and are typically higher than industrial electricity prices. Based on data that are available for 2009, prices varied from 7.7 US cents per kWh in Korea to 36.5 US cents per kWh in Denmark (Table 3.7). In 2009, based on available data, the average household price for electricity in OECD countries was 20 US cents per kWh.

2. PRODUCTION AND INSTALLED CAPACITY

OECD production and installed capacity

By convention, the reported value for electricity generation is the amount of gross production less the amount of electricity generated in pumped storage plants. On this basis, 2008 OECD electricity generated was 10 676 TWh and gross electricity production was 10 745 TWh (Table 2.6).

Total available electricity supplied in OECD countries in 2008 was 10 172 TWh. In deriving this figure, electricity used within power stations for their own use (490 TWh) is subtracted from total gross electricity production (10 745 TWh) to determine net production (10 255 TWh). From this, use for heat pumps (1.8 TWh), electric boilers (2.0 TWh), pumped storage (90.0 TWh) and exports (390 TWh) are then deducted and the supply of imports (401 TWh) is added.

In 2008, the OECD countries reported 2 842 GW of total installed capacity, a 2.1% increase from 2007 (Table 2.7). This consisted of 1 609 GW of plants fired by fossil and other combustible fuels, 312 GW nuclear power, 444 GW hydroelectric power (including pumped storage capacity) and 118 GW of solar, wind, geothermal, tide/wave/ocean and other capacity combined (Table 2.7). Of this 118 GW, wind accounted for 96 GW and solar for 14 GW. A total of 51.5 GW capacity was added in 2008, the biggest contributors being combustible fuels (49%), wind (36%) and solar (11%).

Total generating capacity in the OECD increased at an average annual rate of 3.5% between 1974 and 1990, with nuclear, hydroelectric and combustible fuel capacity increasing by 10.6%, 4.7%, and 2.2%, respectively. Between 1990 and 2008 the total generating

capacity increased at an average annual rate of 2.1%, with nuclear, hydroelectric and combustible fuels increasing by 0.9%, 1.0%, and 2.3%, respectively. In this period there were also substantial additions of solar and wind capacity, both increasing at an average annual rate of 22.8% as many countries began to emphasise renewable energy resources that do not emit greenhouse gases.

The growth of total capacity additions has slowed since 1990. This is partly attributable to economic evolution, which has resulted in the growth of less energy intensive service industries. The OECD-wide pattern of electric power capacity and production conceals large differences between countries. These differences reflect different resource endowments and economics of electricity generation as well as different policy approaches between countries. Data on the growth and type of installed capacity in individual OECD countries and regions are reported in detail in Table 15 in Part IV of this report. The fuel used in individual OECD countries in the production of electricity is illustrated in the graphs in Part IV.

Hydroelectric power

Hydroelectric plants produced 1 353 TWh, or 13.1% of total gross production in the OECD in 2009, marginally lower than in 2008 (1 381 TWh accounting for 12.9% of total gross production) (Tables 1.2 and 2.2).

In 2008, total¹ OECD hydroelectric capacity was 444 GW and accounted for 17.9% of net maximum installed electric capacity in the OECD. Hydroelectric development in the OECD is fairly matured so

1. Main activity producers and autoproducers reported for IEA countries plus Iceland and Mexico.

suitable and environmentally acceptable sites are increasingly difficult to locate and would yield lower load factors than the capacity in place. Many of the civil works associated with existing capacity (waterways, tunnels, conduits) have been developed, maintained or replaced over the last century. As a result, growth of the OECD's hydroelectric capacity has slowed since 1990.

Nuclear power

Nuclear power stations in the OECD produced 2 235 TWh of electricity in 2009, accounting for 21.7% of total gross electricity production. This was slightly less than in 2008 (2 272 TWh accounting for 21.1% of total gross production) (Tables 1.2 and 2.2). OECD nuclear electricity production increased at an average annual rate of 7.4% between 1973 and 2008 (Table 2.6). This growth mainly reflects new capacity additions in the 1970s (between 7 and 14 GW per year) and the 1980s (between 6 and 25 GW per year).

In 2008 total nuclear power capacity in the OECD was 313 GW and accounted for 12.6 % of generating capacity (Table 2.7). Since the peak in 1985, however, annual additions have declined sharply and fewer orders have been placed. From 1990 to 2008, installed capacity increased at an average annual rate of 0.9%. The highest level of nuclear capacity was reached in 2005 (314 GW), declining slightly since then.

Of the 17 OECD countries with nuclear capacity, the share of nuclear electricity production in total gross production exceeded 40% in five countries in 2009. The average share for the 17 countries was 31%, with values as high as 75.6% in France, 53.7% in the Slovak Republic, 51.9% in Belgium, 43% in Hungary and 40.4% in Switzerland (Table 2.2).

Geothermal, solar, tide, wave and wind power

In 2009, OECD electricity production from geothermal, solar, wind, tide, wave, ocean and other sources was 281 TWh, or 2.7% of total gross electricity production. Of this, 216 TWh was from wind, 41.5 TWh from geothermal, 19.7 TWh from solar and 3.7 TWh from tide, wave, ocean and other sources. Production of geothermal electricity increased at an average annual rate of 5.4% between 1973 and 2008 (Table 2.6). In 2009 production increased marginally by 1%. Production of electricity from wind sources has expanded significantly since the mid-1980s, increasing from 0.1 TWh in 1985 to 216 TWh in 2009,

with an average annual growth rate from 1990 to 2009 of 23.6%. Solar electricity production increased at an average rate of 19% from 1990 to 2009 with particularly strong growth in 2008 (64%) and 2009 (55%). In 2009, production from tide, wave and ocean power was 0.5 TWh, while production from other sources (including electricity generated from waste heat and heat from chemical processes) was 3.2 TWh.

In 2008, OECD countries reported 5.7 GW of geothermal, 14.2 GW of solar, 96.3 GW of wind and 1.4 GW of tide, wave, ocean and other sources electricity generating capacity. The overall capacity addition from this group of technologies in 2008 was 24.3 GW, an increase of 26% from 2007. Solar electricity generating capacity experienced the strongest growth in terms of percentage with the addition of 5.7 GW in 2008, an increase of 67.6%. Wind also experienced strong growth with the addition of 18.3 GW capacity in 2008, an increase of 23.5%. The historical data on capacities are presented in Table 15 in Part IV for individual countries, where available.

Measuring the generating capacity of renewable-powered plants can be relatively simple, as in the case of geothermal plants, or difficult in the case of solar, wind and wave plants. In the latter cases, units tend to be quite small - ranging from a few kilowatts to at most 4 MW - and they are often installed by non-utility (end-user or independent) generators. Data on output from these types of small units are often less readily available than those on capacity.

The prospects for power generation from more intermittent renewable sources, especially wind, have improved as costs have declined and technology improved. The contribution from such sources will depend on their degree of dispersion geographically, the mix of energy sources and the generation flexibility of the rest of the system. Electric utilities have indicated that up to 10% to 15% of electricity generation from dispersed, intermittent sources could be managed easily, but generation beyond that share could affect system reliability.

Combustible fuels

In 2009, electricity production from combustible fuels (fossil fuels and combustible renewables and waste in both electricity and CHP plants) was 6 428 TWh and accounted for 62.4% of total gross electricity produced in OECD countries (Table 2.2). In 1973, combustible fuel-fired power plants produced 3 346 TWh and accounted for 74.9% of total gross electricity

produced (Table 1.2). In the period 1973 to 1990, electricity production from combustible fuels increased more slowly than total gross production, as a large amount of nuclear capacity was added. This trend reversed after 1985 when electricity production from combustible fuels began growing at a faster rate as nuclear capacity additions began to slow. In the period 1990 to 2008 electricity production from combustible fuels increased at a 2.2% annual rate, slightly higher than the 1.9% rate for total electricity production (Table 2.6).

In the period 1974 to 1990 combustible fuel-fired capacity increased at an average annual rate of 2.2% (Table 2.7), and between 1990 and 2008 at an annual average rate of 2.3%.²

Since 1960, not only did the share of electricity produced from combustible fuels vary between 59.4% and 74.9%, but the pattern of fuel used for electricity generation in electricity and CHP plants has also varied greatly (Tables 2.9 and 2.10).

Coal

Hard coal is the leading source of electric power generation in the OECD. In 2009, hard coal-fired electricity and CHP plants produced 2 952 TWh of electricity, contributing 45.9% of OECD production using only combustible fuels, or 28.7% of OECD total electricity production from all sources (Table 2.4). This was a decline of 8.2% from the 3 214 TWh produced in 2008 (Table 1.3). Electricity production from all coal sources, including peat and coal derived gases, was 3 578 TWh in 2009, a decline of 7.8% from the 3 882 TWh produced in 2008 and the lowest level since 1999. This decrease reflects the decline in total electricity production in 2009, although coal-fired production declined by a larger percentage than the average. This was partly due to prices of natural gas becoming more competitive relative to coal. IEA coal-fired capacity at the end of 2008 was 552 GW or 22.8% of total IEA capacity (Table 2.12).

Oil

In 2009, liquid fuel-fired (including refinery gas) electricity and CHP plants produced 310 TWh of electricity,

contributing 4.8% of OECD combustible fuel-fired production or 3.0% of total gross OECD electricity production. This was a decline of 18.0% from the 378 TWh produced in 2008 (Table 1.3). IEA oil-fired capacity at the end of 2008 was 135 GW or 5.6% of total IEA capacity (Table 2.12).

Gas

In 2009, gas-fired (including gas works gas) electricity and CHP plants produced 2 314 TWh of electricity, contributing 36.0% of OECD combustible fuel-fired production or 22.5% of total gross OECD electricity production (Table 2.4). This was a decline of 2.0% from the 2 365 TWh produced in 2008. IEA gas-fired capacity at the end of 2008 was 592 GW or 24.5% of total IEA capacity (Table 2.12).

Combustible renewables and waste

This category of fuels comprises the non-fossil fuels that are used for electricity and/or heat production. The category is divided into five sub-categories: wood/wood waste/other solid waste, industrial waste, municipal waste (renewable and non-renewable), biogas (landfill gas, sewage sludge gas and other biogas) and liquid biofuels and waste.

The available data on the use of these fuels for electricity generation continues to improve. The rapid development of statistics in this area causes some data revisions from one year to the next and this results in major breaks in the series between years as new data series begin to be collected and reported to the IEA. Analysis of trends in the use of these fuels must take into account these statistical difficulties.

In 2009, combustible renewables and waste were used in electricity and CHP plants to produce 226 TWh of electricity, contributing 3.5% of OECD production using only combustible fuels or 2.2% of OECD total electricity production from all sources. This was an increase of 2.3% from the 221 TWh produced in 2008. Electricity production from combustible renewables and waste has increased most rapidly since 1992, when efforts to reduce CO₂ emissions from fossil fuels were formalised. Capacity at the end of 2008 was slightly under 20 GW, representing 0.8% of total IEA capacity (Table 2.12).

Heat production

In OECD countries (as in other market economies), data collected on heat production are generally confined to main activity producers, *i.e.* units whose

2. Electricity generating capacity of combustible fuel-fired plants is shown for historical years and 2008 in Table 2.12 where available. The capacity data should be viewed with caution since a large group of the IEA countries (Canada, Czech Republic, France, Germany, the Netherlands and Spain) did not submit the breakdown of combustible fuels by fuel type.

primary activity is to generate energy for public consumption. Data on heat produced by autoproducers relate only to the quantity of heat produced for sale to third parties. The quantity of heat produced and consumed by autoproducers for their own use is not generally measured, although the fuel used to produce the heat is generally measured and available.³

The term “district heat” refers to a particular end-use market for heat. Heat produced and distributed for district heating and other purposes can be produced in CHP plants or in plants designed to only produce heat (called here “Heat Plants”).

In 2008 total OECD heat production that was sold to third parties was 3 046 PJ (Table 2.8). Over 80% of this heat (2 457 PJ) was produced in CHP plants and the rest (589 PJ) in heat plants.

Increasing concern about environmental effects of energy use has led to policies encouraging the development and use of new technologies that increase the efficiency of electricity and heat production. Reflecting such policies and other economic and social factors, large scale main activity producer CHP systems have been built in some member countries. In many cases the heat produced in these CHP plants is sold for district heating. Previously CHP systems tended to be confined to small scale applications in industry.

Direct use of heat

Direct use refers to the use of an energy carrier in its primary form at the point of production; this is separate and additional from heat sold to third parties which is generally transported via a heating network. Heat is used directly in final consumption sectors (residential, industry, commercial and public service, etc.). It should be noted that the data on direct use of heat are included in total final consumption in Table 2.16, but are not included in heat production sold to third parties in Table 6 of Part IV.

At the present time data on direct use of heat are reported by 28 countries. These data are summarised in the following table.

3. Austria, Finland, Iceland, Japan, Norway, the Slovak Republic and Sweden report heat produced by electric boilers and the Czech Republic, Denmark, Finland, Norway, the Slovak Republic, Sweden and Switzerland report heat produced by heat pumps.

2008 Direct use of solar/geothermal heat in the OECD in TJ

| | Geothermal | Solar | Total |
|-----------------|----------------|----------------|----------------|
| Australia | 0 | 6 526 | 6 526 |
| Austria | 240 | 4 829 | 5 069 |
| Belgium | 59 | 245 | 304 |
| Czech Republic | 0 | 202 | 202 |
| Denmark | 0 | 202 | 202 |
| Finland | 0 | 442 | 442 |
| France | 4 777 | 1 839 | 6 616 |
| Germany | 8 471 | 14 872 | 23 343 |
| Greece | 712 | 7 247 | 7 959 |
| Hungary | 3 790 | 158 | 3 948 |
| Iceland | 15 663 | 0 | 15 663 |
| Ireland | 170 | 121 | 291 |
| Italy | 8 916 | 2 800 | 11 716 |
| Japan | 8 456 | 21 335 | 29 791 |
| Korea | 658 | 1 174 | 1 832 |
| Luxembourg | 0 | 20 | 20 |
| Mexico | 0 | 5 584 | 5 584 |
| Netherlands | 96 | 879 | 975 |
| New Zealand | 9 759 | 320 | 10 079 |
| Poland | 502 | 51 | 553 |
| Portugal | 430 | 1 266 | 1 696 |
| Slovak Republic | 70 | 1 | 71 |
| Spain | 343 | 5 379 | 5 722 |
| Sweden | 0 | 396 | 396 |
| Switzerland | 8 096 | 1 257 | 9 353 |
| Turkey | 42 329 | 17 584 | 59 913 |
| United Kingdom | 33 | 2 333 | 2 366 |
| United States | 48 743 | 57 326 | 106 069 |
| Total | 162 313 | 154 388 | 316 701 |

Direct use of solar/geothermal heat was 317 PJ in 2008, an increase of 6.4% from the 298 PJ reported in 2007. Just over 50% of the directly used heat was produced by geothermal sources and just under 50% by solar sources.

Non-OECD production

Gross electricity production in 2008 in Non-OECD countries (including generation from pumped storage plants) was 9 524 TWh (Table 1.1), an increase of 4.0% from the level reported in 2007. Gross electricity production by Non-OECD countries increased at an average annual rate of 5.1% between 1973 and 2008. Non-OECD countries' share of world electricity production increased from 27% in 1973 to 47% in 2008 as these countries have continued to expand their electricity grids to those previously without electricity.

Hydroelectric power

Hydroelectric plants produced 1 906 TWh or 20% of total gross production reported for Non-OECD countries in 2008 (Table 1.2). This represents a 4.7% increase over the 1 822 TWh reported for 2007. Hydroelectric production reported by Non-OECD countries increased at an annual average rate of 4.8% between 1973 and 2008.

Nuclear power

Nuclear power plants produced 458 TWh or 4.8% of total gross production reported for Non-OECD countries for 2008 (Table 1.2). This was an increase of 2.6% compared to the 2007 level. Nuclear generation growth in Non-OECD countries expanded very rapidly from 1973 to 1985 with an annual average rate of 26%. Since, growth was noticeably lower with an annual average rate of 3% from 1985 to 2008.

Geothermal, solar, tide, wave and wind power

Excluding hydroelectricity, non-combustible renewable energy represents only a fraction of total electricity production in Non-OECD countries. In 2008, 55.2 TWh, or 0.58% of total reported electricity production was provided by geothermal, solar, tide, wave and wind power facilities (Table 1.2).

Compared to 2007 levels, electricity production from geothermal sources increased by 9.5% in 2008, production from wind sources increased by 47.8%, and production from solar increased by 28%.

Combustible fuels

In 2008, electricity production from electricity and CHP plants that use combustible fuels (including fossil fuels and combustible renewables and waste) was 7 104 TWh. Combustible fuels comprised, by far, the largest component of Non-OECD countries' gross electricity production in 2008 with a share of 74.1% (Table 1.2). Generation from these sources increased at an average annual rate of 5% from 1973 to 2008 - similar to the average growth rate for electricity production over that time frame. Under the current circumstances, combustible fuels will remain a very important component of Non-OECD electricity production.

Coal

As with the OECD countries, hard coal is the leading source of electricity production in Non-OECD countries. In 2008, electricity production from hard coal-fired electricity and CHP plants was 4 049 TWh,

contributing 57% of combustible fuel-fired production or 42.5% of total production (Table 1.3). Electricity generation from hard coal increased by 2.9% from its 2007 level. Hard coal generation in Non-OECD countries has increased at an average annual rate of 5.6% since 1978 keeping the pace with the rate of total generation growth.

Electricity production from all coal sources, including brown coal, peat and coal gases, was 4 381 TWh in 2008, contributing 61.7% of total gross electricity production.

Other non-fossil solid fuels provided 46.3 TWh of electricity production in 2008. Production from these sources contributed 0.65% of total generation, and increased by 10% from its 2007 level.

Oil

In 2008, liquid fuel-fired (including refinery gas) electricity and CHP plants produced 733 TWh of electricity, contributing 10.3% of combustible fuel-fired generation and 7.7% of total gross generation (Table 1.3). Electricity from oil has become less important in Non-OECD countries over time, with its share of total generation declining gradually from 23% in 1973, when the world experienced the first major oil disruption.

Gas

In 2008, gas-fired (including gas works gas) electricity and CHP plants produced 1 944 TWh of electricity, contributing 27.4% of combustible fuel-fired generation or 20.4% of total gross electricity production (Table 1.3). Electricity generation from gas increased by 5.5% in 2008. The proportion of electricity produced with gas increased until the mid 1980's and has since stayed around 20%, indicating that gas generation is growing at about the same rate as total generation.

Combustible renewables and waste

In 2008, combustible renewables and waste were used in electricity and CHP plants to produce 46.5 TWh of electricity, contributing 0.7% of combustible fuel-fired generation (Table 1.2). Electricity generation from this source has grown more slowly than that from other sources and so its share of total gross electricity generation decreased from 1.5% in 1973 to 0.5% in 2008.

Heat production

In 2008, total Non-OECD heat production was 10 215 PJ, a decline of 2.7% from the 2007 level. The majority (96.5%) of this heat was produced by burning combustible fuels (Table 1.4). The remaining

3.5% was provided by nuclear, heat pumps, electric boilers, solar, chemical heat and other sources. (Please note that Table 1.4 does not show a complete breakdown of the heat production by fuel due to a lack of information for several non-OECD countries, mainly in Europe.)

By far the largest component of heat is produced from natural gas. In 2008, 5 054 PJ, or 49.5% of total heat sold in non-OECD countries came from natural gas. Reported heat production from natural gas declined by 4.5% in 2008.

The second largest component of heat sold to third parties is produced from coal. Heat produced from hard coal was 3 477 PJ, brown coal heat production was 491 PJ, production from peat was 5.6 PJ and

production from coal gases was 169 PJ. Combined, these fossil fuels provided 41% of heat production in 2008. Heat production from hard coal has increased since the late 1990s; however heat production from brown coal and peat has declined sharply.

Heat production from oil was 504 PJ in 2008, contributing 4.9% of total heat production. This represents a decrease of 6.2% from its 2007 level.

The other significant source of combustible fuel-fired heat generation is non-fossil fuels like wood, industrial and municipal wastes, other solid waste, biogas and liquid biofuels. Heat produced from these sources was 158 PJ in 2008, the same level as in 2007. Combustible renewables and waste provided 1.5% of total heat production in 2008.

3. ELECTRICITY CONSUMPTION

OECD consumption

Based on 2009 preliminary data, OECD apparent consumption of electricity (gross production plus imports minus exports) was 10 308 TWh (Table 2.1), a decrease of 4.2% from the 2008 level (10 756 TWh), and the lowest level since 2004. This was the largest year-on-year decrease that has occurred since the time series began in 1960. (Detailed information on observed electricity consumption for the OECD in 2009 is unavailable at the time of going to print.)

OECD electricity consumption for 2008, and for selected earlier years, is shown in Tables 2.6 and 2.13. Electricity final consumption refers to electricity production plus imports minus exports minus electricity used at power stations (own use) minus electricity used for pumped storage, heat pumps and electric boilers, minus transmission and distribution losses, minus energy industry consumption. Accordingly, final electricity consumption is significantly lower than apparent consumption data reported above.

OECD electricity consumption has grown from 3 886 TWh in 1973 to 9 513 TWh in 2008 representing an average annual increase of 2.6% (Table 2.14).

The rate of growth in electricity consumption varies widely among OECD countries. Between 1960 and 1973 the annual average rate of growth of electricity consumption exceeded 10% in Denmark, Greece, Iceland, Japan, Spain and Turkey. Since 1973 the growth in electricity consumption has slowed considerably. The only countries that experienced average annual growth rates over 5% are Iceland, Korea, Mexico, Portugal and Turkey (Table 2.13).

OECD sectoral consumption of electricity

Much of the growth in OECD electricity consumption since 1973 has taken place in the residential and commercial/public service sectors. The combined share of total consumption of the residential and commercial/public service sectors increased from 46.5% in 1973 to 60.4% in 2008 (Table 2.14). Although the amount of electricity consumed in industry increased from 1 836 TWh in 1973 to 3 099 TWh in 2008 (Table 2.14), its share of total electricity consumption in the OECD fell from 47.3% in 1973 to 32.6% in 2008. The transport (mainly rail), agriculture (mainly irrigation pumps) and fishing sectors are relatively small consumers of electricity.

Although industry is the most significant end-use sector for electricity consumption, growth rates since 1973 have been the lowest of the major sectors. This is the result of low rates of economic growth, structural change and improvements in efficiency in energy intensive manufacturing and processing industries. OECD industrial electricity consumption decreased by 1.6% in 2008, with the largest decreases in the iron and steel, chemical and petrochemical and paper, pulp and print industries. (Table 2.15).

These data for the OECD as a whole conceal important regional differences that are shown in Table 11 for the separate OECD regions in Part IV of this report.

Non-OECD consumption

Calculated electricity consumption in 2008 in Non-OECD countries was 7 572 TWh (Table 1.1), an increase of 4.5% from the observed consumption in

2007. Between 1973 and 2008, electricity consumption increased at an average annual rate of 5.1%. Non-OECD countries' share of world electricity consumption increased from 26% in 1973 to 45% in 2008.

The four highest consumers of electricity in Non-OECD countries in 2008, the People's Republic of China, the Russian Federation, India and Brazil, represent 60% of Non-OECD electricity consumption. The largest share is represented by the People's Republic of China at 37.5%. Between 1973 and 2008 electricity consumption in the People's Republic of China increased at an average annual growth rate of 9%.

Transformation and distribution losses represent 11% of electricity supply for Non-OECD countries (6.5% for OECD countries). Losses can reach over 25% of the electricity supply in some Non-OECD countries such as India, Venezuela and Syria.

OECD heat consumption

OECD heat consumption in 2008 was 2 473 PJ, a decline of 1.1% from the 2007 level (Table 2.16)¹. Of total OECD reported heat consumption, 78% occurred in Europe, mainly in France, Germany, Italy, Poland, Finland and Sweden. In fact, these countries together accounted for 54% of OECD heat consumption in 2008. Korea and the United States account for large shares of the remainder. Over the same period, heat consumption has declined in Hungary, Poland and Canada as older heat plants have been closed and replaced with decentralised heat (and not reported in the questionnaire) in some areas, while growth has been particularly strong in Austria, Denmark, Finland, France, Iceland, Japan, Portugal and the United Kingdom.

In 2008, 41.7% of third party heat consumed in OECD countries was used in the industrial sector, 31.1% in the residential sector and 18.8% in the commercial/public services sector (Table 2.17).

OECD market shares

Although electricity has certain unique uses it also competes with other energy carriers in many end-use markets throughout the economies of OECD countries.

1. These data do not include the consumption of heat produced in industrial plants or service industries for their own use. In this section heat consumption refers to heat sold to third parties by both main activity producers and autoproducers.

The pattern of use is shown in Table 2.18 in which the share of electricity, heat and other fuels, in total final energy consumption in 2008 in the OECD region as a whole is reported for the major economic sectors.

In 2008, 21.5% (795 Mtoe) of total final consumption of energy in the OECD countries was met by electricity and about 1.6% (59.1 Mtoe) by heat (Table 2.18). Crude oil and petroleum products held a 48.8% share of final consumption (1 802 Mtoe), natural gas 20% (737 Mtoe), coal 3.7% (135 Mtoe), combustible renewables and waste 4.3% (160 Mtoe), and geothermal and solar 0.2% (7.6 Mtoe).

Electricity plays an important part in the industry, residential and commercial/public service sectors. These three sectors accounted for 93% of electricity consumption in 2008 (Table 2.14). In the transport sector almost 95% of final energy is consumed in the form of oil and petroleum products. However, electricity competes with petroleum products in transport in the rail sector and to support the operations of both submarine and overland pipelines. Similarly, in agriculture and fishing, over 75% of final energy is consumed in the form of oil and petroleum products. However, electricity holds a 12% share of final consumption, higher than the share held by natural gas (5.9%).

Although 33% of electricity consumed in 2008 was by the industry sector (Table 2.14), electricity accounted for a 31% share of final energy consumption in this sector (Table 2.18). Electricity's main competitors in the industry sector are natural gas and petroleum products, with shares of 30% and 15%, respectively, and coal and combustible renewables and waste which combined held a share of 21%.

In the commercial/public services sector (which accounted for 30% of electricity consumption in 2008) (Table 2.14), electricity use is dominant over other fuels. Electricity's share in 2008 was 51% of the total final energy consumption in this sector compared to gas' share of 31% and petroleum products' share of 14% (Table 2.18). Heat contributed about 2% of final energy in the sector in 2008 in the OECD as a whole.

In the residential sector, the shares of fuel and electricity use vary substantially between countries. In 2008 natural gas had the largest market share with 38%. Electricity held a 35% share and petroleum products held a 14% share. Coal and combustible renewables and waste together held about a 10% share of energy consumption in this sector.

Heat's share of total final consumption in OECD countries, amounting to 59 Mtoe, was 1.6% in 2008 (Table 2.18).

Between 1960 and 1973 electricity consumption in end-use markets grew at an average annual rate of 7.8% (Table 2.19). The average rate of growth was significantly lower between 1973 and 2008 at 2.5% (Table 2.20). Over both periods electricity consumption growth significantly exceeded the growth in total final energy consumption, thereby increasing the share of electricity in total final energy consumption.

In the industry sector over the period 1960 to 1973, the increased use of petroleum products, natural gas and electricity displaced coal and to a lesser extent combustible renewables and waste. Over this period, total final consumption in this sector increased by an average annual rate of 4.2% (Table 2.19). However, despite total final consumption in the industry sector decreasing at an average annual rate of 0.5% from 1973 to 2008, electricity consumption continued to grow, averaging an annual rate of growth of 1.2%, compared to 6.6% in the period 1960 to 1973.

Since 1960 the fastest growing market for electricity has been the commercial/public service sector. Final consumption of electricity in this sector increased at an average annual rate of 10.0% between 1960 and 1973, and at 3.8% between 1973 and 2008. This compares to annual average growth rates for petroleum products in final consumption of 10.6% between 1960 and 1973 and a decline over the period 1973 to 2008 of 2%. For natural gas, the annual average growth rate in this sector was 7.6% between 1960 and 1973 and 1.9% between 1973 and 2008.

Electricity has also substantially increased its market share in the residential sector. Averaged over the period since 1960, electricity consumption in this sector has grown at almost twice the annual average rate of consumption of natural gas. Between 1960 and 1973 electricity and petroleum products replaced a large share of coal in end-use, and between 1973 and 2008 heat, combustible renewable fuels, natural gas and electricity replaced shares of both coal and petroleum products.

4. ELECTRICITY TRADE

Transfers of electricity between utilities in neighbouring regions have been common for many years. Exchanges based on differences in natural production costs between regions are economically efficient, and fluctuations in load can be balanced by exchanges with neighbouring utilities with different load profiles. Such exchanges reduce the overall reserve margins needed by diversifying the potential sources of supply. Surplus capacity in a neighbouring region can result not only from simple differences in load timing, but also from differences in climate, economic structure, or the timing of forced and scheduled unit outages.

OECD electricity trade

OECD countries imported 372 TWh and exported 360 TWh of electricity in 2009 (including trade with other OECD countries). Accordingly, net imports of electricity in 2009 amounted to 12 TWh (Table 2.1).

OECD imports of electricity grew from 87.7 TWh in 1973 to 372 TWh in 2009 (Table 2.21). OECD exports of electricity grew from 81.4 TWh in 1973 to 360 TWh in 2009 (Table 2.22). Total imports increased at an average annual rate of 4.2% between 1973 and 2009. Total exports grew at average annual rate of 4.3% over the same period.

Substantial trade in electricity occurred in OECD Europe - principally between OECD countries, and in North America. In OECD Europe, electricity imports grew at an average annual rate of 7.0% between 1973 and 1990, but slowed to a rate of 1.8% annually after 1990 (Table 2.23). In OECD North America, total imports increased by an average annual rate of 4.5% between 1973 and 1990, and by 2.9% between 1990 and 2009.

Non-OECD electricity trade

When considered as a single entity, Non-OECD countries were net exporters of electricity. In 2008, these countries reported electricity imports of 213 TWh and electricity exports of 226 TWh, resulting in net exports of 13 TWh (Table 1.1).

Outside of the OECD there is substantial electricity trade between Russia, Kazakhstan, Lithuania, Ukraine and other countries of the former Soviet Union. These countries export significant quantities of electricity to net importing countries such as Belarus, Moldova, Latvia and Georgia, as well as to countries in central and Western Europe.

In South America, electricity produced by large hydroelectric projects in Paraguay is exported to Brazil and Argentina. In 2008, net exports from Paraguay were 46.3 TWh, an increase of 2.7% from the 2007 level (45.1 TWh).

In Africa, there is a significant trade in the southern portion of the continent. South Africa exports a significant amount of power to Zimbabwe. Mozambique, which has been a net electricity importer, became a net exporter in 1998 as a new hydro project came into service. In 2008, net exports from South Africa were 3.6 TWh.

China exports electricity from nuclear and hydroelectric plants in the south to Hong Kong. In 2008, net exports from China were 12.8 TWh.

India also imports a significant amount of electricity, a substantial part of which is produced by hydro projects in Bhutan.

5. OECD PRICES

Real electricity prices in the OECD as a whole, as measured by the OECD index of energy prices for end-users¹ (Table 3.1 and Figure 3.1), rose strongly in the late 1970s and early 1980s, levelled off between 1982 and 1985; and declined steadily until 1990. Between 1990 and 2000, average real prices in the OECD as a whole declined at an average rate of 1.7% per annum. From 2000 to 2009 the price decline reversed and the average annual real prices rose by an average of 1.9% per year. (Specific producer and consumer price indices are based on 2005=100.)

In 2009, OECD average real electricity price increased by 6.2% for industry and by 1.7% for households. The overall increase was of 3.3%.

The pattern of relative price trends in the OECD as a whole since 1985 masks different trends in the different OECD regions. In the United States (Table 3.2), electricity prices declined from 1985 in line with a decline of real coal and gas prices until starting an upwards trend from the late 1990s.

In contrast to the decline in electricity price from 1986 in the United States, which tracked price declines of input fuels, electricity prices in Europe (Table 3.3 and Figure 3.4) did not track the fall in oil, natural gas and coal prices. They remained on an upward trend until 1992. Electricity prices in Europe began a downward slide after 1993 which continued until 2000. Since 2000, average real electricity price has resumed an upward course. In 2009, real electricity price for industry increased by 9.5% from the 2008 level, and for households increased by 1.4%; yielding an overall average rate increase of 4.8% for both sectors.

In Japan (Table 3.4 and Figure 3.2), until recent years, electricity prices had mainly been on a decline since 1985. In 2009 real electricity price for industry increased by 7.4% and for households increased by 1.4%, yielding an overall average increase of 4.0%.

Electricity prices for industry

In 2008, average electricity prices in US dollars per KWh for industrial consumers (in countries for which data are available) increased in OECD Europe and in total OECD (Table 3.5). The increase for OECD Europe was 23.8% and for the OECD was 24.5%. This large increase was due to significant price spikes for heavy fuel oil (36%), steam coal (52%) and natural gas (27%). Changes in prices measured in local currencies may be quite different since the direct effect of exchange rate changes with the US dollar is not incorporated.

Data on prices in local currencies are published quarterly in *Energy Prices & Taxes* and are shown in Part IV of this book for individual countries. At the time of going to press 2009 data were not yet available for some countries; hence reported average price data for 2009, for the OECD and OECD Europe as a region, can not be calculated. Of countries for whom 2009 data is available, the price decreased in just over half, with the largest decrease (-32.9%) in Mexico.

Electricity prices for industrial consumers vary widely across OECD countries. Based on available 2009 data, prices were the lowest in Korea (5.8 US cents per kWh) while they were the highest in Italy (27.6 US cents per kWh). Electricity prices for industry are also reported in Table 3.6 in terms of US dollars per tonne of oil equivalent to allow for comparison with other fuels.

1. Real price indices are the current price indices divided by the country specific producer price index for industrial prices, and by the consumer price index for the household sector. See Principles and Definitions at the beginning of Part II for further details on methods used.

Electricity prices for households

In 2008, electricity prices in US dollars per kWh for household consumers (in countries for which data are available), increased in OECD Europe by 5.0% and in the whole OECD by 13.2% (Table 3.7). Complete data for 2009 for the OECD as a whole are not yet available, but of the countries where data are available, just over half saw decreases in price. The largest decrease (-18.2%) was in Mexico.

Electricity prices for household consumers also vary widely across OECD countries. Based on data that are available for 2009, prices varied from 7.7 US cents per kWh in Korea to 36.5 US cents per kWh in Denmark. Electricity prices for households are also reported in Table 3.8 in terms of tonnes of oil equivalent to allow for comparison between fuels.

Prices of competing fuels

Fuel oil, steam coal and natural gas are the main fuels used in the production of electricity in power plants that use combustible fuels (Tables 3.11 to 3.16).

In 2009, prices for heavy fuel oil varied (for those countries for which data are available) between

USD 265 per tonne in Austria to USD 803 per tonne in Turkey. In 2009, heavy fuel oil prices decreased from the 2008 level in all of the nine countries that reported data. This is a contrast from 2008, the last year for which complete data are available, when OECD average heavy fuel oil price for electricity generation increased 63% to USD 534 per tonne from USD 327 per tonne in 2007.

Based on data that are available for 2009, steam coal prices for electricity generation varied from USD 32 per tonne in Turkey to USD 120 per tonne in Austria. The variations in prices reflect, in part, the degree to which domestic supply costs differ from international market prices and the relative importance of domestic supply sources, as well as transport costs from supply sources to end use markets. In 2008, the last year for which complete data are available, average steam coal price for the OECD increased 33% from USD 49 per tonne to USD 62 per tonne.

Natural gas prices (reported in gross calorific value) also vary between OECD countries; Based on data that are available for 2009, prices varied from USD 186 per 10⁷ kcal in the US to USD 514 per 10⁷ kcal in Hungary. Prices decreased in every country for which 2009 data have been reported. In 2008, the last year for which complete data are available, average natural gas price for the OECD increased 30% from USD 308 per 10⁷ kcal to USD 402 per 10⁷ kcal.

6. TRENDS IN THE OECD ELECTRICITY SECTOR

Energy and electricity intensity

Table 1 in Section IV, “OECD Total: Energy Consumption, GDP and Population” provides data on relative changes in total primary energy supply (TPES), gross domestic product (GDP), population and electricity final consumption (TFC). The ratio of TPES to GDP is a measure of the amount of energy input required per unit of national output. The data in the table indicate that TPES per unit of GDP (TPES/GDP), often used as a broad indicator of energy intensity of economies, has declined at an average annual rate of 1.5% since the first “oil price shock” in 1973.

The aggregate table for the OECD as a whole masks significant regional differences, which are further elucidated in subsequent aggregate tables for each OECD region. For example, in the OECD Pacific region, the TPES/GDP ratio in 1973, at only 52% of the average for the OECD as a whole, was the lowest in all OECD regions. The low ratio reflects the relative high price of domestic and imported energy in Japan and Korea in 1973, which encouraged conservation and energy efficiency. However, as time has passed, the ratio has declined in the Pacific region much more slowly than for the OECD as a whole. Several factors, including the high level of conservation and energy efficiency at the beginning, and the rapid economic development in Korea have affected this pattern. By 2009, the ratio remains the lowest in the OECD, but is now 82% of the average for the OECD as a whole.

In OECD North America, which is heavily influenced by energy consumption patterns in the United States, the TPES/GDP ratio in 1973 was, by far, the highest in the OECD - some 30% higher than the average for

the OECD as a whole. This reflects the relatively low price of domestic and imported energy in the US – which discouraged investment in energy efficient technology, and other factors like geographic size (which encourages more auto usage), reliance on personal automobiles rather than mass transit, etc. However, since OECD North America started with such a high ratio in 1973, it has experienced the most rapid rate of decline (1.9% per annum), and is now at 18% higher than the OECD average for the OECD. Nevertheless, it retains the highest ratio of any OECD region.

The OECD Europe region falls in between the Pacific and North America regions. In 1973, the TPES/GDP ratio in the region was 94% of the average for the OECD as a whole. Between 1973 and 2009, the ratio declined at an average rate of 1.5% per annum. Thus, it declined more rapidly than the average ratio in the OECD Pacific region, but less rapidly than the ratio of the OECD North America region. In 2009, the region’s ratio was equal to the average ratio for the OECD as a whole.

While the broad measure of energy intensity, TPES/GDP, suggests that all OECD regions are getting more “energy efficient,” albeit at differing rates, another measure shows a different trend. One measure of electricity intensity is the ratio of final consumption of electricity to gross domestic product (Electricity TFC/GDP). The indexed electricity intensity ratio for the OECD as a whole increased at an average annual rate of 0.1% from 1973 to 2000 and then by 2008 had decreased to just below the 1973 level. Essentially, as energy efficiency has improved for member countries as a whole, they are at the same time becoming more electricity intensive. However, the patterns within each region vary considerably.

In the OECD Pacific region, the electricity intensity index has increased at an average annual rate of 0.7%. In the OECD Europe region, the index has increased at an annual rate of 0.1%. The OECD North America region shows a different pattern for electricity intensity, with an average annual decline of 0.4%. Thus, Europe and the Pacific are growing more electricity intensive as electricity intensity declines in the North American region.

Electricity production

Each region's natural endowment of resources, as well as the delivered price and availability of imported resources affect the mixture of inputs for electricity generation. Inputs are also affected by government policies related to environmental compliance, energy security, and by the availability of investment capital for energy technologies and infrastructure, and perceived risks associated with different technologies.

Table 3 in Part IV, "OECD Total Summary Electricity Production and Consumption" provides statistics on electricity generation by sources since 1973. Production from solar, wind, other non-combustible renewable energies and combustible renewables and waste combined increased at an average annual rate of 10.5% between 1973 and 2009. However, the lack of reliable data from several countries in the earlier years of this time period may significantly distort the growth rates.

Data on geothermal, hydro, nuclear and combustible fossil fuels are reliable and available for most member countries throughout the time period. The strongest growth since 1973 has been for nuclear (7.1%) and geothermal (5.2%) followed by natural gas (4.2%) and coal (2.1%), while hydro (1.0%, excluding production from pumped storage plants) has increased more moderately since 1973. Electricity generation from oil has declined at an average rate of 3.5% per annum since 1973.

Average annual growth of electricity generation by source in OECD regions from 1973 to 2009 in %

| Source | N. America | Pacific | Europe | Total |
|--------------|------------|------------|------------|------------|
| Coal | 2.2 | 5.9 | 0.7 | 2.1 |
| Oil | -3.4 | -3.3 | -3.9 | -3.5 |
| Gas | 3.0 | 9.8 | 5.4 | 4.2 |
| Nuclear | 6.3 | 11.1 | 7.1 | 7.1 |
| Geothermal | 6.3 | 4.6 | 4.1 | 5.2 |
| Hydro | 1.0 | 0.6 | 1.2 | 1.1 |
| Other | 19.0 | 13.5 | 11.0 | 12.3 |
| Total | 2.3 | 3.2 | 2.1 | 2.4 |

The above table summarises the variation between OECD regions. Not only has the Pacific region experienced the strongest growth rate, but to do so it has relied more heavily on nuclear, natural gas and coal to meet its generation needs. Coal consumption growth is higher in North America and the Pacific regions than in Europe. Nuclear and natural gas have had the highest growth rates (of the major sources) in OECD Europe. Electricity generation from oil has declined in every region.

7. SMART GRIDS: VISION FOR THE GRID OF THE FUTURE

The following text is taken from the Electricity Networks chapter of 'Energy Technology Perspectives 2010' (ETP) published by the Energy Technology Policy Division of the IEA. This extract gives an overview of the concept of smart grids and the various benefits associated with their implementation.

Growth and change in the electricity system over the next 50 years will require major investment both of financial resources and in the development of expertise and know-how. The electricity grid of the future will need to demonstrate the same primary functional characteristics as today. But it will need to accomplish this with added flexibility in order to enable an environment with a different mix of both centralised and distributed, non-variable and variable generation and new demand profiles. In order for the grid to operate optimally in this environment, utilising both existing and new assets, there will be a need for the grid to become more intelligent, *i.e.* to become smarter.

Box1. What is a smart grid?

*A smart grid is an electricity network that uses digital technology to monitor and manage the transport of electricity from all generation sources to meet the varying electricity demands of end users. Such grids will be able to co-ordinate the needs and capabilities of all generators, grid operators, end users and electricity market stakeholders in such a way that it can optimise asset utilisation and operation and, in the process, minimise both costs and environmental impacts while maintaining system reliability, resilience and stability (Figure 7A)**

*. Various definitions of smart grids can be found in publications at the following links: http://ec.europa.eu/research/energy/pdf/smartgrids_en.pdf
www.weforum.org/pdf/slimcity/SmartGrid2009.pdf
[www.nist.gov/smartgrid/Report%20to%20NIST1August10%20\(2\).pdf](http://www.nist.gov/smartgrid/Report%20to%20NIST1August10%20(2).pdf)

Smart grid technology

The grid is an enabler. It enables sources of generation to be linked to consumers. A range of technologies are primarily grid related, as distinct from being generation related or consumer related (Table 7A).

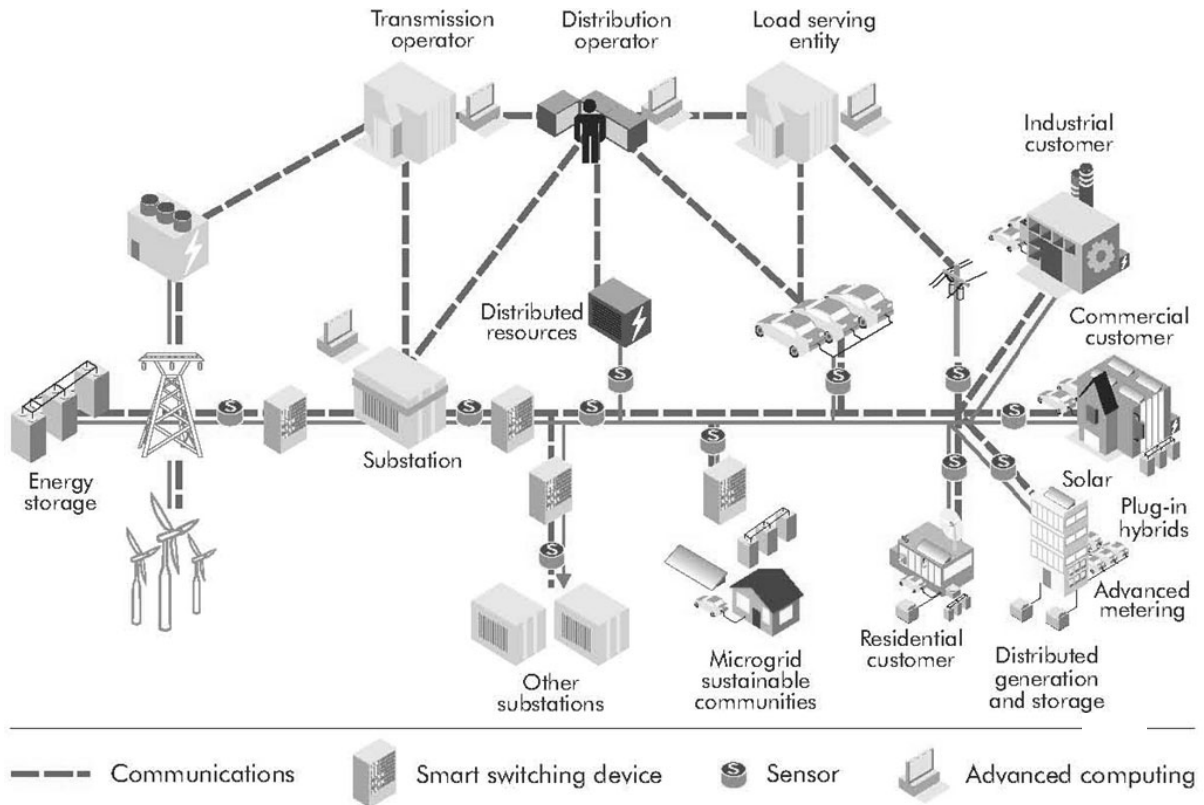
Benefits of smart grids

Smart grids will offer the capability¹

- **To reduce peak demand by actively managing consumer demand:** more appliances and equipment are expected to come onto the market that can respond to both consumer and utility operator priorities. As they do, the ability to manage power requirements in both directions—to the utility as well as from the utility—will reduce the need for power. For example, during high-use periods such as hot summer afternoons when the cost of producing and delivering power is extremely high, the system will enable consumers more directly to be informed of those costs and to reduce their demand, or increase their local generation output, accordingly.
- **To balance consumer reliability and power quality needs:** although some uses of electricity require near perfect reliability and quality, others are almost insensitive to these needs. A smart grid will be able to distinguish differences in demand and, where appropriate, to provide less reliable and lower quality power at a reduced cost.

1. Adapted from Gridwise Alliance (2010). www.gridwise.org/smartgrid_whatIs.asp

Figure 7A: A Smart grid



Source: Wang (2009).

Key Point 1: A smart grid includes generation, transmission, distribution and end-use technology and stakeholders, connected by integrated information, communication and control technology.

- **To encourage the proactive application of energy efficiency opportunities:** a smart grid will furnish consumers and utilities with accurate, timely, and detailed information about energy use. Armed with this information, consumers will be able to identify ways of reducing energy consumption with minimal impacts on safety, comfort, and security.
- **To improve overall operational efficiency:** smart grids will become increasingly automated, and smart sensors and controls will be integral to their design and operation. Utility operators will be able more easily to identify, diagnose, and correct problems, and will even have the capability to anticipate problems before they happen.
- **To integrate clean energy technologies:** electric vehicles (EVs), roof-top solar systems, wind farms and storage devices will become essential parts of

the grid, all contributing in a co-ordinated fashion to the achievement of economic and environmental goals.

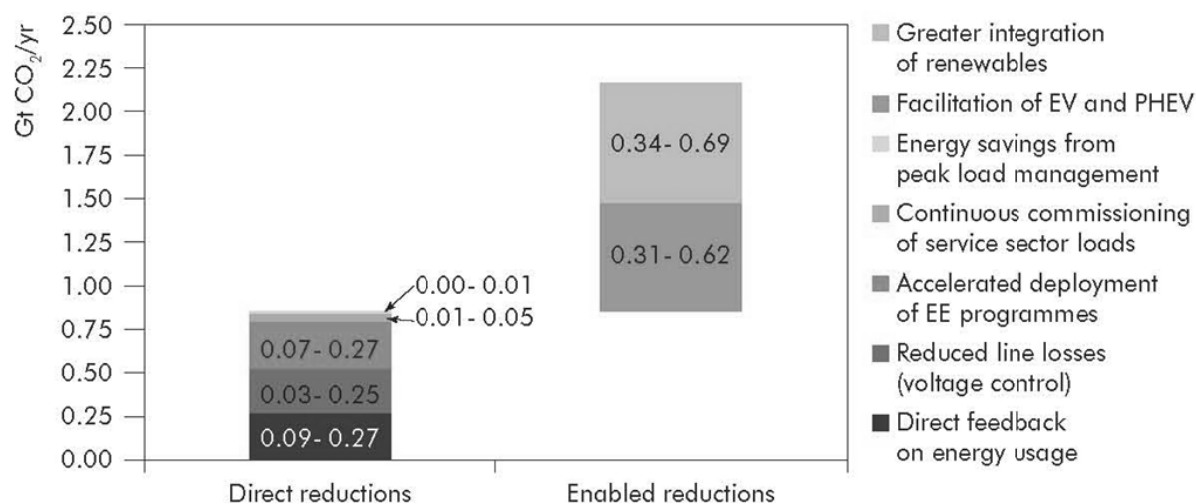
Smart grid CO₂ emissions reduction

Although electricity consumption only represents 17% of final energy use today, it leads to 40% of global CO₂ emissions. This is largely due to the fact that almost 70% of electricity is produced from fossil fuels. In the IEA’s Baseline scenario, this stays largely the same in 2050, but in the BLUE Map scenario, as a result of decarbonisation, power generation contributes only 21% of global CO₂ emissions, representing an annual reduction of 24.5 Gt of CO₂ compared to the Baseline scenario. Smart grids will be needed to contribute directly to these reductions and to enable some of the required technologies (Figure 7B).

Table 7A: Functional smart grid technology areas

| Technology Areas | Description |
|--|---|
| Electricity generation control, automation and power electronics | Communication with, and the intelligent control of, generation sources are part of a smart grid, but not the generation itself. For example, power electronics technologies that allow wind generation to supply reactive power are essential to the smart grid. The wind turbine is not. |
| Advanced computing and grid control software | The data created from embedded sensor and metering technology will require significant computing and system control software to enable the use and management of the grid and to meet stakeholder needs. |
| Embedded grid sensing, automation, measurement and control technology | This technology provides the information and control capability to optimise grid operation and manage power flows within the constraints of the grid technology. Flexible alternating current transmission systems, phasor measurement units and automated switch gear are examples. |
| Communication infrastructure | The infrastructure required for two-way communication including wireless, internet and satellite communications may use existing or specialised methods. |
| Conductor technology and approaches | Advanced conductor technology such as high temperature superconductors (HTSs) can enable electricity systems to respond to operating changes more quickly, benefiting automated control, which will be especially important with the increase in remote variable renewable generation. High voltage direct current configurations can also offer management and control benefits to the grid. |
| Electrical load control and advanced meters | Advanced metering at residential, commercial and industrial levels can give customers and electricity providers the information they need to be able to respond to operational signals either by choice or automatically. Smart meters* can enable demand response initiatives. |
| Energy storage | Energy storage can be used as a load or as a generation source to help peak load management. Storage could also be used to provide ancillary services such as reactive power for frequency and voltage support. |
| EV charging infrastructure | The Electric vehicle (EV) charging infrastructure will have an impact on grid operation. It must be capable of being managed intelligently. |

* The European Smart Meters Industry Group (ESMIG) defines four minimum functionalities of a smart meter: remote reading, two-way communication, support for advance tariffing and payment systems and remote disablement and enablement of supply.

Figure 7B: Smart grid CO₂ reductions in 2050 in the BLUE Map scenario compared to the Baseline

Key Point 2: Smart grids have the potential to reduce CO₂ emissions in the electricity sector both directly and indirectly.

Note: The methodology for calculating CO₂ reductions has been adapted from EPRI (2008). This methodology is preliminary in nature and provides a range for the quantification of CO₂ emissions reductions attributed to the smart grid. Using the ETP 2010 analysis, this methodology has been modified to provide a first estimate of global emissions reduction attributable to smart grids. Actual regional CO₂ reductions depend on specific regional characteristics such as energy efficiency, demand structure and electricity generation mix.

Direct reductions are those that would only occur through the implementation of smart grid technologies or operating approaches. Indirect benefits are those that are the result of the deployment of other technologies, but require the capability of a smart grid to be fully realised. For example, smart grid technology will be needed to support the wider introduction of EVs and plug-in hybrid EVs.

Compared to the Baseline scenario in 2050, smart grids offer the potential to achieve savings of between 0.9 Gt CO₂ and 2.2 Gt CO₂ a year.

Benefits for developing countries

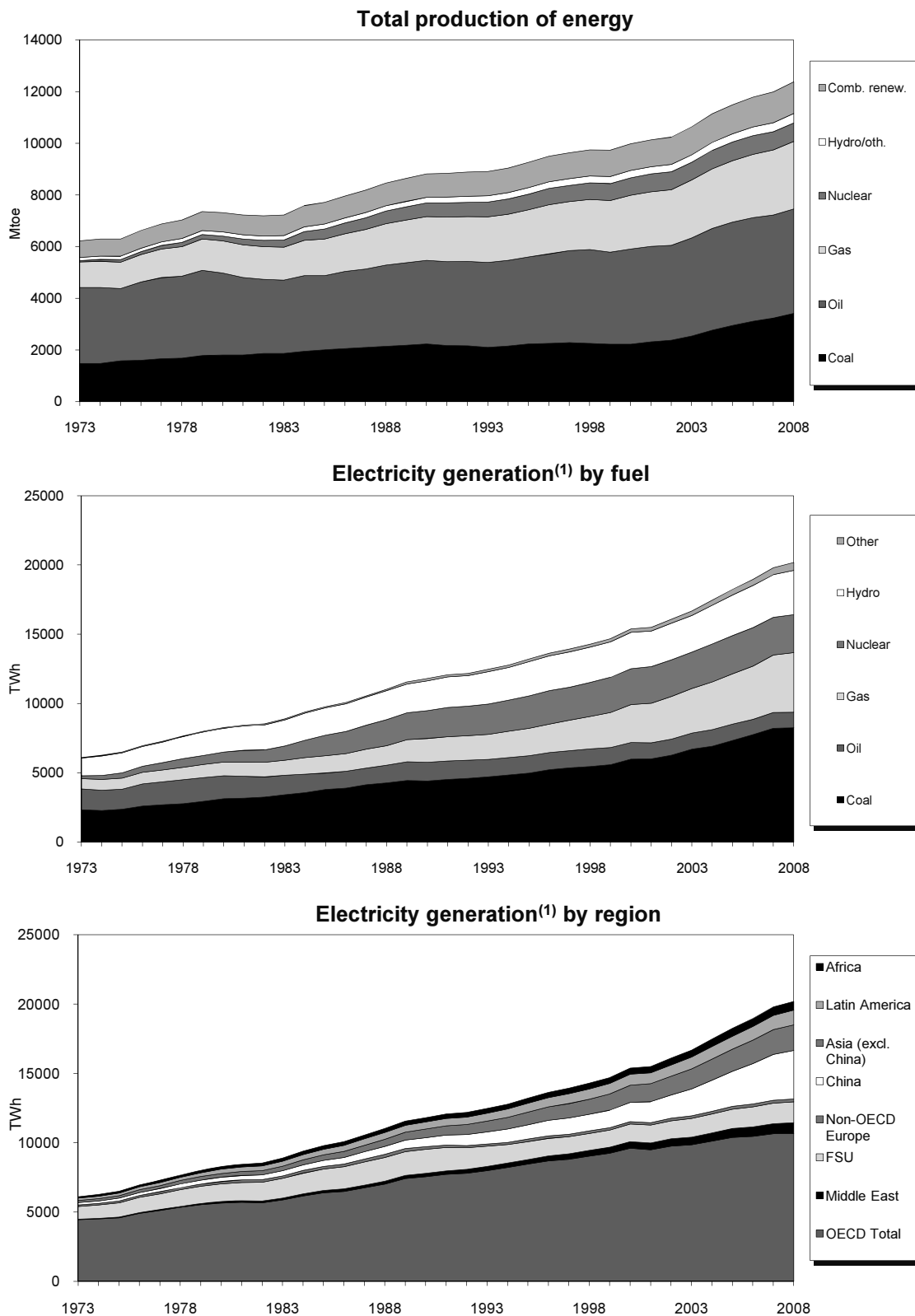
Smart grids could bring even more benefit to developing countries than to developed countries. Across the globe an estimated three billion people continue to lack access to sustainable and affordable modern energy (WEF 2009a). As developing countries respond

to this, they may be able to implement smart grids from the outset, without going through the prior stage of increasingly outmoded technologies. A less carbon-intensive electricity generation infrastructure rather than one based on fossil fuels, along with demand control, could be used to reduce capital and operating costs while providing more robust operation.

Approaching electrification in this way has the potential to accelerate development and do so in a more sustainable way, reducing dependence on foreign sources of fuel. Many of the lessons learned both technically and economically by developed countries could be applied at the early stages of such development. Alternative approaches that may benefit given regions, such as micro grids and remote grids could take significant advantage of smart grid technologies in order to develop solutions that are tailored to specific needs.

PART III

ELECTRICITY DATA OVERVIEW

Figure 1.1. World electricity and energy production

Source: IEA/OECD *Energy Balances of Non-OECD Countries*.

**Table 1.1. Electricity production, imports, exports,
final consumption, 2008
(TWh)**

| | Gross produc- tion ⁽¹⁾ | Imports | Exports | Own use | Other use ⁽²⁾ | Supply | Transm. losses ⁽³⁾ | Energy industry ⁽⁴⁾ | Calc. consump- tion ⁽⁵⁾ |
|------------------------|---|--------------|--------------|---------------|-----------------------------|----------------|----------------------------------|-----------------------------------|--|
| OECD Total | 10744.9 | 401.0 | 389.9 | 490.1 | 93.8 | 10172.0 | 659.4 | 269.1 | 9243.5 |
| Non-OECD Total | 9524.4 | 213.4 | 226.2 | 587.3 | 14.6 | 8909.6 | 997.0 | 340.6 | 7572.0 |
| World | 20269.2 | 614.4 | 616.1 | 1077.5 | 108.4 | 19081.6 | 1656.3 | 609.7 | 16815.5 |
| Australia | 257.2 | - | - | 17.1 | 0.3 | 239.9 | 16.8 | 10.9 | 212.1 |
| Austria | 67.1 | 19.8 | 14.9 | 4.3 | 3.3 | 64.4 | 3.4 | 1.3 | 59.6 |
| Belgium | 84.9 | 17.2 | 6.6 | 3.5 | 1.8 | 90.2 | 4.3 | 3.1 | 82.8 |
| Canada | 651.3 | 25.2 | 57.7 | 20.3 e | 0.2 | 598.4 e | 50.5 | 30.0 e | 517.9 e |
| Czech Republic | 83.5 | 8.5 | 20.0 | 6.4 | 0.5 | 65.1 | 4.7 | 2.4 | 58.0 |
| Denmark | 36.4 | 12.8 | 11.4 | 1.2 | 0.0 | 36.7 | 2.4 | 0.9 | 33.4 |
| Finland | 77.4 | 16.1 | 3.3 | 3.0 | 0.1 | 87.1 | 3.3 | 1.2 | 82.6 |
| France | 574.9 | 10.7 | 58.7 | 25.3 | 6.5 | 495.1 | 32.9 | 28.7 | 433.5 |
| Germany | 637.2 | 41.7 | 61.8 | 38.3 | 7.9 | 570.9 | 30.1 | 15.2 | 525.5 |
| Greece | 63.7 | 7.6 | 2.0 | 4.3 | 1.2 | 63.8 | 5.1 | 2.1 | 56.6 |
| Hungary | 40.0 | 12.8 | 8.9 | 2.6 | - | 41.3 | 3.9 | 3.1 | 34.3 |
| Iceland | 16.5 | - | - | 0.3 | 0.2 | 16.0 | 0.6 | 0.2 | 15.2 |
| Ireland | 29.7 | 0.8 | 0.3 | 1.3 | 0.5 | 28.3 | 2.2 | 0.1 | 25.9 |
| Italy | 319.1 | 43.4 | 3.4 | 12.1 | 7.6 | 339.5 | 20.4 | 9.7 | 309.3 |
| Japan | 1082.0 | - | - | 41.6 | 10.2 | 1030.2 | 51.3 | 14.5 | 964.4 |
| Korea | 446.4 | - | - | 17.8 | 3.2 | 425.4 | 16.1 | 0.9 | 408.4 |
| Luxembourg | 3.6 | 6.8 | 2.5 | 0.0 | 1.2 | 6.7 | 0.1 | - | 6.6 |
| Mexico | 258.9 | 0.4 | 1.5 | 7.3 | - | 250.5 | 43.0 | 7.4 | 200.1 |
| Netherlands | 107.6 | 25.0 | 9.1 | 4.3 | - | 119.2 | 4.7 | 5.4 | 109.1 |
| New Zealand | 43.8 | - | - | 1.5 | - | 42.2 | 3.3 | 0.6 | 38.4 |
| Norway | 142.7 | 3.4 | 17.3 | 1.1 | 2.1 | 125.6 | 10.2 | 3.9 | 111.5 |
| Poland | 156.2 | 8.5 | 9.7 | 13.6 | 0.9 | 140.4 | 12.7 | 9.9 | 117.8 |
| Portugal | 46.0 | 10.7 | 1.3 | 1.4 | 0.6 | 53.4 | 4.2 | 0.8 | 48.4 |
| Slovak Republic | 29.0 | 9.4 | 8.9 | 2.3 | 0.3 | 26.9 | 1.0 | 1.1 | 24.8 |
| Spain | 313.7 | 5.9 | 16.9 | 12.1 | 3.7 | 286.9 | 15.0 | 6.7 | 265.1 |
| Sweden | 150.0 | 12.8 | 14.7 | 3.6 | 1.9 | 142.5 | 11.0 | 2.9 | 128.6 |
| Switzerland | 69.0 | 31.6 | 32.7 | 2.1 | 2.7 | 63.0 | 4.3 | - | 58.7 |
| Turkey | 198.4 | 0.8 | 1.1 | 8.7 | - | 189.4 | 27.5 | 2.5 | 159.4 |
| United Kingdom | 389.4 | 12.3 | 1.3 | 16.3 | 5.4 | 378.7 | 28.2 | 8.9 | 341.6 |
| United States | 4369.1 | 57.0 | 24.1 | 216.3 e | 31.6 | 4154.2 e | 246.1 | 94.4 e | 3813.7 e |
| OECD Total | 10744.9 | 401.0 | 389.9 | 490.1 | 93.8 | 10172.0 | 659.4 | 269.1 | 9243.5 |
| <i>OECD Europe</i> | <i>3636.1</i> | <i>318.4</i> | <i>306.7</i> | <i>168.3</i> | <i>48.4</i> | <i>3431.1</i> | <i>232.2</i> | <i>110.4</i> | <i>3088.5</i> |
| <i>OECD Pacific</i> | <i>1829.5</i> | - | - | <i>78.0</i> | <i>13.7</i> | <i>1737.8</i> | <i>87.5</i> | <i>27.0</i> | <i>1623.3</i> |
| <i>OECD N. America</i> | <i>5279.3</i> | <i>82.6</i> | <i>83.2</i> | <i>243.8</i> | <i>31.8</i> | <i>5003.1</i> | <i>339.6</i> | <i>131.7</i> | <i>4531.7</i> |

Source: IEA/OECD Energy Statistics of OECD Countries and IEA/OECD Energy Statistics of Non-OECD Countries.

(1) Gross production refers to total main activity producers and autoproducers production, including production from pumped storage.

(2) Other use refers to used for heat pumps, electric boilers and pumped storage.

(3) Includes distribution losses.

(4) Electricity consumed by energy industries for heating, traction and lighting purposes; excludes own and other use.

(5) Calculated final consumption may differ from observed final consumption due to statistical difference.

**Table 1.1. Electricity production, imports, exports,
final consumption, 2008 (continued)**
(TWh)

| | Gross produc- tion ⁽¹⁾ | Imports | Exports | Own use | Other use ⁽²⁾ | Supply | Transm. losses ⁽³⁾ | Energy industry ⁽⁴⁾ | Calc. consump- tion ⁽⁵⁾ |
|----------------|---|-------------|-------------|-------------|-----------------------------|--------------|----------------------------------|-----------------------------------|--|
| Algeria | 40.2 | 0.3 | 0.3 | 2.4 | - | 37.8 | 7.3 | 0.6 | 30.0 |
| Angola | 4.0 | - | - | 0.2 | - | 3.8 | 0.6 | - | 3.2 |
| Benin | 0.1 | 0.7 | - | - | - | 0.8 | 0.1 | - | 0.7 |
| Botswana | 0.6 | 2.6 | - | 0.1 | - | 3.1 | 0.3 | - | 2.8 |
| Cameroon | 5.6 | - | - | 0.5 | - | 5.1 | 0.5 | - | 4.5 |
| Congo | 0.5 | 0.4 | - | 0.1 | - | 0.8 | 0.4 | - | 0.4 |
| DR of Congo | 7.5 | 0.1 | 0.7 | 0.0 | - | 6.9 | 0.8 | - | 6.1 |
| Côte d'Ivoire | 5.8 | - | 0.6 | 0.0 | - | 5.2 | 1.4 | - | 3.8 |
| Egypt | 131.0 | 0.1 | 1.0 | 4.5 | - | 125.7 | 13.9 | - | 111.7 |
| Eritrea | 0.3 | - | - | 0.0 | - | 0.3 | 0.0 | - | 0.2 |
| Ethiopia | 3.8 | - | - | 0.3 | - | 3.5 | 0.4 | - | 3.1 |
| Gabon | 2.0 | - | - | 0.1 | - | 1.9 | 0.4 | 0.0 | 1.6 |
| Ghana | 8.4 | 0.3 | 0.5 | 0.1 | - | 8.0 | 1.8 | - | 6.2 |
| Kenya | 7.1 | 0.0 | 0.0 | 0.2 | - | 6.9 | 1.0 | - | 5.9 |
| Libyan Arab J. | 28.7 | 0.1 | 0.1 | 3.4 | - | 25.2 | 4.0 | - | 21.2 |
| Morocco | 21.3 | 4.3 | - | 0.3 | 0.6 | 24.6 | 2.3 | 0.6 | 21.7 |
| Mozambique | 15.1 | 7.8 | 11.2 | 0.1 | - | 11.6 | 1.4 | - | 10.2 |
| Namibia | 2.1 | 2.1 | 0.0 | - | - | 4.2 | 0.4 | - | 3.8 |
| Nigeria | 21.1 | - | - | 0.6 | - | 20.5 | 2.0 | - | 18.5 |
| Senegal | 2.4 | - | - | 0.1 | - | 2.3 | 0.5 | - | 1.9 |
| South Africa | 258.3 | 10.6 | 14.2 | 15.0 | 3.8 | 235.9 | 22.5 | 11.9 | 201.6 |
| Sudan | 4.5 | - | - | 0.0 | - | 4.5 | 0.5 | - | 4.0 |
| UR of Tanzania | 4.4 | - | - | - | - | 4.4 | 0.9 | 0.1 | 3.4 |
| Togo | 0.1 | 0.7 | - | 0.0 | - | 0.8 | 0.2 | - | 0.6 |
| Tunisia | 15.3 | 0.1 | 0.1 | 0.7 | - | 14.6 | 1.9 | - | 12.7 |
| Zambia | 9.7 | 0.3 | 0.1 | 0.2 | - | 9.6 | 2.3 | - | 7.4 |
| Zimbabwe | 8.0 | 5.3 | 0.1 | 0.4 | - | 12.9 | 0.5 | - | 12.4 |
| Other Africa | 15.9 | 1.9 | 0.1 | 0.3 | - | 17.4 | 2.0 | 0.3 | 15.1 |
| Africa | 623.8 | 37.5 | 29.1 | 29.6 | 4.4 | 598.3 | 70.1 | 13.5 | 514.7 |
| Argentina | 121.9 | 8.5 | 3.0 | 3.3 | 0.8 | 123.3 | 16.2 | - | 107.1 |
| Bolivia | 6.2 | - | - | 0.1 | - | 6.1 | 0.8 | - | 5.3 |
| Brazil | 463.4 | 42.9 | 0.7 | 18.4 | - | 487.2 | 77.1 | - | 410.1 |
| Chile | 59.7 | 1.2 | - | 1.6 | - | 59.2 | 5.1 | 0.6 | 53.5 |
| Colombia | 56.0 | 0.1 | 1.5 | 1.7 | - | 52.9 | 10.8 | - | 42.1 |
| Costa Rica | 9.5 | 0.1 | 0.2 | 0.1 | - | 9.3 | 1.0 | - | 8.3 |
| Cuba | 17.7 | - | - | 0.9 | - | 16.8 | 2.8 | - | 14.0 |
| Dominican Rep. | 15.4 | - | - | 0.6 | - | 14.8 | 1.7 | - | 13.1 |
| Ecuador | 18.6 | 0.5 | - | 3.1 | - | 16.0 | 3.8 | - | 12.3 |
| El Salvador | 6.0 | 0.1 | 0.1 | 0.2 | - | 5.8 | 0.1 | - | 5.6 |
| Guatemala | 8.7 | 0.0 | 0.1 | 0.3 | - | 8.4 | 1.2 | - | 7.2 |

Source: IEA/OECD Energy Statistics of OECD Countries and IEA/OECD Energy Statistics of Non-OECD Countries.

(1) Gross production refers to total main activity producers and autoproducers production, including production from pumped storage.

(2) Other use refers to used for heat pumps, electric boilers and pumped storage.

(3) Includes distribution losses.

(4) Electricity consumed by energy industries for heating, traction and lighting purposes; excludes own and other use.

(5) Calculated final consumption may differ from observed final consumption due to statistical difference.

**Table 1.1. Electricity production, imports, exports,
final consumption, 2008 (continued)**
(TWh)

| | Gross produc- tion ⁽¹⁾ | Imports | Exports | Own use | Other use ⁽²⁾ | Supply | Transm. losses ⁽³⁾ | Energy industry ⁽⁴⁾ | Calc. consump- tion ⁽⁵⁾ |
|---------------------------|---|-------------|-------------|--------------|-----------------------------|---------------|----------------------------------|-----------------------------------|--|
| Haiti | 0.5 | - | - | 0.0 | - | 0.5 | 0.3 | - | 0.2 |
| Honduras | 6.5 | - | 0.0 | 0.0 | - | 6.5 | 1.3 | - | 5.2 |
| Jamaica | 7.8 | - | - | 0.0 | - | 7.8 | 0.9 | - | 6.8 |
| N. Antilles | 1.2 | - | - | 0.1 | - | 1.1 | 0.2 | - | 0.9 |
| Nicaragua | 3.4 | 0.0 | - | 0.3 | - | 3.1 | 0.8 | - | 2.3 |
| Panama | 6.4 | 0.1 | 0.0 | 0.0 | - | 6.5 | 0.9 | - | 5.6 |
| Paraguay | 55.5 | - | 46.3 | 0.3 | - | 8.9 | 2.9 | - | 6.0 |
| Peru | 32.4 | - | - | 0.5 | - | 31.9 | 2.7 | - | 29.2 |
| Trinidad and T. | 7.9 | - | - | 0.2 | - | 7.7 | 0.2 | - | 7.6 |
| Uruguay | 8.8 | 1.0 | 0.0 | 0.2 | - | 9.5 | 1.7 | - | 7.7 |
| Venezuela | 119.3 | 0.1 | 0.6 | 1.2 | - | 117.7 | 32.9 | 2.0 | 82.7 |
| Oth. Lat. America | 36.5 | 0.3 | - | 0.3 | - | 36.5 | 2.6 | - | 33.8 |
| Latin America | 1069.3 | 54.7 | 52.4 | 33.4 | 0.8 | 1037.4 | 168.0 | 2.7 | 866.8 |
| Bangladesh | 35.0 | - | - | 2.0 | - | 33.0 | 1.7 | - | 31.3 |
| Brunei Darussalam | 3.4 | - | - | 0.1 | - | 3.3 | 0.2 | - | 3.1 |
| Cambodia | 1.5 | 0.4 | - | 0.1 | - | 1.8 | 0.2 | - | 1.6 |
| India | 830.1 | 9.2 | 0.4 | 54.5 | - | 784.5 | 193.7 | - | 590.7 |
| Indonesia | 149.4 | - | - | 5.4 | - | 144.1 | 15.0 | - | 129.0 |
| DPR of Korea | 23.2 | - | - | 2.2 | - | 21.0 | 3.7 | - | 17.3 |
| Malaysia | 105.8 | 0.1 | 0.6 | 2.0 | - | 103.3 | 2.5 | - | 100.8 |
| Mongolia | 4.1 | 0.2 | 0.0 | 0.7 | - | 3.7 | 0.4 | - | 3.2 |
| Myanmar | 6.6 | - | - | 0.1 | - | 6.5 | 1.8 | - | 4.7 |
| Nepal | 3.1 | 0.2 | 0.2 | 0.2 | - | 3.0 | 0.6 | - | 2.4 |
| Pakistan | 91.6 | - | - | 2.1 | - | 89.6 | 19.2 | - | 70.4 |
| Philippines | 60.8 | - | - | 3.9 | - | 56.9 | 7.7 | - | 49.2 |
| Singapore | 41.7 | - | - | 1.7 | - | 40.0 | 2.1 | 2.5 | 35.5 |
| Sri Lanka | 9.2 | - | - | 0.1 | - | 9.2 | 1.0 | - | 8.2 |
| Chinese Taipei | 238.3 | - | - | 11.5 | 3.9 | 222.9 | 8.6 | 4.3 | 210.0 |
| Thailand | 147.4 | 2.8 | 1.2 | 4.6 | - | 144.4 | 9.0 | - | 135.4 |
| Vietnam | 73.0 | 3.2 | - | 1.0 | - | 75.3 | 7.4 | - | 68.0 |
| Other Asia | 21.4 | 2.2 | 9.0 | 0.5 | - | 14.1 | 0.0 | 0.9 | 13.1 |
| Asia (excl. China) | 1845.9 | 18.3 | 11.3 | 92.5 | 3.9 | 1756.4 | 274.7 | 7.7 | 1474.1 |
| PR of China | 3456.9 | 3.8 | 16.6 | 266.7 | - | 3177.4 | 191.8 | 143.7 | 2841.9 |
| Hong Kong | 38.0 | 11.3 | 3.6 | - | - | 45.7 | 4.8 | - | 40.9 |
| China (Region) | 3494.9 | 15.1 | 20.2 | 266.7 | - | 3223.1 | 196.6 | 143.7 | 2882.8 |
| Albania | 3.8 | 2.4 | - | 0.1 | - | 6.1 | 1.9 | 0.1 | 4.1 |
| Bosnia and H. | 13.3 | 3.4 | 5.0 | 1.5 | - | 10.1 | 2.3 | - | 7.8 |
| Bulgaria | 45.0 | 3.1 | 8.4 | 4.3 | 0.7 | 34.6 | 4.7 | 1.3 | 28.7 |
| Croatia | 12.3 | 8.2 | 1.6 | 0.5 | 0.2 | 18.2 | 1.7 | 0.4 | 16.1 |
| Cyprus | 5.1 | - | - | 0.3 | - | 4.8 | 0.2 | 0.0 | 4.6 |

Source: IEA/OECD Energy Statistics of OECD Countries and IEA/OECD Energy Statistics of Non-OECD Countries.

(1) Gross production refers to total main activity producers and autoproducers production, including production from pumped storage.

(2) Other use refers to used for heat pumps, electric boilers and pumped storage.

(3) Includes distribution losses.

(4) Electricity consumed by energy industries for heating, traction and lighting purposes; excludes own and other use.

(5) Calculated final consumption may differ from observed final consumption due to statistical difference.

**Table 1.1. Electricity production, imports, exports,
final consumption, 2008 (continued)**
(TWh)

| | Gross produc- tion ⁽¹⁾ | Imports | Exports | Own use | Other use ⁽²⁾ | Supply | Transm. losses ⁽³⁾ | Energy industry ⁽⁴⁾ | Calc. consump- tion ⁽⁵⁾ |
|------------------------|---|--------------|--------------|--------------|-----------------------------|---------------|----------------------------------|-----------------------------------|--|
| F.Y.R. Macedonia | 6.3 | 2.7 | - | 0.5 | - | 8.5 | 1.4 | 0.2 | 6.9 |
| Gibraltar | 0.2 | - | - | 0.0 | - | 0.2 | - | - | 0.2 |
| Malta | 2.3 | - | - | 0.1 | - | 2.2 | 0.3 | - | 1.9 |
| Romania | 65.0 | 0.9 | 5.2 | 4.9 | - | 55.9 | 7.2 | 6.1 | 42.6 |
| Serbia | 37.3 | 8.9 | 8.8 | 2.6 | 0.9 | 33.9 | 5.9 | 0.8 | 27.2 |
| Slovenia | 16.4 | 6.2 | 7.8 | 1.0 | - | 13.8 | 0.8 | 0.1 | 12.8 |
| Non-OECD Europe | 207.0 | 35.8 | 36.8 | 15.9 | 1.7 | 188.3 | 26.4 | 9.0 | 152.8 |
| Armenia | 5.8 | 0.3 | 0.4 | 0.2 | - | 5.6 | 0.9 | - | 4.7 |
| Azerbaijan | 23.9 | 0.2 | 0.8 | 3.2 | - | 20.0 | 3.2 | 1.1 | 15.8 |
| Belarus | 35.0 | 7.1 | 5.2 | 2.3 | - | 34.6 | 3.7 | 1.5 | 29.4 |
| Estonia | 10.6 | 1.4 | 2.3 | 1.1 | - | 8.6 | 1.1 | 0.4 | 7.0 |
| Georgia | 8.4 | 0.6 | 0.7 | 0.2 | - | 8.1 | 1.1 | 1.1 | 6.0 |
| Kazakhstan | 80.3 | 2.8 | 2.5 | 13.4 | - | 67.2 | 7.1 | 5.2 | 54.9 |
| Kyrgyzstan | 11.9 | 0.0 | 0.5 | - | - | 11.3 | 3.7 | 0.3 | 7.4 |
| Latvia | 5.3 | 4.6 | 2.1 | 0.2 | - | 7.6 | 0.8 | 0.2 | 6.6 |
| Lithuania | 13.9 | 5.6 | 6.6 | 1.1 | 0.8 | 11.0 | 1.0 | 1.0 | 9.0 |
| Rep. of Moldova | 3.6 | 3.0 | - | 0.2 | - | 6.4 | 1.9 | 0.4 | 4.1 |
| Russian Federation | 1040.4 | 3.1 | 20.7 | 67.4 | 2.7 | 952.6 | 109.2 | 117.9 | 725.5 |
| Tajikistan | 16.1 | 5.3 | 4.4 | 0.1 | - | 16.9 | 2.9 | 0.1 | 14.0 |
| Turkmenistan | 15.0 | - | 1.5 | 1.1 | - | 12.4 | 2.1 | 1.6 | 8.8 |
| Ukraine | 192.6 | 2.1 | 8.8 | 15.2 | 0.2 | 170.5 | 22.4 | 13.3 | 134.9 |
| Uzbekistan | 49.4 | 11.5 | 11.5 | 2.8 | - | 46.5 | 4.3 | 1.4 | 40.7 |
| FSU | 1512.3 | 47.6 | 68.2 | 108.5 | 3.7 | 1379.5 | 165.4 | 145.3 | 1068.7 |
| Bahrain | 11.9 | - | 0.3 | 0.5 | - | 11.2 | 1.5 | - | 9.7 |
| IR of Iran | 214.5 | 1.7 | 3.9 | 8.4 | - | 204.0 | 38.0 | 1.8 | 164.1 |
| Iraq | 36.8 | 1.5 | - | - | - | 38.3 | 2.5 | - | 35.7 |
| Israel | 56.4 | - | 3.7 | 3.4 | - | 49.4 | 1.2 | - | 48.2 |
| Jordan | 13.8 | 0.5 | 0.3 | 0.6 | - | 13.4 | 1.9 | 0.1 | 11.4 |
| Kuwait | 51.7 | - | - | 7.4 | - | 44.3 | 6.1 | 5.5 | 32.8 |
| Lebanon | 10.6 | 0.6 | - | - | - | 11.2 | 1.7 | - | 9.5 |
| Oman | 15.7 | - | - | 2.4 | - | 13.3 | 2.1 | - | 11.2 |
| Qatar | 21.6 | - | - | 1.9 | - | 19.7 | 1.5 | - | 18.2 |
| Saudi Arabia | 204.2 | - | - | 5.4 | - | 198.8 | 17.5 | 11.3 | 170.1 |
| Syrian Arab R. | 41.0 | - | - | 4.7 | - | 36.3 | 9.7 | - | 26.6 |
| UAE | 86.3 | - | - | 5.7 | - | 80.6 | 10.5 | - | 70.1 |
| Yemen | 6.5 | - | - | 0.5 | - | 6.0 | 1.5 | - | 4.5 |
| Middle East | 771.2 | 4.3 | 8.1 | 40.8 | - | 726.6 | 95.7 | 18.7 | 612.2 |
| Non-OECD Total | 9524.4 | 213.4 | 226.2 | 587.3 | 14.6 | 8909.6 | 997.0 | 340.6 | 7572.0 |

Source: IEA/OECD Energy Statistics of OECD Countries and IEA/OECD Energy Statistics of Non-OECD Countries.

(1) Gross production refers to total main activity producers and autoproducers production, including production from pumped storage

(2) Other use refers to used for heat pumps, electric boilers and pumped storage.

(3) Includes distribution losses.

(4) Electricity consumed by energy industries for heating, traction and lighting purposes; excludes own and other use.

(5) Calculated final consumption may differ from observed final consumption due to statistical difference.

Table 1.2. Gross electricity production, by country, by source, 2008
(TWh)

| | Nuclear | Hydro | Geo-thermal | Solar/wind ⁽¹⁾ | Fossil fuels ⁽²⁾ | Comb.renew & waste ⁽³⁾ | Total |
|------------------------|----------------|----------------|--------------|---------------------------|-----------------------------|-----------------------------------|-----------------|
| OECD Total | 2272.42 | 1381.19 | 40.95 | 204.38 | 6625.39 | 220.52 | 10744.86 |
| Non-OECD Total | 458.40 | 1906.36 | 23.65 | 31.59 | 7057.80 | 46.51 | 9524.37 |
| World | 2730.82 | 3287.55 | 64.61 | 235.97 | 13683.19 | 267.03 | 20269.23 |
| Australia | - | 12.06 | - | 4.10 | 238.89 | 2.20 | 257.25 |
| Austria | - | 40.68 | 0.00 | 2.06 | 19.35 | 5.02 | 67.10 |
| Belgium | 45.57 | 1.76 | - | 0.93 | 32.29 | 4.39 | 84.93 |
| Canada | 93.95 | 382.58 | - | 3.89 | 162.45 | 8.46 e | 651.32 |
| Czech Republic | 26.55 | 2.38 | - | 0.26 | 52.87 | 1.46 | 83.52 |
| Denmark | - | 0.03 | - | 6.93 | 25.52 | 3.92 | 36.39 |
| Finland | 22.96 | 17.11 | - | 0.77 | 25.98 | 10.61 | 77.44 |
| France | 439.47 | 68.33 | - | 6.24 | 54.94 | 5.89 | 574.87 |
| Germany | 148.50 | 26.96 | 0.02 | 44.99 | 387.54 | 29.22 | 637.23 |
| Greece | - | 4.15 | - | 2.25 | 57.14 | 0.21 | 63.75 |
| Hungary | 14.82 | 0.21 | - | 0.21 | 22.74 | 2.05 | 40.03 |
| Iceland | - | 12.43 | 4.04 | - | 0.00 | 0.00 | 16.47 |
| Ireland | - | 1.30 | - | 2.41 | 25.81 | 0.16 | 29.69 |
| Italy | - | 47.23 | 5.52 | 5.97 | 252.75 | 7.66 e | 319.13 |
| Japan | 258.13 | 83.30 | 2.75 | 4.87 e | 710.58 | 22.39 e | 1082.01 |
| Korea | 150.96 | 5.56 | - | 0.80 | 288.44 | 0.67 | 446.43 |
| Luxembourg | - | 0.97 | - | 0.08 | 2.40 | 0.11 | 3.56 |
| Mexico | 9.80 | 39.18 | 7.06 | 0.28 | 201.80 | 0.80 | 258.91 |
| Netherlands | 4.17 | 0.10 | - | 4.45 | 92.29 | 6.64 | 107.65 |
| New Zealand | - | 22.31 | 4.20 | 1.11 | 15.60 | 0.56 | 43.78 |
| Norway | - | 140.52 | - | 1.09 | 0.61 | 0.45 | 142.67 |
| Poland | - | 2.75 | - | 0.84 | 148.86 | 3.74 | 156.18 |
| Portugal | - | 7.30 | 0.19 | 5.80 | 30.54 | 2.14 | 45.97 |
| Slovak Republic | 16.70 | 4.24 | - | 0.05 | 7.44 | 0.54 | 28.96 |
| Spain | 58.97 | 26.11 | - | 35.09 | 189.54 | 4.04 | 313.75 |
| Sweden | 63.89 | 69.21 | - | 2.00 | 3.71 | 11.23 | 150.04 |
| Switzerland | 27.70 | 37.94 | - | 0.05 | 0.90 | 2.40 | 68.98 |
| Turkey | - | 33.27 | 0.16 | 0.85 | 163.92 | 0.22 | 198.42 |
| United Kingdom | 52.49 | 9.26 | - | 7.11 | 309.55 | 10.96 | 389.37 |
| United States | 837.80 | 282.00 | 17.01 | 58.93 e | 3100.96 | 72.39 | 4369.10 |
| OECD Total | 2272.42 | 1381.19 | 40.95 | 204.38 | 6625.39 | 220.52 | 10744.86 |
| <i>OECD Europe</i> | <i>921.78</i> | <i>554.21</i> | <i>9.93</i> | <i>130.41</i> | <i>1906.67</i> | <i>113.06</i> | <i>3636.06</i> |
| <i>OECD Pacific</i> | <i>409.09</i> | <i>123.23</i> | <i>6.95</i> | <i>10.88</i> | <i>1253.51</i> | <i>25.81</i> | <i>1829.46</i> |
| <i>OECD N. America</i> | <i>941.56</i> | <i>703.75</i> | <i>24.07</i> | <i>63.10</i> | <i>3465.21</i> | <i>81.65</i> | <i>5279.34</i> |

Source: IEA/OECD Energy Statistics of OECD Countries and IEA/OECD Energy Statistics of Non-OECD Countries.

(1) Includes tide, wave, ocean and other (fuel cells etc).

(2) Includes hard coal, brown coal, peat, coal gases, oil products and natural gas.

(3) Includes wood/wood waste/other solid waste, industrial and municipal waste, biogas and liquid biofuels.

Note: Including electricity production from pumped storage.

Table 1.2. Gross electricity production, by country, by source, 2008 (continued)
(TWh)

| | Nuclear | Hydro | Geo-thermal | Solar/wind ⁽¹⁾ | Fossil fuels ⁽²⁾ | Comb.renew & waste ⁽³⁾ | Total |
|----------------|--------------|--------------|-------------|---------------------------|-----------------------------|-----------------------------------|---------------|
| Algeria | - | 0.28 | - | - | 39.95 | - | 40.24 |
| Angola | - | 3.84 | - | - | 0.15 | - | 3.99 |
| Benin | - | 0.00 | - | - | 0.14 | - | 0.14 |
| Botswana | - | - | - | - | 0.63 | - | 0.63 |
| Cameroon | - | 4.23 | - | - | 1.31 | 0.01 | 5.55 |
| Congo | - | 0.38 | - | - | 0.09 | - | 0.46 |
| DR of Congo | - | 7.48 | - | - | 0.05 | - | 7.53 |
| Côte d'Ivoire | - | 1.90 | - | - | 3.78 | 0.12 | 5.80 |
| Egypt | - | 14.68 | - | 0.93 | 115.43 | - | 131.04 |
| Eritrea | - | - | - | 0.00 | 0.29 | - | 0.29 |
| Ethiopia | - | 3.30 | 0.01 | - | 0.47 | - | 3.78 |
| Gabon | - | 0.89 | - | - | 1.14 | 0.01 | 2.04 |
| Ghana | - | 6.20 | - | - | 2.16 | - | 8.36 |
| Kenya | - | 2.85 | 1.18 | - | 2.71 | 0.32 | 7.06 |
| Libyan Arab J. | - | - | - | - | 28.67 | - | 28.67 |
| Morocco | - | 1.37 | - | 0.30 | 19.60 | - | 21.27 |
| Mozambique | - | 15.11 | - | - | 0.01 | - | 15.13 |
| Namibia | - | 1.42 | - | - | 0.68 | - | 2.10 |
| Nigeria | - | 5.72 | - | - | 15.39 | - | 21.11 |
| Senegal | - | 0.23 | - | 0.04 | 2.10 | 0.03 | 2.40 |
| South Africa | 13.00 | 4.03 | - | 0.05 | 240.94 | 0.26 | 258.29 |
| Sudan | - | 1.46 | - | - | 3.06 | - | 4.52 |
| UR of Tanzania | - | 2.66 | - | - | 1.76 | - | 4.41 |
| Togo | - | 0.09 | - | - | 0.03 | 0.00 | 0.12 |
| Tunisia | - | 0.04 | - | 0.04 | 15.23 | - | 15.31 |
| Zambia | - | 9.67 | - | - | 0.03 | - | 9.70 |
| Zimbabwe | - | 4.26 | - | - | 3.73 | - | 7.99 |
| Other Africa | - | 6.06 | - | 0.01 | 9.83 | - | 15.90 |
| Africa | 13.00 | 98.15 | 1.19 | 1.37 | 509.34 | 0.75 | 623.81 |
| Argentina | 7.33 | 30.74 | - | 0.04 | 82.16 | 1.63 | 121.91 |
| Bolivia | - | 2.28 | - | - | 3.77 | 0.19 | 6.24 |
| Brazil | 13.97 | 369.56 | - | 0.89 | 59.13 | 19.77 | 463.37 |
| Chile | - | 24.19 | - | 0.04 | 32.39 | 3.08 | 59.70 |
| Colombia | - | 46.40 | - | 0.05 | 8.98 | 0.59 | 56.02 |
| Costa Rica | - | 7.39 | 1.13 | 0.20 | 0.68 | 0.08 | 9.48 |
| Cuba | - | 0.14 | - | - | 17.13 | 0.39 | 17.66 |
| Dominican Rep. | - | 1.73 | - | - | 13.66 | 0.03 | 15.41 |
| Ecuador | - | 11.29 | - | 0.00 | 6.89 | 0.42 | 18.61 |
| El Salvador | - | 2.04 | 1.52 | - | 2.30 | 0.11 | 5.96 |
| Guatemala | - | 3.71 | - | - | 3.45 | 1.55 | 8.72 |

Source: IEA/OECD *Energy Statistics of OECD Countries* and IEA/OECD *Energy Statistics of Non-OECD Countries*.

(1) Includes tide, wave, ocean and other (fuel cells etc).

(2) Includes hard coal, brown coal, peat, coal gases, oil products and natural gas.

(3) Includes wood/wood waste/other solid waste, industrial and municipal waste, biogas and liquid biofuels.

Note: Including electricity production from pumped storage.

Table 1.2. Gross electricity production, by country, by source, 2008 (continued)
(TWh)

| | Nuclear | Hydro | Geo-thermal | Solar/wind ⁽¹⁾ | Fossil fuels ⁽²⁾ | Comb.renew & waste ⁽³⁾ | Total |
|---------------------------|--------------|---------------|--------------|---------------------------|-----------------------------|-----------------------------------|----------------|
| Haiti | - | 0.18 | - | - | 0.31 | - | 0.49 |
| Honduras | - | 2.29 | - | - | 4.05 | 0.20 | 6.54 |
| Jamaica | - | 0.16 | - | 0.05 | 7.47 | 0.11 | 7.78 |
| N. Antilles | - | - | - | - | 1.24 | - | 1.24 |
| Nicaragua | - | 0.53 | 0.32 | - | 2.17 | 0.34 | 3.36 |
| Panama | - | 3.97 | - | - | 2.44 | 0.02 | 6.43 |
| Paraguay | - | 55.46 | - | - | - | - | 55.46 |
| Peru | - | 19.04 | - | 0.00 | 12.89 | 0.50 | 32.43 |
| Trinidad and T. | - | - | - | - | 7.88 | 0.01 | 7.89 |
| Uruguay | - | 4.51 | - | 0.00 | 3.43 | 0.83 | 8.77 |
| Venezuela | - | 86.84 | - | - | 32.46 | - | 119.30 |
| Oth. Lat. America | - | 1.41 | - | - | 35.02 | 0.11 | 36.53 |
| Latin America | 21.30 | 673.86 | 2.97 | 1.27 | 339.90 | 29.95 | 1069.30 |
| Bangladesh | - | 1.47 | - | - | 33.48 | - | 34.96 |
| Brunei Darussalam | - | - | - | - | 3.42 | - | 3.42 |
| Cambodia | - | 0.05 | - | - | 1.41 | 0.01 | 1.46 |
| India | 14.71 | 114.30 | - | 13.76 | 685.39 | 1.97 | 830.13 |
| Indonesia | - | 11.53 | 8.30 | - | 129.61 | - | 149.44 |
| DPR of Korea | - | 14.07 | - | - | 9.14 | - | 23.21 |
| Malaysia | - | 7.46 | - | 0.00 | 98.32 | - | 105.78 |
| Mongolia | - | - | - | - | 4.15 | - | 4.15 |
| Myanmar | - | 4.03 | - | - | 2.59 | - | 6.62 |
| Nepal | - | 3.07 | - | - | 0.01 | - | 3.08 |
| Pakistan | 1.62 | 27.78 | - | - | 62.22 | - | 91.63 |
| Philippines | - | 9.84 | 10.72 | 0.06 | 40.19 | - | 60.82 |
| Singapore | - | - | - | - | 41.72 | - | 41.72 |
| Sri Lanka | - | 4.13 | - | 0.02 | 5.09 | 0.00 | 9.24 |
| Chinese Taipei | 40.83 | 7.77 | - | 0.59 | 185.63 | 3.50 | 238.32 |
| Thailand | - | 7.11 | 0.00 | 0.00 | 135.47 | 4.84 | 147.43 |
| Vietnam | - | 25.99 | - | - | 47.06 | - | 73.05 |
| Other Asia | - | 13.49 | - | 0.04 | 7.88 | - | 21.41 |
| Asia (excl. China) | 57.16 | 252.09 | 19.02 | 14.48 | 1492.80 | 10.32 | 1845.87 |
| PR of China | 68.39 | 585.19 | - | 13.25 | 2787.72 | 2.36 | 3456.91 |
| Hong Kong | - | - | - | 0.00 | 37.99 | - | 37.99 |
| China (Region) | 68.39 | 585.19 | - | 13.25 | 2825.71 | 2.36 | 3494.90 |
| Albania | - | 3.80 | - | - | - | - | 3.80 |
| Bosnia and H. | - | 4.55 | - | - | 8.71 | - | 13.26 |
| Bulgaria | 15.77 | 3.28 | - | 0.12 | 25.86 | 0.02 | 45.04 |
| Croatia | - | 5.33 | - | 0.04 | 6.94 | 0.02 | 12.33 |
| Cyprus | - | - | - | 0.00 | 5.06 | 0.01 | 5.08 |

Source: IEA/OECD *Energy Statistics of OECD Countries* and IEA/OECD *Energy Statistics of Non-OECD Countries*.

(1) Includes tide, wave, ocean and other (fuel cells etc).

(2) Includes hard coal, brown coal, peat, coal gases, oil products and natural gas.

(3) Includes wood/wood waste/other solid waste, industrial and municipal waste, biogas and liquid biofuels.

Note: Including electricity production from pumped storage.

Table 1.2. Gross electricity production, by country, by source, 2008 (continued)
(TWh)

| | Nuclear | Hydro | Geo-thermal | Solar/wind ⁽¹⁾ | Fossil fuels ⁽²⁾ | Comb.renew & waste ⁽³⁾ | Total |
|------------------------|---------------|----------------|--------------|---------------------------|-----------------------------|-----------------------------------|----------------|
| F.Y.R. Macedonia | - | 0.84 | - | - | 5.47 | - | 6.31 |
| Gibraltar | - | - | - | - | 0.17 | - | 0.17 |
| Malta | - | - | - | - | 2.31 | - | 2.31 |
| Romania | 11.23 | 17.20 | - | 0.01 | 36.51 | 0.02 | 64.96 |
| Serbia | - | 10.11 | - | - | 27.21 | - | 37.32 |
| Slovenia | 6.27 | 4.02 | - | 0.00 | 5.82 | 0.29 | 16.40 |
| Non-OECD Europe | 33.26 | 49.11 | - | 0.17 | 124.05 | 0.36 | 206.96 |
| Armenia | 2.46 | 1.80 | 0.00 | 0.00 | 1.51 | - | 5.77 |
| Azerbaijan | - | 2.23 | - | - | 21.64 | - | 23.88 |
| Belarus | - | 0.04 | - | 0.00 | 34.93 | 0.08 | 35.05 |
| Estonia | - | 0.03 | - | 0.13 | 10.38 | 0.04 | 10.58 |
| Georgia | - | 7.16 | - | - | 1.28 | - | 8.44 |
| Kazakhstan | - | 7.46 | - | - | 72.87 | - | 80.33 |
| Kyrgyzstan | - | 10.74 | - | - | 1.14 | - | 11.88 |
| Latvia | - | 3.11 | - | 0.06 | 2.06 | 0.04 | 5.27 |
| Lithuania | 9.89 | 0.99 | - | 0.37 | 2.59 | 0.07 | 13.91 |
| Rep. of Moldova | - | 0.08 | - | - | 3.54 | - | 3.63 |
| Russian Federation | 163.09 | 166.71 | 0.47 | 0.01 | 707.57 | 2.54 | 1040.38 |
| Tajikistan | - | 15.85 | - | - | 0.30 | - | 16.15 |
| Turkmenistan | - | 0.00 | - | - | 15.04 | - | 15.04 |
| Ukraine | 89.84 | 11.51 | - | 0.05 | 91.19 | - | 192.59 |
| Uzbekistan | - | 11.36 | - | - | 38.04 | - | 49.40 |
| FSU | 265.28 | 239.07 | 0.47 | 0.61 | 1004.08 | 2.77 | 1512.28 |
| Bahrain | - | - | - | - | 11.93 | - | 11.93 |
| IR of Iran | - | 5.00 | - | 0.20 | 209.33 | - | 214.53 |
| Iraq | - | 0.56 | - | - | 36.22 | - | 36.78 |
| Israel | - | 0.02 | - | 0.23 | 56.18 | - | 56.42 |
| Jordan | - | 0.06 | - | 0.00 | 13.76 | 0.01 | 13.84 |
| Kuwait | - | - | - | - | 51.75 | - | 51.75 |
| Lebanon | - | 0.37 | - | - | 10.25 | - | 10.63 |
| Oman | - | - | - | - | 15.72 | - | 15.72 |
| Qatar | - | - | - | - | 21.62 | - | 21.62 |
| Saudi Arabia | - | - | - | - | 204.20 | - | 204.20 |
| Syrian Arab R. | - | 2.87 | - | - | 38.15 | - | 41.02 |
| UAE | - | - | - | - | 86.26 | - | 86.26 |
| Yemen | - | - | - | - | 6.55 | - | 6.55 |
| Middle East | - | 8.89 | - | 0.43 | 761.92 | 0.01 | 771.24 |
| Non-OECD Total | 458.40 | 1906.36 | 23.65 | 31.59 | 7057.80 | 46.51 | 9524.37 |

Source: IEA/OECD Energy Statistics of OECD Countries and IEA/OECD Energy Statistics of Non-OECD Countries.

(1) Includes tide, wave, ocean and other (fuel cells etc).

(2) Includes hard coal, brown coal, peat, coal gases, oil products and natural gas.

(3) Includes wood/wood waste/other solid waste, industrial and municipal waste, biogas and liquid biofuels.

Note: Including electricity production from pumped storage.

**Table 1.3. Gross electricity production from combustible fuels,
by country, 2008
(TWh)**

| | Coal | | | | Oil | Gas | Wood | Indust. waste | Municip. waste | Biogas liq. biof. | Tot. comb. fuels |
|------------------------|----------------|---------------|-------------|---------------|----------------|----------------|---------------|---------------|----------------|-------------------|------------------|
| | Hard | Brown | Peat | Gases | | | | | | | |
| OECD Total | 3213.62 | 571.38 | 8.61 | 88.89 | 378.16 | 2364.74 | 122.08 | 8.62 | 55.14 | 34.68 | 6845.91 |
| Non-OECD Total | 4049.42 | 288.19 | 0.49 | 42.54 | 733.14 | 1944.02 | 40.75 | 2.59 | 2.98 | 0.20 | 7104.31 |
| World | 7263.04 | 859.57 | 9.10 | 131.43 | 1111.29 | 4308.76 | 162.83 | 11.21 | 58.12 | 34.88 | 13950.22 |
| Australia | 141.71 | 54.09 | - | 1.82 | 2.76 | 38.51 | 1.20 | - | - | 1.00 | 241.09 |
| Austria | 5.52 | - | - | 1.37 | 1.24 | 11.20 | 3.26 | 0.39 | 0.36 | 1.01 | 24.36 |
| Belgium | 5.55 | - | - | 1.69 | 0.41 | 24.65 | 2.49 | 0.41 | 1.03 | 0.47 | 36.68 |
| Canada | 24.89 | 87.02 | - | 0.06 | 9.85 | 40.64 | 7.53 | - | 0.16 e | 0.77 | 170.91 |
| Czech Republic | 5.79 | 42.99 | - | 1.05 | 0.13 | 2.92 | 1.17 | 0.00 | 0.02 | 0.27 | 54.33 |
| Denmark | 17.46 | - | - | - | 1.13 | 6.93 | 1.80 | - | 1.87 | 0.25 | 29.43 |
| Finland | 8.50 | 0.01 | 5.20 | 0.60 | 0.43 | 11.25 | 10.06 | 0.04 | 0.43 | 0.09 | 36.60 |
| France | 23.38 | - | - | 3.85 | 5.83 | 21.88 | 1.43 | - | 3.78 | 0.68 | 60.83 |
| Germany | 125.83 | 155.34 | - | 9.47 | 9.24 | 87.65 | 8.96 | 0.36 | 9.01 | 10.89 | 416.76 |
| Greece | - | 33.36 | - | - | 9.99 | 13.80 | - | 0.02 | - | 0.19 | 57.35 |
| Hungary | 0.31 | 6.78 | - | 0.12 | 0.36 | 15.18 | 1.76 | 0.01 | 0.22 | 0.07 | 24.79 |
| Iceland | - | - | - | - | 0.00 | - | - | - | 0.00 | - | 0.00 |
| Ireland | 5.23 | - | 2.79 | - | 1.73 | 16.07 | 0.03 | - | - | 0.13 | 25.98 |
| Italy | 43.07 | - | - | 5.52 | 31.46 | 172.70 | 2.75 | 0.14 | 3.11 e | 1.66 | 260.41 |
| Japan | 256.09 | - | - | 32.16 | 139.17 | 283.15 | 15.08 | 0.47 | 6.84 e | - | 732.97 |
| Korea | 176.70 | - | - | 15.07 | 15.35 | 81.33 | 0.04 | 0.02 | 0.16 | 0.45 | 289.11 |
| Luxembourg | - | - | - | - | - | 2.40 | - | - | 0.07 | 0.04 | 2.51 |
| Mexico | 20.91 | - | - | 0.50 | 49.31 | 131.08 | 0.73 | - | - | 0.07 | 202.60 |
| Netherlands | 23.47 | - | - | 3.33 | 2.07 | 63.42 | 2.56 | - | 2.92 | 1.16 | 98.93 |
| New Zealand | 4.22 | 0.02 | - | 0.58 | 0.13 | 10.65 | 0.34 | - | - | 0.22 | 16.16 |
| Norway | 0.07 | - | - | 0.09 | 0.02 | 0.43 | 0.33 | 0.01 | 0.11 | 0.01 | 1.06 |
| Poland | 83.91 | 57.26 | - | 2.19 | 2.32 | 3.17 | 3.20 | 0.28 | 0.01 | 0.25 | 152.59 |
| Portugal | 11.20 | - | - | - | 4.15 | 15.20 | 1.50 | 0.01 | 0.56 | 0.07 | 32.69 |
| Slovak Republic | 2.46 | 2.21 | - | 0.48 | 0.68 | 1.61 | 0.48 | 0.00 | 0.04 | 0.02 | 7.97 |
| Spain | 45.38 | 3.33 | - | 1.26 | 18.00 | 121.56 | 1.89 | .. | 1.56 | 0.59 | 193.57 |
| Sweden | 0.51 | - | 0.62 | 1.11 | 0.87 | 0.60 | 8.93 | 0.04 | 2.12 | 0.14 | 14.94 |
| Switzerland | - | - | - | - | 0.14 | 0.75 | 0.15 | 0.24 | 1.82 | 0.18 | 3.30 |
| Turkey | 14.52 | 41.86 | - | 1.34 | 7.52 | 98.69 | 0.02 | 0.08 | - | 0.12 | 164.14 |
| United Kingdom | 125.32 | - | - | 1.38 | 6.10 | 176.75 | 2.77 | 0.91 | 1.96 | 5.32 | 320.51 |
| United States | 2041.63 | 87.11 | - | 3.86 | 57.78 | 910.59 | 41.62 | 5.20 | 16.99 | 8.58 | 3173.35 |
| OECD Total | 3213.62 | 571.38 | 8.61 | 88.89 | 378.16 | 2364.74 | 122.08 | 8.62 | 55.14 | 34.68 | 6845.91 |
| <i>OECD Europe</i> | <i>547.47</i> | <i>343.14</i> | <i>8.61</i> | <i>34.85</i> | <i>103.81</i> | <i>868.80</i> | <i>55.54</i> | <i>2.93</i> | <i>31.00</i> | <i>23.59</i> | <i>2019.73</i> |
| <i>OECD Pacific</i> | <i>578.72</i> | <i>54.11</i> | <i>-</i> | <i>49.62</i> | <i>157.41</i> | <i>413.64</i> | <i>16.66</i> | <i>0.49</i> | <i>6.99</i> | <i>1.67</i> | <i>1279.32</i> |
| <i>OECD N. America</i> | <i>2087.43</i> | <i>174.13</i> | <i>-</i> | <i>4.42</i> | <i>116.93</i> | <i>1082.30</i> | <i>49.88</i> | <i>5.20</i> | <i>17.14</i> | <i>9.42</i> | <i>3546.86</i> |

Source: IEA/OECD Energy Statistics of OECD Countries and IEA/OECD Energy Statistics of Non-OECD Countries.

**Table 1.3. Gross electricity production from combustible fuels,
by country, 2008 (continued)**
(TWh)

| | Coal | | | | Oil | Gas | Wood | Indust. waste | Municip. waste | Biogas liq. biof. | Tot. comb. fuels |
|----------------|---------------|-------|------|-------|--------------|---------------|-------------|---------------|----------------|-------------------|------------------|
| | Hard | Brown | Peat | Gases | | | | | | | |
| Algeria | - | - | - | - | 0.79 | 39.16 | - | - | - | - | 39.95 |
| Angola | - | - | - | - | 0.15 | - | - | - | - | - | 0.15 |
| Benin | - | - | - | - | 0.14 | - | - | - | - | - | 0.14 |
| Botswana | 0.63 | - | - | - | - | - | - | - | - | - | 0.63 |
| Cameroon | - | - | - | - | 0.88 | 0.43 | 0.01 | - | - | - | 1.32 |
| Congo | - | - | - | - | - | 0.09 | - | - | - | - | 0.09 |
| DR of Congo | - | - | - | - | 0.02 | 0.03 | - | - | - | - | 0.05 |
| Côte d'Ivoire | - | - | - | - | 0.01 | 3.78 | 0.12 | - | - | - | 3.90 |
| Egypt | - | - | - | - | 25.83 | 89.59 | - | - | - | - | 115.43 |
| Eritrea | - | - | - | - | 0.29 | - | - | - | - | - | 0.29 |
| Ethiopia | - | - | - | - | 0.47 | - | - | - | - | - | 0.47 |
| Gabon | - | - | - | - | 0.64 | 0.50 | 0.01 | - | - | - | 1.15 |
| Ghana | - | - | - | - | 2.16 | - | - | - | - | - | 2.16 |
| Kenya | - | - | - | - | 2.71 | - | 0.32 | - | - | - | 3.03 |
| Libyan Arab J. | - | - | - | - | 16.92 | 11.75 | - | - | - | - | 28.67 |
| Morocco | 11.70 | - | - | - | 5.03 | 2.87 | - | - | - | - | 19.60 |
| Mozambique | - | - | - | - | 0.00 | 0.01 | - | - | - | - | 0.01 |
| Namibia | 0.65 | - | - | - | 0.03 | - | - | - | - | - | 0.68 |
| Nigeria | - | - | - | - | 3.10 | 12.29 | - | - | - | - | 15.39 |
| Senegal | - | - | - | - | 2.06 | 0.04 | 0.03 | - | - | - | 2.13 |
| South Africa | 240.80 | - | - | - | 0.14 | - | 0.26 | - | - | - | 241.20 |
| Sudan | - | - | - | - | 3.06 | - | - | - | - | - | 3.06 |
| UR of Tanzania | 0.12 | - | - | - | 0.04 | 1.60 | - | - | - | - | 1.76 |
| Togo | - | - | - | - | 0.03 | - | 0.00 | - | - | - | 0.03 |
| Tunisia | - | - | - | - | 1.66 | 13.58 | - | - | - | - | 15.23 |
| Zambia | 0.00 | - | - | - | 0.03 | - | - | - | - | - | 0.03 |
| Zimbabwe | 3.70 | - | - | - | 0.02 | - | - | - | - | - | 3.73 |
| Other Africa | 2.17 | - | - | - | 7.66 | - | - | - | - | - | 9.83 |
| Africa | 259.77 | - | - | - | 73.86 | 175.72 | 0.75 | - | - | - | 510.09 |
| Argentina | 1.66 | - | - | 1.14 | 14.26 | 65.10 | 1.63 | - | - | - | 83.79 |
| Bolivia | - | - | - | - | 0.87 | 2.90 | 0.19 | - | - | - | 3.96 |
| Brazil | 0.31 | 6.54 | - | 5.71 | 17.55 | 29.02 | 19.77 | - | - | - | 78.91 |
| Chile | 14.11 | - | - | - | 16.09 | 2.19 | 3.08 | - | - | - | 35.47 |
| Colombia | 2.92 | - | - | 0.12 | 0.15 | 5.78 | 0.59 | - | - | - | 9.57 |
| Costa Rica | - | - | - | - | 0.68 | - | 0.08 | - | - | 0.00 | 0.76 |
| Cuba | - | - | - | - | 17.13 | - | 0.39 | - | - | - | 17.52 |
| Dominican Rep. | 2.13 | - | - | - | 9.53 | 2.00 | 0.03 | - | - | - | 13.69 |
| Ecuador | - | - | - | - | 5.54 | 1.36 | 0.42 | - | - | - | 7.31 |
| El Salvador | - | - | - | - | 2.30 | - | 0.11 | - | - | - | 2.40 |
| Guatemala | 1.13 | - | - | - | 2.32 | - | 1.55 | - | - | - | 5.01 |

Source: IEA/OECD Energy Statistics of OECD Countries and IEA/OECD Energy Statistics of Non-OECD Countries.

**Table 1.3. Gross electricity production from combustible fuels,
by country, 2008 (continued)**
(TWh)

| | Coal | | | | Oil | Gas | Wood | Indust. waste | Municip. waste | Biogas liq. biof. | Tot. comb. fuels |
|---------------------------|----------------|---------------|------|--------------|---------------|---------------|--------------|---------------|----------------|-------------------|------------------|
| | Hard | Brown | Peat | Gases | | | | | | | |
| Haiti | - | - | - | - | 0.31 | - | - | - | - | - | 0.31 |
| Honduras | - | - | - | - | 4.05 | - | 0.20 | - | - | - | 4.25 |
| Jamaica | - | - | - | - | 7.47 | - | 0.11 | - | - | - | 7.57 |
| N. Antilles | - | - | - | - | 1.24 | - | - | - | - | - | 1.24 |
| Nicaragua | - | - | - | - | 2.17 | - | 0.34 | - | - | - | 2.51 |
| Panama | - | - | - | - | 2.44 | - | 0.02 | - | - | - | 2.46 |
| Paraguay | - | - | - | - | - | - | - | - | - | - | - |
| Peru | 0.88 | - | - | - | 2.92 | 9.09 | 0.50 | - | - | - | 13.39 |
| Trinidad and T. | - | - | - | - | 0.02 | 7.86 | 0.01 | - | - | - | 7.89 |
| Uruguay | - | - | - | - | 3.43 | 0.00 | 0.83 | - | - | - | 4.26 |
| Venezuela | - | - | - | - | 14.96 | 17.50 | - | - | - | - | 32.46 |
| Oth. Lat. America | - | - | - | - | 31.76 | 3.26 | 0.11 | - | - | - | 35.13 |
| Latin America | 23.15 | 6.54 | - | 6.98 | 157.18 | 146.05 | 29.94 | - | - | 0.00 | 369.84 |
| Bangladesh | 0.64 | - | - | - | 1.74 | 31.11 | - | - | - | - | 33.48 |
| Brunei Darussalam | - | - | - | - | 0.03 | 3.39 | - | - | - | - | 3.42 |
| Cambodia | - | - | - | - | 1.41 | - | 0.01 | - | - | - | 1.42 |
| India | 549.75 | 18.13 | - | 1.43 | 34.15 | 81.93 | 1.97 | - | - | - | 687.36 |
| Indonesia | - | 61.40 | - | - | 42.98 | 25.24 | - | - | - | - | 129.61 |
| DPR of Korea | 7.46 | 0.90 | - | - | 0.78 | - | - | - | - | - | 9.14 |
| Malaysia | 30.24 | - | - | - | 1.83 | 66.26 | - | - | - | - | 98.32 |
| Mongolia | - | 3.99 | - | - | 0.16 | - | - | - | - | - | 4.15 |
| Myanmar | - | - | - | - | 0.23 | 2.36 | - | - | - | - | 2.59 |
| Nepal | - | - | - | - | 0.01 | - | - | - | - | - | 0.01 |
| Pakistan | 0.11 | - | - | - | 32.43 | 29.68 | - | - | - | - | 62.22 |
| Philippines | 15.75 | - | - | - | 4.87 | 19.58 | - | - | - | - | 40.19 |
| Singapore | - | - | - | - | 8.22 | 33.50 | - | - | - | - | 41.72 |
| Sri Lanka | - | - | - | - | 5.09 | - | 0.00 | - | - | - | 5.09 |
| Chinese Taipei | 112.37 | 10.63 | - | 2.05 | 14.25 | 46.33 | 0.52 | - | 2.98 | - | 189.13 |
| Thailand | 13.11 | 18.42 | - | - | 1.66 | 102.29 | 4.80 | - | - | 0.04 | 140.31 |
| Vietnam | 15.17 | - | - | - | 1.55 | 30.34 | - | - | - | - | 47.06 |
| Other Asia | - | - | - | - | 7.88 | - | - | - | - | - | 7.88 |
| Asia (excl. China) | 744.59 | 113.46 | - | 3.48 | 159.28 | 471.99 | 7.29 | - | 2.98 | 0.04 | 1503.12 |
| PR of China | 2708.24 | - | - | 21.59 | 23.41 | 34.48 | 2.36 | - | - | - | 2790.08 |
| Hong Kong | 25.90 | - | - | - | 0.11 | 11.98 | - | - | - | - | 37.99 |
| China (Region) | 2734.15 | - | - | 21.59 | 23.52 | 46.46 | 2.36 | - | - | - | 2828.07 |
| Albania | - | - | - | - | - | - | - | - | - | - | - |
| Bosnia and H. | 5.37 | 3.12 | - | 0.04 | 0.17 | - | - | - | - | - | 8.71 |
| Bulgaria | 6.04 | 17.15 | - | 0.04 | 0.28 | 2.36 | - | 0.02 | - | - | 25.87 |
| Croatia | 2.49 | 0.00 | - | - | 1.99 | 2.46 | 0.00 | - | - | 0.02 | 6.96 |
| Cyprus | - | - | - | - | 5.06 | - | - | - | - | 0.01 | 5.08 |

Source: IEA/OECD Energy Statistics of OECD Countries and IEA/OECD Energy Statistics of Non-OECD Countries.

**Table 1.3. Gross electricity production from combustible fuels,
by country, 2008 (continued)**
(TWh)

| | Coal | | | | Oil | Gas | Wood | Indust. waste | Municip. waste | Biogas liq. biof. | Tot. comb. fuels |
|------------------------|----------------|---------------|-------------|--------------|---------------|----------------|--------------|---------------|----------------|-------------------|------------------|
| | Hard | Brown | Peat | Gases | | | | | | | |
| F.Y.R. Macedonia | - | 5.29 | - | - | 0.18 | - | - | - | - | - | 5.47 |
| Gibraltar | - | - | - | - | 0.17 | - | - | - | - | - | 0.17 |
| Malta | - | - | - | - | 2.31 | - | - | - | - | - | 2.31 |
| Romania | 0.11 | 25.71 | - | 0.06 | 0.70 | 9.92 | 0.02 | - | - | 0.00 | 36.53 |
| Serbia | 0.00 | 26.62 | - | - | 0.17 | 0.42 | - | - | - | - | 27.21 |
| Slovenia | 0.52 | 4.81 | - | - | 0.02 | 0.48 | 0.23 | 0.00 | - | 0.06 | 6.11 |
| Non-OECD Europe | 14.53 | 82.70 | - | 0.14 | 11.05 | 15.63 | 0.26 | 0.02 | - | 0.09 | 124.41 |
| Armenia | - | - | - | - | - | 1.51 | - | - | - | - | 1.51 |
| Azerbaijan | - | - | - | - | 1.57 | 20.08 | - | - | - | - | 21.64 |
| Belarus | - | - | 0.01 | - | 0.96 | 33.96 | 0.03 | 0.05 | - | 0.00 | 35.01 |
| Estonia | - | 9.63 | 0.02 | - | 0.04 | 0.70 | 0.03 | - | - | 0.01 | 10.42 |
| Georgia | - | - | - | - | - | 1.28 | - | - | - | - | 1.28 |
| Kazakhstan | 56.50 | - | - | - | 7.78 | 8.58 | - | - | - | - | 72.87 |
| Kyrgyzstan | 0.41 | - | - | - | - | 0.72 | - | - | - | - | 1.14 |
| Latvia | 0.00 | - | - | - | 0.00 | 2.06 | 0.01 | - | - | 0.04 | 2.11 |
| Lithuania | - | - | 0.00 | - | 0.57 | 2.03 | 0.06 | - | - | 0.01 | 2.66 |
| Rep. of Moldova | - | - | - | - | 0.08 | 3.47 | - | - | - | - | 3.54 |
| Russian Federation | 115.94 | 73.57 | 0.46 | 6.77 | 16.10 | 494.72 | 0.02 | 2.52 | - | - | 710.11 |
| Tajikistan | - | - | - | - | - | 0.30 | - | - | - | - | 0.30 |
| Turkmenistan | - | - | - | - | - | 15.04 | - | - | - | - | 15.04 |
| Ukraine | 65.02 | 0.25 | - | 3.19 | 0.69 | 22.04 | - | - | - | - | 91.19 |
| Uzbekistan | - | 2.02 | - | - | 1.46 | 34.57 | - | - | - | - | 38.04 |
| FSU | 237.88 | 85.47 | 0.49 | 9.97 | 29.24 | 641.03 | 0.15 | 2.57 | - | 0.06 | 1006.85 |
| Bahrain | - | - | - | - | 0.01 | 11.93 | - | - | - | - | 11.93 |
| IR of Iran | - | - | - | 0.39 | 35.54 | 173.40 | - | - | - | - | 209.33 |
| Iraq | - | - | - | - | 36.22 | - | - | - | - | - | 36.22 |
| Israel | 35.35 | 0.03 | - | - | 5.99 | 14.81 | - | - | - | - | 56.18 |
| Jordan | - | - | - | - | 2.61 | 11.15 | - | - | - | 0.01 | 13.77 |
| Kuwait | - | - | - | - | 36.01 | 15.74 | - | - | - | - | 51.75 |
| Lebanon | - | - | - | - | 10.25 | - | - | - | - | - | 10.25 |
| Oman | - | - | - | - | 2.83 | 12.89 | - | - | - | - | 15.72 |
| Qatar | - | - | - | - | - | 21.62 | - | - | - | - | 21.62 |
| Saudi Arabia | - | - | - | - | 116.24 | 87.96 | - | - | - | - | 204.20 |
| Syrian Arab R. | - | - | - | - | 25.30 | 12.85 | - | - | - | - | 38.15 |
| UAE | - | - | - | - | 1.47 | 84.79 | - | - | - | - | 86.26 |
| Yemen | - | - | - | - | 6.55 | - | - | - | - | - | 6.55 |
| Middle East | 35.35 | 0.03 | - | 0.39 | 279.01 | 447.14 | - | - | - | 0.01 | 761.93 |
| Non-OECD Total | 4049.42 | 288.19 | 0.49 | 42.54 | 733.14 | 1944.02 | 40.75 | 2.59 | 2.98 | 0.20 | 7104.31 |

Source: IEA/OECD Energy Statistics of OECD Countries and IEA/OECD Energy Statistics of Non-OECD Countries.

**Table 1.4. Gross heat production⁽¹⁾ from combustible fuels,
by country, 2008
(PJ)**

| | Coal | | | | Oil | Gas | Wood | Indust. waste | Municip. waste | Biogas liq. biof. | Tot. comb. fuels |
|------------------------|----------------|---------------|--------------|---------------|---------------|----------------|---------------|---------------|----------------|-------------------|------------------|
| | Hard | Brown | Peat | Gases | | | | | | | |
| OECD Total | 652.50 | 115.50 | 40.33 | 43.74 | 272.84 | 1382.24 | 247.22 | 9.53 | 188.36 | 17.40 | 2974.32 |
| Non-OECD Total | 3477.02 | 491.45 | 5.59 | 169.19 | 503.83 | 5053.85 | 76.67 | 81.04 | - | 0.16 | 9858.80 |
| World | 4129.52 | 606.95 | 45.91 | 212.93 | 776.67 | 6436.08 | 323.90 | 90.57 | 188.36 | 17.56 | 12833.12 |
| Australia | - | - | - | - | - | - | - | - | - | - | - |
| Austria | 2.98 | - | - | 0.39 | 5.91 | 28.05 | 24.84 | 0.62 | 3.48 | 0.65 | 66.91 |
| Belgium | - | - | - | - | 0.00 | 27.56 | 0.27 | 0.22 | 0.27 | 0.25 | 28.57 |
| Canada | - | - | - | - | 1.00 | 30.85 | - | - | 1.81 e | 0.05 | 33.70 |
| Czech Republic | 27.07 | 57.57 | - | 4.38 | 3.20 | 22.89 | 1.90 | 0.38 | 2.57 | 0.16 | 120.11 |
| Denmark | 33.07 | - | - | - | 4.33 | 35.99 | 20.84 | - | 25.33 | 0.90 | 120.44 |
| Finland | 30.21 | 0.01 | 30.57 | 0.37 | 10.99 | 45.42 | 53.00 | 0.94 | 3.24 | 0.67 | 175.40 |
| France | 12.19 | - | - | 2.67 | 23.34 | 97.97 | - | - | 21.34 | - | 157.50 |
| Germany | 123.68 | 38.88 | - | 0.30 | 6.26 | 250.04 | 10.51 | - | 43.75 | 1.09 | 479.17 |
| Greece | - | 1.83 | - | - | 0.01 | - | - | - | - | - | 1.84 |
| Hungary | 1.68 | 4.32 | - | 3.57 | 0.49 | 43.38 | 0.86 | - | 1.08 | 0.00 | 55.37 |
| Iceland | - | - | - | - | 0.04 | - | - | - | 0.03 | - | 0.07 |
| Ireland | - | - | - | - | - | - | - | - | - | - | - |
| Italy | 1.01 | - | - | 0.88 | 64.66 | 121.04 | 3.62 | 0.13 | 6.18 e | 0.86 | 198.37 |
| Japan | 0.50 | - | - | - | 0.36 | 14.89 | - | 0.07 | - | 5.16 | 20.98 |
| Korea | 41.62 | - | - | 0.39 | 86.93 | 57.13 | 0.42 | - | 12.67 | 0.73 | 199.89 |
| Luxembourg | - | - | - | - | - | 2.12 | - | - | - | 0.25 | 2.37 |
| Mexico | - | - | - | - | - | - | - | - | - | - | - |
| Netherlands | 15.77 | - | - | 1.87 | 8.22 | 101.35 | 1.48 | - | 8.43 | 0.11 | 137.24 |
| New Zealand | - | - | - | - | - | - | - | - | - | - | - |
| Norway | 0.21 | - | - | 0.01 | 0.64 | 0.63 | 1.55 | 0.55 | 6.48 | 0.01 | 10.08 |
| Poland | 261.20 | 5.71 | - | 12.17 | 4.39 | 20.29 | 5.68 | 2.00 | 0.28 | 0.93 | 312.65 |
| Portugal | - | - | - | - | 3.99 | 9.26 | - | - | - | - | 13.25 |
| Slovak Republic | 3.00 | 6.72 | - | 0.14 | 0.62 | 24.40 | 1.91 | 0.21 | 0.24 | 0.16 | 37.41 |
| Spain | - | - | - | - | - | - | - | - | - | - | - |
| Sweden | 5.53 | - | 9.76 | 5.38 | 4.06 | 6.41 | 91.23 | 0.23 | 29.65 | 4.36 | 156.60 |
| Switzerland | - | - | - | - | 0.33 | 4.90 | 0.75 | 0.44 | 10.16 | 0.02 | 16.58 |
| Turkey | 0.11 | 0.47 | - | - | 0.56 | 41.40 | - | - | - | - | 42.54 |
| United Kingdom | 6.80 | - | - | 0.68 | 1.39 | 44.76 | - | - | - | - | 53.63 |
| United States | 85.90 | - | - | 10.54 | 41.14 | 351.54 | 28.36 | 3.75 | 11.38 | 1.06 | 533.67 |
| OECD Total | 652.50 | 115.50 | 40.33 | 43.74 | 272.84 | 1382.24 | 247.22 | 9.53 | 188.36 | 17.40 | 2969.65 |
| <i>OECD Europe</i> | <i>524.49</i> | <i>115.50</i> | <i>40.33</i> | <i>32.81</i> | <i>143.41</i> | <i>927.83</i> | <i>218.44</i> | <i>5.71</i> | <i>162.51</i> | <i>10.39</i> | <i>2181.42</i> |
| <i>OECD Pacific</i> | <i>42.11</i> | - | - | <i>0.39</i> | <i>87.29</i> | <i>72.01</i> | <i>0.42</i> | <i>0.07</i> | <i>12.67</i> | <i>5.89</i> | <i>220.86</i> |
| <i>OECD N. America</i> | <i>85.90</i> | - | - | <i>10.54</i> | <i>42.14</i> | <i>382.39</i> | <i>28.36</i> | <i>3.75</i> | <i>13.18</i> | <i>1.11</i> | <i>567.37</i> |

Source: IEA/OECD Energy Statistics of OECD Countries and IEA/OECD Energy Statistics of Non-OECD Countries.

(1) Production in industry for own use is not included.

Note: Please refer to definitions in the introductory information.

**Table 1.4. Gross heat production⁽¹⁾ from combustible fuels,
by country, 2008 (continued)
(PJ)**

| | Coal | | | | Oil | Gas | Wood | Indust. waste | Municip. waste | Biogas liq. biof. | Tot. Comb. Fuels |
|----------------|------|-------|------|-------|-----|-----|------|---------------|----------------|-------------------|------------------|
| | Hard | Brown | Peat | Gases | | | | | | | |
| Algeria | - | - | - | - | - | - | - | - | - | - | - |
| Angola | - | - | - | - | - | - | - | - | - | - | - |
| Benin | - | - | - | - | - | - | - | - | - | - | - |
| Botswana | - | - | - | - | - | - | - | - | - | - | - |
| Cameroon | - | - | - | - | - | - | - | - | - | - | - |
| Congo | - | - | - | - | - | - | - | - | - | - | - |
| DR of Congo | - | - | - | - | - | - | - | - | - | - | - |
| Côte d'Ivoire | - | - | - | - | - | - | - | - | - | - | - |
| Egypt | - | - | - | - | - | - | - | - | - | - | - |
| Eritrea | - | - | - | - | - | - | - | - | - | - | - |
| Ethiopia | - | - | - | - | - | - | - | - | - | - | - |
| Gabon | - | - | - | - | - | - | - | - | - | - | - |
| Ghana | - | - | - | - | - | - | - | - | - | - | - |
| Kenya | - | - | - | - | - | - | - | - | - | - | - |
| Libyan Arab J. | - | - | - | - | - | - | - | - | - | - | - |
| Morocco | - | - | - | - | - | - | - | - | - | - | - |
| Mozambique | - | - | - | - | - | - | - | - | - | - | - |
| Namibia | - | - | - | - | - | - | - | - | - | - | - |
| Nigeria | - | - | - | - | - | - | - | - | - | - | - |
| Senegal | - | - | - | - | - | - | - | - | - | - | - |
| South Africa | - | - | - | - | - | - | - | - | - | - | - |
| Sudan | - | - | - | - | - | - | - | - | - | - | - |
| UR of Tanzania | - | - | - | - | - | - | - | - | - | - | - |
| Togo | - | - | - | - | - | - | - | - | - | - | - |
| Tunisia | - | - | - | - | - | - | - | - | - | - | - |
| Zambia | - | - | - | - | - | - | - | - | - | - | - |
| Zimbabwe | - | - | - | - | - | - | - | - | - | - | - |
| Other Africa | - | - | - | - | - | - | - | - | - | - | - |
| Africa | - | - | - | - | - | - | - | - | - | - | - |
| Argentina | - | - | - | - | - | - | - | - | - | - | - |
| Bolivia | - | - | - | - | - | - | - | - | - | - | - |
| Brazil | - | - | - | - | - | - | - | - | - | - | - |
| Chile | - | - | - | - | - | - | - | - | - | - | - |
| Colombia | - | - | - | - | - | - | - | - | - | - | - |
| Costa Rica | - | - | - | - | - | - | - | - | - | - | - |
| Cuba | - | - | - | - | - | - | - | - | - | - | - |
| Dominican Rep. | - | - | - | - | - | - | - | - | - | - | - |
| Ecuador | - | - | - | - | - | - | - | - | - | - | - |
| El Salvador | - | - | - | - | - | - | - | - | - | - | - |
| Guatemala | - | - | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD *Energy Statistics of OECD Countries* and IEA/OECD *Energy Statistics of Non-OECD Countries*.

(1) Production in industry for own use is not included.

Note: Please refer to definitions in the introductory information.

**Table 1.4. Gross heat production⁽¹⁾ from combustible fuels,
by country, 2008 (continued)**
(PJ)

| | Coal | | | | Oil | Gas | Wood | Indust. waste | Municip. waste | Biogas liq. biof. | Tot. comb. fuels |
|---------------------------|----------------|--------------|------|--------------|---------------|--------------|--------------|---------------|----------------|-------------------|------------------|
| | Hard | Brown | Peat | Gases | | | | | | | |
| Haiti | - | - | - | - | - | - | - | - | - | - | - |
| Honduras | - | - | - | - | - | - | - | - | - | - | - |
| Jamaica | - | - | - | - | - | - | - | - | - | - | - |
| N. Antilles | - | - | - | - | - | - | - | - | - | - | - |
| Nicaragua | - | - | - | - | - | - | - | - | - | - | - |
| Panama | - | - | - | - | - | - | - | - | - | - | - |
| Paraguay | - | - | - | - | - | - | - | - | - | - | - |
| Peru | - | - | - | - | - | - | - | - | - | - | - |
| Trinidad and T. | - | - | - | - | - | - | - | - | - | - | - |
| Uruguay | - | - | - | - | - | - | - | - | - | - | - |
| Venezuela | - | - | - | - | - | - | - | - | - | - | - |
| Oth. Lat. America | - | - | - | - | - | - | - | - | - | - | - |
| Latin America | - | - | - | - | - | - | - | - | - | - | - |
| Bangladesh | - | - | - | - | - | - | - | - | - | - | - |
| Brunei Darussalam | - | - | - | - | - | - | - | - | - | - | - |
| Cambodia | - | - | - | - | - | - | - | - | - | - | - |
| India | - | - | - | - | - | - | - | - | - | - | - |
| Indonesia | - | - | - | - | - | - | - | - | - | - | - |
| DPR of Korea | - | - | - | - | - | - | - | - | - | - | - |
| Malaysia | - | - | - | - | - | - | - | - | - | - | - |
| Mongolia | - | 32.35 | - | - | 0.14 | - | - | - | - | - | 32.49 |
| Myanmar | - | - | - | - | - | - | - | - | - | - | - |
| Nepal | - | - | - | - | - | - | - | - | - | - | - |
| Pakistan | - | - | - | - | - | - | - | - | - | - | - |
| Philippines | - | - | - | - | - | - | - | - | - | - | - |
| Singapore | - | - | - | - | - | - | - | - | - | - | - |
| Sri Lanka | - | - | - | - | - | - | - | - | - | - | - |
| Chinese Taipei | - | - | - | - | - | - | - | - | - | - | - |
| Thailand | - | - | - | - | - | - | - | - | - | - | - |
| Vietnam | - | - | - | - | - | - | - | - | - | - | - |
| Other Asia | - | - | - | - | - | - | - | - | - | - | - |
| Asia (excl. China) | - | 32.35 | - | - | 0.14 | - | - | - | - | - | 32.49 |
| PR of China | 2320.58 | - | - | 51.46 | 118.69 | 74.98 | 11.91 | - | - | - | 2577.63 |
| Hong Kong | - | - | - | - | - | - | - | - | - | - | - |
| China (Region) | 2320.58 | - | - | 51.46 | 118.69 | 74.98 | 11.91 | - | - | - | 2577.63 |
| Albania | - | - | - | - | 0.14 | - | - | - | - | - | 0.14 |
| Bosnia and H. | - | - | - | 1.82 | 0.73 | 1.84 | - | - | - | - | 4.39 |
| Bulgaria | 19.76 | 12.69 | - | 0.01 | 2.07 | 25.09 | 0.03 | 0.08 | - | - | 59.72 |
| Croatia | - | - | - | - | 2.77 | 9.18 | - | - | - | - | 11.95 |
| Cyprus | - | - | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Statistics of OECD Countries and IEA/OECD Energy Statistics of Non-OECD Countries.

(1) Production in industry for own use is not included.

Note: Please refer to definitions in the introductory information.

**Table 1.4. Gross heat production⁽¹⁾ from combustible fuels,
by country, 2008 (continued)
(PJ)**

| | Coal | | | | Oil | Gas | Wood | Indust. waste | Municip. waste | Biogas liq. biof. | Tot. comb. fuels |
|------------------------|----------------|---------------|-------------|---------------|---------------|----------------|--------------|---------------|----------------|-------------------|------------------|
| | Hard | Brown | Peat | Gases | | | | | | | |
| F.Y.R. Macedonia | - | 0.28 | - | - | 2.41 | 2.43 | 0.07 | - | - | - | 5.18 |
| Gibraltar | - | - | - | - | - | - | - | - | - | - | - |
| Malta | - | - | - | - | - | - | - | - | - | - | - |
| Romania | 3.06 | 22.67 | - | 0.37 | 7.59 | 66.19 | 0.76 | 0.01 | - | 0.01 | 100.65 |
| Serbia | 0.02 | 3.39 | - | - | 12.64 | 16.40 | 0.02 | 0.01 | - | - | 32.47 |
| Slovenia | 4.52 | 1.47 | - | - | 0.17 | 2.65 | 0.44 | - | - | 0.08 | 9.33 |
| Non-OECD Europe | 27.35 | 40.49 | - | 2.20 | 28.50 | 123.78 | 1.31 | 0.10 | - | 0.09 | 223.82 |
| Armenia | - | - | - | - | - | 1.85 | - | - | - | - | 1.85 |
| Azerbaijan | - | - | - | - | 1.82 | 20.77 | - | - | - | - | 22.59 |
| Belarus | 0.59 | 1.46 | 1.58 | - | 12.95 | 227.85 | 14.05 | 0.95 | - | 0.00 | 259.44 |
| Estonia | 0.03 | 4.19 | 0.96 | - | 1.59 | 15.07 | 3.29 | - | - | 0.03 | 25.15 |
| Georgia | - | - | - | - | - | 2.05 | - | - | - | - | 2.05 |
| Kazakhstan | 396.29 | - | - | - | - | - | - | - | - | - | 396.29 |
| Kyrgyzstan | 3.03 | - | - | - | - | 6.72 | - | - | - | - | 9.75 |
| Latvia | 0.36 | - | 0.03 | - | 0.55 | 21.23 | 4.21 | - | - | 0.02 | 26.40 |
| Lithuania | 0.15 | - | 0.08 | - | 1.43 | 27.48 | 6.87 | - | - | 0.02 | 36.02 |
| Rep. of Moldova | 0.06 | - | - | - | 0.38 | 12.30 | - | 0.14 | - | - | 12.88 |
| Russian Federation | 715.96 | 408.49 | 2.94 | 110.09 | 334.27 | 3899.51 | 35.03 | 79.85 | - | - | 5586.12 |
| Tajikistan | - | - | - | - | - | 3.59 | - | - | - | - | 3.59 |
| Turkmenistan | - | - | - | - | - | 7.26 | - | - | - | - | 7.26 |
| Ukraine | 12.63 | - | - | 5.45 | 0.26 | 518.53 | - | - | - | - | 536.87 |
| Uzbekistan | - | 4.49 | - | - | 3.24 | 90.88 | - | - | - | - | 98.60 |
| FSU | 1129.09 | 418.62 | 5.59 | 115.53 | 356.50 | 4855.08 | 63.45 | 80.94 | - | 0.07 | 7024.86 |
| Bahrain | - | - | - | - | - | - | - | - | - | - | - |
| IR of Iran | - | - | - | - | - | - | - | - | - | - | - |
| Iraq | - | - | - | - | - | - | - | - | - | - | - |
| Israel | - | - | - | - | - | - | - | - | - | - | - |
| Jordan | - | - | - | - | - | - | - | - | - | - | - |
| Kuwait | - | - | - | - | - | - | - | - | - | - | - |
| Lebanon | - | - | - | - | - | - | - | - | - | - | - |
| Oman | - | - | - | - | - | - | - | - | - | - | - |
| Qatar | - | - | - | - | - | - | - | - | - | - | - |
| Saudi Arabia | - | - | - | - | - | - | - | - | - | - | - |
| Syrian Arab R. | - | - | - | - | - | - | - | - | - | - | - |
| UAE | - | - | - | - | - | - | - | - | - | - | - |
| Yemen | - | - | - | - | - | - | - | - | - | - | - |
| Middle East | - | - | - | - | - | - | - | - | - | - | - |
| Non-OECD Total | 3477.02 | 491.45 | 5.59 | 169.19 | 503.83 | 5053.85 | 76.67 | 81.04 | - | 0.16 | 9858.80 |

Source: IEA/OECD Energy Statistics of OECD Countries and IEA/OECD Energy Statistics of Non-OECD Countries.

(1) Production in industry for own use is not included.

Note: Please refer to definitions in the introductory information.

**Table 1.5. Fuel use for electricity and heat production,⁽¹⁾
by country, 2008
(PJ)**

| | Coal | | | | Oil | Gas | Wood | Indust. waste | Municip. waste | Biogas liq. biof. | Tot. comb. fuels |
|------------------------|----------------|----------------|--------------|---------------|----------------|----------------|---------------|---------------|----------------|-------------------|------------------|
| | Hard | Brown | Peat | Gases | | | | | | | |
| OECD Total | 21348.9 | 15553.8 | 106.8 | 877.6 | 3457.8 | 20268.3 | 1413.0 | 89.1 | 935.3 | 449.7 | 64500.4 |
| Non-OECD Total | 48555.1 | 3670.6 | 11.8 | 735.9 | 7910.8 | 27081.9 | 567.5 | 122.3 | 43.0 | 2.2 | 88701.1 |
| World | 69904.0 | 19224.4 | 118.7 | 1613.6 | 11368.6 | 47350.2 | 1980.5 | 211.4 | 978.3 | 451.9 | 153201.4 |
| Australia | 815.4 | 1273.0 | - | 19.1 | 28.4 | 431.9 | 39.9 | - | - | 12.9 | 2620.4 |
| Austria | 48.6 | - | - | 14.4 | 16.8 | 110.4 | 58.2 | 4.7 | 8.7 | 10.9 | 272.6 |
| Belgium | 54.4 | - | - | 23.9 | 3.1 | 196.8 | 22.9 | 7.5 | 23.5 | 4.4 | 336.5 |
| Canada | 175.3 | 798.8 | - | 0.8 | 106.2 | 354.6 | 72.3 | - | 4.7 e | 6.5 e | 1519.1 |
| Czech Republic | 82.5 | 505.9 | - | 15.4 | 5.8 | 54.2 | 12.0 | 0.5 | 3.3 | 2.5 | 682.2 |
| Denmark | 162.4 | - | - | - | 12.4 | 81.5 | 32.8 | - | 37.9 | 2.6 | 329.6 |
| Finland | 89.7 | 0.1 | 68.3 | 7.7 | 15.3 | 110.3 | 115.6 | 1.4 | 6.8 | 1.2 | 416.3 |
| France | 221.1 | - | - | 35.6 | 90.7 | 261.3 e | 10.0 | - | 75.0 | 15.5 | 709.2 |
| Germany | 1254.7 | 1453.4 | - | 94.1 | 85.7 | 871.1 | 147.2 | 2.8 | 166.2 | 158.7 | 4233.7 |
| Greece | - | 332.9 | - | - | 99.2 | 116.1 | - | 0.2 | - | 1.4 | 549.7 |
| Hungary | 5.9 | 74.8 | - | 6.3 | 4.0 | 173.1 | 24.0 | 0.1 | 3.9 | 0.4 | 292.4 |
| Iceland | - | - | - | - | 0.1 e | - | - | - | 0.2 | - | 0.2 |
| Ireland | 43.8 | - | 24.3 | - | 14.5 | 130.5 | 0.3 | - | - | 1.3 | 214.7 |
| Italy | 432.1 | - | - | 54.9 | 282.3 | 1440.8 | 37.6 | 2.1 | 53.5 e | 17.9 | 2321.2 |
| Japan | 2261.8 | - | - | 277.8 | 1098.9 | 2426.7 | 118.7 | 3.8 | 58.1 e | 5.4 | 6251.0 |
| Korea | 1617.5 | 66.2 | - | 117.8 | 181.4 e | 664.7 | 0.9 | 0.2 | 17.6 | 5.0 | 2671.2 |
| Luxembourg | - | - | - | - | - | 19.0 | - | - | 1.6 | 0.5 | 21.1 |
| Mexico | - | 216.6 | - | 5.7 | 478.2 | 1096.9 | 42.2 | - | - | 1.2 | 1840.8 |
| Netherlands | 202.9 | - | - | 26.7 | 24.6 | 545.8 | 25.8 | - | 62.4 | 10.2 | 898.3 |
| New Zealand | - | 43.4 | - | 5.9 | 1.3 | 84.2 | 4.4 | - | - | 2.6 | 141.8 |
| Norway | 0.6 | - | - | 0.5 | 0.9 | 3.5 | 3.9 | 0.7 | 7.7 | 0.0 | 17.7 |
| Poland | 1056.8 | 521.3 | - | 33.9 | 22.6 | 57.5 | 38.3 | 4.7 | 0.4 | 3.0 | 1738.5 |
| Portugal | 102.4 | - | - | - | 38.8 e | 118.8 | 9.7 | 0.2 | 7.7 | 1.0 | 278.6 |
| Slovak Republic | 27.4 | 31.7 | - | 3.1 | 4.6 | 39.9 | 5.6 | 0.3 | 1.5 | 0.3 | 114.3 |
| Spain | 428.5 | 31.3 | - | 11.2 | 166.8 | 834.8 | 24.8 | - | 27.5 | 7.4 | 1532.1 |
| Sweden | 8.8 | - | 14.2 | 11.2 | 9.0 | 10.2 | 145.0 | 0.5 | 44.3 | 5.7 | 248.9 |
| Switzerland | - | - | - | - | 1.1 | 10.2 | 3.6 | 1.4 | 22.6 | 1.2 | 40.1 |
| Turkey | 137.7 | 442.1 | - | 21.2 | 71.7 | 765.5 | 0.4 | 0.9 | - | 1.1 | 1440.7 |
| United Kingdom | 1199.7 | - | - | 38.1 | 40.3 | 1430.0 | 34.1 | 6.9 | 24.0 | 65.8 | 2838.7 |
| United States | 10919.0 | 9762.4 | - | 52.6 | 553.4 e | 7828.2 | 382.9 | 50.4 | 276.5 | 103.4 | 29928.7 |
| OECD Total | 21348.9 | 15553.8 | 106.8 | 877.6 | 3457.8 | 20268.3 | 1413.0 | 89.1 | 935.3 | 449.7 | 64500.4 |
| <i>OECD Europe</i> | <i>5559.9</i> | <i>3393.4</i> | <i>106.8</i> | <i>398.1</i> | <i>1010.1</i> | <i>7381.3</i> | <i>751.8</i> | <i>34.9</i> | <i>578.4</i> | <i>312.8</i> | <i>19527.5</i> |
| <i>OECD Pacific</i> | <i>4694.7</i> | <i>1382.5</i> | <i>-</i> | <i>420.5</i> | <i>1309.9</i> | <i>3607.4</i> | <i>163.9</i> | <i>3.9</i> | <i>75.7</i> | <i>25.8</i> | <i>11684.3</i> |
| <i>OECD N. America</i> | <i>11094.3</i> | <i>10777.9</i> | <i>-</i> | <i>59.0</i> | <i>1137.7</i> | <i>9279.7</i> | <i>497.3</i> | <i>50.4</i> | <i>281.2</i> | <i>111.1</i> | <i>33288.6</i> |

Source: IEA/OECD Energy Balances of OECD Countries and IEA/OECD Energy Balances of Non-OECD Countries

(1) Covers use in electricity, CHP and heat plants. Amounts corresponding to heat produced by industry for own use are not included. Data are not available for 2009.

**Table 1.5. Fuel use for electricity and heat production,⁽¹⁾
by country, 2008 (continued)**
(PJ)

| | Coal | | | | Oil | Gas | Wood | Indust. waste | Municip. waste | Biogas liq. biof. | Tot. comb. fuels |
|----------------|---------------|-------|------|-------|--------------|---------------|-------------|------------------|-------------------|----------------------|---------------------|
| | Hard | Brown | Peat | Gases | | | | | | | |
| Algeria | - | - | - | - | 9.9 | 463.4 | - | - | - | - | 473.3 |
| Angola | - | - | - | - | 2.0 | - | - | - | - | - | 2.0 |
| Benin | - | - | - | - | 1.3 | - | - | - | - | - | 1.3 |
| Botswana | 12.2 | - | - | - | - | - | - | - | - | - | 12.2 |
| Cameroon | - | - | - | - | 8.8 | 9.8 | 0.7 | - | - | - | 19.3 |
| Congo | - | - | - | - | - | 1.0 | - | - | - | - | 1.0 |
| DR of Congo | - | - | - | - | 0.2 | 0.3 | - | - | - | - | 0.5 |
| Côte d'Ivoire | - | - | - | - | 0.1 | 51.6 | 1.7 | - | - | - | 53.5 |
| Egypt | - | - | - | - | 213.4 | 874.4 | - | - | - | - | 1087.9 |
| Eritrea | - | - | - | - | 2.5 | - | - | - | - | - | 2.5 |
| Ethiopia | - | - | - | - | 6.1 | - | - | - | - | - | 6.1 |
| Gabon | - | - | - | - | 5.7 | 7.9 | 0.3 | - | - | - | 13.9 |
| Ghana | - | - | - | - | 24.7 | - | - | - | - | - | 24.7 |
| Kenya | - | - | - | - | 30.7 | - | 16.8 | - | - | - | 47.5 |
| Libyan Arab J. | - | - | - | - | 246.1 | 139.1 | - | - | - | - | 385.2 |
| Morocco | 108.8 | - | - | - | 49.9 | 20.0 | - | - | - | - | 178.7 |
| Mozambique | - | - | - | - | - | 0.1 | - | - | - | - | 0.1 |
| Namibia | 9.4 | - | - | - | 0.3 | - | - | - | - | - | 9.6 |
| Nigeria | - | - | - | - | 28.9 | 126.4 | - | - | - | - | 155.3 |
| Senegal | - | - | - | - | 18.4 | 0.4 | 2.1 | - | - | - | 20.9 |
| South Africa | 2300.6 | - | - | - | 1.5 | - | 3.7 | - | - | - | 2305.7 |
| Sudan | - | - | - | - | 36.8 | - | - | - | - | - | 36.8 |
| UR of Tanzania | 1.4 | - | - | - | 0.5 | 17.9 | - | - | - | - | 19.8 |
| Togo | - | - | - | - | 0.4 | - | 0.1 | - | - | - | 0.5 |
| Tunisia | - | - | - | - | 18.2 | 131.5 | - | - | - | - | 149.6 |
| Zambia | 0.0 | - | - | - | 0.4 | - | - | - | - | - | 0.4 |
| Zimbabwe | 52.8 | - | - | - | 0.4 | - | - | - | - | - | 53.1 |
| Other Africa | 22.4 | - | - | - | 78.6 | - | - | - | - | - | 101.0 |
| Africa | 2507.4 | - | - | - | 785.5 | 1844.0 | 25.4 | - | - | - | 5162.4 |
| Argentina | 15.1 | - | - | 14.9 | 143.2 | 606.8 | 22.1 | - | - | - | 802.0 |
| Bolivia | - | - | - | - | 15.2 | 39.6 | 1.5 | - | - | - | 56.2 |
| Brazil | 3.8 | 78.3 | - | 57.7 | 156.5 | 252.0 | 152.6 | - | - | - | 700.9 |
| Chile | 145.8 | - | - | - | 130.6 | 22.1 | 21.6 | - | - | - | 320.0 |
| Colombia | 31.2 | - | - | 1.3 | 1.8 | 53.2 | 6.1 | - | - | - | 93.5 |
| Costa Rica | - | - | - | - | 8.2 | - | 0.5 | - | - | 0.0 | 8.7 |
| Cuba | - | - | - | - | 216.8 | - | 3.5 | - | - | - | 220.3 |
| Dominican Rep. | 20.4 | - | - | - | 89.6 | 20.0 | 0.9 | - | - | - | 130.8 |
| Ecuador | - | - | - | - | 54.7 | 15.8 | 7.5 | - | - | - | 78.0 |
| El Salvador | - | - | - | - | 19.6 | - | 4.0 | - | - | - | 23.6 |
| Guatemala | 11.6 | - | - | - | 24.1 | - | 25.4 | - | - | - | 61.2 |

Source: IEA/OECD Energy Balances of OECD Countries and IEA/OECD Energy Balances of Non-OECD Countries.

(1) Covers use in electricity, CHP and heat plants. Amounts corresponding to heat produced by industry for own use are not included. Data are not available for 2009.

**Table 1.5. Fuel use for electricity and heat production,⁽¹⁾
by country, 2008 (continued)**
(PJ)

| | Coal | | | | Oil | Gas | Wood | Indust. waste | Municip. waste | Biogas liq. biof. | Tot. comb. fuels |
|---------------------------|----------------|---------------|------|--------------|---------------|---------------|--------------|---------------|----------------|-------------------|------------------|
| | Hard | Brown | Peat | Gases | | | | | | | |
| Haiti | - | - | - | - | 3.2 | - | - | - | - | - | 3.2 |
| Honduras | - | - | - | - | 35.0 | - | 13.7 | - | - | - | 48.7 |
| Jamaica | - | - | - | - | 80.0 | - | 6.4 | - | - | - | 86.5 |
| N. Antilles | - | - | - | - | 11.5 | - | - | - | - | - | 11.5 |
| Nicaragua | - | - | - | - | 21.0 | - | 5.3 | - | - | - | 26.3 |
| Panama | - | - | - | - | 23.2 | - | 0.6 | - | - | - | 23.7 |
| Paraguay | - | - | - | - | - | - | - | - | - | - | - |
| Peru | 10.5 | - | - | - | 27.0 | 85.4 | 6.6 | - | - | - | 129.6 |
| Trinidad and T. | - | - | - | - | 0.4 | 107.5 | 0.5 | - | - | - | 108.3 |
| Uruguay | - | - | - | - | 36.0 | 0.1 | 8.2 | - | - | - | 44.3 |
| Venezuela | - | - | - | - | 177.1 | 217.8 | - | - | - | - | 394.9 |
| Oth. Lat. America | - | - | - | - | 87.9 | 29.4 | 2.3 | - | - | - | 119.6 |
| Latin America | 238.6 | 78.3 | - | 73.9 | 1362.4 | 1449.4 | 289.2 | - | - | 0.0 | 3491.8 |
| Bangladesh | 9.2 | - | - | - | 26.0 | 343.0 | - | - | - | - | 378.2 |
| Brunei Darussalam | - | - | - | - | 0.4 | 50.9 | - | - | - | - | 51.3 |
| Cambodia | - | - | - | - | 22.6 | - | 0.1 | - | - | - | 22.7 |
| India | 7698.1 | 245.5 | - | 22.9 | 409.2 | 726.6 | 47.4 | - | - | - | 9149.5 |
| Indonesia | - | 683.0 | - | - | 423.3 | 254.7 | - | - | - | - | 1361.1 |
| DPR of Korea | 96.8 | 11.9 | - | - | 14.1 | - | - | - | - | - | 122.8 |
| Malaysia | 337.9 | - | - | - | 22.7 | 682.9 | - | - | - | - | 1043.5 |
| Mongolia | - | 69.9 | - | - | 2.4 | - | - | - | - | - | 72.2 |
| Myanmar | - | - | - | - | 2.4 | 34.1 | - | - | - | - | 36.5 |
| Nepal | - | - | - | - | 0.1 | - | - | - | - | - | 0.1 |
| Pakistan | 2.6 | - | - | - | 309.9 | 346.1 | - | - | - | - | 658.6 |
| Philippines | 210.1 | - | - | - | 45.5 | 132.8 | - | - | - | - | 388.4 |
| Singapore | - | - | - | - | 75.9 | 325.3 | - | - | - | - | 401.2 |
| Sri Lanka | - | - | - | - | 51.6 | - | 0.0 | - | - | - | 51.6 |
| Chinese Taipei | 1126.9 | 111.6 | - | 20.2 | 149.1 | 394.9 | 7.5 | - | 43.0 | - | 1853.2 |
| Thailand | 132.0 | 177.7 | - | - | 15.9 | 934.5 | 59.6 | - | - | 0.7 | 1320.4 |
| Vietnam | 156.1 | - | - | - | 24.8 | 264.8 | - | - | - | - | 445.8 |
| Other Asia | 2.7 | - | - | - | 72.9 | 5.0 | - | - | - | - | 80.5 |
| Asia (excl. China) | 9772.4 | 1299.7 | - | 43.1 | 1668.7 | 4495.5 | 114.5 | - | 43.0 | 0.7 | 17437.5 |
| PR of China | 31957.9 | - | - | 338.3 | 383.1 | 447.1 | 53.8 | - | - | - | 33180.2 |
| Hong Kong | 250.6 | - | - | - | 1.5 | 108.2 | - | - | - | - | 360.3 |
| China (Region) | 32208.5 | - | - | 338.3 | 384.6 | 555.3 | 53.8 | - | - | - | 33540.6 |
| Albania | - | - | - | - | 0.7 | - | - | - | - | - | 0.7 |
| Bosnia and H. | - | 135.8 | - | 2.7 | 2.3 | 2.9 | - | - | - | - | 143.7 |
| Bulgaria | 83.8 | 196.2 | - | 0.5 | 5.3 | 45.7 | 0.0 | 0.2 | - | - | 331.6 |
| Croatia | 23.0 | 0.0 | - | - | 20.4 | 31.9 | 0.0 | - | - | 0.2 | 75.6 |
| Cyprus | - | - | - | - | 50.4 | - | - | - | - | 0.1 | 50.5 |

Source: IEA/OECD Energy Balances of OECD Countries and IEA/OECD Energy Balances of Non-OECD Countries.

(1) Covers use in electricity, CHP and heat plants. Amounts corresponding to heat produced by industry for own use are not included. Data are not available for 2009.

**Table 1.5. Fuel use for electricity and heat production,⁽¹⁾
by country, 2008 (continued)
(PJ)**

| | Coal | | | | Oil | Gas | Wood | Indust. waste | Municip. waste | Biogas liq. biof. | Tot. comb. fuels |
|------------------------|----------------|---------------|-------------|--------------|---------------|----------------|--------------|---------------|----------------|-------------------|------------------|
| | Hard | Brown | Peat | Gases | | | | | | | |
| F.Y.R. Macedonia | - | 56.3 | - | - | 4.8 | 3.0 | 0.1 | - | - | - | 64.2 |
| Gibraltar | - | - | - | - | 1.6 | - | - | - | - | - | 1.6 |
| Malta | - | - | - | - | 25.8 | - | - | - | - | - | 25.8 |
| Romania | - | 282.8 | - | 1.0 | 14.7 | 171.2 | 1.2 | 0.2 | - | 0.0 | 471.2 |
| Serbia and M. | 0.1 | 288.4 | - | - | 16.7 | 23.5 | 0.0 | 0.0 | - | - | 328.8 |
| Slovenia | - | 59.9 | - | - | 0.3 | 6.5 | 2.9 | 0.0 | - | 0.5 | 70.1 |
| Non-OECD Europe | 106.9 | 1019.4 | - | 4.2 | 143.0 | 284.7 | 4.3 | 0.4 | - | 0.9 | 1563.8 |
| Armenia | - | - | - | - | - | 20.6 | - | - | - | - | 20.6 |
| Azerbaijan | - | - | - | - | 18.5 | 221.9 | - | - | - | - | 240.3 |
| Belarus | 0.8 | 2.1 | 2.2 | - | 23.3 | 598.7 | 20.8 | 1.6 | - | 0.0 | 649.5 |
| Estonia | 0.1 | 111.8 | 1.5 | - | 2.7 | 23.1 | 4.1 | - | - | 0.1 | 143.2 |
| Georgia | - | - | - | - | - | 14.5 | - | - | - | - | 14.5 |
| Kazakhstan | 817.2 | - | - | - | 36.7 | 99.9 | - | - | - | - | 953.8 |
| Kyrgyzstan | 6.1 | - | - | - | - | 16.0 | - | - | - | - | 22.1 |
| Latvia | 0.5 | - | 0.0 | - | 0.6 | 37.4 | 6.4 | - | - | 0.3 | 45.3 |
| Lithuania | 0.2 | - | 0.1 | - | 5.5 | 50.7 | 9.0 | - | - | 0.1 | 65.5 |
| Rep. of Moldova | 0.1 | - | - | - | 1.0 | 50.7 | - | 0.4 | - | - | 52.2 |
| Russian Federation | 1834.0 | 1119.3 | 7.7 | 202.7 | 527.1 | 9868.3 | 40.0 | 119.9 | - | - | 13719.1 |
| Tajikistan | - | - | - | - | - | 10.5 | - | - | - | - | 10.5 |
| Turkmenistan | - | - | - | - | - | 270.0 | - | - | - | - | 270.0 |
| Ukraine | 744.3 | 1.9 | 0.3 | 68.2 | 7.7 | 1030.2 | - | - | - | - | 1852.6 |
| Uzbekistan | - | 36.8 | - | - | 18.9 | 566.4 | - | - | - | - | 622.1 |
| FSU | 3403.2 | 1271.9 | 11.8 | 270.9 | 641.9 | 12878.9 | 80.2 | 121.9 | - | 0.5 | 18681.1 |
| Bahrain | - | - | - | - | 0.1 | 154.5 | - | - | - | - | 154.6 |
| IR of Iran | - | - | - | 5.6 | 499.1 | 1708.3 | - | - | - | - | 2213.0 |
| Iraq | - | - | - | - | 395.8 | - | - | - | - | - | 395.8 |
| Israel | 318.2 | 1.3 | - | - | 56.2 | 105.2 | - | - | - | - | 480.9 |
| Jordan | - | - | - | - | 23.3 | 126.8 | - | - | - | 0.1 | 150.2 |
| Kuwait | - | - | - | - | 317.0 | 153.8 | - | - | - | - | 470.8 |
| Lebanon | - | - | - | - | 100.3 | - | - | - | - | - | 100.3 |
| Oman | - | - | - | - | 40.8 | 209.0 | - | - | - | - | 249.7 |
| Qatar | - | - | - | - | - | 229.8 | - | - | - | - | 229.8 |
| Saudi Arabia | - | - | - | - | 1175.5 | 1336.8 | - | - | - | - | 2512.3 |
| Syrian Arab R. | - | - | - | - | 237.7 | 138.9 | - | - | - | - | 376.6 |
| UAE | - | - | - | - | 23.9 | 1411.2 | - | - | - | - | 1435.1 |
| Yemen | - | - | - | - | 55.0 | - | - | - | - | - | 55.0 |
| Middle East | 318.2 | 1.3 | - | 5.6 | 2924.7 | 5574.2 | - | - | - | 0.1 | 8824.0 |
| Non-OECD Total | 48555.1 | 3670.6 | 11.8 | 735.9 | 7910.8 | 27081.9 | 567.5 | 122.3 | 43.0 | 2.2 | 88701.1 |

Source: IEA/OECD Energy Balances of OECD Countries and IEA/OECD Energy Balances of Non-OECD Co

(1) Covers use in electricity, CHP and heat plants. Amounts corresponding to heat produced by industry for own use are not included.
Data are not available for 2009.

**Table 2.1. OECD electricity production, imports, exports,
apparent consumption, 2009e**
(TWh)

| | Gross production ⁽¹⁾ | Imports | Exports | Apparent consumption ⁽²⁾ |
|---------------------------|------------------------------------|--------------|--------------|--|
| Australia | 246.3 | - | - | 246.3 |
| Austria | 68.9 | 19.5 | 18.8 | 69.6 |
| Belgium | 91.0 | 9.5 | 11.3 | 89.2 |
| Canada | 622.6 | 18.2 | 53.7 | 587.1 |
| Czech Republic | 82.3 | 8.6 | 22.2 | 68.6 |
| Denmark | 36.2 | 11.2 | 10.9 | 36.5 |
| Finland | 71.6 | 15.5 | 3.4 | 83.7 |
| France | 541.7 | 19.2 | 44.9 | 516.0 |
| Germany | 596.8 | 41.9 | 54.1 | 584.5 |
| Greece | 55.8 | 7.6 | 3.2 | 60.2 |
| Hungary | 35.9 | 10.7 | 5.2 | 41.4 |
| Iceland | 16.8 | - | - | 16.8 |
| Ireland | 27.7 | 0.9 | 0.2 | 28.4 |
| Italy | 289.9 | 46.6 | 2.1 | 334.4 |
| Japan | 1046.4 | - | - | 1046.4 |
| Korea | 446.0 | - | - | 446.0 |
| Luxembourg | 3.9 | 6.0 | 2.6 | 7.3 |
| Mexico | 252.8 | 0.3 | 1.2 | 251.9 |
| Netherlands | 112.2 | 15.5 | 10.6 | 117.1 |
| New Zealand | 43.4 | - | - | 43.4 |
| Norway | 132.8 | 5.7 | 14.6 | 123.8 |
| Poland | 151.6 | 7.4 | 9.6 | 149.4 |
| Portugal | 49.9 | 7.6 | 2.8 | 54.7 |
| Slovak Republic | 26.2 | 9.0 | 7.7 | 27.5 |
| Spain | 294.3 | 6.8 | 14.9 | 286.2 |
| Sweden | 133.7 | 13.8 | 9.1 | 138.4 |
| Switzerland | 68.6 | 31.4 | 33.5 | 66.4 |
| Turkey | 194.1 | 0.8 | 1.6 | 193.3 |
| United Kingdom | 371.8 | 6.6 | 3.7 | 374.6 |
| United States | 4184.4 | 52.2 | 18.1 | 4218.5 |
| OECD Total | 10295.3 | 372.3 | 360.1 | 10307.5 |
| <i>OECD Europe</i> | <i>3453.5</i> | <i>301.6</i> | <i>287.0</i> | <i>3468.1</i> |
| <i>OECD Pacific</i> | <i>1782.0</i> | - | - | <i>1782.0</i> |
| <i>OECD North America</i> | <i>5059.8</i> | <i>70.7</i> | <i>73.1</i> | <i>5057.4</i> |

Source: IEA/OECD Energy Statistics of OECD Countries.

(1) Gross production refers to total main activity producers and autoproducers production, including production from pumped storage.

(2) Apparent consumption = production + imports - exports. Includes "own use by power plant", "used for heat pumps", "electric boilers" and "pumped storage", "transmission losses" and transformation industries for heating, traction and lighting purposes. Apparent consumption is an estimate based on preliminary data and not verified with the real consumption side of the balance.

Table 2.2. OECD gross electricity production, by country, by source, 2009e
(TWh)

| | Nuclear | Hydro | Geo-thermal | Solar/wind ⁽¹⁾ | Fossil fuels ⁽²⁾ | Comb.renew & waste ⁽³⁾ | Total |
|------------------------|----------------|----------------|--------------|---------------------------|-----------------------------|-----------------------------------|-----------------|
| Australia | - | 11.63 | - | 3.96 | 228.60 | 2.08 | 246.26 |
| Austria | - | 42.35 | 0.00 | 2.49 | 18.21 | 5.81 | 68.85 |
| Belgium | 47.25 | 1.76 | - | 1.39 | 35.90 | 4.73 | 91.03 |
| Canada | 90.43 | 367.02 | - | 3.85 | 153.35 | 7.98 | 622.63 |
| Czech Republic | 27.21 | 2.98 | - | 0.38 | 49.88 | 1.80 | 82.25 |
| Denmark | - | 0.02 | - | 6.72 | 25.52 | 3.95 | 36.21 |
| Finland | 23.51 | 12.72 | - | 0.78 | 25.70 | 8.86 | 71.57 |
| France | 409.74 | 61.55 | - | 8.41 | 55.97 | 6.00 | 541.67 |
| Germany | 134.93 | 23.50 | 0.02 | 44.01 | 354.02 | 40.32 | 596.80 |
| Greece | - | 5.65 | - | 1.99 | 47.98 | 0.20 | 55.83 |
| Hungary | 15.43 | 0.23 | - | 0.33 | 17.48 | 2.45 | 35.91 |
| Iceland | - | 12.28 | 4.55 | - | 0.00 | 0.00 | 16.84 |
| Ireland | - | 1.26 | - | 2.96 | 23.27 | 0.18 | 27.66 |
| Italy | - | 51.74 | 5.35 | 7.74 | 217.19 | 7.89 | 289.91 |
| Japan | 279.75 | 82.61 | 2.90 | 5.68 | 659.12 | 16.32 | 1046.38 |
| Korea | 147.77 | 5.64 | - | 1.74 | 290.29 | 0.56 | 446.00 |
| Luxembourg | - | 0.83 | - | 0.08 | 2.84 | 0.12 | 3.87 |
| Mexico | 10.50 | 26.68 | 6.74 | 0.26 | 207.73 | 0.87 | 252.77 |
| Netherlands | 4.23 | 0.10 | - | 4.74 | 95.46 | 7.70 | 112.23 |
| New Zealand | - | 24.20 | 4.81 | 1.53 | 12.28 | 0.56 | 43.38 |
| Norway | - | 127.07 | - | 1.06 | 4.38 | 0.29 | 132.79 |
| Poland | - | 3.01 | - | 1.09 | 142.28 | 5.24 | 151.62 |
| Portugal | - | 8.92 | 0.18 | 7.73 | 30.64 | 2.42 | 49.89 |
| Slovak Republic | 14.08 | 4.70 | - | 0.04 | 6.90 | 0.50 | 26.21 |
| Spain | 52.73 | 29.05 | - | 43.06 | 165.24 | 4.21 | 294.29 |
| Sweden | 50.02 | 65.25 | - | 2.49 | 3.99 | 11.92 | 133.66 |
| Switzerland | 27.69 | 37.51 | - | 0.05 | 0.91 | 2.44 | 68.59 |
| Turkey | - | 35.88 | 0.46 | 1.48 | 155.99 | 0.26 | 194.06 |
| United Kingdom | 69.19 | 8.91 | - | 8.53 | 272.47 | 12.65 | 371.75 |
| United States | 830.09 | 297.59 | 16.52 | 74.50 | 2898.30 | 67.35 | 4184.35 |
| OECD Total | 2234.55 | 1352.61 | 41.53 | 239.09 | 6201.87 | 225.62 | 10295.28 |
| <i>OECD Europe</i> | <i>876.00</i> | <i>537.25</i> | <i>10.56</i> | <i>147.57</i> | <i>1752.21</i> | <i>129.92</i> | <i>3453.50</i> |
| <i>OECD Pacific</i> | <i>427.52</i> | <i>124.08</i> | <i>7.71</i> | <i>12.92</i> | <i>1190.29</i> | <i>19.51</i> | <i>1782.03</i> |
| <i>OECD N. America</i> | <i>931.03</i> | <i>691.29</i> | <i>23.26</i> | <i>78.60</i> | <i>3259.38</i> | <i>76.19</i> | <i>5059.76</i> |

Source: IEA/OECD Energy Statistics of OECD Countries.

(1) Includes tide, wave, ocean and other (fuel cells etc).

(2) Includes hard coal, brown coal, peat, coal gases, oil products and natural gas.

(3) Includes wood/wood waste/other solid waste, industrial and municipal waste, biogas and liquid biofuels.

Note: Including electricity production from pumped storage.

**Table 2.3. Monthly net electricity supply, ⁽¹⁾
by country
(GWh)**

| Australia | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 18 772 | 18 710 | 18 488 | 18 036 | 17 960 | 18 096 | 18 261 | 18 159 | 18 059 | 17 687 | 17 426 | 17 555 |
| + Nuclear | - | - | - | - | - | - | - | - | - | - | - | - |
| + Hydro | 716 | 748 | 860 | 931 | 969 | 901 | 979 | 1 030 | 1 081 | 1 084 | 1 216 | 1 150 |
| + Geothermal/other | 444 | 456 | 468 | 481 | 493 | 505 | 520 | 532 | 544 | 556 | 568 | 580 |
| = Production | 19 932 | 19 914 | 19 816 | 19 448 | 19 422 | 19 502 | 19 760 | 19 721 | 19 684 | 19 327 | 19 210 | 19 285 |
| + Imports | - | - | - | - | - | - | - | - | - | - | - | - |
| - Exports | - | - | - | - | - | - | - | - | - | - | - | - |
| = Supply | 19 932 | 19 914 | 19 816 | 19 448 | 19 422 | 19 502 | 19 760 | 19 721 | 19 684 | 19 327 | 19 210 | 19 285 |

| Austria | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 2 820 | 2 554 | 2 016 | 1 307 | 1 130 | 1 030 | 1 046 | 992 | 1 682 | 2 812 | 2 471 | 2 738 |
| + Nuclear | - | - | - | - | - | - | - | - | - | - | - | - |
| + Hydro | 2 195 | 1 951 | 3 150 | 4 019 | 4 583 | 4 201 | 4 356 | 3 940 | 3 346 | 2 904 | 2 218 | 2 542 |
| + Geothermal/other | 149 | 166 | 193 | 197 | 223 | 208 | 216 | 198 | 189 | 184 | 181 | 187 |
| = Production | 5 164 | 4 671 | 5 359 | 5 523 | 5 936 | 5 439 | 5 618 | 5 130 | 5 217 | 5 900 | 4 870 | 5 467 |
| + Imports | 2 494 | 2 179 | 1 844 | 1 115 | 666 | 991 | 1 023 | 1 222 | 1 572 | 1 664 | 2 390 | 2 378 |
| - Exports | 1 231 | 1 178 | 1 442 | 1 753 | 1 765 | 1 677 | 1 654 | 1 503 | 1 654 | 1 824 | 1 451 | 1 630 |
| = Supply | 6 427 | 5 672 | 5 761 | 4 885 | 4 837 | 4 753 | 4 987 | 4 849 | 5 135 | 5 740 | 5 809 | 6 215 |

| Belgium | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 3 173 | 2 799 | 3 088 | 3 013 | 2 926 | 2 993 | 3 443 | 3 442 | 3 573 | 3 815 | 3 654 | 3 801 |
| + Nuclear | 4 366 | 3 921 | 3 935 | 3 358 | 3 747 | 3 630 | 3 554 | 3 912 | 3 857 | 3 589 | 3 235 | 3 856 |
| + Hydro | 153 | 148 | 163 | 150 | 150 | 142 | 140 | 135 | 131 | 134 | 137 | 166 |
| + Geothermal/other | 97 | 70 | 126 | 89 | 124 | 109 | 153 | 107 | 129 | 146 | 292 | 203 |
| = Production | 7 789 | 6 938 | 7 312 | 6 610 | 6 947 | 6 874 | 7 290 | 7 596 | 7 690 | 7 684 | 7 318 | 8 026 |
| + Imports | 1 071 | 890 | 757 | 713 | 654 | 701 | 621 | 536 | 524 | 953 | 1 029 | 1 038 |
| - Exports | 659 | 519 | 648 | 683 | 895 | 948 | 1 345 | 1 450 | 1 209 | 1 103 | 860 | 1 002 |
| = Supply | 8 201 | 7 309 | 7 421 | 6 640 | 6 706 | 6 627 | 6 566 | 6 682 | 7 005 | 7 534 | 7 487 | 8 062 |

| Canada | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 15 599 | 12 877 | 13 054 | 11 160 | 11 044 | 10 255 | 10 818 | 11 416 | 10 701 | 11 550 | 11 379 | 14 217 |
| + Nuclear | 8 249 | 7 164 | 7 938 | 6 050 | 4 827 | 6 718 | 7 531 | 7 792 | 7 131 | 6 701 | 6 890 | 8 310 |
| + Hydro | 37 944 | 33 092 | 33 078 | 28 539 | 28 796 | 27 072 | 28 185 | 28 524 | 26 233 | 30 804 | 30 159 | 36 615 |
| + Geothermal/other | 391 | 386 | 382 | 377 | 373 | 368 | 359 | 355 | 350 | 345 | 340 | 336 |
| = Production | 62 183 | 53 519 | 54 452 | 46 126 | 45 040 | 44 413 | 46 893 | 48 087 | 44 415 | 49 400 | 48 768 | 59 478 |
| + Imports | 1 423 | 884 | 1 073 | 1 353 | 865 | 999 | 825 | 814 | 842 | 845 | 801 | 820 |
| - Exports | 3 155 | 2 987 | 2 947 | 2 729 | 3 292 | 3 697 | 4 271 | 4 527 | 3 362 | 3 605 | 2 918 | 3 501 |
| = Supply | 60 451 | 51 416 | 52 578 | 44 750 | 42 613 | 41 715 | 43 447 | 44 374 | 41 895 | 46 640 | 46 651 | 56 797 |

| Czech Republic | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 4 701 | 4 478 | 4 472 | 3 714 | 3 206 | 3 353 | 3 008 | 3 186 | 3 585 | 4 509 | 4 196 | 4 572 |
| + Nuclear | 2 469 | 2 179 | 2 395 | 1 993 | 1 949 | 1 945 | 2 327 | 1 991 | 1 827 | 1 959 | 2 191 | 2 440 |
| + Hydro | 163 | 193 | 349 | 298 | 220 | 246 | 378 | 242 | 179 | 211 | 229 | 231 |
| + Geothermal/other | 18 | 33 | 41 | 28 | 30 | 34 | 33 | 32 | 32 | 43 | 40 | 29 |
| = Production | 7 351 | 6 883 | 7 257 | 6 033 | 5 405 | 5 578 | 5 746 | 5 451 | 5 623 | 6 722 | 6 656 | 7 272 |
| + Imports | 1 074 | 748 | 682 | 424 | 492 | 491 | 599 | 590 | 817 | 845 | 1 050 | 773 |
| - Exports | 2 073 | 2 001 | 2 181 | 1 784 | 1 273 | 1 534 | 1 808 | 1 464 | 1 710 | 2 127 | 2 153 | 2 122 |
| = Supply | 6 352 | 5 630 | 5 758 | 4 673 | 4 624 | 4 535 | 4 537 | 4 577 | 4 730 | 5 440 | 5 553 | 5 923 |

Source: IEA/OECD Monthly Electricity Statistics

(1) Net generation excludes power station own use.

Note: Please refer to Notes, Principles and Definitions in the Monthly Electricity Statistics IEA publication.

**Table 2.3. Monthly net electricity supply, ⁽¹⁾
by country (continued)
(GWh)**

| Denmark | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 3 357 | 3 155 | 3 019 | 2 123 | 1 660 | 1 802 | 1 658 | 1 590 | 1 844 | 2 455 | 2 473 | 3 066 |
| + Nuclear | - | - | - | - | - | - | - | - | - | - | - | - |
| + Hydro | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 |
| + Geothermal/other | 629 | 441 | 590 | 338 | 564 | 491 | 404 | 482 | 633 | 688 | 872 | 589 |
| = Production | 3 988 | 3 598 | 3 611 | 2 462 | 2 225 | 2 294 | 2 063 | 2 073 | 2 478 | 3 144 | 3 347 | 3 658 |
| + Imports | 883 | 760 | 860 | 1 049 | 1 144 | 982 | 917 | 1 200 | 1 064 | 766 | 735 | 849 |
| - Exports | 1 399 | 1 257 | 1 285 | 806 | 684 | 606 | 424 | 562 | 800 | 896 | 989 | 1 167 |
| = Supply | 3 472 | 3 101 | 3 186 | 2 705 | 2 685 | 2 670 | 2 556 | 2 711 | 2 742 | 3 014 | 3 093 | 3 340 |

| Finland | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 3 827 | 3 743 | 3 356 | 2 437 | 1 769 | 1 441 | 1 444 | 1 885 | 2 336 | 3 169 | 3 355 | 4 233 |
| + Nuclear | 2 020 | 1 829 | 2 027 | 1 957 | 1 472 | 1 923 | 1 975 | 1 854 | 1 567 | 2 003 | 1 944 | 2 022 |
| + Hydro | 1 419 | 1 241 | 1 284 | 1 075 | 1 361 | 944 | 685 | 797 | 916 | 920 | 853 | 1 080 |
| + Geothermal/other | 77 | 55 | 61 | 64 | 61 | 44 | 39 | 53 | 91 | 64 | 80 | 72 |
| = Production | 7 343 | 6 868 | 6 728 | 5 533 | 4 663 | 4 352 | 4 143 | 4 589 | 4 910 | 6 156 | 6 232 | 7 407 |
| + Imports | 1 311 | 1 181 | 1 290 | 1 296 | 1 410 | 1 127 | 1 307 | 1 128 | 1 318 | 1 339 | 1 350 | 1 402 |
| - Exports | 425 | 551 | 353 | 380 | 81 | 295 | 147 | 15 | 67 | 184 | 299 | 577 |
| = Supply | 8 229 | 7 498 | 7 665 | 6 449 | 5 992 | 5 184 | 5 303 | 5 702 | 6 161 | 7 311 | 7 283 | 8 232 |

| France | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 8 425 | 7 275 | 6 683 | 2 695 | 2 049 | 2 278 | 2 693 | 2 854 | 3 856 | 4 888 | 7 136 | 8 199 |
| + Nuclear | 43 093 | 37 051 | 35 932 | 30 862 | 29 883 | 27 129 | 28 900 | 28 223 | 28 680 | 30 932 | 31 461 | 37 853 |
| + Hydro | 6 028 | 5 695 | 6 189 | 6 596 | 7 043 | 6 297 | 4 844 | 3 821 | 2 926 | 3 020 | 3 712 | 5 223 |
| + Geothermal/other | 709 | 540 | 809 | 507 | 589 | 442 | 588 | 388 | 592 | 690 | 1 416 | 1 027 |
| = Production | 58 255 | 50 561 | 49 613 | 40 660 | 39 564 | 36 146 | 37 025 | 35 286 | 36 054 | 39 530 | 43 725 | 52 302 |
| + Imports | 1 759 | 1 102 | 926 | 1 158 | 777 | 1 692 | 2 270 | 1 539 | 1 798 | 2 922 | 2 152 | 2 665 |
| - Exports | 4 348 | 4 371 | 5 350 | 3 869 | 5 307 | 3 508 | 3 431 | 3 495 | 2 906 | 2 209 | 3 069 | 3 218 |
| = Supply | 55 666 | 47 292 | 45 189 | 37 949 | 35 034 | 34 330 | 35 864 | 33 330 | 34 946 | 40 243 | 42 808 | 51 749 |

| Germany | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 36 576 | 32 313 | 32 377 | 26 445 | 24 706 | 27 567 | 28 575 | 26 161 | 29 628 | 33 426 | 32 843 | 34 252 |
| + Nuclear | 12 581 | 11 040 | 11 053 | 10 454 | 10 068 | 9 459 | 8 884 | 10 353 | 9 786 | 10 086 | 11 368 | 12 301 |
| + Hydro | 1 847 | 1 616 | 2 129 | 2 419 | 2 581 | 2 337 | 2 610 | 2 173 | 1 893 | 1 574 | 1 763 | 2 057 |
| + Geothermal/other | 3 675 | 3 730 | 3 785 | 3 840 | 3 895 | 3 950 | 4 000 | 4 030 | 4 060 | 4 090 | 4 120 | 4 150 |
| = Production | 54 679 | 48 699 | 49 344 | 43 158 | 41 250 | 43 313 | 44 069 | 42 717 | 45 367 | 49 176 | 50 094 | 52 760 |
| + Imports | 3 752 | 3 782 | 3 970 | 3 628 | 4 326 | 3 455 | 3 397 | 3 519 | 3 237 | 3 368 | 2 632 | 2 911 |
| - Exports | 6 089 | 5 328 | 4 572 | 3 980 | 3 045 | 3 994 | 3 126 | 3 205 | 3 947 | 4 751 | 5 786 | 6 140 |
| = Supply | 52 342 | 47 153 | 48 742 | 42 806 | 42 531 | 42 774 | 44 340 | 43 031 | 44 657 | 47 793 | 46 940 | 49 531 |

| Greece | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 4 592 | 3 896 | 3 851 | 3 495 | 3 844 | 4 123 | 4 826 | 4 538 | 4 106 | 3 973 | 3 419 | 3 765 |
| + Nuclear | - | - | - | - | - | - | - | - | - | - | - | - |
| + Hydro | 388 | 606 | 681 | 613 | 394 | 420 | 640 | 537 | 385 | 495 | 872 | 812 |
| + Geothermal/other | 200 | 208 | 216 | 224 | 232 | 240 | 240 | 242 | 243 | 245 | 246 | 248 |
| = Production | 5 180 | 4 710 | 4 748 | 4 332 | 4 470 | 4 783 | 5 706 | 5 317 | 4 734 | 4 713 | 4 537 | 4 825 |
| + Imports | 432 | 616 | 957 | 296 | 213 | 497 | 663 | 486 | 650 | 406 | 486 | 513 |
| - Exports | 415 | 1 062 | 508 | 369 | 231 | 23 | - | 231 | 623 | 208 | 392 | 1 085 |
| = Supply | 5 197 | 4 264 | 5 197 | 4 259 | 4 452 | 5 257 | 6 369 | 5 572 | 4 761 | 4 911 | 4 631 | 4 253 |

Source: IEA/OECD Monthly Electricity Statistics

(1) Net generation excludes power station own use.

Note: Please refer to Notes, Principles and Definitions in the Monthly Electricity Statistics IEA publication.

**Table 2.3. Monthly net electricity supply, ⁽¹⁾
by country (continued)
(GWh)**

| Hungary | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 1 763 | 1 583 | 1 436 | 1 511 | 1 351 | 1 135 | 1 340 | 1 228 | 1 290 | 1 637 | 1 804 | 1 829 |
| + Nuclear | 1 410 | 1 284 | 1 275 | 1 027 | 1 010 | 1 287 | 1 051 | 1 267 | 1 024 | 1 079 | 1 317 | 1 440 |
| + Hydro | 17 | 15 | 13 | 16 | 20 | 24 | 23 | 17 | 13 | 20 | 19 | 19 |
| + Geothermal/other | 21 | 20 | 22 | 21 | 26 | 25 | 22 | 22 | 20 | 22 | 21 | 24 |
| = Production | 3 211 | 2 902 | 2 746 | 2 575 | 2 407 | 2 471 | 2 436 | 2 534 | 2 347 | 2 758 | 3 161 | 3 312 |
| + Imports | 1 005 | 837 | 1 224 | 746 | 736 | 868 | 1 167 | 787 | 1 107 | 990 | 803 | 908 |
| - Exports | 655 | 566 | 623 | 398 | 148 | 385 | 318 | 212 | 282 | 429 | 641 | 850 |
| = Supply | 3 561 | 3 173 | 3 347 | 2 923 | 2 995 | 2 954 | 3 285 | 3 109 | 3 172 | 3 319 | 3 323 | 3 370 |

| Iceland | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | - | - | - | - | - | - | - | - | - | - | - | - |
| + Nuclear | - | - | - | - | - | - | - | - | - | - | - | - |
| + Hydro | 1 041 | 959 | 1 051 | 986 | 1 031 | 995 | 996 | 1 002 | 1 001 | 1 004 | 992 | 1 083 |
| + Geothermal/other | 397 | 357 | 385 | 371 | 339 | 319 | 366 | 365 | 337 | 381 | 370 | 382 |
| = Production | 1 438 | 1 316 | 1 436 | 1 357 | 1 370 | 1 314 | 1 362 | 1 367 | 1 338 | 1 385 | 1 362 | 1 465 |
| + Imports | - | - | - | - | - | - | - | - | - | - | - | - |
| - Exports | - | - | - | - | - | - | - | - | - | - | - | - |
| = Supply | 1 438 | 1 316 | 1 436 | 1 357 | 1 370 | 1 314 | 1 362 | 1 367 | 1 338 | 1 385 | 1 362 | 1 465 |

| Ireland | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 2 230 | 2 049 | 1 964 | 1 832 | 1 703 | 1 762 | 1 692 | 1 612 | 1 720 | 1 945 | 1 773 | 2 054 |
| + Nuclear | - | - | - | - | - | - | - | - | - | - | - | - |
| + Hydro | 126 | 117 | 81 | 82 | 105 | 54 | 68 | 95 | 101 | 75 | 170 | 159 |
| + Geothermal/other | 299 | 157 | 299 | 198 | 277 | 143 | 200 | 264 | 201 | 237 | 397 | 284 |
| = Production | 2 655 | 2 323 | 2 344 | 2 112 | 2 085 | 1 959 | 1 960 | 1 971 | 2 022 | 2 257 | 2 340 | 2 497 |
| + Imports | 44 | 58 | 90 | 87 | 100 | 87 | 117 | 107 | 100 | 32 | 46 | 71 |
| - Exports | 40 | 25 | 11 | 10 | 5 | 12 | 7 | 5 | 2 | 23 | 23 | 14 |
| = Supply | 2 659 | 2 356 | 2 423 | 2 189 | 2 180 | 2 034 | 2 070 | 2 073 | 2 120 | 2 266 | 2 363 | 2 554 |

| Italy | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 19 158 | 17 481 | 17 536 | 14 537 | 15 360 | 16 194 | 20 041 | 17 999 | 19 491 | 20 433 | 19 858 | 19 112 |
| + Nuclear | - | - | - | - | - | - | - | - | - | - | - | - |
| + Hydro | 4 115 | 4 037 | 4 146 | 5 183 | 5 964 | 5 903 | 5 585 | 4 026 | 3 510 | 3 288 | 2 968 | 3 890 |
| + Geothermal/other | 895 | 819 | 938 | 909 | 944 | 837 | 907 | 909 | 877 | 913 | 895 | 938 |
| = Production | 24 168 | 22 337 | 22 620 | 20 629 | 22 268 | 22 934 | 26 533 | 22 934 | 23 878 | 24 634 | 23 721 | 23 940 |
| + Imports | 4 067 | 4 277 | 4 806 | 4 128 | 3 933 | 3 912 | 4 432 | 2 956 | 3 735 | 3 344 | 3 848 | 3 603 |
| - Exports | 192 | 139 | 113 | 177 | 135 | 202 | 152 | 93 | 189 | 302 | 222 | 185 |
| = Supply | 28 043 | 26 475 | 27 313 | 24 580 | 26 066 | 26 644 | 30 813 | 25 797 | 27 424 | 27 676 | 27 347 | 27 358 |

| Japan | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 56 658 | 48 475 | 51 888 | 46 035 | 43 419 | 48 026 | 53 121 | 53 780 | 49 586 | 46 356 | 47 785 | 51 828 |
| + Nuclear | 24 213 | 20 832 | 20 008 | 19 008 | 20 646 | 19 668 | 23 674 | 23 574 | 21 396 | 22 198 | 22 834 | 26 462 |
| + Hydro | 4 772 | 6 149 | 8 052 | 7 770 | 8 667 | 7 721 | 10 568 | 9 598 | 5 594 | 5 178 | 5 221 | 5 255 |
| + Geothermal/other | 667 | 589 | 649 | 583 | 620 | 673 | 658 | 678 | 687 | 557 | 594 | 615 |
| = Production | 86 310 | 76 045 | 80 597 | 73 396 | 73 352 | 76 088 | 88 021 | 87 630 | 77 263 | 74 289 | 76 434 | 84 160 |
| + Imports | - | - | - | - | - | - | - | - | - | - | - | - |
| - Exports | - | - | - | - | - | - | - | - | - | - | - | - |
| = Supply | 86 310 | 76 045 | 80 597 | 73 396 | 73 352 | 76 088 | 88 021 | 87 630 | 77 263 | 74 289 | 76 434 | 84 160 |

Source: IEA/OECD Monthly Electricity Statistics

(1) Net generation excludes power station own use.

Note: Please refer to Notes, Principles and Definitions in the Monthly Electricity Statistics IEA publication.

**Table 2.3. Monthly net electricity supply, ⁽¹⁾
by country (continued)
(GWh)**

| Korea | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 26 297 | 23 973 | 25 670 | 22 244 | 20 941 | 22 227 | 23 777 | 24 218 | 24 578 | 23 036 | 26 800 | 30 109 |
| + Nuclear | 12 325 | 10 840 | 11 811 | 11 471 | 12 354 | 11 857 | 12 494 | 12 238 | 10 833 | 11 640 | 10 952 | 12 372 |
| + Hydro | 316 | 258 | 296 | 336 | 496 | 624 | 1 040 | 947 | 479 | 304 | 231 | 358 |
| + Geothermal/other | 76 | 78 | 79 | 81 | 82 | 84 | 85 | 85 | 86 | 87 | 88 | 89 |
| = Production | 39 014 | 35 149 | 37 856 | 34 132 | 33 873 | 34 792 | 37 396 | 37 488 | 35 976 | 35 067 | 38 071 | 42 928 |
| + Imports | - | - | - | - | - | - | - | - | - | - | - | - |
| - Exports | - | - | - | - | - | - | - | - | - | - | - | - |
| = Supply | 39 014 | 35 149 | 37 856 | 34 132 | 33 873 | 34 792 | 37 396 | 37 488 | 35 976 | 35 067 | 38 071 | 42 928 |

| Luxembourg | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 307 | 238 | 253 | 240 | 231 | 166 | 249 | 247 | 259 | 284 | 267 | 276 |
| + Nuclear | - | - | - | - | - | - | - | - | - | - | - | - |
| + Hydro | 89 | 80 | 81 | 57 | 53 | 44 | 48 | 63 | 60 | 67 | 71 | 78 |
| + Geothermal/other | 7 | 7 | 11 | 5 | 5 | 5 | 7 | 4 | 5 | 7 | 13 | 11 |
| = Production | 403 | 325 | 345 | 302 | 289 | 215 | 304 | 314 | 324 | 358 | 351 | 365 |
| + Imports | 549 | 493 | 487 | 465 | 466 | 458 | 497 | 462 | 517 | 552 | 518 | 500 |
| - Exports | 267 | 219 | 231 | 200 | 187 | 142 | 203 | 243 | 225 | 247 | 244 | 258 |
| = Supply | 685 | 599 | 601 | 567 | 568 | 531 | 598 | 533 | 616 | 663 | 625 | 607 |

| Mexico | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 15 412 | 13 944 | 16 214 | 16 447 | 18 658 | 18 725 | 19 691 | 20 347 | 18 400 | 18 558 | 16 781 | 17 073 |
| + Nuclear | 962 | 917 | 973 | 526 | 468 | 962 | 967 | 1 003 | 975 | 972 | 854 | 955 |
| + Hydro | 1 962 | 2 266 | 2 535 | 2 572 | 2 308 | 2 228 | 2 624 | 2 125 | 2 074 | 1 950 | 1 371 | 1 327 |
| + Geothermal/other | 585 | 503 | 569 | 564 | 570 | 540 | 587 | 584 | 538 | 543 | 547 | 568 |
| = Production | 18 921 | 17 630 | 20 291 | 20 109 | 22 004 | 22 455 | 23 869 | 24 059 | 21 987 | 22 023 | 19 553 | 19 923 |
| + Imports | 8 | 7 | 14 | 60 | 63 | 32 | 39 | 32 | 33 | 21 | 18 | 18 |
| - Exports | 180 | 148 | 104 | 85 | 50 | 59 | 47 | 63 | 87 | 155 | 118 | 153 |
| = Supply | 18 749 | 17 489 | 20 201 | 20 084 | 22 017 | 22 428 | 23 861 | 24 028 | 21 933 | 21 889 | 19 453 | 19 788 |

| Netherlands | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 9 094 | 8 148 | 8 567 | 7 456 | 7 209 | 7 502 | 8 100 | 7 708 | 7 960 | 8 903 | 8 881 | 9 497 |
| + Nuclear | 365 | 329 | 364 | 147 | 359 | 323 | 351 | 349 | 341 | 359 | 349 | 363 |
| + Hydro | 9 | 11 | 14 | 12 | 11 | 7 | 7 | 3 | 1 | 3 | 7 | 12 |
| + Geothermal/other | 451 | 333 | 457 | 242 | 423 | 263 | 355 | 254 | 384 | 430 | 712 | 490 |
| = Production | 9 919 | 8 821 | 9 402 | 7 857 | 8 002 | 8 095 | 8 813 | 8 314 | 8 686 | 9 695 | 9 949 | 10 362 |
| + Imports | 1 639 | 1 405 | 1 297 | 1 468 | 1 455 | 1 651 | 1 052 | 1 345 | 1 086 | 1 000 | 1 080 | 1 058 |
| - Exports | 751 | 521 | 609 | 511 | 435 | 725 | 1 005 | 959 | 981 | 1 179 | 1 114 | 1 252 |
| = Supply | 10 807 | 9 705 | 10 090 | 8 814 | 9 022 | 9 021 | 8 860 | 8 700 | 8 791 | 9 516 | 9 915 | 10 168 |

| New Zealand | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 799 | 924 | 915 | 1 077 | 1 065 | 1 213 | 1 353 | 1 039 | 837 | 762 | 960 | 859 |
| + Nuclear | - | - | - | - | - | - | - | - | - | - | - | - |
| + Hydro | 1 941 | 1 646 | 1 890 | 1 731 | 2 106 | 2 114 | 2 042 | 2 112 | 2 184 | 2 246 | 1 918 | 2 019 |
| + Geothermal/other | 487 | 415 | 485 | 455 | 518 | 486 | 546 | 538 | 510 | 561 | 521 | 539 |
| = Production | 3 227 | 2 985 | 3 290 | 3 263 | 3 689 | 3 813 | 3 941 | 3 689 | 3 531 | 3 569 | 3 399 | 3 417 |
| + Imports | - | - | - | - | - | - | - | - | - | - | - | - |
| - Exports | - | - | - | - | - | - | - | - | - | - | - | - |
| = Supply | 3 227 | 2 985 | 3 290 | 3 263 | 3 689 | 3 813 | 3 941 | 3 689 | 3 531 | 3 569 | 3 399 | 3 417 |

Source: IEA/OECD Monthly Electricity Statistics

(1) Net generation excludes power station own use.

Note: Please refer to Notes, Principles and Definitions in the Monthly Electricity Statistics IEA publication.

**Table 2.3. Monthly net electricity supply, ⁽¹⁾
by country (continued)
(GWh)**

| Norway | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 197 | 176 | 317 | 293 | 315 | 247 | 325 | 259 | 251 | 335 | 327 | 402 |
| + Nuclear | - | - | - | - | - | - | - | - | - | - | - | - |
| + Hydro | 13 586 | 11 833 | 11 475 | 8 797 | 8 245 | 7 432 | 7 390 | 8 899 | 9 741 | 11 799 | 11 646 | 13 385 |
| + Geothermal/other | 160 | 89 | 144 | 89 | 89 | 55 | 68 | 68 | 168 | 80 | 113 | 105 |
| = Production | 13 943 | 12 098 | 11 936 | 9 179 | 8 649 | 7 734 | 7 783 | 9 226 | 10 160 | 12 214 | 12 086 | 13 892 |
| + Imports | 547 | 686 | 606 | 669 | 618 | 610 | 391 | 151 | 72 | 207 | 456 | 665 |
| - Exports | 1 162 | 581 | 913 | 752 | 870 | 863 | 1 031 | 1 725 | 1 873 | 1 857 | 1 554 | 1 282 |
| = Supply | 13 328 | 12 203 | 11 629 | 9 096 | 8 397 | 7 481 | 7 143 | 7 652 | 8 359 | 10 564 | 10 988 | 13 275 |

| Poland | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 12 952 | 11 409 | 12 063 | 10 315 | 10 081 | 9 908 | 10 437 | 10 455 | 10 845 | 12 205 | 11 867 | 12 899 |
| + Nuclear | - | - | - | - | - | - | - | - | - | - | - | - |
| + Hydro | 191 | 226 | 328 | 323 | 202 | 238 | 260 | 191 | 158 | 220 | 281 | 262 |
| + Geothermal/other | 85 | 80 | 85 | 62 | 79 | 87 | 64 | 78 | 85 | 104 | 155 | 98 |
| = Production | 13 228 | 11 715 | 12 476 | 10 700 | 10 362 | 10 233 | 10 761 | 10 724 | 11 088 | 12 529 | 12 303 | 13 259 |
| + Imports | 891 | 654 | 459 | 241 | 484 | 476 | 690 | 578 | 722 | 716 | 804 | 688 |
| - Exports | 1 195 | 942 | 926 | 490 | 465 | 522 | 687 | 581 | 859 | 947 | 1 047 | 954 |
| = Supply | 12 924 | 11 427 | 12 009 | 10 451 | 10 381 | 10 187 | 10 764 | 10 721 | 10 951 | 12 298 | 12 060 | 12 993 |

| Portugal | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 2 885 | 2 026 | 2 538 | 2 380 | 2 612 | 2 786 | 2 916 | 2 814 | 2 897 | 2 597 | 1 969 | 2 245 |
| + Nuclear | - | - | - | - | - | - | - | - | - | - | - | - |
| + Hydro | 994 | 1 594 | 839 | 548 | 532 | 435 | 413 | 435 | 483 | 500 | 679 | 1 371 |
| + Geothermal/other | 575 | 598 | 621 | 644 | 667 | 690 | 710 | 730 | 750 | 770 | 790 | 810 |
| = Production | 4 454 | 4 218 | 3 998 | 3 572 | 3 811 | 3 911 | 4 039 | 3 979 | 4 130 | 3 867 | 3 438 | 4 426 |
| + Imports | 836 | 485 | 557 | 743 | 711 | 755 | 753 | 574 | 497 | 594 | 666 | 427 |
| - Exports | 244 | 348 | 294 | 149 | 173 | 157 | 156 | 193 | 194 | 165 | 214 | 533 |
| = Supply | 5 046 | 4 355 | 4 261 | 4 166 | 4 349 | 4 509 | 4 636 | 4 360 | 4 433 | 4 296 | 3 890 | 4 320 |

| Slovak Republic | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 658 | 612 | 512 | 503 | 608 | 466 | 459 | 436 | 494 | 564 | 499 | 591 |
| + Nuclear | 1 239 | 1 113 | 1 209 | 1 004 | 930 | 1 119 | 974 | 1 042 | 893 | 1 050 | 1 227 | 1 205 |
| + Hydro | 253 | 242 | 493 | 560 | 385 | 363 | 437 | 301 | 248 | 273 | 298 | 363 |
| + Geothermal/other | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| = Production | 2 154 | 1 971 | 2 218 | 2 071 | 1 927 | 1 952 | 1 874 | 1 783 | 1 639 | 1 891 | 2 028 | 2 163 |
| + Imports | 997 | 759 | 853 | 306 | 435 | 445 | 885 | 692 | 1 046 | 1 028 | 819 | 933 |
| - Exports | 700 | 498 | 795 | 564 | 507 | 562 | 793 | 522 | 676 | 686 | 614 | 763 |
| = Supply | 2 451 | 2 232 | 2 276 | 1 813 | 1 855 | 1 835 | 1 966 | 1 953 | 2 009 | 2 233 | 2 233 | 2 333 |

| Spain | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 14 990 | 11 374 | 12 811 | 11 203 | 11 874 | 14 009 | 16 125 | 14 074 | 14 861 | 13 830 | 11 587 | 12 155 |
| + Nuclear | 5 427 | 4 508 | 4 092 | 4 056 | 3 682 | 3 524 | 3 979 | 5 269 | 4 544 | 3 939 | 3 965 | 3 958 |
| + Hydro | 2 328 | 3 736 | 3 172 | 2 130 | 2 434 | 1 992 | 1 698 | 1 418 | 1 031 | 1 306 | 2 014 | 3 157 |
| + Geothermal/other | 3 197 | 3 277 | 3 357 | 3 437 | 3 517 | 3 596 | 3 646 | 3 686 | 3 726 | 3 766 | 3 806 | 3 846 |
| = Production | 25 942 | 22 895 | 23 432 | 20 826 | 21 507 | 23 121 | 25 448 | 24 447 | 24 162 | 22 841 | 21 372 | 23 116 |
| + Imports | 481 | 537 | 739 | 668 | 851 | 634 | 610 | 481 | 413 | 357 | 421 | 720 |
| - Exports | 1 370 | 1 007 | 925 | 1 211 | 1 270 | 1 400 | 1 552 | 1 303 | 1 125 | 1 307 | 1 317 | 1 167 |
| = Supply | 25 053 | 22 425 | 23 246 | 20 283 | 21 088 | 22 355 | 24 506 | 23 625 | 23 450 | 21 891 | 20 476 | 22 669 |

Source: IEA/OECD Monthly Electricity Statistics

(1) Net generation excludes power station own use.

Note: Please refer to Notes, Principles and Definitions in the Monthly Electricity Statistics IEA publication.

**Table 2.3. Monthly net electricity supply, ⁽¹⁾
by country (continued)
(GWh)**

| Sweden | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 1 852 | 1 695 | 1 758 | 1 206 | 1 057 | 837 | 713 | 715 | 955 | 1 489 | 1 531 | 2 231 |
| + Nuclear | 6 295 | 5 758 | 5 181 | 4 573 | 4 385 | 4 245 | 3 774 | 2 823 | 2 542 | 3 423 | 3 319 | 3 750 |
| + Hydro | 6 346 | 6 077 | 5 818 | 4 568 | 4 976 | 4 183 | 4 189 | 5 413 | 5 538 | 5 942 | 5 684 | 6 798 |
| + Geothermal/other | 217 | 130 | 199 | 138 | 193 | 173 | 169 | 194 | 300 | 257 | 338 | 213 |
| = Production | 14 710 | 13 660 | 12 956 | 10 485 | 10 611 | 9 438 | 8 845 | 9 145 | 9 335 | 11 111 | 10 872 | 12 992 |
| + Imports | 1 034 | 804 | 939 | 968 | 659 | 922 | 855 | 1 258 | 1 168 | 1 462 | 1 774 | 1 928 |
| - Exports | 1 099 | 969 | 508 | 858 | 1 231 | 835 | 1 149 | 1 004 | 558 | 355 | 246 | 273 |
| = Supply | 14 645 | 13 495 | 13 387 | 10 595 | 10 039 | 9 525 | 8 551 | 9 399 | 9 945 | 12 218 | 12 400 | 14 647 |

| Switzerland | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 269 | 248 | 258 | 249 | 246 | 243 | 251 | 244 | 256 | 257 | 270 | 276 |
| + Nuclear | 2 426 | 2 184 | 2 414 | 2 324 | 2 365 | 1 725 | 2 267 | 1 213 | 2 056 | 2 403 | 2 320 | 2 422 |
| + Hydro | 2 675 | 2 226 | 2 389 | 2 899 | 3 890 | 4 354 | 4 703 | 4 451 | 2 916 | 2 356 | 1 976 | 2 302 |
| + Geothermal/other | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| = Production | 5 373 | 4 661 | 5 064 | 5 475 | 6 504 | 6 325 | 7 224 | 5 911 | 5 231 | 5 019 | 4 569 | 5 003 |
| + Imports | 3 000 | 2 683 | 2 725 | 2 457 | 2 260 | 2 431 | 2 535 | 2 414 | 2 642 | 3 132 | 3 069 | 3 340 |
| - Exports | 2 414 | 2 092 | 2 298 | 2 893 | 3 306 | 3 441 | 4 040 | 3 083 | 2 843 | 2 937 | 2 473 | 2 668 |
| = Supply | 5 959 | 5 252 | 5 491 | 5 039 | 5 458 | 5 315 | 5 719 | 5 242 | 5 030 | 5 214 | 5 165 | 5 675 |

| Turkey | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 13 556 | 12 269 | 12 507 | 10 830 | 10 850 | 11 962 | 13 317 | 13 505 | 11 883 | 12 402 | 11 759 | 13 399 |
| + Nuclear | - | - | - | - | - | - | - | - | - | - | - | - |
| + Hydro | 2 436 | 1 933 | 2 692 | 3 328 | 3 744 | 3 180 | 3 483 | 3 265 | 2 725 | 2 665 | 2 967 | 3 187 |
| + Geothermal/other | 143 | 152 | 112 | 117 | 130 | 158 | 189 | 254 | 204 | 196 | 185 | 300 |
| = Production | 16 135 | 14 354 | 15 311 | 14 275 | 14 724 | 15 300 | 16 989 | 17 024 | 14 812 | 15 263 | 14 911 | 16 886 |
| + Imports | 65 | 57 | 60 | 60 | 51 | 59 | 90 | 94 | 53 | 37 | 92 | 96 |
| - Exports | 111 | 101 | 110 | 108 | 111 | 113 | 103 | 217 | 185 | 107 | 131 | 240 |
| = Supply | 16 089 | 14 310 | 15 261 | 14 227 | 14 664 | 15 246 | 16 976 | 16 901 | 14 680 | 15 193 | 14 872 | 16 742 |

| United Kingdom | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| + Combustible fuels | 31 945 | 26 706 | 26 181 | 21 687 | 21 997 | 20 302 | 22 256 | 21 480 | 22 721 | 25 523 | 26 149 | 28 930 |
| + Nuclear | 4 074 | 5 225 | 6 147 | 5 862 | 4 912 | 5 714 | 5 720 | 5 532 | 4 851 | 4 522 | 5 058 | 5 229 |
| + Hydro | 973 | 760 | 959 | 649 | 666 | 468 | 499 | 669 | 864 | 756 | 1 006 | 820 |
| + Geothermal/other | 665 | 660 | 655 | 650 | 645 | 640 | 650 | 668 | 686 | 704 | 722 | 740 |
| = Production | 37 657 | 33 351 | 33 942 | 28 848 | 28 220 | 27 124 | 29 125 | 28 349 | 29 122 | 31 505 | 32 935 | 35 719 |
| + Imports | 458 | 421 | 522 | 937 | 1 279 | 769 | 784 | 551 | 185 | 60 | 306 | 336 |
| - Exports | 381 | 226 | 230 | 85 | 58 | 61 | 120 | 184 | 405 | 736 | 613 | 647 |
| = Supply | 37 734 | 33 546 | 34 234 | 29 700 | 29 441 | 27 832 | 29 789 | 28 716 | 28 902 | 30 829 | 32 628 | 35 408 |

| United States | Jan-09 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 | Aug-09 | Sep-09 | Oct-09 | Nov-09 | Dec-09 |
|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| + Combustible fuels | 250 494 | 212 577 | 213 880 | 196 883 | 209 999 | 242 897 | 270 657 | 283 300 | 238 677 | 222 108 | 209 234 | 247 771 |
| + Nuclear | 73 228 | 64 008 | 66 691 | 58 927 | 65 006 | 69 198 | 72 700 | 71 998 | 65 716 | 57 491 | 58 867 | 70 200 |
| + Hydro | 26 167 | 19 872 | 23 780 | 27 537 | 32 126 | 32 332 | 25 913 | 22 259 | 19 587 | 21 770 | 22 762 | 27 240 |
| + Geothermal/other | 7 940 | 7 463 | 9 029 | 9 297 | 8 066 | 7 282 | 6 576 | 7 153 | 6 164 | 8 287 | 8 397 | 8 268 |
| = Production | 357 829 | 303 920 | 313 380 | 292 644 | 315 197 | 351 709 | 375 846 | 384 710 | 330 144 | 309 656 | 299 260 | 353 479 |
| + Imports | 4 286 | 3 903 | 2 963 | 3 306 | 4 146 | 4 752 | 5 526 | 5 857 | 4 491 | 4 731 | 3 848 | 4 621 |
| - Exports | 2 246 | 1 528 | 1 704 | 1 483 | 1 388 | 1 623 | 1 419 | 1 353 | 1 379 | 1 355 | 1 281 | 1 350 |
| = Supply | 359 869 | 306 295 | 314 639 | 294 467 | 317 955 | 354 838 | 379 953 | 389 214 | 333 256 | 313 032 | 301 827 | 356 750 |

Source: IEA/OECD Monthly Electricity Statistics

(1) Net generation excludes power station own use.

Note: Please refer to Notes, Principles and Definitions in the Monthly Electricity Statistics IEA publication.

**Table 2.4. OECD gross electricity production from combustible fuels,
by country, 2009e**
(TWh)

| | Coal | | | | Oil | Gas | Wood | Indust. waste | Municip. waste | Biogas liq. biof. | Tot. comb. fuels |
|------------------------|----------------|---------------|-------------|--------------|---------------|----------------|---------------|---------------|----------------|-------------------|------------------|
| | Hard | Brown | Peat | Gases | | | | | | | |
| Australia | 131.35 | 55.43 | - | 0.91 | 2.76 | 38.16 | 1.20 | - | - | 0.87 | 230.68 |
| Austria | 3.77 | - | - | 1.27 | 1.12 | 12.04 | 4.33 | 0.45 | 0.42 | 0.61 | 24.01 |
| Belgium | 4.71 | - | - | 1.43 | 0.72 | 29.03 | 2.68 | 0.44 | 1.11 | 0.51 | 40.63 |
| Canada | 23.49 | 82.14 | - | 0.06 | 9.29 | 38.36 | 7.11 | - | 0.15 | 0.73 | 161.33 |
| Czech Republic | 5.30 | 40.36 | - | 1.04 | 0.15 | 3.03 | 1.44 | 0.00 | 0.02 | 0.34 | 51.68 |
| Denmark | 17.45 | - | - | - | 1.14 | 6.93 | 1.92 | - | 1.77 | 0.26 | 29.47 |
| Finland | 10.56 | 0.01 | 4.58 | 0.45 | 0.53 | 9.57 | 8.29 | 0.04 | 0.44 | 0.09 | 34.56 |
| France | 23.82 | - | - | 3.93 | 5.93 | 22.30 | 1.46 | - | 3.85 | 0.70 | 61.98 |
| Germany | 109.00 | 146.50 | - | 9.02 | 12.50 | 77.00 | 12.96 | 1.47 | 10.10 | 15.79 | 394.34 |
| Greece | - | 30.54 | - | - | 8.07 | 9.38 | - | 0.02 | - | 0.18 | 48.18 |
| Hungary | 0.20 | 6.15 | - | 0.08 | 0.59 | 10.47 | 2.15 | 0.01 | 0.22 | 0.07 | 19.92 |
| Iceland | - | - | - | - | 0.00 | - | - | - | - | 0.00 | 0.00 |
| Ireland | 4.06 | - | 2.66 | - | 0.92 | 15.62 | 0.06 | - | - | 0.12 | 23.45 |
| Italy | 39.00 | - | - | 4.31 | 28.13 | 145.75 | 2.83 | 0.15 | 2.86 | 2.05 | 225.08 |
| Japan | 263.80 | - | - | 31.32 | 90.28 | 273.73 | 11.84 | 0.45 | 4.03 | - | 675.45 |
| Korea | 195.24 | - | - | 12.43 | 14.22 | 68.40 | 0.00 | 0.02 | 0.11 | 0.44 | 290.85 |
| Luxembourg | - | - | - | - | - | 2.84 | - | - | 0.07 | 0.05 | 2.96 |
| Mexico | 29.06 | - | - | 0.34 | 45.49 | 132.84 | 0.82 | - | - | 0.05 | 208.60 |
| Netherlands | 23.98 | - | - | 2.36 | 1.33 | 67.78 | 3.62 | - | 3.11 | 0.97 | 103.16 |
| New Zealand | 2.71 | 0.02 | - | 0.57 | 0.01 | 8.97 | 0.35 | - | - | 0.21 | 12.83 |
| Norway | 0.07 | - | - | 0.06 | 0.02 | 4.24 | 0.17 | 0.01 | 0.10 | 0.01 | 4.67 |
| Poland | 80.00 | 55.14 | - | 1.60 | 2.33 | 3.21 | 4.70 | 0.28 | 0.01 | 0.25 | 147.52 |
| Portugal | 12.98 | - | - | - | 2.44 | 15.22 | 1.75 | 0.01 | 0.58 | 0.08 | 33.06 |
| Slovak Republic | 2.28 | 2.05 | - | 0.44 | 0.63 | 1.49 | 0.45 | 0.00 | 0.04 | 0.01 | 7.39 |
| Spain | 33.42 | 2.86 | - | 1.13 | 17.45 | 110.39 | 2.02 | - | 1.57 | 0.62 | 169.45 |
| Sweden | 0.54 | - | 0.72 | 0.37 | 1.07 | 1.29 | 9.89 | 0.07 | 1.81 | 0.15 | 15.90 |
| Switzerland | - | - | - | - | 0.15 | 0.77 | 0.15 | 0.25 | 1.85 | 0.18 | 3.35 |
| Turkey | 14.70 | 38.83 | - | 1.46 | 6.60 | 94.40 | 0.03 | 0.04 | - | 0.18 | 156.24 |
| United Kingdom | 103.41 | - | - | 1.09 | 5.82 | 162.15 | 3.19 | 1.05 | 2.26 | 6.14 | 285.12 |
| United States | 1816.96 | 79.88 | - | 2.63 | 50.24 | 948.60 | 40.23 | 1.92 | 16.91 | 8.29 | 2965.65 |
| OECD Total | 2951.87 | 539.90 | 7.96 | 78.28 | 309.92 | 2313.94 | 125.62 | 6.67 | 53.39 | 39.95 | 6427.49 |
| <i>OECD Europe</i> | <i>489.27</i> | <i>322.44</i> | <i>7.96</i> | <i>30.04</i> | <i>97.63</i> | <i>804.88</i> | <i>64.07</i> | <i>4.28</i> | <i>32.19</i> | <i>29.37</i> | <i>1882.12</i> |
| <i>OECD Pacific</i> | <i>593.10</i> | <i>55.45</i> | - | <i>45.22</i> | <i>107.26</i> | <i>389.26</i> | <i>13.39</i> | <i>0.47</i> | <i>4.14</i> | <i>1.52</i> | <i>1209.80</i> |
| <i>OECD N. America</i> | <i>1869.51</i> | <i>162.02</i> | - | <i>3.02</i> | <i>105.03</i> | <i>1119.80</i> | <i>48.15</i> | <i>1.92</i> | <i>17.06</i> | <i>9.06</i> | <i>3335.57</i> |

Source: IEA/OECD Energy Statistics of OECD Countries.

**Table 2.5. OECD gross heat production⁽¹⁾ from combustible fuels,
by country, 2009e
(PJ)**

| | Coal | | | | Oil | Gas | Wood | Indust. waste | Municip. waste | Biogas liq. biof. | Tot. comb. fuels |
|------------------------|---------------|---------------|--------------|--------------|---------------|----------------|---------------|---------------|----------------|-------------------|------------------|
| | Hard | Brown | Peat | Gases | | | | | | | |
| Australia | - | - | - | - | - | - | - | - | - | - | - |
| Austria | 3.05 | - | - | 0.40 | 6.05 | 28.73 | 25.45 | 0.63 | 3.57 | 0.66 | 68.54 |
| Belgium | - | - | - | - | 0.00 | 27.56 | 0.27 | 0.22 | 0.27 | 0.25 | 28.57 |
| Canada | - | - | - | - | 0.94 | 29.12 | - | - | 1.70 | 0.05 | 31.81 |
| Czech Republic | 26.96 | 57.26 | - | 4.24 | 3.17 | 22.56 | 2.06 | 0.38 | 2.61 | 0.18 | 119.41 |
| Denmark | 33.06 | - | - | - | 4.33 | 36.71 | 21.37 | - | 24.06 | 0.92 | 120.44 |
| Finland | 30.24 | 0.01 | 29.25 | 0.31 | 12.10 | 45.04 | 52.19 | 0.93 | 3.21 | 0.67 | 173.94 |
| France | 12.19 | - | - | 2.67 | 23.34 | 97.97 | - | - | 21.34 | - | 157.50 |
| Germany | 121.33 | 38.14 | - | 0.30 | 6.14 | 245.29 | 11.17 | - | 46.53 | 1.16 | 470.04 |
| Greece | - | 1.68 | - | - | 0.01 | - | - | - | - | - | 1.69 |
| Hungary | 1.48 | 2.33 | - | 3.17 | 0.75 | 41.40 | 0.80 | - | 1.07 | 0.00 | 51.00 |
| Iceland | - | - | - | - | 0.02 | - | - | - | 0.03 | - | 0.05 |
| Ireland | - | - | - | - | - | - | - | - | - | - | - |
| Italy | 0.85 | - | - | 0.72 | 56.70 | 98.70 | 3.75 | 0.14 | 5.80 | 1.34 | 168.00 |
| Japan | - | - | - | - | 0.30 | 16.59 | - | 0.08 | - | 4.07 | 21.02 |
| Korea | 41.62 | - | - | 0.39 | 56.59 | 41.45 | 0.42 | - | 10.46 | 0.54 | 151.47 |
| Luxembourg | - | - | - | - | - | 2.15 | - | - | - | 0.35 | 2.50 |
| Mexico | - | - | - | - | - | - | - | - | - | - | - |
| Netherlands | 16.12 | - | - | 1.33 | 5.82 | 95.80 | 1.38 | - | 9.09 | 0.11 | 129.64 |
| New Zealand | - | - | - | - | - | - | - | - | - | - | - |
| Norway | 0.21 | - | - | 0.01 | 0.64 | 0.63 | 1.55 | 0.55 | 6.48 | 0.01 | 10.08 |
| Poland | 252.01 | 5.30 | - | 9.10 | 4.23 | 19.70 | 6.50 | 1.95 | 0.28 | 0.93 | 300.00 |
| Portugal | - | - | - | - | 3.68 | 12.33 | - | - | - | - | 16.01 |
| Slovak Republic | 4.09 | 9.16 | - | 0.20 | 0.84 | 33.24 | 2.60 | 0.28 | 0.33 | 0.22 | 50.96 |
| Spain | - | - | - | - | - | - | - | - | - | - | - |
| Sweden | 4.84 | - | 7.86 | 2.44 | 8.01 | 11.34 | 88.00 | 0.70 | 31.36 | 7.15 | 161.70 |
| Switzerland | - | - | - | - | 0.32 | 4.85 | 0.74 | 0.43 | 10.06 | 0.02 | 16.42 |
| Turkey | 0.11 | 0.32 | - | - | 0.72 | 38.20 | - | - | - | - | 39.35 |
| United Kingdom | 6.80 | - | - | 0.68 | 1.39 | 44.76 | - | - | - | - | 53.63 |
| United States | 77.55 | - | - | 8.22 | 40.61 | 351.75 | 32.07 | 3.73 | 11.45 | 2.10 | 527.48 |
| OECD Total | 632.50 | 114.19 | 37.11 | 34.17 | 236.69 | 1345.87 | 250.32 | 10.01 | 189.70 | 20.71 | 2871.26 |
| <i>OECD Europe</i> | <i>513.34</i> | <i>114.19</i> | <i>37.11</i> | <i>25.56</i> | <i>138.26</i> | <i>906.96</i> | <i>217.83</i> | <i>6.20</i> | <i>166.08</i> | <i>13.96</i> | <i>2139.48</i> |
| <i>OECD Pacific</i> | <i>41.62</i> | - | - | <i>0.39</i> | <i>56.89</i> | <i>58.04</i> | <i>0.42</i> | <i>0.08</i> | <i>10.46</i> | <i>4.60</i> | <i>172.49</i> |
| <i>OECD N. America</i> | <i>77.55</i> | - | - | <i>8.22</i> | <i>41.55</i> | <i>380.88</i> | <i>32.07</i> | <i>3.73</i> | <i>13.16</i> | <i>2.15</i> | <i>559.29</i> |

Source: IEA/OECD Energy Statistics of OECD Countries.

(1) Production in industry for own use is not included.

Note: Please refer to notes in the introductory information.

Table 2.6. ELECTRICITY PRODUCTION AND CONSUMPTION, OECD, 1973-2008
(TWh)

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | Average annual percent change | |
|--|---------------|---------------|---------------|---------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | 73-90 | 90-08 |
| Gross production⁽¹⁾ | 4467.3 | 5659.8 | 7603.2 | 9682.9 | 10731.4 | 10744.9 | 3.2 | 1.9 |
| Nuclear | 188.5 | 620.7 | 1724.8 | 2244.4 | 2272.6 | 2272.4 | 13.9 | 1.5 |
| Hydro | 925.6 | 1100.4 | 1212.8 | 1386.5 | 1334.2 | 1381.2 | 1.6 | 0.7 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 13.2 | 15.7 | 43.1 | 68.5 | 73.7 | 68.8 | 7.2 | 2.6 |
| Geothermal | 6.6 | 11.1 | 28.6 | 33.0 | 40.3 | 41.0 | 9.0 | 2.0 |
| Solar | - | - | 0.7 | 1.3 | 7.7 | 12.7 | - | 17.6 |
| Tide, wave, ocean | 0.6 | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 | 0.4 | -0.5 |
| Wind | - | 0.0 | 3.8 | 28.6 | 149.7 | 187.9 | - | 24.1 |
| Combustible fuels | 3346.0 | 3927.1 | 4631.7 | 5987.4 | 6922.6 | 6845.9 | 1.9 | 2.2 |
| <i>Coal</i> | 1694.0 | 2317.5 | 3057.1 | 3739.3 | 3960.0 | 3882.5 | 3.5 | 1.3 |
| <i>Oil</i> | 1125.2 | 978.7 | 682.7 | 575.6 | 437.2 | 378.2 | -2.9 | -3.2 |
| <i>Gas</i> | 520.2 | 617.7 | 769.1 | 1526.1 | 2309.6 | 2364.7 | 2.3 | 6.4 |
| <i>Comb. renew. & waste</i> | 6.6 | 13.3 | 122.8 | 146.5 | 215.7 | 220.5 | 18.7 | 3.3 |
| Other (e.g. fuel cells) | - | - | 0.2 | 1.2 | 3.7 | 3.3 | - | 16.7 |
| - Own use by power plant | 219.2 | 293.9 | 407.0 | 491.8 | 447.1 | 490.1 | 3.7 | 1.0 |
| Net production⁽¹⁾ | 4248.1 | 5365.9 | 7196.3 | 9191.1 | 10284.3 | 10254.7 | 3.1 | 2.0 |
| Nuclear | .. | 580.1 | 1630.5 | 2127.7 | 2170.1 | 2169.2 | .. | 1.6 |
| Hydro | .. | 1087.2 | 1200.0 | 1369.7 | 1317.9 | 1363.9 | .. | 0.7 |
| Geothermal | .. | 9.7 | 27.1 | 31.4 | 36.9 | 37.6 | .. | 1.8 |
| Solar | .. | - | 0.7 | 1.2 | 7.6 | 12.5 | .. | 17.6 |
| Tide, wave, ocean | .. | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 | .. | -0.5 |
| Wind | .. | 0.0 | 3.8 | 28.5 | 149.2 | 187.1 | .. | 24.1 |
| Combustible fuels | .. | 3621.7 | 4333.4 | 5630.8 | 6598.5 | 6480.7 | .. | 2.3 |
| Other (e.g. fuel cells) | .. | - | 0.2 | 1.2 | 3.5 | 3.1 | .. | 16.5 |
| - Used for heat pumps | - | - | 0.0 | 2.3 | 1.8 | 1.8 | - | 36.1 |
| - Used for electric boilers | - | - | 0.8 | 3.8 | 2.3 | 2.0 | - | 5.3 |
| - Used for pumped storage | 19.1 | 25.5 | 65.7 | 92.4 | 97.6 | 90.0 | 7.5 | 1.8 |
| + Imports | 87.7 | 140.3 | 255.3 | 342.7 | 408.6 | 401.0 | 6.5 | 2.5 |
| - Exports | 81.4 | 124.6 | 231.9 | 339.6 | 405.5 | 389.9 | 6.3 | 2.9 |
| Electrical energy supplied | 4235.2 | 5356.1 | 7153.2 | 9095.8 | 10185.7 | 10172.0 | 3.1 | 2.0 |
| - Transmission & distr. losses | 349.1 | 437.7 | 579.5 | 616.1 | 679.7 | 659.4 | 3.0 | 0.7 |
| - Statistical difference | - | -0.0 | -4.8 | -7.1 | -0.5 | -0.4 | - | -13.5 |
| Total consumption | 3886.2 | 4918.4 | 6578.5 | 8486.8 | 9506.5 | 9513.0 | 3.1 | 2.1 |
| - Energy industry consumption ⁽²⁾ | 128.7 | 179.1 | 211.5 | 233.8 | 266.9 | 269.1 | 3.0 | 1.3 |
| Final consumption | 3757.5 | 4739.4 | 6367.1 | 8253.0 | 9239.6 | 9243.9 | 3.2 | 2.1 |
| Industry | 1836.1 | 2159.6 | 2559.0 | 3187.0 | 3148.4 | 3098.9 | 2.0 | 1.1 |
| Transport | 61.5 | 70.3 | 89.6 | 106.6 | 111.9 | 112.5 | 2.2 | 1.3 |
| Commercial & publ. serv. | 726.8 | 1004.7 | 1677.9 | 2387.8 | 2853.8 | 2866.9 | 5.0 | 3.0 |
| Residential | 1081.9 | 1443.1 | 1960.7 | 2484.0 | 2870.0 | 2879.7 | 3.6 | 2.2 |
| Agriculture & fishing | 44.0 | 50.6 | 69.2 | 80.9 | 86.5 | 91.5 | 2.7 | 1.6 |
| Sector non specified | 7.2 | 11.0 | 10.7 | 6.7 | 169.1 | 194.3 | 2.3 | 17.5 |

Source: IEA/OECD *Energy Statistics of OECD Countries*, IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to notes in Principles and Definitions for data coverage.

**Table 2.7. Net maximum electricity generating capacity,
OECD, by source, 1974-2008
(GW)**

| | 1974 | 1985 | 1990 | 2000 | 2007 | 2008 | Average annual percent change | |
|----------------------------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | 74-90 | 90-08 |
| Total | 993.32 | 1530.87 | 1717.96 | 2056.75 | 2430.73 | 2482.20 | 3.5 | 2.1 |
| Nuclear | 52.92 | 205.05 | 266.79 | 302.09 | 313.06 | 312.27 | 10.6 | 0.9 |
| Hydro | 178.80 | 341.30 | 372.94 | 420.27 | 441.00 | 443.81 | 4.7 | 1.0 |
| <i>of which: pumped storage</i> | .. | 32.43 | 48.59 | 84.93 | 93.07 | 94.87 | .. | 3.8 |
| Geothermal | 0.64 | 2.86 | 4.46 | 5.39 | 5.37 | 5.65 | 12.9 | 1.3 |
| Solar | - | 0.02 | 0.35 | 1.18 | 8.48 | 14.21 | - | 22.8 |
| Tide, wave, ocean | 0.24 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.5 | - |
| Wind | - | 0.06 | 2.38 | 15.40 | 77.94 | 96.26 | - | 22.8 |
| Other (e.g. fuel cells) | - | - | - | 0.20 | 1.14 | 1.09 | - | - |
| Combustible fuels ⁽¹⁾ | 760.72 | 981.32 | 1073.12 | 1311.95 | 1583.49 | 1608.66 | 2.2 | 2.3 |
| <i>of which:</i> | | | | | | | | |
| <i>Single fuel fired:</i> | | | | | | | | |
| Coal and coal products | 316.00 | 396.12 | 438.66 | 503.44 | 476.31 | 480.73 | 2.1 | 0.5 |
| Liquid fuels | 226.49 | 217.41 | 194.30 | 151.58 | 141.49 | 142.53 | -1.0 | -1.7 |
| Natural gas | 74.58 | 43.46 | 76.41 | 218.24 | 560.77 | 573.69 | 0.2 | 11.9 |
| Comb. renew. & waste | 0.16 | 2.89 | 10.55 | 16.54 | 19.68 | 20.12 | 29.9 | 3.7 |
| <i>Multi-fired:</i> | | | | | | | | |
| Solid / liquid | 43.31 | 86.73 | 85.94 | 67.11 | 53.42 | 53.62 | 4.4 | -2.6 |
| Solid / natural gas | 17.96 | 30.98 | 33.51 | 10.29 | 4.48 | 5.46 | 4.0 | -9.6 |
| Liquid / natural gas | 68.16 | 186.77 | 175.84 | 216.56 | 47.89 | 49.01 | 6.1 | -6.9 |
| Solid / liquid / gas | 9.29 | 16.96 | 30.96 | 29.21 | 18.00 | 18.82 | 7.8 | -2.7 |

Source: IEA/OECD Electricity Statistics.

(1) Sum of capacity for single and multi-fired plants is not equal to total capacity for combustible fuels as single and multi-fired plants capacity data are not available for all countries (see Notes).

Notes: Please refer to notes in the introductory information for data coverage.

Prior to 1982, split between single and multi-fired plants is not available for Mexico.

Prior to 1991, excludes new federal German states.

Prior to 1993, excludes the Czech Republic.

Prior to 1994, excludes Korea.

Prior to 1995, excludes the Slovak Republic.

Prior to 2001, split between single and multi-fired plants is not available for the Slovak Republic.

From 1990, complete split between single and multi-fired plants is not available for Japan.

From 1990 to 2003 and from 2006 onwards, split between single and multi-fired plants is not available for Sweden.

From 1999, split between single and multi-fired plants is not available for France.

From 2000, complete split between single and multi-fired plants is not available for Canada.

From 2002, split between single and multi-fired plants is not available for Germany and the Netherlands.

From 2003, split between single and multi-fired plants is not available for Spain.

From 2007, split between single and multi-fired plants is not available for Belgium.

Table 2.8. Electricity generation and heat sold, OECD, 1974 - 2008

| | 1974 | 1980 | 1990 | 2000 | 2007 | 2008 | Average annual percent change | |
|--|---------------|---------------|---------------|---------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | 74-90 | 90-08 |
| Electricity generation (TWh) | | | | | | | | |
| Total⁽¹⁾ | 4503.3 | 5644.1 | 7560.2 | 9614.4 | 10657.8 | 10676.1 | 3.3 | 1.9 |
| <i>of which:</i> Electricity plants | 4325.4 | 5396.1 | 7023.8 | 8777.6 | 9606.8 | 9642.0 | 3.1 | 1.8 |
| CHP plants | 177.9 | 248.0 | 536.4 | 836.8 | 1050.9 | 1034.1 | 7.1 | 3.7 |
| Main activity producers | 4138.8 | 5277.6 | 6946.2 | 8976.0 | 9964.8 | 9993.6 | 3.3 | 2.0 |
| <i>of which:</i> Electricity plants | 3986.7 | 5063.0 | 6689.9 | 8465.5 | 9282.6 | 9329.1 | 3.3 | 1.9 |
| CHP plants | 152.1 | 214.6 | 256.3 | 510.4 | 682.1 | 664.5 | 3.3 | 5.4 |
| Autoproducers⁽¹⁾ | 364.5 | 366.5 | 614.0 | 638.4 | 693.0 | 682.5 | 3.3 | 0.6 |
| <i>of which:</i> Electricity plants | 338.7 | 333.1 | 333.9 | 312.1 | 324.2 | 313.0 | -0.1 | -0.4 |
| CHP plants | .. | .. | 280.1 | 326.4 | 368.8 | 369.5 | .. | 1.6 |
| Heat sold to third parties (PJ) | | | | | | | | |
| Total⁽²⁾ | 1084.3 | 1671.3 | 1947.8 | 2347.7 | 3067.7 | 3045.5 | 3.7 | 2.5 |
| <i>of which:</i> CHP plants | 766.8 | 1159.6 | 1398.0 | 1816.4 | 2481.2 | 2456.5 | 3.8 | 3.2 |
| Heat plants | 317.5 | 511.7 | 549.7 | 531.3 | 586.5 | 589.1 | 3.5 | 0.4 |
| Main activity producers | .. | .. | .. | 1864.3 | 2426.6 | 2425.3 | .. | .. |
| <i>of which:</i> CHP plants | .. | .. | .. | 1506.0 | 1951.8 | 1950.2 | .. | .. |
| Heat plants | .. | .. | .. | 358.3 | 474.8 | 475.2 | .. | .. |
| Autoproducers | .. | .. | .. | 483.4 | 641.1 | 620.2 | .. | .. |
| <i>of which:</i> CHP plants | .. | .. | .. | 310.4 | 529.4 | 506.3 | .. | .. |
| Heat plants | .. | .. | .. | 173.0 | 111.7 | 113.9 | .. | .. |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Excludes pumped storage production. Break in series: data related to United States autoproducers plants included from 1989.

(2) Includes own use in main activity producer plants. Break in series: data related to United States autoproducers CHP plants included from 1989.

**Table 2.9. Electricity production from combustible fuels
in electricity plants⁽¹⁾, OECD, 1980 - 2008**

| | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|--|----------|----------|----------|----------|----------|----------|----------|
| Hard coal⁽²⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | 710657 | 907216 | 1148655 | 1249627 | 1249906 | 1273131 | 1245851 |
| Fuel input (TJ) | 17621704 | 21935356 | 27641818 | 29320745 | 29439115 | 29676995 | 28775273 |
| Electricity production (GWh) | 1750140 | 2279942 | 2885137 | 3052278 | 3034096 | 3048868 | 3010685 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 408193 | 501266 | 497588 | 486366 | 472655 | 494170 | 475790 |
| Fuel input (TJ) | 3933268 | 4909256 | 5035917 | 4916725 | 4835236 | 4978429 | 4817094 |
| Electricity production (GWh) | 353011 | 455513 | 481899 | 499709 | 488378 | 514803 | 484616 |
| Peat | | | | | | | |
| Fuel input (1000 t) | 3534 | 3814 | 3532 | 3886 | 5083 | 5315 | 4857 |
| Fuel input (TJ) | 29600 | 32308 | 30112 | 33616 | 46795 | 48929 | 42214 |
| Electricity production (GWh) | 2236 | 3025 | 2834 | 3711 | 5155 | 5705 | 4757 |
| Coal manufactured gases⁽³⁾ | | | | | | | |
| Fuel input (TJ) | 582015 | 540262 | 641343 | 620066 | 615018 | 640522 | 561232 |
| Electricity production (GWh) | 53218 | 54775 | 66484 | 64056 | 63657 | 65547 | 57911 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 219296 | 142722 | 117233 | 104766 | 80084 | 85504 | 71261 |
| Fuel input (TJ) | 9046419 | 6251897 | 5039430 | 4344399 | 3339040 | 3563291 | 2972957 |
| Electricity production (GWh) | 923424 | 644851 | 506763 | 448532 | 342044 | 370096 | 319175 |
| Natural gas and gas works gas⁽³⁾ | | | | | | | |
| Fuel input (TJ) | 6250695 | 6185072 | 10479704 | 12239392 | 13230963 | 14711663 | 14949116 |
| Electricity production (GWh) | 587343 | 610209 | 1131201 | 1446369 | 1582075 | 1760442 | 1825573 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 9630 | 353578 | 344576 | 545106 | 523978 | 647253 | 675918 |
| Electricity production (GWh) | 1300 | 25568 | 32229 | 47593 | 46603 | 54563 | 55981 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 24560 | 33243 | 61010 | 29605 | 28046 | 30096 | 30011 |
| Electricity production (GWh) | 2585 | 3403 | 5561 | 2972 | 2684 | 2419 | 2543 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 35978 | 226258 | 389655 | 439529 | 441980 | 530809 | 539878 |
| Electricity production (GWh) | 3105 | 15262 | 29382 | 31030 | 31177 | 38474 | 38562 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | 379 | 40099 | 124893 | 200604 | 209055 | 343046 | 366718 |
| Electricity production (GWh) | 32 | 2989 | 10144 | 16164 | 17216 | 25870 | 27992 |
| Total combustible fuels⁽⁴⁾ | | | | | | | |
| Electricity production (GWh) | 3679186 | 4095537 | 5151634 | 5612414 | 5613085 | 5886787 | 5827795 |

Source: IEA/OECD Electricity Statistics.

(1) Excludes CHP plant. Please refer to Principles and Definitions.

(2) Includes sub-bituminous coal for Australia, Belgium, Finland, France, Iceland, Japan, Korea, Mexico, New Zealand, Portugal and the United States.

(3) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(4) Includes non-specified combustible fuels not shown in this table.

**Table 2.10. Electricity and heat produced for sale⁽¹⁾ from combustible fuels
in CHP plants, OECD, 1980 - 2008**

| | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|--|---------|---------|---------|---------|---------|---------|---------|
| Hard coal⁽²⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | 95159 | 102386 | 97021 | 101396 | 105413 | 103417 | 98892 |
| Fuel input (TJ) | 1933892 | 2311942 | 2311876 | 2331314 | 2419905 | 2344121 | 2246762 |
| Electricity production (GWh) | 125653 | 179256 | 200158 | 201249 | 217736 | 211761 | 202933 |
| CHP heat production (TJ) | 566114 | 608325 | 497212 | 514985 | 566863 | 541041 | 526083 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 55527 | 113172 | 89704 | 99735 | 99277 | 93080 | 99759 |
| Fuel input (TJ) | 452337 | 1011388 | 840703 | 897986 | 883246 | 848691 | 902680 |
| Electricity production (GWh) | 25901 | 68640 | 73797 | 86295 | 85207 | 80726 | 86765 |
| CHP heat production (TJ) | 161041 | 296773 | 170060 | 110954 | 104017 | 105616 | 108101 |
| Peat | | | | | | | |
| Fuel input (1000 t) | 3192 | 2375 | 3846 | 4859 | 5509 | 5653 | 5324 |
| Fuel input (TJ) | 26726 | 25768 | 40354 | 51493 | 57247 | 58027 | 55047 |
| Electricity production (GWh) | 4194 | 2050 | 2968 | 3742 | 4080 | 4221 | 3849 |
| CHP heat production (TJ) | 6866 | 14414 | 23226 | 29246 | 32900 | 32984 | 32351 |
| Coal manufactured gases⁽³⁾ | | | | | | | |
| Fuel input (TJ) | 61263 | 190413 | 270004 | 285773 | 288153 | 296200 | 309744 |
| Electricity production (GWh) | 3120 | 13860 | 25980 | 26388 | 25832 | 28410 | 30977 |
| CHP heat production (TJ) | 25865 | 31709 | 21670 | 46580 | 48140 | 36498 | 40346 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 16886 | 9662 | 20827 | 27756 | 27854 | 26779 | 23968 |
| Fuel input (TJ) | 680827 | 392075 | 718066 | 872397 | 829296 | 783219 | 665041 |
| Electricity production (GWh) | 55294 | 37877 | 68865 | 77137 | 70914 | 67148 | 58981 |
| CHP heat production (TJ) | 217857 | 106346 | 156517 | 271008 | 307466 | 270802 | 246175 |
| Natural gas and gas works gas⁽³⁾ | | | | | | | |
| Fuel input (TJ) | 396231 | 1847188 | 3831622 | 5368760 | 5076623 | 5077621 | 5015999 |
| Electricity production (GWh) | 30356 | 158912 | 394867 | 527547 | 528437 | 549152 | 539170 |
| CHP heat production (TJ) | 97176 | 177449 | 750501 | 1138162 | 1304583 | 1162612 | 1147865 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 25368 | 1262440 | 597474 | 753428 | 691676 | 627648 | 645670 |
| Electricity production (GWh) | 1970 | 67767 | 50496 | 63439 | 68501 | 65243 | 66099 |
| CHP heat production (TJ) | 7069 | 13788 | 75796 | 124447 | 159809 | 164287 | 172791 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 5289 | 80136 | 81438 | 52299 | 60348 | 62967 | 57695 |
| Electricity production (GWh) | 161 | 4262 | 7971 | 6577 | 6616 | 6674 | 6077 |
| CHP heat production (TJ) | 3077 | 3693 | 6191 | 6781 | 9200 | 8024 | 8287 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 21105 | 81005 | 182044 | 284862 | 316490 | 315982 | 323903 |
| Electricity production (GWh) | 1313 | 2847 | 7742 | 17412 | 20322 | 15986 | 16574 |
| CHP heat production (TJ) | 3895 | 37063 | 91998 | 116878 | 130361 | 126618 | 138674 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 7007 | 30503 | 101704 | 122157 | 68204 | 69104 |
| Electricity production (GWh) | - | 659 | 2962 | 9143 | 11351 | 6489 | 6690 |
| CHP heat production (TJ) | - | 123 | 3892 | 6182 | 8866 | 8477 | 7838 |
| Total combustible fuels⁽⁴⁾ | | | | | | | |
| Electricity production (GWh) | 247962 | 536130 | 835806 | 1018929 | 1038996 | 1035810 | 1018115 |
| CHP heat production (TJ) | 1137281 | 1370991 | 1797063 | 2478107 | 2780417 | 2458441 | 2430810 |

Source: IEA/OECD Electricity Statistics.

(1) Includes own use in main activity producer plants.

(2) Includes sub-bit. coal for Australia, Belgium, Finland, France, Iceland, Japan, Korea, Mexico, New Zealand, Portugal and the U.S.

(3) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(4) Includes non-specified combustible fuels not shown in this table.

**Table 2.11. Heat produced for sale⁽¹⁾ from combustible fuels
in heat plants, OECD, 1980 - 2008**

| | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|--|--------|--------|--------|--------|--------|--------|--------|
| Hard coal⁽²⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | 18562 | 19918 | 8157 | 6593 | 6564 | 6974 | 6757 |
| Fuel input (TJ) | 418375 | 428363 | 181049 | 152958 | 153650 | 163636 | 158482 |
| Heat production (TJ) | 281870 | 307121 | 147019 | 118966 | 119559 | 129627 | 126417 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 4739 | 2769 | 727 | 626 | 574 | 965 | 681 |
| Fuel input (TJ) | 54336 | 30408 | 10275 | 8776 | 8395 | 11510 | 8633 |
| Heat production (TJ) | 39968 | 21674 | 7748 | 6061 | 6362 | 7824 | 7397 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | 1029 | 582 | 660 | 626 | 884 | 801 |
| Fuel input (TJ) | - | 11849 | 6587 | 7120 | 6588 | 10627 | 9538 |
| Heat production (TJ) | - | 10121 | 5730 | 6223 | 5617 | 9115 | 7976 |
| Coal manufactured gases⁽³⁾ | | | | | | | |
| Fuel input (TJ) | 7266 | 6615 | 11867 | 5798 | 5770 | 5820 | 5658 |
| Heat production (TJ) | 5116 | 4629 | 9644 | 3654 | 3414 | 3412 | 3394 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 2233 | 1623 | 1835 | 1280 | 1215 | 951 | 767 |
| Fuel input (TJ) | 92509 | 66942 | 76480 | 53087 | 51987 | 39869 | 31990 |
| Heat production (TJ) | 70446 | 51926 | 59473 | 38103 | 43081 | 33398 | 26666 |
| Natural gas and gas works gas⁽³⁾ | | | | | | | |
| Fuel input (TJ) | 111244 | 110753 | 228047 | 266225 | 251540 | 362099 | 332627 |
| Heat production (TJ) | 79694 | 78723 | 173369 | 194351 | 182170 | 227276 | 234370 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 1073 | 28435 | 51982 | 76738 | 89632 | 86675 | 91452 |
| Heat production (TJ) | 750 | 22852 | 44902 | 66543 | 74585 | 70205 | 74433 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 476 | 261 | 9099 | 1949 | 961 | 1280 | 1436 |
| Heat production (TJ) | 323 | 186 | 8098 | 1483 | 777 | 1034 | 1242 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 26121 | 72499 | 45740 | 53311 | 48242 | 65862 | 71521 |
| Heat production (TJ) | 14148 | 44558 | 32157 | 37779 | 35374 | 46905 | 49689 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 1795 | 6679 | 10688 | 9934 | 12494 | 10814 |
| Heat production (TJ) | - | 1313 | 6242 | 9644 | 9007 | 11069 | 9557 |
| Total combustible fuels⁽⁴⁾ | | | | | | | |
| Heat production (TJ) | 511522 | 545216 | 494382 | 624647 | 612518 | 541974 | 543510 |

Source: IEA/OECD Electricity Statistics.

(1) Includes own use in main activity producer plants.

(2) Includes sub-bit. coal for Australia, Belgium, Finland, France, Iceland, Japan, Korea, Mexico, New Zealand, Portugal and the U.S.

(3) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(4) Includes non-specified combustible fuels not shown in this table.

Table 2.12. IEA electricity generating capacity, 1974-2008
(GW)

| | Coal ⁽¹⁾ | | | | Comb. renew. and waste | | | |
|------------------|---------------------|---------------|---------------|---------------|----------------------------|---------------|---------------|---------------|
| | 1974 | 1990 | 2000 | 2008 | 1974 | 1990 | 2000 | 2008 |
| Australia | 11.65 | 24.92 | 28.65 | 30.17 | 0.02 | 0.24 | 0.36 | 0.32 |
| Austria | 1.60 | 1.89 | 2.16 | 3.07 | - | .. | 0.33 | 0.59 |
| Belgium | 4.56 | 4.90 | 2.47 | .. | - | 0.08 | 0.18 | .. |
| Canada | 10.91 | 19.24 | .. | .. | - | 0.91 | .. | 3.09 |
| Czech Republic | .. | 12.11 | 11.47 | 11.58 | .. | .. | .. | .. |
| Denmark | 2.94 | 7.54 | 5.80 | 5.92 | - | 0.10 | 0.14 | 0.18 |
| Finland | 2.85 | 5.79 | 7.71 | 7.80 | - | - | - | - |
| France | 14.28 | 14.23 | .. | .. | - | - | .. | .. |
| Germany | 39.94 | 42.73 | 51.59 | .. | - | 0.91 | 1.94 | .. |
| Greece | 1.34 | 3.89 | 4.49 | 4.81 | - | 0.05 | 0.04 | 0.03 |
| Hungary | 2.33 | 2.24 | 2.02 | 1.29 | - | - | - | 0.31 |
| Iceland | - | - | - | - | - | - | - | 0.00 |
| Ireland | 0.50 | 1.31 | 1.26 | 1.21 | - | - | 0.02 | 0.01 |
| Italy | 9.55 | 9.03 | 12.56 | 10.32 | - | 0.13 | 0.69 | 1.20 |
| Japan | 8.84 | 40.47 | 51.78 | 60.02 | - | .. | .. | .. |
| Korea | .. | .. | 14.44 e | 27.40 | .. | .. | 0.48 e | 0.17 |
| Luxembourg | 0.16 | 0.09 | - | - | - | 0.01 | 0.01 | 0.01 |
| Netherlands | 2.20 | 3.77 | 4.18 e | .. | - | - | - | - |
| New Zealand | 0.20 | 1.09 | 1.11 | 1.12 | - | - | 0.10 | 0.11 |
| Norway | 0.01 | 0.05 | 0.08 | 0.07 e | - | 0.07 | 0.14 | 0.13 e |
| Poland | 17.83 | 25.99 | 27.80 | 28.37 | - | - | 0.01 | 0.10 |
| Portugal | 0.26 | 1.47 | 1.99 | 2.13 | 0.00 | 0.01 | 0.07 | 0.04 |
| Spain | 3.90 | 10.41 | 11.36 | .. | 0.07 | 0.10 | 0.46 | .. |
| Sweden | - | .. | .. | .. | - | .. | .. | .. |
| Switzerland | - | 0.01 e | - | 0.29 | - | 0.25 e | 0.49 e | 0.26 |
| Turkey | 1.00 | 5.58 | 7.40 | 10.66 | 0.01 | - | 0.02 | 0.06 |
| United Kingdom | 48.60 | 41.17 | 33.37 | 29.99 | - | 0.12 | 0.79 | 1.78 |
| United States | 201.11 | 307.96 | 321.06 e | 315.32 | 0.06 | 7.58 | 10.27 e | 11.57 |
| IEA Total | 386.56 | 587.86 | 604.75 | 551.54 | 0.16 | 10.55 | 16.54 | 19.96 |
| | Oil | | | | Natural gas ⁽²⁾ | | | |
| | 1974 | 1990 | 2000 | 2008 | 1974 | 1990 | 2000 | 2008 |
| Australia | 1.43 | 1.59 | 1.93 | 0.97 | 0.82 | 3.39 | 6.01 e | 12.75 |
| Austria | 0.51 | 0.10 | 0.18 | 0.25 | 0.90 | 2.76 | 3.47 | 3.34 |
| Belgium | 1.25 | 0.47 | 0.53 | .. | 1.84 | 1.79 | 5.37 | .. |
| Canada | 4.66 | 7.15 | .. | 0.07 | 2.52 | 3.90 | .. | 2.18 |
| Czech Republic | .. | .. | .. | .. | .. | .. | .. | .. |
| Denmark | 3.01 | 0.85 | 1.97 | 1.08 | - | 0.31 | 2.32 | 2.14 |
| Finland | 1.16 | 0.97 | 0.99 | 0.97 | 0.22 | 1.48 | 2.01 | 1.96 |
| France | 9.71 | 7.86 | .. | .. | 2.16 | 0.58 | .. | .. |
| Germany | 9.06 | 6.05 | 4.14 | .. | 9.10 | 18.75 | 23.12 | .. |
| Greece | 1.22 | 2.15 | 1.97 | 2.38 | 0.10 | 0.02 | 1.11 | 2.83 |
| Hungary | 0.12 | 0.20 | 0.58 | 0.40 | 1.44 | 2.93 | 3.78 | 4.51 |
| Iceland | 0.11 | 0.14 | 0.15 | 0.12 | - | - | - | - |
| Ireland | 1.09 | 0.59 | 0.84 | 1.03 | - | 1.39 | 1.95 | 3.39 |
| Italy | 9.52 | 16.44 | 14.56 | 11.87 | 3.47 | 11.69 | 26.23 | 49.02 |
| Japan | 64.80 | 50.83 | 51.12 | 39.32 | 3.10 | 15.62 | 35.27 | 40.68 |
| Korea | .. | .. | 8.53 e | 7.13 | .. | .. | 13.37 e | 21.27 |
| Luxembourg | 0.02 | 0.01 | - | - | - | - | 0.07 | 0.45 |
| Netherlands | 1.11 | 0.04 | 0.02 e | .. | 9.74 | 13.16 | 15.87 e | .. |
| New Zealand | 0.24 | 0.34 | - | 0.16 | 0.53 | 0.86 | 1.60 | 1.68 |
| Norway | 0.15 | 0.14 | 0.01 | 0.02 e | - | - | 0.04 | 0.44 e |
| Poland | - | - | 0.35 | 0.49 | - | - | 0.21 | 0.86 |
| Portugal | 0.53 | 2.57 | 2.34 | 2.97 | - | - | 1.87 | 2.63 |
| Spain | 6.64 | 7.65 | 8.14 | .. | - | 2.04 | 6.28 | .. |
| Sweden | 7.39 | .. | .. | .. | - | .. | .. | .. |
| Switzerland | 0.59 | 0.12 e | 0.06 e | 0.11 | - | 0.10 e | 0.24 e | 0.21 |
| Turkey | 1.28 | 1.75 | 1.59 | 1.82 | - | 2.21 | 7.04 | 15.05 |
| United Kingdom | 18.93 | 15.92 | 5.19 | 5.87 | - | 0.73 | 21.87 | 29.18 |
| United States | 80.45 | 56.02 | 35.55 | 57.44 | 106.82 | 165.11 | 243.24 | 397.43 |
| IEA Total | 224.98 | 179.93 | 140.73 | 134.48 | 142.74 | 248.80 | 422.31 | 591.99 |

Source: IEA Country Submission (IEA Total includes Iceland).

(1) Includes multi-fired units.

(2) Includes tide, wave, ocean and other (e.g. fuel cells).

Table 2.12. IEA electricity generating capacity, 1974-2008 (continued)
(GW)

| | Hydro | | | | Nuclear | | | |
|------------------|--------------------------------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | 1974 | 1990 | 2000 | 2008 | 1974 | 1990 | 2000 | 2008 |
| Australia | 5.32 | 8.32 | 9.20 | 9.30 | - | - | - | - |
| Austria | 5.98 | 10.95 | 11.66 | 12.50 | - | - | - | - |
| Belgium | 0.44 | 1.40 | 1.41 | 1.42 | 0.01 | 5.50 | 5.71 | 5.83 |
| Canada | 36.78 | 59.38 | 67.41 | 74.61 | 2.67 | 13.54 | 10.62 | 13.35 |
| Czech Republic | .. | 1.41 | 2.10 | 2.19 | .. | 1.76 | 1.76 | 3.76 |
| Denmark | 0.01 | 0.01 | 0.01 | 0.01 | - | - | - | - |
| Finland | 2.27 | 2.62 | 2.88 | 3.10 | - | 2.36 | 2.64 | 2.67 |
| France | 16.09 | 24.75 | 25.12 | 25.18 | 2.89 | 55.75 | 63.18 | 63.26 |
| Germany | 4.81 | 6.85 | 8.98 | 10.00 | 3.29 | 22.41 | 22.40 | 20.49 |
| Greece | 1.29 | 2.41 | 3.07 | 3.18 | - | - | - | - |
| Hungary | 0.02 | 0.05 | 0.05 | 0.05 | - | 1.76 | 1.85 | 1.94 |
| Iceland | 0.38 | 0.76 | 1.06 | 1.88 | - | - | - | - |
| Ireland | 0.51 | 0.51 | 0.53 | 0.53 | - | - | - | - |
| Italy | 14.87 | 18.77 | 20.35 | 21.28 | 0.55 | - | - | - |
| Japan | 23.55 | 37.83 | 46.32 | 47.34 | 3.91 | 31.65 | 45.25 | 47.94 |
| Korea | .. | 2.34 | 3.15 | 5.51 | .. | .. | 13.72 | 17.72 |
| Luxembourg | 0.91 | 1.13 | 1.13 | 1.13 | - | - | - | - |
| Netherlands | - | 0.04 | 0.04 | 0.04 | 0.50 | 0.51 | 0.45 | 0.51 |
| New Zealand | 3.48 | 4.62 | 5.19 | 5.37 | - | - | - | - |
| Norway | 16.08 | 26.88 | 28.13 | 29.73 e | - | - | - | - |
| Poland | 0.79 | 1.98 | 2.18 | 2.34 | - | - | - | - |
| Portugal | 2.12 | 3.34 | 4.53 | 5.06 | - | - | - | - |
| Spain | 11.65 | 16.23 | 17.96 | 18.45 | 1.09 | 6.97 | 7.50 | 7.37 |
| Sweden | 12.31 | 16.33 | 16.53 | 16.44 | 1.06 | 9.97 | 9.46 | 8.94 |
| Switzerland | 11.72 | 13.13 e | 14.90 e | 15.25 | 1.01 | 2.95 | 3.20 | 3.22 |
| Turkey | 1.45 | 6.76 | 11.18 | 13.83 | - | - | - | - |
| United Kingdom | 2.41 | 3.90 | 4.27 | 4.37 | 4.28 | 11.35 | 12.49 | 10.98 |
| United States | - | 92.36 | 98.88 | 99.79 | 31.66 | 99.64 | 97.86 | 100.76 |
| IEA Total | 175.25 | 365.06 | 408.22 | 429.87 | 52.92 | 266.12 | 298.08 | 308.71 |
| | Geothermal/solar/wind ⁽²⁾ | | | | Total | | | |
| | 1974 | 1990 | 2000 | 2008 | 1974 | 1990 | 2000 | 2008 |
| Australia | - | - | 0.06 | 1.99 | 19.25 | 38.45 | 46.21 | 55.51 |
| Austria | - | - | 0.06 | 1.05 | 8.98 | 16.69 | 17.86 | 20.80 |
| Belgium | - | 0.01 | 0.01 | 0.39 | 8.11 | 14.14 | 15.69 | 16.76 |
| Canada | - | 0.02 | 0.12 e | 2.42 | 57.53 | 104.14 | 111.32 | 127.64 |
| Czech Republic | - | - | 0.00 | 0.20 | .. | 15.28 | 15.32 | 17.74 |
| Denmark | - | 0.34 | 2.39 | 3.17 | 5.96 | 9.14 | 12.63 | 12.50 |
| Finland | - | - | 0.04 | 0.15 | 6.50 | 13.22 | 16.26 | 16.65 |
| France | 0.24 | 0.24 | 0.30 | 3.74 | 45.38 | 103.41 | 114.68 | 117.82 |
| Germany | - | 0.05 | 6.21 | 29.24 | 66.20 | 97.75 | 118.38 | 139.28 |
| Greece | - | 0.00 | 0.23 | 1.03 | 3.94 | 8.51 | 10.90 | 14.25 |
| Hungary | - | - | - | 0.14 | 3.91 | 7.18 | 8.28 | 8.63 |
| Iceland | 0.00 | 0.05 | 0.17 | 0.58 | 0.49 | 0.94 | 1.38 | 2.57 |
| Ireland | - | - | 0.12 | 1.23 | 2.09 | 3.81 | 4.71 | 7.40 |
| Italy | 0.38 | 0.50 | 1.13 | 4.94 | 38.34 | 56.56 | 75.51 | 98.63 |
| Japan | 0.02 | 0.27 | 0.95 e | 4.43 e | 104.21 | 194.73 | 260.49 | 280.53 |
| Korea | .. | 0.00 | 0.01 | 0.66 | .. | .. | 53.69 | 79.86 |
| Luxembourg | - | - | 0.01 | 0.07 | 1.08 | 1.24 | 1.22 | 1.67 |
| Netherlands | - | 0.05 | 0.51 | 2.28 | 13.56 | 17.56 | 21.06 | 24.88 |
| New Zealand | 0.16 | 0.26 | 0.45 | 0.93 | 4.60 | 7.18 | 8.46 | 9.38 |
| Norway | - | - | 0.02 | 0.40 e | 16.24 | 27.13 | 28.42 | 30.79 e |
| Poland | - | - | 0.00 | 0.53 | 18.62 | 27.97 | 30.56 | 32.68 |
| Portugal | - | 0.00 | 0.10 | 2.94 | 2.91 | 7.40 | 10.90 | 15.76 |
| Spain | - | 0.01 | 2.22 | 19.88 | 23.36 | 43.42 | 53.92 | 93.53 |
| Sweden | - | 0.01 | 0.21 | 0.82 | 20.77 | 34.19 | 33.72 | 33.94 |
| Switzerland | - | 0.00 | 0.02 | 0.06 | 13.32 | 16.56 | 18.91 | 19.40 |
| Turkey | - | 0.02 | 0.04 | 0.39 | 3.73 | 16.32 | 27.26 | 41.82 |
| United Kingdom | - | 0.01 | 0.42 | 3.43 | 74.22 | 73.21 | 78.39 | 85.61 |
| United States | - | 4.92 | 5.77 e | 29.29 e | 420.10 | 733.59 | 812.63 e | 1011.60 e |
| IEA Total | 0.81 | 6.76 | 21.56 | 116.37 | 983.41 | 1689.69 | 2008.77 | 2417.61 |

Source: IEA Country Submission (IEA Total includes Iceland).

(1) Includes multi-fired units.

(2) Includes tide, wave, ocean and other (e.g. fuel cells).

Table 2.13. OECD ELECTRICITY CONSUMPTION, BY COUNTRY, 1960-2008
(TWh)

| | 1960 | 1973 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------|-------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 60-73 | 73-08 |
| Australia | 17.6 | 52.5 | 134.3 | 179.9 | 212.9 | 217.3 | 223.1 | 8.8 | 4.2 |
| Austria | 11.6 | 25.9 | 43.6 | 53.2 | 59.6 | 60.8 | 60.9 | 6.4 | 2.5 |
| Belgium | 13.4 | 35.8 | 59.1 | 79.2 | 86.1 e | 86.1 | 85.8 | 7.9 | 2.5 |
| Canada | 98.9 | 223.2 | 433.1 e | 503.5 e | 525.3 e | 533.3 e | 548.8 e | 6.5 | 2.6 |
| Czech Republic | .. | 34.1 | 53.0 | 52.3 | 59.4 | 59.8 | 60.5 | .. | 1.6 |
| Denmark | 4.6 | 16.1 | 28.9 | 33.0 | 34.7 | 34.5 | 34.3 | 10.1 | 2.2 |
| Finland | 8.0 | 27.2 | 59.5 | 76.4 e | 86.7 | 87.3 | 83.8 | 9.9 | 3.3 |
| France | 65.2 | 160.0 | 323.3 | 410.4 | 446.5 | 448.4 | 462.2 | 7.1 | 3.1 |
| Germany ⁽¹⁾ | 106.5 | 337.6 | 481.0 | 501.4 | 542.4 | 543.2 | 540.8 | 9.3 | 1.4 |
| Greece | 1.9 | 13.0 | 29.7 | 45.0 | 54.9 | 57.5 | 58.8 | 16.0 | 4.4 |
| Hungary | .. | 18.6 | 33.0 | 30.9 | 36.6 | 37.2 | 37.4 | .. | 2.0 |
| Iceland | 0.5 | 2.1 | 3.9 | 7.1 | 9.2 | 11.1 | 15.4 | 12.4 | 5.9 |
| Ireland | 1.9 | 6.2 | 12.0 | 20.4 | 26.0 | 26.0 | 26.8 | 9.7 | 4.3 |
| Italy | 47.6 | 125.8 | 218.8 | 279.3 | 317.6 | 319.0 | 319.0 | 7.8 | 2.7 |
| Japan | 99.3 | 421.7 | 758.8 | 956.5 | 998.4 | 1025.8 | 978.9 | 11.8 | 2.4 |
| Korea | .. | 12.8 e | 94.4 e | 263.1 | 371.4 | 392.7 | 408.0 | .. | 10.4 |
| Luxembourg | 1.4 | 3.0 | 4.1 | 5.7 | 6.5 | 6.7 | 6.6 | 6.2 | 2.3 |
| Mexico | .. | 31.6 | 100.2 | 166.3 | 197.5 | 202.8 | 207.5 | .. | 5.5 |
| Netherlands | 14.7 | 46.1 | 75.5 | 100.9 | 111.4 | 113.8 | 114.6 | 9.2 | 2.6 |
| New Zealand | 5.7 | 15.9 | 27.8 | 35.1 | 39.0 | 39.2 | 39.0 | 8.3 | 2.6 |
| Norway | 27.2 | 61.0 | 97.4 | 110.5 e | 110.6 | 114.2 | 115.4 | 6.4 | 1.8 |
| Poland | 24.0 | 67.2 | 109.2 | 108.8 | 121.3 | 124.7 | 127.8 | 8.2 | 1.9 |
| Portugal | 2.8 | 8.3 | 24.0 | 38.9 | 48.5 | 49.7 | 49.2 | 8.8 | 5.2 |
| Slovak Republic | .. | 12.3 | 23.4 e | 22.5 e | 24.9 | 25.8 | 25.9 | .. | 2.1 |
| Spain | 14.6 | 60.7 | 129.2 | 194.7 | 264.7 | 269.4 | 272.1 | 11.6 | 4.4 |
| Sweden | 29.3 | 69.4 | 130.7 | 131.1 | 133.4 | 133.7 | 131.5 | 6.9 | 1.8 |
| Switzerland | 15.9 | 29.0 | 47.0 | 52.4 | 57.8 | 57.4 | 58.7 | 4.7 | 2.0 |
| Turkey | 2.4 | 10.5 | 46.8 | 98.3 | 143.1 | 155.1 | 161.9 | 12.1 | 8.1 |
| United Kingdom | 117.5 | 242.5 | 284.4 | 340.3 | 352.9 | 352.0 | 350.5 | 5.7 | 1.1 |
| United States | 688.0 | 1715.9 | 2712.6 | 3589.8 e | 3817.6 e | 3921.9 e | 3907.9 e | 7.3 | 2.4 |
| OECD Total | .. | 3886.2 | 6578.5 | 8486.8 | 9296.7 | 9506.5 | 9513.0 | .. | 2.6 |
| <i>OECD Europe</i> | .. | <i>1412.6</i> | <i>2317.3</i> | <i>2792.6</i> | <i>3134.7</i> | <i>3173.6</i> | <i>3199.8</i> | .. | <i>2.4</i> |
| <i>OECD Pacific</i> | .. | <i>502.9</i> | <i>1015.4</i> | <i>1434.6</i> | <i>1621.6</i> | <i>1674.9</i> | <i>1649.0</i> | .. | <i>3.5</i> |
| <i>OECD North America</i> | .. | <i>1970.7</i> | <i>3245.8</i> | <i>4259.7</i> | <i>4540.3</i> | <i>4658.1</i> | <i>4664.2</i> | .. | <i>2.5</i> |

Source: IEA/OECD Energy Statistics of OECD Countries.

(1) Includes data for new federal German states, except for 1960.

Note: Electricity consumption = gross production + imports - exports - own use by power plants - electricity used for pumped storage - used for heat pumps - used for electric boilers - transmission and distribution losses = final consumption + energy sector consumption.

Table 2.14. ELECTRICITY CONSUMPTION, OECD, BY SECTOR, 1973-2008
(TWh)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 73-08 |
|---------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---|
| Total consumption (TWh) | 3886.18 | 4918.43 | 6578.53 | 8486.81 | 9296.66 | 9506.51 | 9513.01 | 2.6 |
| Industry | 1836.12 | 2159.62 | 2558.98 | 3186.98 | 3095.29 | 3148.41 | 3098.92 | 1.5 |
| Transport | 61.47 | 70.33 | 89.59 | 106.62 | 111.97 | 111.86 | 112.53 | 1.7 |
| Agriculture and fishing | 43.99 | 50.65 | 69.20 | 80.93 | 86.23 | 86.50 | 91.49 | 2.1 |
| Commercial and publ. serv. | 726.76 | 1004.68 | 1677.89 | 2387.78 | 2778.17 | 2853.75 | 2866.94 | 4.0 |
| Residential | 1081.93 | 1443.12 | 1960.73 | 2483.98 | 2813.15 | 2869.99 | 2879.69 | 2.8 |
| Energy ⁽¹⁾ | 128.67 | 179.06 | 211.48 | 233.84 | 256.18 | 266.89 | 269.14 | 2.1 |
| Sector non specified | 7.23 | 10.97 | 10.66 | 6.69 | 155.67 | 169.11 | 194.30 | 9.9 |
| Total consumption (Mtoe) | 334.21 | 422.98 | 565.75 | 729.87 | 799.51 | 817.56 | 818.12 | 2.6 |

Source: IEA/OECD Energy Statistics of OECD Countries.

(1) Includes use in coal mines, oil and gas extraction, petroleum refineries and elsewhere in energy industries and excludes own use in electricity, CHP and heat plants and electricity used for pumped storage.

Note: The final consumption of electricity reported in Table 3 of OECD in Part IV excludes energy consumed in energy industries.

Table 2.15. ELECTRICITY CONSUMPTION, OECD, BY INDUSTRY, 1973-2008
(TWh)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 73-08 |
|------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---|
| Total industry (TWh) | 1836.12 | 2159.62 | 2558.98 | 3186.98 | 3095.29 | 3148.41 | 3098.92 | 1.5 |
| Iron and steel | 256.99 | 288.74 | 303.29 | 345.40 | 370.43 | 378.96 | 363.48 | 1.0 |
| Chemical and petrochemical | 382.27 | 412.01 | 513.43 | 592.83 | 583.05 | 587.95 | 578.39 | 1.2 |
| Non-ferrous metals | 224.78 | 278.44 | 230.12 | 300.37 | 319.85 | 323.24 | 332.35 | 1.1 |
| Non-metallic minerals | 92.94 | 112.96 | 139.94 | 167.25 | 177.14 | 181.29 | 182.20 | 1.9 |
| Transport equipment | 67.37 | 80.34 | 77.04 | 126.88 | 118.65 | 120.78 | 120.70 | 1.7 |
| Machinery | 120.69 | 149.63 | 290.68 | 331.25 | 350.43 | 357.32 | 358.65 | 3.2 |
| Mining and quarrying | 56.45 | 66.50 | 98.71 | 103.39 | 99.54 | 96.14 | 94.54 | 1.5 |
| Food and tobacco | 85.23 | 111.04 | 159.86 | 209.78 | 234.91 | 238.87 | 237.27 | 3.0 |
| Paper, pulp and print | 163.52 | 197.23 | 327.24 | 393.89 | 388.87 | 382.97 | 371.59 | 2.4 |
| Wood and wood products | 32.68 | 42.13 | 52.89 | 58.40 | 59.64 | 60.16 | 59.80 | 1.7 |
| Construction | 6.77 | 10.10 | 14.06 | 15.78 | 19.11 | 20.21 | 20.26 | 3.2 |
| Textiles and leather | 85.78 | 89.50 | 95.03 | 104.58 | 84.38 | 85.18 | 80.26 | -0.2 |
| Non specified/other | 260.66 | 321.00 | 256.71 | 437.17 | 289.30 | 315.37 | 299.44 | 0.4 |
| Total industry (Mtoe) | 157.91 | 185.73 | 220.07 | 274.08 | 266.19 | 270.76 | 266.51 | 1.5 |

Source: IEA/OECD Energy Statistics of OECD Countries.

Table 2.16. OECD final consumption of heat, by country, 1980-2008
(Mtoe)

| | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | Average annual percent change 1980-2008 |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---|
| Australia | - | - | - | - | - | - | - | - |
| Austria | 0.19 | 0.61 | 1.03 | 1.32 | 1.40 | 1.40 | 1.48 | 7.7 |
| Belgium | 0.39 | 0.22 | 0.49 | 0.43 | 0.47 | 0.41 | 0.47 | 0.7 |
| Canada | 1.03 | 0.63 | 0.81 | 0.93 | 0.86 | 0.80 | 0.76 | -1.1 |
| Czech Republic | 1.37 | 2.96 | 2.62 | 2.48 | 2.31 | 2.09 | 2.05 | 1.5 |
| Denmark | 0.59 | 1.76 | 2.25 | 2.42 | 2.41 | 2.30 | 2.34 | 5.1 |
| Finland | 1.14 | 1.91 | 2.78 | 3.60 | 4.45 | 4.29 | 4.19 | 4.7 |
| France | 0.24 | 0.48 | 3.24 | 4.16 | 3.91 | 3.89 | 3.76 | 10.4 |
| Germany | 7.69 | 9.15 | 6.83 | 17.94 | 17.80 | 10.22 | 10.43 | 1.1 |
| Greece | - | - | 0.03 | 0.05 | 0.06 | 0.04 | 0.04 | - |
| Hungary | 1.72 | 1.59 | 1.45 | 1.31 | 1.24 | 1.19 | 1.16 | -1.4 |
| Iceland | 0.03 | 0.10 | 0.17 | 0.20 | 0.22 | 0.18 | 0.24 | 7.3 |
| Ireland | - | - | - | - | - | - | - | - |
| Italy | - | - | - | 3.08 | 3.13 | 3.07 | 3.17 | - |
| Japan | 0.10 | 0.20 | 0.54 | 0.60 | 0.58 | 0.60 | 0.57 | 6.4 |
| Korea ⁽¹⁾ | - | - | 3.29 | 4.50 | 4.40 | 4.59 | 4.72 | - |
| Luxembourg | - | - | 0.03 | 0.06 | 0.06 | 0.05 | 0.06 | - |
| Mexico | - | - | - | - | - | - | - | - |
| Netherlands | - | 0.31 | 2.89 | 2.98 | 2.42 | 2.48 | 2.28 | - |
| New Zealand | - | - | - | - | - | - | - | - |
| Norway | - | 0.07 | 0.13 | 0.21 | 0.23 | 0.25 | 0.26 | - |
| Poland | 18.01 | 15.56 | 6.88 | 7.05 | 7.18 | 6.94 | 6.39 | -3.6 |
| Portugal | 0.02 | 0.03 | 0.13 | 0.33 | 0.33 | 0.34 | 0.32 | 10.1 |
| Slovak Republic | 0.45 | 0.65 | 0.62 | 0.95 | 0.83 | 0.74 | 0.71 | 1.7 |
| Spain | - | - | - | - | - | - | - | - |
| Sweden | 2.36 | 1.71 | 3.55 | 4.17 | 4.18 | 4.09 | 4.06 | 2.0 |
| Switzerland | 0.19 | 0.25 | 0.32 | 0.38 | 0.38 | 0.37 | 0.39 | 2.6 |
| Turkey | - | - | 0.39 | 0.85 | 0.96 | 1.03 | 1.02 | - |
| United Kingdom | 0.12 | - | 2.44 | 1.27 | 1.24 | 1.13 | 1.21 | 8.6 |
| United States ⁽²⁾ | - | 2.15 | 5.28 | 3.26 | 7.07 | 7.20 | 6.96 | - |
| OECD Total^(1,2) | 35.65 | 40.34 | 48.19 | 64.52 | 68.14 | 59.70 | 59.06 | .. |
| <i>OECD Europe</i> | <i>34.52</i> | <i>37.35</i> | <i>38.27</i> | <i>55.23</i> | <i>55.23</i> | <i>46.51</i> | <i>46.04</i> | <i>1.0</i> |
| <i>OECD Pacific⁽¹⁾</i> | <i>0.10</i> | <i>0.20</i> | <i>3.83</i> | <i>5.09</i> | <i>4.98</i> | <i>5.19</i> | <i>5.29</i> | <i>..</i> |
| <i>OECD N. America⁽²⁾</i> | <i>1.03</i> | <i>2.79</i> | <i>6.09</i> | <i>4.19</i> | <i>7.93</i> | <i>8.00</i> | <i>7.72</i> | <i>..</i> |
| OECD Total (TJ)^(1,2) | 1492883 | 1689099 | 2018070 | 2701708 | 2853407 | 2500015 | 2473042 | .. |
| <i>OECD Europe (TJ)</i> | <i>1445473</i> | <i>1564083</i> | <i>1602453</i> | <i>2312811</i> | <i>2312609</i> | <i>1947670</i> | <i>1927860</i> | <i>1.0</i> |
| <i>OECD Pacific (TJ)⁽¹⁾</i> | <i>4270</i> | <i>8361</i> | <i>160484</i> | <i>213339</i> | <i>208598</i> | <i>217261</i> | <i>221723</i> | <i>..</i> |
| <i>OECD North America (TJ)⁽²⁾</i> | <i>43140</i> | <i>116655</i> | <i>255133</i> | <i>175558</i> | <i>332200</i> | <i>335084</i> | <i>323459</i> | <i>..</i> |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Break in series: data related to Korea included from 1991

(2) Break in series: data related to United States autoproducers CHP plants included from 1989.

Table 2.17. Final consumption of heat, OECD, by sector⁽¹⁾, 1980-2008
(per cent of total)

| | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | Average annual percent change 80-08 |
|--------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---|
| Total final consumption | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | - |
| Industry | 43.30 | 34.15 | 33.43 | 41.05 | 43.91 | 43.07 | 41.65 | -0.1 |
| Transport | - | - | - | - | - | - | - | - |
| Agriculture and fishing | 1.37 | 1.73 | 0.97 | 0.51 | 0.48 | 0.51 | 0.56 | -3.2 |
| Commercial and publ. serv. | 6.30 | 14.37 | 15.63 | 10.80 | 11.20 | 17.64 | 18.78 | 4.0 |
| Residential | 38.14 | 46.71 | 41.55 | 23.97 | 22.40 | 30.77 | 31.10 | -0.7 |
| Sector non specified | 10.89 | 3.03 | 8.42 | 23.66 | 22.01 | 8.01 | 7.90 | -1.1 |
| TFC (Mtoe) | 35.65 | 40.34 | 48.19 | 64.52 | 68.14 | 59.70 | 59.06 | 1.8 |
| TFC (TJ) | 1492883 | 1689099 | 2018070 | 2701708 | 2853407 | 2500015 | 2473042 | 1.8 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Break in series: data related to United States autoproducers CHP plants included from 1989.

Note: Excludes direct use of geothermal and solar heat.

Table 2.18. Share of final consumption, OECD, by source, by sector, 2008
(per cent of total)

| | Coal | Oil | Natural gas | Comb. renew. & waste | Geo- thermal | Solar | Electricity | Heat |
|------------------------------|---------------|----------------|----------------|----------------------------|-----------------|-------------|---------------|--------------|
| Industry | 12.92 | 14.66 | 29.80 | 8.30 | 0.03 | 0.02 | 31.38 | 2.90 |
| Transport | 0.01 | 94.72 | 1.87 | 2.58 | - | - | 0.81 | - |
| Agriculture and fishing | 1.88 | 75.88 | 5.93 | 3.03 | 0.26 | 0.02 | 12.47 | 0.52 |
| Commercial and publ. serv. | 1.00 | 14.30 | 30.52 | 0.96 | 0.17 | 0.05 | 50.72 | 2.28 |
| Residential | 2.14 | 14.01 | 38.20 | 7.37 | 0.34 | 0.45 | 34.91 | 2.59 |
| Sector non specified | 2.28 | 5.28 | 26.80 | 0.04 | 0.65 | 0.17 | 50.63 | 14.14 |
| Non-energy use | 0.90 | 90.84 | 8.26 | - | - | - | - | - |
| TFC (%)⁽¹⁾ | 3.65 | 48.75 | 19.95 | 4.33 | 0.10 | 0.10 | 21.51 | 1.60 |
| TFC (Mtoe) | 135.08 | 1801.66 | 737.38 | 160.17 | 3.88 | 3.68 | 794.97 | 59.06 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes non-energy use.

Table 2.19. Final consumption, OECD, by source, by sector, average annual rate of growth (%), 1960-1973

| | Coal | Comb. renew. & waste | Crude oil | Petroleum products | Natural gas | Electricity | Heat | Total |
|----------------------------|--------------|----------------------------|--------------|-----------------------|----------------|-------------|--------------|-------------|
| Total consumption | -2.60 | 2.34 | - | 6.74 | 6.43 | 7.76 | 11.55 | 5.09 |
| Industry | -1.15 | 3.62 | - | 6.17 | 6.34 | 6.62 | 9.06 | 4.23 |
| Transport | -11.05 | - | - | 5.72 | 38.85 | 4.58 | - | 5.25 |
| Agriculture and fishing | 6.45 | 11.49 | - | 6.70 | 20.54 | 0.34 | 3.11 | 5.88 |
| Commercial and publ. serv. | -0.30 | 19.77 | - | 10.55 | 7.55 | 10.00 | 10.45 | 8.42 |
| Residential | -5.26 | 6.00 | - | 7.36 | 4.62 | 9.39 | 18.09 | 4.11 |
| Sector non specified | -0.73 | -3.52 | - | 2.38 | 78.58 | -2.42 | 16.35 | 1.38 |
| Non-energy use | 12.55 | - | - | 9.73 | 43.07 | - | - | 9.93 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

Note: Excludes the Czech Republic, Hungary, Korea, Mexico, and the Slovak Republic as data are not available.

Table 2.20. Final consumption, OECD, by source, by sector, average annual rate of growth (%), 1973-2008

| | Coal | Comb. renew. & waste | Crude oil | Petroleum products | Natural gas | Electricity | Heat | Total |
|----------------------------|--------------|----------------------------|--------------|-----------------------|----------------|-------------|-------------|-------------|
| Total consumption | -2.12 | 1.91 | 8.58 | 0.18 | 0.92 | 2.45 | 2.81 | 0.65 |
| Industry | -1.48 | 1.42 | 3.79 | -2.79 | -0.12 | 1.24 | 1.97 | -0.49 |
| Transport | -11.25 | 30.80 | - | 1.38 | 0.60 | 1.74 | - | 1.41 |
| Agriculture and fishing | 0.27 | 10.33 | - | 0.54 | 13.90 | 1.80 | 0.52 | 0.95 |
| Commercial and publ. serv. | -3.57 | 4.79 | - | -1.96 | 1.94 | 3.83 | 8.77 | 1.40 |
| Residential | -3.84 | 2.09 | - | -2.19 | 1.48 | 2.75 | 2.15 | 0.68 |
| Sector non specified | -6.85 | -17.89 | - | -9.08 | -0.66 | 12.70 | 4.97 | -1.71 |
| Non-energy use | -0.69 | - | - | 0.89 | 5.38 | - | - | 1.09 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

Note: Excludes the Czech Republic, Hungary, Korea, Mexico, and the Slovak Republic as data are not available.

Table 2.21. OECD total electricity imports, by country, 1960-2009e
(GWh)

| | 1960 | 1973 | 1990 | 2000 | 2006 | 2007 | 2008 | 2009e |
|---------------------------|------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Austria | 641 | 3261 | 6838 | 13824 | 21257 | 22130 | 19796 | 19538 |
| Belgium | 402 | 1650 | 4785 | 11645 | 18853 | 15816 | 17158 | 9485 |
| Canada | 357 | 2249 | 17781 | 15342 | 23624 | 19380 | 25189 | 18154 |
| Czech Republic | .. | 2926 | 8179 | 8725 | 11466 | 10204 | 8520 | 8586 |
| Denmark | 397 | 1002 | 11973 | 8417 | 6767 | 10427 | 12815 | 11208 |
| Finland | 427 | 4556 | 11007 | 12206 | 14118 | 15419 | 16107 | 15460 |
| France | 1787 | 4654 | 6674 | 3695 | 8522 | 10782 | 10683 | 19213 |
| Germany ⁽¹⁾ | 5964 | 19685 | 31669 | 45134 | 48464 | 45953 | 41670 | 41853 |
| Greece | 9 | 79 | 1330 | 1729 | 6140 | 6412 | 7575 | 7601 |
| Hungary | .. | 5732 | 13299 | 9523 | 15393 | 14680 | 12774 | 10702 |
| Ireland | - | 74 | - | 169 | 1787 | 1412 | 753 | 939 |
| Italy | 237 | 3248 | 35577 | 44831 | 46596 | 48931 | 43433 | 46570 |
| Luxembourg | 81 | 2827 | 4678 | 6457 | 6824 | 6847 | 6830 | 6022 |
| Mexico | .. | 317 | 576 | 1069 | 523 | 277 | 351 | 346 |
| Netherlands | 257 | 7 | 9679 | 22946 | 27346 | 23139 | 24967 | 15452 |
| Norway | 210 | 66 | 334 | 1474 | 9801 | 5285 | 3412 | 5650 |
| Poland | 659 | 2011 | 10437 | 3290 | 4789 | 7761 | 8480 | 7403 |
| Portugal | 1 | 68 | 1733 | 4698 | 8624 | 9641 | 10744 | 7598 |
| Slovak Republic | .. | 3024 | 7255 | 5951 | 8590 | 13580 | 9412 | 8994 |
| Spain | 257 | 315 | 3208 | 12268 | 9093 | 8773 | 5881 | 6752 |
| Sweden | 264 | 5950 | 12909 | 18308 | 17537 | 16052 | 12754 | 13771 |
| Switzerland | 1306 | 7018 | 20754 | 24330 | 33803 | 34818 | 31601 | 31368 |
| Turkey | - | - | 176 | 3791 | 573 | 864 | 789 | 813 |
| United Kingdom | - | 177 | 11990 | 14308 | 10282 | 8613 | 12294 | 6609 |
| United States | 5323 | 16848 | 22506 | 48592 | 42691 | 51396 | 57020 | 52229 |
| OECD Total | .. | 87744 | 255347 | 342722 | 403463 | 408592 | 401008 | 372316 |
| <i>OECD Europe</i> | .. | <i>68330</i> | <i>214484</i> | <i>277719</i> | <i>336625</i> | <i>337539</i> | <i>318448</i> | <i>301587</i> |
| <i>OECD North America</i> | .. | <i>19414</i> | <i>40863</i> | <i>65003</i> | <i>66838</i> | <i>71053</i> | <i>82560</i> | <i>70729</i> |

Source: IEA/OECD Energy Statistics of OECD Countries.

(1) Includes data for new Federal German states, except for 1960.

Table 2.22. OECD total electricity exports, by country, 1960-2009e
(GWh)

| | 1960 | 1973 | 1990 | 2000 | 2006 | 2007 | 2008 | 2009e |
|---------------------------|------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Austria | 2544 | 4808 | 7298 | 15192 | 14407 | 15511 | 14933 | 18762 |
| Belgium | 365 | 2405 | 8509 | 7319 | 8696 | 9037 | 6561 | 11322 |
| Canada | 5512 | 16286 | 18130 | 50983 | 42736 | 50331 | 57675 | 53711 |
| Czech Republic | .. | 5135 | 8871 | 18742 | 24097 | 26357 | 19989 | 22230 |
| Denmark | 293 | 1226 | 4925 | 7752 | 13702 | 11377 | 11360 | 10875 |
| Finland | 5 | 237 | 364 | 326 | 2717 | 2862 | 3335 | 3375 |
| France | 1849 | 7543 | 52112 | 73174 | 71863 | 67595 | 58689 | 44913 |
| Germany ⁽¹⁾ | 1799 | 8123 | 30739 | 42077 | 65441 | 62508 | 61770 | 54132 |
| Greece | 1 | 34 | 619 | 1740 | 1938 | 2057 | 1962 | 3233 |
| Hungary | .. | 1070 | 2152 | 6083 | 8186 | 10694 | 8871 | 5187 |
| Ireland | - | 29 | - | 71 | 9 | 82 | 303 | 176 |
| Italy | 365 | 2369 | 922 | 484 | 1611 | 2648 | 3398 | 2121 |
| Luxembourg | 72 | 791 | 746 | 735 | 3267 | 2887 | 2484 | 2604 |
| Mexico | .. | - | 1945 | 195 | 1299 | 1451 | 1452 | 1249 |
| Netherlands | 139 | 1352 | 471 | 4031 | 5887 | 5565 | 9116 | 10564 |
| Norway | 78 | 5259 | 16241 | 20529 | 8947 | 15320 | 17275 | 14633 |
| Poland | 357 | 3765 | 11478 | 9663 | 15775 | 13109 | 9703 | 9594 |
| Portugal | - | 78 | 1696 | 3767 | 3183 | 2153 | 1313 | 2822 |
| Slovak Republic | .. | 184 | 2059 | 8647 | 10921 | 11855 | 8891 | 7682 |
| Spain | 406 | 2331 | 3628 | 7827 | 12373 | 14524 | 16920 | 14856 |
| Sweden | 1030 | 5216 | 14677 | 13630 | 11497 | 14736 | 14715 | 9085 |
| Switzerland | 3822 | 10516 | 22862 | 31400 | 31100 | 36880 | 32736 | 33525 |
| Turkey | - | - | 907 | 437 | 2236 | 2422 | 1122 | 1550 |
| United Kingdom | 1 | 114 | 47 | 134 | 2765 | 3398 | 1272 | 3748 |
| United States | 788 | 2570 | 20526 | 14678 | 24271 | 20143 | 24083 | 18111 |
| OECD Total | .. | 81441 | 231924 | 339616 | 388924 | 405502 | 389928 | 360060 |
| <i>OECD Europe</i> | .. | <i>62585</i> | <i>191323</i> | <i>273760</i> | <i>320618</i> | <i>333577</i> | <i>306718</i> | <i>286989</i> |
| <i>OECD North America</i> | .. | <i>18856</i> | <i>40601</i> | <i>65856</i> | <i>68306</i> | <i>71925</i> | <i>83210</i> | <i>73071</i> |

Source: IEA/OECD Energy Statistics of OECD Countries.

(1) Includes data for new Federal German states, except for 1960.

Table 2.23. Electricity trade, 1960-2009e
(GWh)

| | 1960 | 1973 | 1990 | 2006 | 2007 | 2008 | 2009E | Average annual percent change | |
|---|--------------|--------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| OECD Europe⁽¹⁾ | | | | | | | | | |
| <i>Imports</i> | | | | | | | | | |
| Total | 12240 | 68330 | 214484 | 336625 | 337539 | 318448 | 301587 | 6.96 | 2.22 |
| <i>from:</i> | | | | | | | | | |
| OECD ⁽²⁾ | .. | .. | 170643 | 302478 | 309487 | 285836 | .. | .. | 2.91 |
| Non-OECD Europe ⁽³⁾ | .. | .. | 2740 | 13617 | 9263 | 12140 | .. | .. | 8.62 |
| Former Soviet Union | .. | .. | 16867 | 19158 | 15840 | 16528 | .. | .. | -0.11 |
| Other ⁽⁴⁾ | .. | .. | .. | 1368 | 1028 | 1694 | .. | .. | .. |
| <i>Exports</i> | | | | | | | | | |
| Total | 12355 | 62585 | 191323 | 320618 | 333577 | 306718 | 286989 | 6.79 | 2.66 |
| <i>to:</i> | | | | | | | | | |
| OECD ⁽²⁾ | .. | .. | 168575 | 303724 | 309346 | 286344 | .. | .. | 2.99 |
| Non-OECD Europe ⁽³⁾ | .. | .. | 3848 | 8948 | 13963 | 11119 | .. | .. | 6.07 |
| Former Soviet Union | .. | .. | 132 | 2164 | 2983 | 1317 | .. | .. | 13.63 |
| Other ⁽⁴⁾ | .. | .. | .. | 5775 | 7264 | 7928 | .. | .. | .. |
| OECD North America⁽⁵⁾ | | | | | | | | | |
| <i>Imports</i> | | | | | | | | | |
| Total | 5680 | 19414 | 40863 | 66838 | 71053 | 82560 | 70729 | 4.48 | 3.98 |
| <i>from:</i> | | | | | | | | | |
| OECD | .. | 19414 | 40863 | 66838 | 71053 | 82560 | .. | 4.48 | 3.98 |
| Other | .. | .. | - | - | - | - | .. | .. | - |
| <i>Exports</i> | | | | | | | | | |
| Total | 6300 | 18856 | 40601 | 68306 | 71925 | 83210 | 73071 | 4.61 | 4.07 |
| <i>to:</i> | | | | | | | | | |
| OECD | .. | 18856 | 40601 | 68095 | 71698 | 82959 | .. | 4.61 | 4.05 |
| Other | .. | .. | - | 211 | 227 | 251 | .. | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Excludes Czech Republic, Hungary and the Slovak Republic for 1960.

(2) Prior to 1991 includes only imports and exports of Former Federal Republic of Germany.

(3) Includes Albania, Bulgaria, Romania, Bosnia-Herzegovina, Croatia, FYR of Macedonia, Serbia and Montenegro, Slovenia.

(4) Includes Andorra, Liechtenstein and non-specified.

(5) Excludes Mexico for 1960.

**Table 3.1. OECD: indices of real energy prices for end-users
(2005=100)**

| | 1978 | 1980 | 1990 | 2000 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---------------------------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|
| Total energy | | | | | | | | | | |
| Industry | 70.6 | 84.6 | 75.7 | 79.7 | 88.9 | 100.0 | 104.1 | 103.9 | 117.5 | 101.0 |
| Households | 87.9 | 109.1 | 88.3 | 86.5 | 90.9 | 100.0 | 106.9 | 108.5 | 116.6 | 101.2 |
| Both sectors | 81.7 | 99.8 | 83.8 | 84.2 | 90.3 | 100.0 | 105.8 | 106.6 | 116.7 | 101.2 |
| Oil products | | | | | | | | | | |
| Industry ⁽¹⁾ | 58.0 | 82.1 | 63.7 | 78.3 | 85.2 | 100.0 | 105.9 | 106.3 | 124.4 | 97.3 |
| Households ⁽²⁾ | 83.7 | 113.9 | 79.8 | 82.1 | 87.3 | 100.0 | 107.8 | 111.8 | 123.4 | 95.7 |
| Both sectors | 77.6 | 105.2 | 75.7 | 81.3 | 86.7 | 100.0 | 107.0 | 109.5 | 123.3 | 96.1 |
| Coal | | | | | | | | | | |
| Industry | 111.3 | 106.7 | 80.5 | 66.7 | 83.5 | 100.0 | 102.5 | 104.4 | 149.8 | 143.5 |
| Households | 55.0 | 60.9 | 81.6 | 93.4 | 98.9 | 100.0 | 104.1 | 110.1 | 123.8 | 136.7 |
| Both sectors | 102.1 | 100.0 | 80.2 | 69.0 | 84.4 | 100.0 | 103.0 | 105.3 | 147.8 | 144.1 |
| Natural gas | | | | | | | | | | |
| Industry | 51.4 | 60.7 | 53.9 | 65.9 | 85.1 | 100.0 | 100.7 | 95.8 | 110.8 | 86.9 |
| Households | 67.0 | 72.9 | 78.9 | 81.1 | 90.3 | 100.0 | 110.4 | 108.1 | 114.2 | 110.0 |
| Both sectors | 58.9 | 65.9 | 67.2 | 74.1 | 88.2 | 100.0 | 105.9 | 102.4 | 112.2 | 99.4 |
| Electricity | | | | | | | | | | |
| Industry | 97.8 | 105.2 | 106.4 | 90.1 | 97.5 | 100.0 | 104.0 | 107.0 | 110.2 | 117.1 |
| Households | 122.8 | 124.7 | 116.8 | 98.1 | 98.8 | 100.0 | 105.0 | 104.6 | 107.9 | 109.7 |
| Both sectors | 109.5 | 114.4 | 111.5 | 94.6 | 98.3 | 100.0 | 104.6 | 105.1 | 108.4 | 112.0 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Industry includes prices for automotive diesel oil.

(2) Households includes prices for gasoline.

Note: "Real" price indices are the current price indices divided by the country specific producer price index for industrial prices, and by the consumer price index for the household sector.

**Table 3.2. United States: indices of real energy prices for end-users
(2005=100)**

| | 1978 | 1980 | 1990 | 2000 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---------------------------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|
| Total energy | | | | | | | | | | |
| Industry | 71.5 | 88.0 | 75.1 | 73.2 | 84.2 | 100.0 | 103.0 | 103.5 | 119.3 | 89.5 |
| Households | 90.4 | 119.6 | 86.5 | 80.0 | 88.0 | 100.0 | 108.2 | 111.0 | 120.1 | 97.9 |
| Both sectors | 85.1 | 109.8 | 83.1 | 77.8 | 86.9 | 100.0 | 106.6 | 108.7 | 119.8 | 95.3 |
| Oil products | | | | | | | | | | |
| Industry ⁽¹⁾ | 57.7 | 95.7 | 68.6 | 69.3 | 78.8 | 100.0 | 108.5 | 112.0 | 137.4 | 93.1 |
| Households ⁽²⁾ | 86.5 | 128.5 | 76.6 | 74.1 | 84.1 | 100.0 | 109.7 | 116.3 | 130.5 | 94.4 |
| Both sectors | 81.6 | 122.1 | 74.9 | 72.9 | 82.8 | 100.0 | 109.4 | 115.1 | 132.4 | 94.1 |
| Coal | | | | | | | | | | |
| Industry | 127.2 | 123.4 | 83.3 | 66.8 | 82.6 | 100.0 | 106.0 | 105.8 | 118.0 | 138.9 |
| Households | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Both sectors | 127.2 | 123.4 | 83.3 | 66.8 | 82.6 | 100.0 | 106.0 | 105.8 | 118.0 | 138.9 |
| Natural gas | | | | | | | | | | |
| Industry | 45.3 | 54.1 | 45.2 | 59.4 | 81.8 | 100.0 | 89.3 | 83.6 | 98.0 | 56.2 |
| Households | 60.0 | 68.3 | 71.0 | 74.1 | 86.7 | 100.0 | 104.0 | 95.8 | 98.4 | 85.0 |
| Both sectors | 53.5 | 61.5 | 59.5 | 67.2 | 84.6 | 100.0 | 97.5 | 90.5 | 98.2 | 72.8 |
| Electricity | | | | | | | | | | |
| Industry | 109.4 | 114.8 | 109.1 | 90.6 | 96.9 | 100.0 | 103.2 | 103.2 | 102.1 | 107.6 |
| Households | 136.6 | 134.4 | 124.2 | 98.4 | 98.2 | 100.0 | 106.7 | 106.2 | 108.2 | 111.2 |
| Both sectors | 125.7 | 126.9 | 118.7 | 95.5 | 97.8 | 100.0 | 105.7 | 105.3 | 106.4 | 110.2 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Industry includes prices for automotive diesel oil.

(2) Households includes prices for gasoline.

Note: "Real" price indices are the current price indices divided by the country specific producer price index for industrial prices, and by the consumer price index for the household sector.

**Table 3.3. OECD Europe: indices of real energy prices for end-users
(2005=100)**

| | 1978 | 1980 | 1990 | 2000 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---------------------------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|
| Total energy | | | | | | | | | | |
| Industry | 66.6 | 78.2 | 74.9 | 84.1 | 90.4 | 100.0 | 105.0 | 104.5 | 115.9 | 107.8 |
| Households | 82.2 | 94.6 | 88.5 | 94.3 | 93.8 | 100.0 | 106.4 | 107.1 | 114.4 | 108.3 |
| Both sectors | 75.7 | 87.4 | 82.9 | 89.9 | 92.2 | 100.0 | 105.8 | 105.8 | 115.1 | 108.0 |
| Oil products | | | | | | | | | | |
| Industry ⁽¹⁾ | 52.4 | 68.3 | 62.0 | 86.6 | 88.7 | 100.0 | 102.6 | 100.5 | 112.0 | 95.5 |
| Households ⁽²⁾ | 77.3 | 95.5 | 80.6 | 95.1 | 91.5 | 100.0 | 104.3 | 104.0 | 111.4 | 96.5 |
| Both sectors | 69.8 | 86.7 | 74.6 | 91.5 | 90.2 | 100.0 | 103.4 | 102.0 | 111.5 | 95.9 |
| Coal | | | | | | | | | | |
| Industry | 86.9 | 84.7 | 78.1 | 72.4 | 91.3 | 100.0 | 96.5 | 97.9 | 134.3 | 127.4 |
| Households | 55.0 | 60.9 | 81.6 | 93.4 | 98.9 | 100.0 | 104.1 | 110.1 | 123.8 | 136.7 |
| Both sectors | 73.6 | 75.3 | 77.9 | 78.1 | 93.0 | 100.0 | 99.0 | 101.4 | 131.3 | 131.8 |
| Natural gas | | | | | | | | | | |
| Industry | 65.3 | 82.8 | 66.6 | 78.4 | 86.8 | 100.0 | 117.3 | 112.4 | 131.8 | 127.7 |
| Households | 83.1 | 82.1 | 90.6 | 88.2 | 91.9 | 100.0 | 117.0 | 120.7 | 132.4 | 135.3 |
| Both sectors | 72.9 | 81.0 | 80.6 | 84.7 | 90.3 | 100.0 | 116.8 | 117.3 | 131.4 | 131.4 |
| Electricity | | | | | | | | | | |
| Industry | 95.1 | 100.0 | 107.0 | 83.2 | 95.5 | 100.0 | 107.3 | 115.1 | 121.7 | 133.2 |
| Households | 106.8 | 108.8 | 109.8 | 95.3 | 99.0 | 100.0 | 105.5 | 105.8 | 111.4 | 112.9 |
| Both sectors | 99.1 | 102.5 | 107.0 | 89.7 | 97.3 | 100.0 | 106.3 | 108.7 | 114.8 | 120.3 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Industry includes prices for automotive diesel oil.

(2) Households includes prices for gasoline.

Note: "Real" price indices are the current price indices divided by the country specific producer price index for industrial prices, and by the consumer price index for the household sector.

**Table 3.4. Japan: indices of real energy prices for end-users
(2005=100)**

| | 1978 | 1980 | 1990 | 2000 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total energy | | | | | | | | | | |
| Industry | 93.2 | 118.8 | 93.3 | 88.2 | 92.7 | 100.0 | 106.0 | 106.3 | 121.3 | 108.4 |
| Households | 119.2 | 156.8 | 111.7 | 92.8 | 94.9 | 100.0 | 106.2 | 107.0 | 114.9 | 100.4 |
| Both sectors | 105.5 | 137.0 | 103.3 | 91.0 | 94.1 | 100.0 | 106.1 | 106.7 | 117.2 | 103.3 |
| Oil products | | | | | | | | | | |
| Industry ⁽¹⁾ | 76.4 | 114.8 | 71.2 | 68.8 | 83.3 | 100.0 | 114.0 | 116.7 | 144.2 | 96.7 |
| Households ⁽²⁾ | 110.8 | 154.0 | 100.3 | 80.6 | 89.1 | 100.0 | 111.5 | 113.1 | 127.4 | 96.9 |
| Both sectors | 97.3 | 139.3 | 89.4 | 76.7 | 87.3 | 100.0 | 112.2 | 114.1 | 131.9 | 96.9 |
| Coal | | | | | | | | | | |
| Industry | 132.9 | 121.1 | 77.1 | 42.8 | 69.1 | 100.0 | 111.6 | 111.2 | 184.4 | 163.3 |
| Households | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Both sectors | 132.9 | 121.1 | 77.1 | 42.8 | 69.1 | 100.0 | 111.6 | 111.2 | 184.4 | 163.3 |
| Natural gas | | | | | | | | | | |
| Industry | 183.6 | 188.9 | 116.0 | 104.6 | 96.7 | 100.0 | 112.5 | 117.2 | 118.7 | 123.5 |
| Households | 109.2 | 132.8 | 106.1 | 99.5 | 100.0 | 100.0 | 104.9 | 105.9 | 110.7 | 111.7 |
| Both sectors | 124.4 | 143.5 | 107.6 | 100.3 | 99.4 | 100.0 | 106.5 | 108.4 | 112.5 | 114.3 |
| Electricity | | | | | | | | | | |
| Industry | 96.1 | 119.1 | 112.4 | 108.3 | 102.6 | 100.0 | 98.9 | 97.9 | 99.2 | 106.6 |
| Households | 137.2 | 166.5 | 130.8 | 108.6 | 101.8 | 100.0 | 99.4 | 99.7 | 100.8 | 102.1 |
| Both sectors | 110.4 | 135.8 | 120.8 | 108.5 | 102.1 | 100.0 | 99.2 | 98.9 | 100.1 | 104.0 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Industry includes prices for automotive diesel oil.

(2) Households includes prices for gasoline.

Note: "Real" price indices are the current price indices divided by the country specific producer price index for industrial prices, and by the consumer price index for the household sector.

Table 3.5. Electricity prices for industry in US dollars/kWh

| | 1978 | 1980 | 1990 | 2000 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Australia | 0.027 | 0.031 | 0.046 | 0.045 | 0.061 | .. | .. | .. | .. | .. |
| Austria | 0.039 | 0.051 | 0.065 | 0.038 | 0.096 | 0.102 | 0.109 | 0.134 | 0.154 | .. |
| Belgium | 0.045 | 0.058 | 0.070 | 0.048 | .. | .. | .. | .. | 0.140 | .. |
| Canada | 0.015 | 0.020 | 0.037 | 0.038 | 0.049 | 0.055 | 0.059 | 0.064 | .. | .. |
| Czech Republic | .. | .. | 0.030 | 0.043 | 0.066 | 0.081 | 0.094 | 0.115 | 0.151 | 0.148 |
| Denmark | 0.049 | 0.050 | 0.062 | 0.058 | 0.096 | 0.093 | 0.097 | 0.101 | 0.130 | 0.111 |
| Finland | 0.047 | 0.054 | 0.063 | 0.039 | 0.072 | 0.070 | .. | 0.081 | 0.097 | 0.097 |
| France | 0.032 | 0.048 | 0.056 | 0.036 | 0.050 | 0.050 | 0.051 | 0.092 | 0.105 | 0.107 |
| Germany | 0.047 | 0.058 | 0.091 | 0.041 | 0.077 | 0.084 | 0.094 | 0.109 | .. | .. |
| Greece | 0.027 | 0.042 | 0.065 | 0.042 | 0.063 | 0.067 | .. | .. | 0.112 | 0.114 |
| Hungary | .. | .. | 0.074 | 0.049 | 0.092 | 0.096 | 0.105 | 0.134 | 0.170 | 0.160 |
| Ireland | 0.038 | 0.051 | 0.068 | 0.049 | 0.096 | 0.099 | 0.122 | 0.149 | 0.186 | 0.169 |
| Italy | 0.043 | 0.065 | 0.098 | 0.089 | 0.161 | 0.174 | 0.210 | 0.237 | 0.290 | 0.276 |
| Japan | 0.062 | 0.086 | 0.122 | 0.143 | 0.127 | 0.123 | 0.117 | 0.116 | 0.139 | 0.158 |
| Korea | 0.043 | 0.081 | 0.070 | 0.052 | 0.053 | 0.059 | 0.065 | 0.069 | 0.060 | 0.058 |
| Luxembourg | 0.035 | 0.047 | .. | .. | .. | .. | .. | .. | 0.123 | 0.136 |
| Mexico | 0.022 | 0.031 | 0.040 | 0.051 | 0.077 | 0.088 | 0.099 | 0.102 | 0.126 | 0.085 |
| Netherlands | 0.031 | 0.059 | 0.052 | 0.057 | c | c | c | 0.122 | 0.140 | 0.141 |
| New Zealand | 0.019 | 0.028 | 0.034 | 0.028 | 0.051 | 0.061 | 0.060 | 0.068 | 0.071 | .. |
| Norway | 0.012 | 0.018 | 0.035 | 0.019 | 0.043 | 0.043 | 0.055 | 0.048 | 0.064 | 0.059 |
| Poland | .. | .. | 0.025 | 0.037 | 0.060 | 0.070 | 0.073 | 0.082 | 0.119 | 0.120 |
| Portugal | 0.027 | 0.045 | 0.098 | 0.067 | 0.093 | 0.098 | 0.110 | 0.129 | 0.131 | 0.127 |
| Slovak Republic | 0.021 | 0.024 | 0.029 | 0.042 | 0.083 | 0.086 | 0.098 | 0.137 | 0.174 | 0.195 |
| Spain | 0.028 | 0.044 | 0.097 | 0.043 | 0.060 | 0.083 | 0.091 | 0.090 | 0.125 | .. |
| Sweden | 0.029 | 0.040 | 0.050 | .. | .. | .. | .. | 0.076 | 0.095 | 0.083 |
| Switzerland | 0.051 | 0.056 | 0.089 | 0.069 | 0.084 | 0.081 | 0.080 | 0.084 | 0.094 | 0.094 |
| Turkey | 0.062 | 0.061 | 0.082 | 0.080 | 0.100 | 0.106 | 0.100 | 0.109 | 0.139 | 0.138 |
| United Kingdom | 0.038 | 0.063 | 0.071 | 0.055 | 0.067 | 0.087 | 0.117 | 0.130 | 0.146 | 0.135 |
| United States | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| OECD Europe | 0.038 | 0.053 | 0.072 | 0.051 | 0.082 | 0.091 | 0.106 | 0.119 | 0.147 | .. |
| OECD | 0.041 | 0.057 | 0.076 | 0.066 | 0.082 | 0.089 | 0.098 | 0.107 | 0.133 | .. |

Table 3.6. Electricity prices for industry in US dollars/toe

| | 1978 | 1980 | 1990 | 2000 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Australia | 311.8 | 357.9 | 534.3 | 525.3 | 708.4 | .. | .. | .. | .. | .. |
| Austria | 459.2 | 588.8 | 760.2 | 444.8 | 1113.7 | 1183.0 | 1269.3 | 1561.0 | 1791.8 | .. |
| Belgium | 518.1 | 673.6 | 814.9 | 555.1 | .. | .. | .. | .. | 1629.4 | .. |
| Canada | 177.4 | 227.7 | 435.4 | 446.3 | 569.3 | 643.0 | 681.4 | 739.3 | .. | .. |
| Czech Republic | .. | .. | 343.3 | 499.6 | 769.3 | 936.8 | 1091.5 | 1341.1 | 1758.7 | 1717.0 |
| Denmark | 569.5 | 580.8 | 723.6 | 670.8 | 1114.7 | 1078.2 | 1125.0 | 1172.9 | 1509.6 | 1286.6 |
| Finland | 543.5 | 633.4 | 734.2 | 449.0 | 837.8 | 818.1 | .. | 946.6 | 1126.6 | 1133.0 |
| France | 376.9 | 557.9 | 655.6 | 415.8 | 579.2 | 579.2 | 589.4 | 1072.0 | 1218.9 | 1240.7 |
| Germany | 551.4 | 669.6 | 1061.4 | 471.5 | 894.1 | 976.5 | 1095.7 | 1266.3 | .. | .. |
| Greece | 312.2 | 493.0 | 756.8 | 491.7 | 736.7 | 778.6 | .. | .. | 1305.6 | 1324.7 |
| Hungary | .. | .. | 864.6 | 566.5 | 1075.3 | 1111.1 | 1216.6 | 1561.7 | 1972.6 | 1857.4 |
| Ireland | 437.4 | 592.7 | 785.8 | 569.1 | 1112.2 | 1155.6 | 1415.2 | 1733.6 | 2161.5 | 1964.8 |
| Italy | 501.8 | 757.7 | 1134.6 | 1034.2 | 1877.8 | 2022.2 | 2436.5 | 2755.7 | 3369.9 | 3211.0 |
| Japan | 723.8 | 1005.3 | 1421.4 | 1665.0 | 1478.8 | 1427.0 | 1361.0 | 1348.3 | 1619.6 | 1834.6 |
| Korea | 497.8 | 943.7 | 813.0 | 599.6 | 611.6 | 684.0 | 756.4 | 807.7 | 699.7 | 672.1 |
| Luxembourg | 406.5 | 546.9 | .. | .. | .. | .. | .. | .. | 1424.6 | 1583.1 |
| Mexico | 256.1 | 355.4 | 465.0 | 591.4 | 900.6 | 1020.9 | 1150.7 | 1187.0 | 1465.1 | 983.8 |
| Netherlands | 362.3 | 688.4 | 608.1 | 663.4 | c | c | c | 1417.6 | 1623.5 | 1639.7 |
| New Zealand | 215.4 | 320.4 | 396.4 | 325.4 | 592.6 | 713.6 | 693.2 | 795.4 | 830.7 | .. |
| Norway | 135.3 | 212.0 | 408.8 | 226.0 | 503.5 | 505.1 | 643.5 | 559.5 | 739.1 | 682.3 |
| Poland | .. | .. | 295.0 | 428.9 | 698.5 | 813.1 | 853.6 | 958.8 | 1386.8 | 1392.3 |
| Portugal | 313.3 | 527.7 | 1141.5 | 779.1 | 1079.0 | 1139.0 | 1283.9 | 1497.3 | 1526.6 | 1481.3 |
| Slovak Republic | 241.3 | 284.1 | 339.3 | 491.3 | 963.2 | 1004.3 | 1141.4 | 1593.0 | 2022.2 | 2264.8 |
| Spain | 325.4 | 515.3 | 1132.4 | 495.1 | 696.3 | 968.9 | 1061.8 | 1041.7 | 1455.3 | .. |
| Sweden | 334.7 | 467.4 | 579.6 | .. | .. | .. | .. | 880.1 | 1107.8 | 961.8 |
| Switzerland | 596.3 | 654.9 | 1036.5 | 803.3 | 971.3 | 937.0 | 933.4 | 972.9 | 1090.3 | 1087.7 |
| Turkey | 715.1 | 704.9 | 954.0 | 929.7 | 1164.3 | 1237.3 | 1160.6 | 1264.5 | 1613.9 | 1600.5 |
| United Kingdom | 441.6 | 729.8 | 822.0 | 644.2 | 775.5 | 1008.3 | 1358.8 | 1510.2 | 1697.0 | 1569.5 |
| United States | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| OECD Europe | 444.9 | 614.8 | 833.1 | 588.9 | 951.5 | 1054.7 | 1232.3 | 1381.9 | 1710.8 | .. |
| OECD | 481.1 | 663.5 | 885.4 | 767.5 | 957.3 | 1032.3 | 1137.2 | 1241.6 | 1546.0 | .. |

Source: IEA/OECD *Energy Prices & Taxes*.

Note: Prices are in current US dollars. Price excluding tax for Australia and the United States.

Table 3.7. Electricity prices for households in US dollars/kWh

| | 1978 | 1980 | 1990 | 2000 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Australia | 0.039 | 0.043 | 0.072 | 0.063 | 0.089 | .. | .. | .. | .. | .. |
| Austria | 0.080 | 0.101 | 0.156 | 0.118 | 0.177 | 0.174 | 0.174 | 0.214 | 0.257 | 0.262 |
| Belgium | 0.115 | 0.141 | 0.167 | 0.132 | .. | .. | .. | .. | 0.266 | .. |
| Canada | 0.024 | 0.028 | 0.053 | 0.053 | 0.068 | 0.076 | 0.082 | 0.089 | .. | .. |
| Czech Republic | 0.034 | 0.039 | 0.027 | 0.054 | 0.097 | 0.106 | 0.122 | 0.146 | 0.191 | 0.192 |
| Denmark | 0.068 | 0.102 | 0.164 | 0.197 | 0.283 | 0.295 | 0.322 | 0.344 | 0.396 | 0.365 |
| Finland | 0.058 | 0.069 | 0.103 | 0.078 | 0.123 | 0.121 | 0.128 | 0.145 | 0.172 | 0.174 |
| France | 0.081 | 0.114 | 0.150 | 0.102 | 0.142 | 0.142 | 0.144 | 0.156 | 0.164 | 0.159 |
| Germany | 0.085 | 0.101 | 0.164 | 0.121 | 0.198 | 0.212 | 0.222 | 0.263 | .. | .. |
| Greece | 0.063 | 0.074 | 0.119 | 0.071 | 0.107 | 0.112 | .. | .. | 0.157 | 0.152 |
| Hungary | .. | 0.032 | 0.039 | 0.065 | 0.134 | 0.146 | 0.144 | 0.188 | 0.224 | 0.206 |
| Ireland | 0.056 | 0.077 | 0.131 | 0.101 | 0.173 | 0.199 | 0.199 | 0.244 | 0.267 | 0.255 |
| Italy | 0.050 | 0.077 | 0.157 | 0.135 | 0.191 | 0.198 | 0.226 | 0.258 | 0.305 | 0.284 |
| Japan | 0.093 | 0.117 | 0.177 | 0.214 | 0.196 | 0.189 | 0.178 | 0.176 | 0.206 | 0.228 |
| Korea | 0.067 | 0.098 | 0.096 | 0.084 | 0.079 | 0.089 | 0.098 | 0.102 | 0.089 | 0.077 |
| Luxembourg | 0.069 | 0.086 | 0.124 | 0.099 | 0.147 | 0.187 | 0.183 | 0.231 | 0.215 | 0.237 |
| Mexico | 0.035 | 0.052 | 0.046 | 0.068 | 0.090 | 0.097 | 0.101 | 0.093 | 0.096 | 0.079 |
| Netherlands | 0.082 | 0.115 | 0.117 | 0.131 | 0.221 | 0.236 | 0.258 | 0.285 | 0.243 | 0.258 |
| New Zealand | 0.024 | 0.033 | 0.055 | 0.060 | 0.120 | 0.136 | 0.133 | 0.161 | 0.164 | .. |
| Norway | 0.028 | 0.035 | 0.073 | 0.058 | 0.117 | 0.122 | 0.156 | 0.132 | 0.164 | 0.137 |
| Poland | .. | 0.023 | 0.010 | 0.065 | 0.103 | 0.121 | 0.132 | 0.151 | 0.193 | 0.167 |
| Portugal | 0.047 | 0.071 | 0.147 | 0.120 | 0.175 | 0.180 | 0.184 | 0.214 | 0.220 | 0.215 |
| Slovak Republic | 0.034 | 0.039 | 0.028 | 0.050 | 0.134 | 0.141 | 0.156 | 0.188 | 0.220 | 0.231 |
| Spain | 0.057 | 0.080 | 0.190 | 0.117 | 0.152 | 0.154 | 0.165 | 0.187 | 0.218 | .. |
| Sweden | 0.046 | 0.059 | 0.088 | .. | .. | .. | .. | 0.196 | 0.218 | 0.194 |
| Switzerland | 0.066 | 0.073 | 0.111 | 0.111 | 0.143 | 0.139 | 0.132 | 0.136 | 0.154 | 0.164 |
| Turkey | 0.077 | 0.063 | 0.051 | 0.084 | 0.111 | 0.118 | 0.111 | 0.122 | 0.165 | 0.165 |
| United Kingdom | 0.052 | 0.087 | 0.118 | 0.107 | 0.138 | 0.149 | 0.186 | 0.219 | 0.231 | 0.206 |
| United States | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| OECD Europe | 0.072 | 0.088 | 0.131 | 0.107 | 0.157 | 0.164 | 0.179 | 0.202 | 0.213 | .. |
| OECD | 0.067 | 0.083 | 0.124 | 0.119 | 0.147 | 0.154 | 0.161 | 0.176 | 0.199 | .. |

Table 3.8. Electricity prices for households in US dollars/toe

| | 1978 | 1980 | 1990 | 2000 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Australia | 450.4 | 503.8 | 833.7 | 734.8 | 1040.6 | .. | .. | .. | .. | .. |
| Austria | 928.3 | 1177.6 | 1810.3 | 1366.4 | 2054.7 | 2025.1 | 2028.0 | 2484.9 | 2988.6 | 3049.9 |
| Belgium | 1335.5 | 1639.1 | 1937.0 | 1537.9 | .. | .. | .. | .. | 3089.7 | .. |
| Canada | 280.3 | 330.1 | 617.7 | 615.4 | 785.6 | 880.0 | 958.5 | 1032.7 | .. | .. |
| Czech Republic | 399.7 | 448.2 | 310.9 | 632.0 | 1126.8 | 1228.1 | 1421.0 | 1696.4 | 2226.4 | 2234.0 |
| Denmark | 789.5 | 1181.2 | 1912.5 | 2295.8 | 3291.7 | 3424.9 | 3744.9 | 4001.7 | 4605.3 | 4249.4 |
| Finland | 671.4 | 806.2 | 1195.3 | 904.5 | 1430.0 | 1405.5 | 1487.4 | 1690.4 | 2004.7 | 2020.1 |
| France | 936.3 | 1327.1 | 1745.6 | 1182.1 | 1646.5 | 1646.5 | 1672.0 | 1819.1 | 1910.8 | 1851.3 |
| Germany | 993.0 | 1169.0 | 1904.7 | 1402.9 | 2296.7 | 2470.0 | 2578.0 | 3059.9 | .. | .. |
| Greece | 732.1 | 865.1 | 1378.3 | 823.4 | 1242.2 | 1304.3 | .. | .. | 1824.1 | 1765.7 |
| Hungary | .. | 369.2 | 450.7 | 759.4 | 1556.7 | 1698.8 | 1675.8 | 2189.7 | 2606.7 | 2398.0 |
| Ireland | 655.2 | 891.8 | 1526.2 | 1178.9 | 2007.9 | 2311.1 | 2319.7 | 2831.6 | 3106.4 | 2965.3 |
| Italy | 581.4 | 894.5 | 1822.1 | 1575.4 | 2224.5 | 2296.7 | 2626.1 | 2994.6 | 3549.6 | 3304.9 |
| Japan | 1083.0 | 1364.4 | 2055.8 | 2488.8 | 2281.6 | 2195.8 | 2071.3 | 2052.3 | 2395.5 | 2647.0 |
| Korea | 773.6 | 1140.9 | 1118.4 | 974.1 | 923.4 | 1033.9 | 1144.7 | 1185.7 | 1030.7 | 894.4 |
| Luxembourg | 796.5 | 994.4 | 1439.1 | 1154.2 | 1705.9 | 2169.6 | 2131.5 | 2682.4 | 2505.8 | 2757.5 |
| Mexico | 409.8 | 609.3 | 533.0 | 794.0 | 1047.2 | 1129.9 | 1171.1 | 1081.5 | 1116.9 | 913.9 |
| Netherlands | 957.9 | 1331.7 | 1362.7 | 1524.0 | 2569.7 | 2744.5 | 3000.1 | 3313.4 | 2821.4 | 3000.3 |
| New Zealand | 278.3 | 389.4 | 635.5 | 698.3 | 1397.8 | 1581.4 | 1546.3 | 1877.0 | 1911.3 | .. |
| Norway | 330.5 | 412.2 | 852.8 | 672.3 | 1358.5 | 1418.6 | 1811.7 | 1531.1 | 1905.9 | 1596.9 |
| Poland | .. | 263.1 | 120.0 | 761.2 | 1199.4 | 1405.8 | 1536.4 | 1754.9 | 2243.6 | 1940.4 |
| Portugal | 541.6 | 826.6 | 1713.1 | 1390.0 | 2038.1 | 2087.2 | 2144.7 | 2484.9 | 2554.2 | 2502.3 |
| Slovak Republic | 399.7 | 447.9 | 321.9 | 582.8 | 1558.4 | 1637.6 | 1808.2 | 2183.6 | 2556.8 | 2684.9 |
| Spain | 665.9 | 930.8 | 2206.1 | 1362.1 | 1762.2 | 1785.5 | 1915.6 | 2174.1 | 2535.0 | .. |
| Sweden | 540.6 | 687.4 | 1021.7 | .. | .. | .. | .. | 2275.5 | 2539.9 | 2256.3 |
| Switzerland | 767.3 | 843.6 | 1287.6 | 1294.4 | 1657.1 | 1614.6 | 1540.2 | 1585.4 | 1794.2 | 1906.0 |
| Turkey | 895.3 | 728.2 | 588.8 | 981.6 | 1291.2 | 1372.2 | 1287.1 | 1415.8 | 1916.3 | 1919.7 |
| United Kingdom | 606.6 | 1013.6 | 1377.6 | 1240.9 | 1602.1 | 1733.3 | 2165.5 | 2543.4 | 2689.3 | 2395.1 |
| United States | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| OECD Europe | 835.9 | 1018.7 | 1520.5 | 1244.0 | 1820.1 | 1905.4 | 2079.7 | 2352.5 | 2471.0 | .. |
| OECD | 783.6 | 961.2 | 1441.9 | 1385.6 | 1705.7 | 1786.9 | 1877.6 | 2045.5 | 2316.0 | .. |

Source: IEA/OECD *Energy Prices & Taxes*.

Note: Prices are in current US dollars. Price excluding tax for Australia and the United States.

**Table 3.9. Electricity prices for households in US dollars/kWh
converted with purchasing power parities**

| | 1978 | 1980 | 1990 | 2000 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Australia | 0.035 | 0.038 | 0.067 | 0.083 | 0.089 | .. | .. | .. | .. | .. |
| Austria | 0.081 | 0.099 | 0.141 | 0.142 | 0.163 | 0.158 | 0.158 | 0.176 | 0.197 | 0.213 |
| Belgium | 0.092 | 0.114 | 0.153 | 0.161 | .. | .. | .. | .. | 0.199 | .. |
| Canada | 0.024 | 0.029 | 0.049 | 0.064 | 0.071 | 0.076 | 0.078 | 0.079 | .. | .. |
| Czech Republic | .. | .. | 0.089 | 0.148 | 0.174 | 0.177 | 0.192 | 0.207 | 0.228 | 0.250 |
| Denmark | 0.048 | 0.074 | 0.115 | 0.190 | 0.202 | 0.206 | 0.224 | 0.220 | 0.235 | 0.232 |
| Finland | 0.052 | 0.056 | 0.065 | 0.085 | 0.102 | 0.100 | 0.105 | 0.110 | 0.122 | 0.130 |
| France | 0.068 | 0.086 | 0.121 | 0.117 | 0.121 | 0.123 | 0.124 | 0.125 | 0.122 | 0.125 |
| Germany | 0.073 | 0.084 | 0.139 | 0.135 | 0.177 | 0.197 | 0.206 | 0.226 | .. | .. |
| Greece | 0.097 | 0.109 | 0.163 | 0.112 | 0.124 | 0.126 | .. | .. | 0.146 | 0.148 |
| Hungary | .. | 0.075 | 0.107 | 0.171 | 0.215 | 0.227 | 0.230 | 0.257 | 0.288 | 0.308 |
| Ireland | 0.067 | 0.077 | 0.125 | 0.114 | 0.138 | 0.158 | 0.158 | 0.181 | 0.185 | 0.196 |
| Italy | 0.066 | 0.087 | 0.138 | 0.180 | 0.176 | 0.183 | 0.211 | 0.224 | 0.249 | 0.241 |
| Japan | 0.078 | 0.116 | 0.136 | 0.149 | 0.158 | 0.160 | 0.167 | 0.173 | 0.183 | 0.185 |
| Korea | 0.105 | 0.154 | 0.128 | 0.127 | 0.114 | 0.115 | 0.123 | 0.125 | 0.128 | 0.127 |
| Luxembourg | 0.057 | 0.068 | 0.114 | 0.115 | 0.128 | 0.158 | 0.156 | 0.178 | 0.155 | 0.184 |
| Mexico | 0.062 | 0.072 | 0.091 | 0.106 | 0.141 | 0.148 | 0.149 | 0.136 | 0.137 | 0.129 |
| Netherlands | 0.064 | 0.088 | 0.105 | 0.159 | 0.196 | 0.212 | 0.231 | 0.237 | 0.188 | 0.214 |
| New Zealand | 0.030 | 0.040 | 0.060 | 0.092 | 0.120 | 0.126 | 0.135 | 0.143 | 0.150 | .. |
| Norway | 0.019 | 0.022 | 0.047 | 0.056 | 0.088 | 0.088 | 0.112 | 0.086 | 0.102 | 0.099 |
| Poland | .. | .. | 0.036 | 0.155 | 0.202 | 0.209 | 0.217 | 0.221 | 0.241 | 0.264 |
| Portugal | 0.081 | 0.115 | 0.209 | 0.185 | 0.197 | 0.211 | 0.217 | 0.230 | 0.223 | 0.232 |
| Slovak Republic | .. | .. | 0.073 | 0.146 | 0.250 | 0.256 | 0.269 | 0.273 | 0.278 | 0.301 |
| Spain | 0.078 | 0.091 | 0.189 | 0.173 | 0.161 | 0.162 | 0.174 | 0.183 | 0.196 | .. |
| Sweden | 0.034 | 0.039 | 0.059 | .. | .. | .. | .. | 0.145 | 0.156 | 0.159 |
| Switzerland | 0.049 | 0.057 | 0.077 | 0.101 | 0.101 | 0.099 | 0.098 | 0.100 | 0.102 | 0.109 |
| Turkey | 0.077 | 0.100 | 0.081 | 0.187 | 0.195 | 0.191 | 0.182 | 0.176 | 0.223 | 0.254 |
| United Kingdom | 0.064 | 0.076 | 0.109 | 0.111 | 0.119 | 0.129 | 0.158 | 0.167 | 0.191 | 0.200 |
| United States | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| OECD Europe | 0.064 | 0.078 | 0.116 | 0.134 | 0.151 | 0.158 | 0.171 | 0.177 | 0.179 | 0.184 |
| OECD | 0.061 | 0.077 | 0.109 | 0.126 | 0.139 | 0.147 | 0.157 | 0.161 | 0.175 | 0.179 |

**Table 3.10. Purchasing power parities
national currency/US dollars**

| | 1978 | 1980 | 1990 | 2000 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Australia | 0.98 | 0.99 | 1.38 | 1.31 | 1.37 | 1.39 | 1.41 | 1.42 | 1.48 | 1.46 |
| Austria | 1.03 | 0.96 | 0.91 | 0.90 | 0.87 | 0.89 | 0.88 | 0.89 | 0.89 | 0.89 |
| Belgium | 0.98 | 0.90 | 0.90 | 0.89 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 |
| Canada | 1.13 | 1.16 | 1.25 | 1.23 | 1.23 | 1.21 | 1.21 | 1.21 | 1.23 | 1.19 |
| Czech Republic | .. | .. | 5.40 | 14.21 | 14.29 | 14.32 | 14.38 | 14.27 | 14.36 | 14.62 |
| Denmark | 7.83 | 7.69 | 8.86 | 8.41 | 8.40 | 8.59 | 8.53 | 8.53 | 8.59 | 8.44 |
| Finland | 0.76 | 0.77 | 1.02 | 0.99 | 0.98 | 0.98 | 0.97 | 0.96 | 0.97 | 0.97 |
| France | 0.82 | 0.85 | 1.03 | 0.94 | 0.94 | 0.92 | 0.92 | 0.91 | 0.92 | 0.92 |
| Germany | 1.20 | 1.12 | 0.97 | 0.97 | 0.90 | 0.87 | 0.86 | 0.85 | 0.86 | 0.85 |
| Greece | 0.07 | 0.09 | 0.34 | 0.68 | 0.70 | 0.71 | 0.72 | 0.73 | 0.74 | 0.74 |
| Hungary | 15.20 | 13.75 | 22.90 | 107.89 | 126.28 | 128.59 | 131.63 | 134.66 | 134.01 | 135.45 |
| Ireland | 0.56 | 0.62 | 0.81 | 0.96 | 1.01 | 1.01 | 1.01 | 0.98 | 0.99 | 0.94 |
| Italy | 0.33 | 0.39 | 0.70 | 0.82 | 0.87 | 0.87 | 0.85 | 0.84 | 0.84 | 0.85 |
| Japan | 250.53 | 229.58 | 188.20 | 154.75 | 134.37 | 129.55 | 124.34 | 120.02 | 116.46 | 114.98 |
| Korea | 306.43 | 386.09 | 531.89 | 745.26 | 795.78 | 788.92 | 762.97 | 757.19 | 761.65 | 773.43 |
| Luxembourg | 0.94 | 0.91 | 0.90 | 0.94 | 0.92 | 0.95 | 0.94 | 0.95 | 0.95 | 0.93 |
| Mexico | 0.01 | 0.02 | 1.44 | 6.10 | 7.21 | 7.13 | 7.37 | 7.49 | 7.82 | 8.22 |
| Netherlands | 1.27 | 1.17 | 0.92 | 0.89 | 0.91 | 0.90 | 0.89 | 0.88 | 0.88 | 0.87 |
| New Zealand | 0.76 | 0.87 | 1.53 | 1.44 | 1.51 | 1.54 | 1.52 | 1.54 | 1.56 | 1.58 |
| Norway | 7.96 | 8.05 | 9.71 | 9.13 | 8.99 | 8.90 | 8.90 | 8.99 | 9.10 | 8.69 |
| Poland | .. | .. | 0.27 | 1.84 | 1.86 | 1.87 | 1.89 | 1.89 | 1.93 | 1.97 |
| Portugal | 0.13 | 0.15 | 0.50 | 0.70 | 0.72 | 0.68 | 0.68 | 0.68 | 0.67 | 0.67 |
| Slovak Republic | .. | .. | 0.23 | 0.53 | 0.57 | 0.57 | 0.57 | 0.56 | 0.56 | 0.55 |
| Spain | 0.34 | 0.38 | 0.62 | 0.73 | 0.76 | 0.76 | 0.75 | 0.75 | 0.76 | 0.75 |
| Sweden | 6.23 | 6.36 | 8.75 | 9.14 | 9.10 | 9.38 | 9.31 | 9.10 | 9.26 | 9.35 |
| Switzerland | 2.40 | 2.13 | 1.99 | 1.85 | 1.75 | 1.74 | 1.70 | 1.64 | 1.64 | 1.63 |
| Turkey | 0.00 | 0.00 | 0.00 | 0.28 | 0.81 | 0.83 | 0.87 | 0.90 | 0.96 | 1.01 |
| United Kingdom | 0.43 | 0.49 | 0.61 | 0.64 | 0.63 | 0.64 | 0.64 | 0.66 | 0.66 | 0.66 |
| United States | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Source: IEA/OECD Energy Prices & Taxes.

Note: Data are in current US dollars. Price excluding tax for Australia in Table 3.9.

Table 3.11. Heavy fuel oil prices for electricity generation in US dollars/tonne

| | 1978 | 1980 | 1990 | 2000 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|---------|----------|----------|----------|----------|----------|----------|--------|--------|--------|
| Australia | 91.93 | 198.65 | .. | .. | .. | .. | .. | .. | .. | .. |
| Austria | 94.83 | 164.67 | 127.05 | 70.33 | 153.34 | 182.18 | 226.08 | 220.33 | 342.31 | 264.53 |
| Belgium | 92.87 | 179.34 | 126.94 | 180.78 | x | x | x | x | x | x |
| Canada | 70.09 | 79.84 | .. | 120.05 | 141.46 | 198.45 | 222.37 | 261.34 | .. | .. |
| Czech Republic | 70.83 | 71.48 | 151.42 | 111.47 | 166.73 | 207.22 | 289.17 | 285.47 | 438.40 | c |
| Denmark | .. | 162.93 | .. | .. | .. | .. | .. | .. | .. | .. |
| Finland | 97.84 | 203.39 | 179.44 | 183.32 | 219.55 | 319.26 | 367.16 | 412.36 | 577.01 | 421.92 |
| France | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Germany | 103.80 | 197.58 | 146.20 | 167.28 | 202.24 | 287.92 | 354.08 | 372.50 | 572.11 | 420.23 |
| Greece | 68.06 | 136.32 | 159.81 | .. | .. | .. | .. | .. | .. | .. |
| Hungary | .. | 84.23 | 89.15 | 146.11 | .. | .. | .. | .. | .. | .. |
| Ireland | .. | .. | 111.55 | 140.48 | 203.79 | 284.62 | 343.17 | 339.24 | 566.12 | .. |
| Italy | 85.75 | 181.24 | 134.60 | c | c | c | c | c | c | c |
| Japan | 109.48 | 250.29 | 207.11 | .. | .. | .. | .. | .. | .. | .. |
| Korea | .. | 250.60 | 130.77 | 275.67 | 339.29 | .. | .. | .. | .. | .. |
| Luxembourg | .. | 181.70 | .. | .. | .. | .. | .. | .. | .. | .. |
| Mexico | 11.45 | 15.40 | 55.11 | 124.86 | 144.12 | 177.93 | 253.19 | 252.51 | 443.95 | 302.87 |
| Netherlands | 91.10 | 192.46 | .. | .. | .. | .. | .. | .. | .. | .. |
| New Zealand | c | c | c | c | c | c | c | c | c | c |
| Norway | x | x | x | x | x | x | x | x | x | x |
| Poland | .. | .. | 86.21 | 112.69 | 173.53 | 254.44 | 308.36 | 354.08 | 486.83 | 356.18 |
| Portugal | 66.07 | 130.20 | 104.65 | 148.68 | 184.51 | 217.83 | 310.97 | 352.18 | 478.36 | 336.37 |
| Slovak Republic | 70.83 | 71.43 | 121.97 | .. | x | x | x | x | x | x |
| Spain | 88.00 | 168.38 | 142.90 | 227.35 | .. | .. | .. | .. | .. | .. |
| Sweden | 92.10 | 199.10 | 106.79 | .. | .. | .. | .. | .. | .. | .. |
| Switzerland | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Turkey | 144.25 | 245.69 | 239.82 | 206.11 | 346.14 | 545.08 | 641.09 | 786.05 | 999.18 | 802.61 |
| United Kingdom | 95.36 | 199.28 | 94.42 | 181.35 | 260.15 | 384.48 | 426.78 | 454.55 | 533.44 | 468.55 |
| United States | 88.65 | 178.01 | 139.37 | 178.64 | 203.53 | 292.94 | 326.67 | 359.64 | 572.74 | 370.52 |
| OECD Europe | 91.73 e | 179.06 e | 128.66 e | 183.16 e | 236.80 e | 312.18 e | 393.75 e | 494.21 | 671.03 | .. |
| OECD | 91.65 e | 189.66 e | 139.88 e | 168.21 e | 199.32 e | 252.31 e | 302.99 e | 327.04 | 533.50 | .. |

Table 3.12. Heavy fuel oil prices for electricity generation in US dollars/tonne

| | 1978 | 1980 | 1990 | 2000 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|--------|---------|---------|---------|---------|---------|---------|-------|--------|-------|
| Australia | 95.8 | 206.9 | .. | .. | .. | .. | .. | .. | .. | .. |
| Austria | 98.8 | 171.5 | 132.3 | 73.3 | 159.7 | 189.8 | 235.5 | 229.5 | 356.6 | 275.6 |
| Belgium | 95.2 | 183.9 | 130.2 | 185.4 | x | x | x | x | x | x |
| Canada | 73.0 | 83.2 | .. | 125.0 | 147.4 | 206.7 | 231.6 | 272.2 | .. | .. |
| Czech Republic | 74.3 | 75.0 | 158.9 | 116.9 | 174.9 | 217.4 | 303.4 | 299.5 | 459.9 | c |
| Denmark | .. | 168.8 | .. | .. | .. | .. | .. | .. | .. | .. |
| Finland | 101.9 | 211.9 | 186.9 | 191.0 | 228.7 | 332.6 | 382.5 | 429.5 | 601.1 | 439.5 |
| France | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Germany | 105.9 | 201.6 | 149.2 | 170.7 | 206.4 | 293.8 | 361.3 | 380.1 | 583.8 | 428.8 |
| Greece | 70.9 | 142.0 | 166.5 | .. | .. | .. | .. | .. | .. | .. |
| Hungary | .. | 86.8 | 91.9 | 150.6 | .. | .. | .. | .. | .. | .. |
| Ireland | .. | .. | 117.7 | 148.2 | 215.0 | 300.2 | 362.0 | 357.8 | 597.2 | .. |
| Italy | 89.3 | 188.8 | 140.2 | c | c | c | c | c | c | c |
| Japan | 114.0 | 260.7 | 215.7 | .. | .. | .. | .. | .. | .. | .. |
| Korea | .. | 272.3 | 142.1 | 299.5 | 368.7 | .. | .. | .. | .. | .. |
| Luxembourg | .. | 188.3 | .. | .. | .. | .. | .. | .. | .. | .. |
| Mexico | 11.3 | 15.2 | 54.4 | 123.1 | 142.1 | 175.5 | 249.7 | 249.0 | 437.9 | 298.7 |
| Netherlands | 93.3 | 197.2 | .. | .. | .. | .. | .. | .. | .. | .. |
| New Zealand | c | c | c | c | c | c | c | c | c | c |
| Norway | x | x | x | x | x | x | x | x | x | x |
| Poland | .. | .. | 88.0 | 115.1 | 177.2 | 259.8 | 314.9 | 361.6 | 497.1 | 363.7 |
| Portugal | 68.8 | 135.6 | 109.0 | 154.9 | 192.2 | 226.9 | 323.9 | 366.9 | 498.3 | 350.4 |
| Slovak Republic | 73.0 | 73.6 | 125.8 | .. | x | x | x | x | x | x |
| Spain | 93.6 | 179.1 | 152.0 | 241.9 | .. | .. | .. | .. | .. | .. |
| Sweden | 95.9 | 207.4 | 111.2 | .. | .. | .. | .. | .. | .. | .. |
| Switzerland | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Turkey | 150.3 | 255.9 | 249.8 | 214.7 | 360.6 | 567.8 | 667.8 | 818.8 | 1040.8 | 836.1 |
| United Kingdom | 96.6 | 201.9 | 95.7 | 183.7 | 263.6 | 389.5 | 432.4 | 460.5 | 540.5 | 474.7 |
| United States | 88.8 | 178.2 | 139.5 | 178.9 | 203.8 | 293.3 | 327.1 | 360.1 | 573.4 | 371.0 |
| OECD Europe | 94.8 e | 185.5 e | 133.5 e | 191.9 e | 245.0 e | 322.3 e | 407.1 e | 512.2 | 694.7 | .. |
| OECD | 93.8 e | 195.4 e | 144.1 e | 171.7 e | 203.0 e | 253.7 e | 304.7 e | 329.1 | 536.5 | .. |

Source: IEA/OECD Energy Prices & Taxes.

Note: Prices are in current US dollars.

Table 3.13. Steam coal prices for electricity generation in US dollars/tonne

| | 1978 | 1980 | 1990 | 2000 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|--------|--------|--------|-------|-------|-------|-------|-------|--------|--------|
| Australia | 10.21 | 13.65 | 27.39 | .. | .. | .. | .. | .. | .. | .. |
| Austria | 163.51 | 167.07 | 76.45 | 53.76 | 81.28 | 87.52 | 92.75 | 96.24 | 122.13 | 120.38 |
| Belgium | 40.47 | 47.67 | 45.45 | 32.76 | 72.46 | 80.35 | 63.24 | 75.54 | 130.54 | 76.84 |
| Canada | 32.98 | 42.32 | 53.12 | 17.88 | 20.32 | 24.51 | 26.28 | 27.83 | .. | .. |
| Czech Republic | 3.75 | 4.20 | 7.47 | 7.97 | c | c | c | c | c | c |
| Denmark | .. | 46.53 | .. | .. | .. | .. | .. | .. | .. | .. |
| Finland | 45.02 | 67.70 | 62.95 | 38.64 | 67.00 | 72.06 | 74.27 | 83.72 | 142.92 | 97.08 |
| France | .. | 49.96 | 50.88 | 37.25 | 63.55 | 74.89 | 72.88 | 83.86 | 136.12 | 113.94 |
| Germany | 82.94 | 98.85 | 140.21 | 42.41 | 70.00 | 79.74 | 77.95 | 90.26 | 152.57 | 110.10 |
| Greece | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Hungary | .. | 11.44 | 26.89 | c | c | c | c | c | c | c |
| Ireland | .. | .. | 55.85 | 30.31 | 67.24 | 70.09 | 61.25 | 83.45 | 99.46 | 113.73 |
| Italy | 36.60 | 50.81 | 59.98 | c | 61.09 | 72.72 | 67.92 | 84.99 | 140.06 | 102.90 |
| Japan | 72.09 | 71.81 | 81.05 | 40.93 | .. | .. | .. | .. | .. | .. |
| Korea | .. | .. | .. | .. | 47.63 | 55.10 | 51.61 | 60.31 | 90.97 | 82.54 |
| Luxembourg | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Mexico | .. | 21.83 | 31.50 | 31.82 | 37.14 | 40.97 | 42.35 | 45.92 | 52.41 | 51.11 |
| Netherlands | 40.99 | 63.99 | 71.37 | .. | .. | .. | .. | .. | .. | .. |
| New Zealand | c | c | c | c | c | c | c | c | c | c |
| Norway | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Poland | .. | 2.26 | 11.39 | 28.23 | 39.95 | 47.55 | 51.42 | 57.74 | 79.23 | 80.98 |
| Portugal | 27.26 | 38.71 | 51.37 | 30.24 | 57.49 | 67.60 | 58.30 | 76.41 | 141.29 | 81.39 |
| Slovak Republic | 3.75 | 4.20 | 7.52 | .. | .. | .. | .. | .. | .. | .. |
| Spain | 33.47 | 54.80 | .. | .. | .. | .. | .. | .. | .. | .. |
| Sweden | 47.60 | 87.49 | .. | .. | .. | .. | .. | .. | .. | .. |
| Switzerland | x | x | x | x | x | x | x | x | x | x |
| Turkey | .. | 14.25 | 9.10 | 14.41 | 25.90 | 25.22 | 24.82 | 27.75 | 32.35 | 32.12 |
| United Kingdom | 42.14 | 74.01 | 77.74 | 44.43 | 59.75 | 65.57 | 70.04 | 82.37 | 120.07 | 84.86 |
| United States | 26.11 | 31.72 | 33.57 | 27.46 | 30.92 | 35.30 | 38.76 | 40.48 | 47.35 | 50.53 |
| OECD Europe | 46.98 | 50.57 | 60.92 | 33.09 | 57.06 | 64.05 | 64.47 | 74.52 | 113.46 | .. |
| OECD | 31.64 | 38.28 | 42.23 | 29.12 | 36.99 | 41.97 | 44.63 | 48.70 | 61.66 | .. |

Table 3.14. Steam coal prices for electricity generation in US dollars/toe

| | 1978 | 1980 | 1990 | 2000 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| Australia | 15.5 | 20.7 | 41.5 | .. | .. | .. | .. | .. | .. | .. |
| Austria | 247.4 | 252.8 | 115.7 | 81.3 | 123.0 | 132.4 | 140.3 | 145.6 | 184.8 | 182.1 |
| Belgium | 75.8 | 89.3 | 85.1 | 61.4 | 135.7 | 150.5 | 118.5 | 141.5 | 244.6 | 144.0 |
| Canada | 54.1 | 69.4 | 87.2 | 29.3 | 33.3 | 40.2 | 43.1 | 45.7 | .. | .. |
| Czech Republic | 14.7 | 16.5 | 29.3 | 31.3 | c | c | c | c | c | c |
| Denmark | .. | 79.8 | .. | .. | .. | .. | .. | .. | .. | .. |
| Finland | 73.9 | 111.1 | 103.4 | 63.4 | 110.0 | 118.3 | 121.9 | 137.4 | 234.6 | 159.4 |
| France | .. | 80.4 | 81.9 | 60.0 | 102.3 | 120.6 | 117.4 | 135.0 | 219.2 | 183.5 |
| Germany | 120.0 | 143.0 | 202.8 | 61.3 | 101.2 | 115.3 | 112.7 | 130.5 | 220.7 | 159.2 |
| Greece | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Hungary | .. | 48.1 | 129.4 | c | c | c | c | c | c | c |
| Ireland | .. | .. | 90.2 | 48.9 | 108.6 | 113.2 | 98.9 | 134.7 | 160.6 | 183.6 |
| Italy | 59.0 | 82.0 | 96.7 | c | 100.2 | 119.2 | 113.2 | 144.0 | 241.5 | 174.4 |
| Japan | 129.4 | 128.9 | 145.5 | 73.5 | .. | .. | .. | .. | .. | .. |
| Korea | .. | .. | .. | .. | 72.2 | 83.5 | 78.2 | 91.4 | 137.8 | 125.1 |
| Luxembourg | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Mexico | .. | 47.7 | 68.9 | 69.6 | 81.2 | 89.6 | 92.6 | 100.4 | 114.6 | 111.7 |
| Netherlands | 58.6 | 91.4 | 102.0 | .. | .. | .. | .. | .. | .. | .. |
| New Zealand | c | c | c | c | c | c | c | c | c | c |
| Norway | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Poland | .. | 4.7 | 24.3 | 55.5 | 78.4 | 93.1 | 99.6 | 113.2 | 157.4 | 160.9 |
| Portugal | 44.7 | 63.4 | 84.1 | 49.5 | 94.2 | 110.7 | 95.5 | 125.2 | 231.4 | 133.3 |
| Slovak Republic | 6.1 | 6.9 | 12.3 | .. | .. | .. | .. | .. | .. | .. |
| Spain | 60.9 | 99.6 | .. | .. | .. | .. | .. | .. | .. | .. |
| Sweden | 71.4 | 131.3 | .. | .. | .. | .. | .. | .. | .. | .. |
| Switzerland | x | x | x | x | x | x | x | x | x | x |
| Turkey | .. | 71.3 | 45.5 | 72.1 | 129.5 | 126.1 | 124.1 | 138.7 | 161.7 | 160.6 |
| United Kingdom | 74.5 | 130.9 | 137.5 | 78.6 | 105.7 | 116.0 | 123.9 | 145.7 | 212.4 | 150.1 |
| United States | 42.8 | 52.0 | 55.0 | 45.0 | 50.7 | 57.9 | 63.5 | 66.4 | 77.6 | 82.8 |
| OECD Europe | 77.2 | 84.9 | 102.3 | 61.6 | 100.2 | 112.8 | 114.3 | 133.5 | 201.4 | .. |
| OECD | 52.0 | 63.5 | 70.2 | 49.4 | 61.6 | 69.9 | 74.5 | 81.7 | 103.0 | .. |

Source: IEA/OECD *Energy Prices & Taxes*.

Note: Prices are in current US dollars.

**Table 3.15. Natural gas prices for electricity generation in US dollars/10⁷ kcal
(gross calorific value basis)**

| | 1978 | 1980 | 1990 | 2000 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Australia | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Austria | 95.45 | 211.91 | 148.60 | .. | .. | .. | .. | .. | .. | .. |
| Belgium | 84.11 | 158.30 | 123.56 | c | c | c | c | c | c | c |
| Canada | 44.26 | 42.29 | 62.87 | 134.75 | 171.88 | 225.28 | 218.74 | 265.83 | .. | .. |
| Czech Republic | .. | .. | 120.95 | 146.23 | .. | .. | .. | .. | .. | .. |
| Denmark | c | c | c | c | c | c | c | c | c | c |
| Finland | 100.87 | 203.16 | 123.59 | 113.20 | 145.56 | 165.41 | 223.04 | 240.53 | 340.08 | 302.19 |
| France | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Germany | 78.04 | 126.75 | 158.09 | 153.44 | .. | .. | .. | .. | .. | .. |
| Greece | .. | .. | .. | c | c | c | c | c | c | c |
| Hungary | .. | 66.00 | 98.35 | 99.87 | 251.35 | 285.86 | 391.89 | 494.11 | 623.68 | 513.83 |
| Ireland | .. | .. | 116.97 | 99.05 | c | c | c | c | c | c |
| Italy | 81.71 | 173.10 | 116.87 | c | c | c | c | c | c | c |
| Japan | 93.99 | 195.54 | 167.13 | .. | .. | .. | .. | .. | .. | .. |
| Korea | .. | .. | .. | .. | 292.82 | 366.94 | 477.14 | 489.71 | 675.59 | 452.66 |
| Luxembourg | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Mexico | 13.66 | 17.87 | 87.93 | 150.03 | 274.99 | 363.77 | 339.58 | 316.28 | 422.89 | 198.09 |
| Netherlands | 79.05 | 163.19 | 132.72 | .. | .. | .. | .. | .. | .. | .. |
| New Zealand | c | c | c | c | c | c | c | c | c | c |
| Norway | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Poland | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Portugal | x | x | x | .. | 242.04 | 291.84 | 355.06 | 371.43 | 519.27 | 379.37 |
| Slovak Republic | 57.64 | 68.35 | 99.00 | 101.41 | 242.97 | 287.50 | 378.99 | 420.29 | 622.70 | 510.33 |
| Spain | 77.38 | 164.08 | 152.22 | 165.00 | .. | .. | .. | .. | .. | .. |
| Sweden | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Switzerland | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Turkey | .. | .. | 141.71 | 168.52 | 227.95 | 301.19 | 349.35 | 438.86 | 571.99 | 466.28 |
| United Kingdom | 68.03 | 119.80 | c | 104.04 | 162.15 | 214.58 | 274.81 | 287.67 | 350.05 | 254.26 |
| United States | 56.43 | 87.26 | 92.11 | 172.86 | 235.72 | 325.89 | 274.59 | 281.51 | 362.42 | 185.93 |
| OECD Europe | 79.33 | 136.44 | 134.78 | 126.74 | 186.75 | 245.38 | 306.89 | 351.22 | 444.84 | .. |
| OECD | 64.46 | 108.35 | 116.17 | 158.57 | 229.66 | 311.60 | 294.83 | 308.19 | 402.11 | .. |

**Table 3.16. Natural gas prices for electricity generation in US dollars/toe
(net calorific value basis)**

| | 1978 | 1980 | 1990 | 2000 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Australia | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Austria | 106.1 | 235.5 | 165.1 | .. | .. | .. | .. | .. | .. | .. |
| Belgium | 93.5 | 175.9 | 137.3 | c | c | c | c | c | c | c |
| Canada | 49.2 | 47.0 | 69.9 | 149.7 | 191.0 | 250.3 | 243.0 | 295.4 | .. | .. |
| Czech Republic | .. | .. | 134.4 | 162.5 | .. | .. | .. | .. | .. | .. |
| Denmark | c | c | c | c | c | c | c | c | c | c |
| Finland | 112.1 | 225.7 | 137.3 | 125.8 | 161.7 | 183.8 | 247.8 | 267.3 | 377.9 | 335.8 |
| France | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Germany | 86.7 | 140.8 | 175.7 | 170.5 | .. | .. | .. | .. | .. | .. |
| Greece | .. | .. | .. | c | c | c | c | c | c | c |
| Hungary | .. | 73.3 | 109.3 | 111.0 | 279.3 | 317.6 | 435.4 | 549.0 | 693.0 | 570.9 |
| Ireland | .. | .. | 130.0 | 110.1 | c | c | c | c | c | c |
| Italy | 90.8 | 192.3 | 129.9 | c | c | c | c | c | c | c |
| Japan | 104.4 | 217.3 | 185.7 | .. | .. | .. | .. | .. | .. | .. |
| Korea | .. | .. | .. | .. | 325.4 | 407.7 | 530.2 | 544.1 | 750.7 | 503.0 |
| Luxembourg | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Mexico | 15.2 | 19.9 | 97.7 | 166.7 | 305.5 | 404.2 | 377.3 | 351.4 | 469.9 | 220.1 |
| Netherlands | 87.8 | 181.3 | 147.5 | .. | .. | .. | .. | .. | .. | .. |
| New Zealand | c | c | c | c | c | c | c | c | c | c |
| Norway | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Poland | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Portugal | x | x | x | .. | 268.9 | 324.3 | 394.5 | 412.7 | 577.0 | 421.5 |
| Slovak Republic | 64.0 | 75.9 | 110.0 | 112.7 | 270.0 | 319.4 | 421.1 | 467.0 | 691.9 | 567.0 |
| Spain | 86.0 | 182.3 | 169.1 | 183.3 | .. | .. | .. | .. | .. | .. |
| Sweden | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Switzerland | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Turkey | .. | .. | 157.5 | 187.2 | 253.3 | 334.7 | 388.2 | 487.6 | 635.5 | 518.1 |
| United Kingdom | 75.6 | 133.1 | c | 115.6 | 180.2 | 238.4 | 305.3 | 319.6 | 388.9 | 282.5 |
| United States | 62.7 | 97.0 | 102.3 | 192.1 | 261.9 | 362.1 | 305.1 | 312.8 | 402.7 | 206.6 |
| OECD Europe | 88.1 | 151.6 | 149.8 | 140.8 | 207.5 | 272.6 | 341.0 | 390.2 | 494.3 | .. |
| OECD | 71.6 | 120.4 | 129.1 | 176.2 | 255.2 | 346.2 | 327.6 | 342.4 | 446.8 | .. |

Source: IEA/OECD Energy Prices & Taxes.

Note: Prices are in current US dollars.

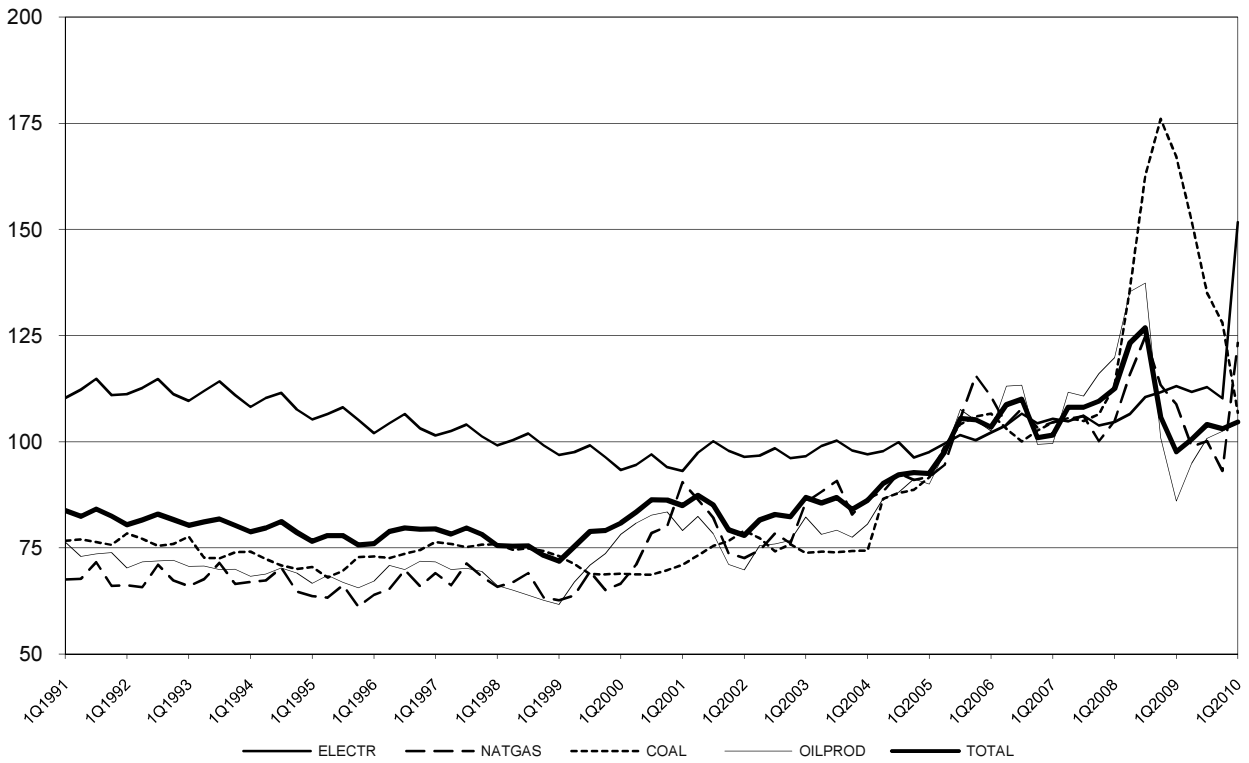
Table 3.17. US dollar exchange rates in national currencies

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Australia | 0.8726 | 0.8771 | 1.2818 | 1.7265 | 1.3128 | 1.3279 | 1.1952 | 1.1975 | 1.2822 |
| Austria | 1.056 | 0.94 | 0.826 | 1.085 | 0.805 | 0.797 | 0.73 | 0.684 | 0.7198 |
| Belgium | 0.781 | 0.725 | 0.829 | 1.085 | 0.805 | 0.797 | 0.73 | 0.684 | 0.7198 |
| Canada | 1.1407 | 1.1694 | 1.1671 | 1.4851 | 1.2117 | 1.1343 | 1.0742 | 1.0676 | 1.1414 |
| Czech Republic | 14.4 | 14.27 | 17.95 | 38.637 | 23.955 | 22.585 | 20.289 | 17.078 | 19.05 |
| Denmark | 5.5111 | 5.6358 | 6.1864 | 8.088 | 5.9961 | 5.943 | 5.4428 | 5.099 | 5.3594 |
| Finland | 0.691 | 0.626 | 0.643 | 1.085 | 0.805 | 0.797 | 0.73 | 0.684 | 0.7198 |
| France | 0.688 | 0.644 | 0.83 | 1.085 | 0.805 | 0.797 | 0.73 | 0.684 | 0.7198 |
| Germany | 1.027 | 0.929 | 0.826 | 1.085 | 0.805 | 0.797 | 0.73 | 0.684 | 0.7198 |
| Greece | 0.108 | 0.125 | 0.464 | 1.069 | 0.805 | 0.797 | 0.73 | 0.684 | 0.7198 |
| Hungary | 37.91 | 32.53 | 63.21 | 282.29 | 199.53 | 210.4 | 183.59 | 172.46 | 202.06 |
| Ireland | 0.662 | 0.618 | 0.768 | 1.085 | 0.805 | 0.797 | 0.73 | 0.684 | 0.7198 |
| Italy | 0.438 | 0.442 | 0.619 | 1.085 | 0.805 | 0.797 | 0.73 | 0.684 | 0.7198 |
| Japan | 210.44 | 226.7 | 144.8 | 107.83 | 110.1 | 116.35 | 117.76 | 103.39 | 93.57 |
| Korea | 484 | 607.45 | 708 | 1130.64 | 1024.23 | 951.82 | 929.46 | 1100.86 | 1274.95 |
| Luxembourg | 0.781 | 0.725 | 0.829 | 1.085 | 0.805 | 0.797 | 0.73 | 0.684 | 0.7198 |
| Mexico | 0.0227 | 0.0229 | 2.8407 | 9.4531 | 10.8897 | 10.9031 | 10.9286 | 11.1532 | 13.5042 |
| Netherlands | 0.982 | 0.902 | 0.826 | 1.085 | 0.805 | 0.797 | 0.73 | 0.684 | 0.7198 |
| New Zealand | 0.9609 | 1.0272 | 1.6779 | 2.2047 | 1.4208 | 1.5416 | 1.361 | 1.4255 | 1.6 |
| Norway | 5.2415 | 4.9369 | 6.2583 | 8.7967 | 6.4414 | 6.4148 | 5.8584 | 5.6478 | 6.2901 |
| Poland | 0.00033 | 0.00442 | 0.95 | 4.3457 | 3.234 | 3.1035 | 2.7653 | 2.4101 | 3.1191 |
| Portugal | 0.219 | 0.249 | 0.71 | 1.085 | 0.805 | 0.797 | 0.73 | 0.684 | 0.7198 |
| Slovak Republic | 0.48 | 0.47 | 0.60 | 1.54 | 1.03 | 0.98 | 0.82 | 0.71 | 0.72 |
| Spain | 0.461 | 0.431 | 0.613 | 1.085 | 0.805 | 0.797 | 0.73 | 0.684 | 0.7198 |
| Sweden | 4.517 | 4.229 | 5.918 | 9.161 | 7.472 | 7.373 | 6.758 | 6.597 | 7.653 |
| Switzerland | 1.7883 | 1.6761 | 1.3889 | 1.6879 | 1.2459 | 1.2532 | 1.1999 | 1.0836 | 1.0861 |
| Turkey | 0.00002 | 0.00008 | 0.00261 | 0.62522 | 1.34129 | 1.42997 | 1.29992 | 1.29878 | 1.54687 |
| United Kingdom | 0.5214 | 0.4302 | 0.563 | 0.6606 | 0.5501 | 0.5434 | 0.4997 | 0.5461 | 0.6413 |
| United States | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

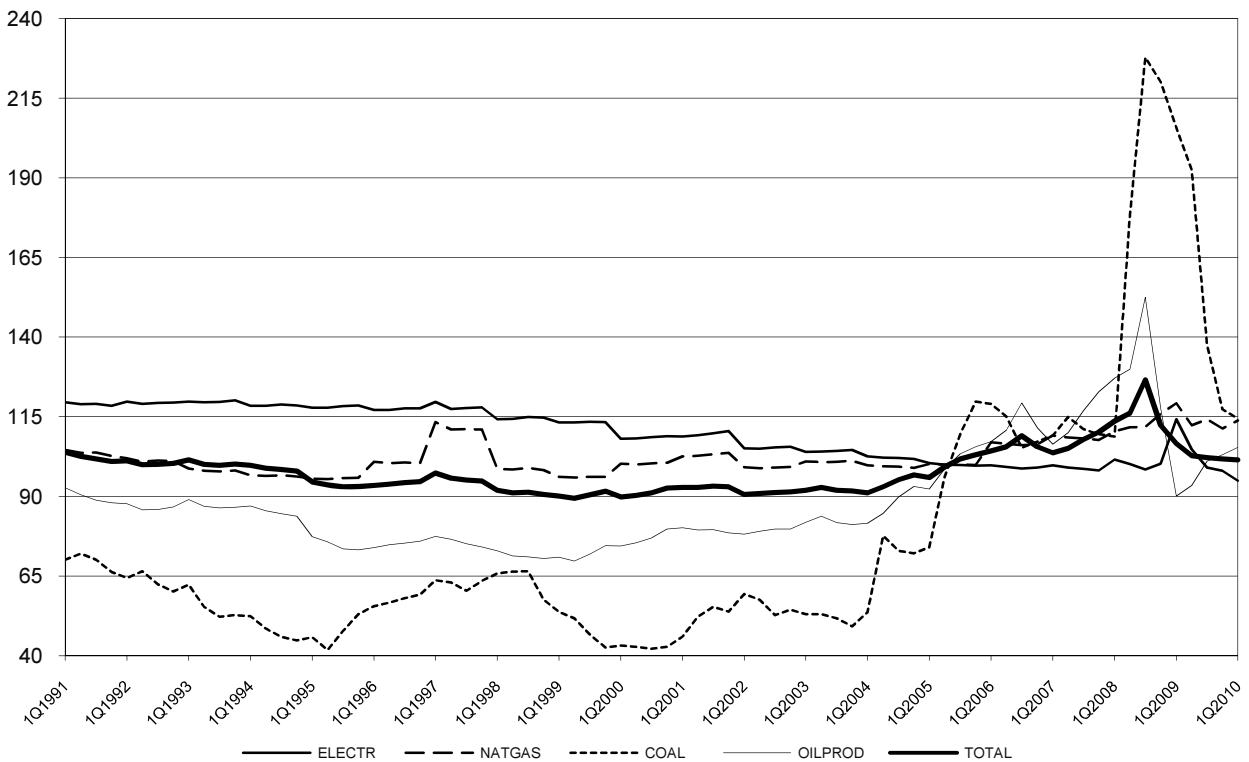
Source: IEA/OECD *Energy Prices & Taxes*.

Note: For information on the euro conversion rates before 2000 please see notes in the introductory information.

**Figure 3.1. OECD - indices of real energy end-use prices
(2005=100)**



**Figure 3.2. Japan - indices of real energy end-use prices
(2005=100)**



Source: IEA/OECD Energy Prices & Taxes.

Figure 3.3. United States - indices of real energy end-use prices (2005=100)

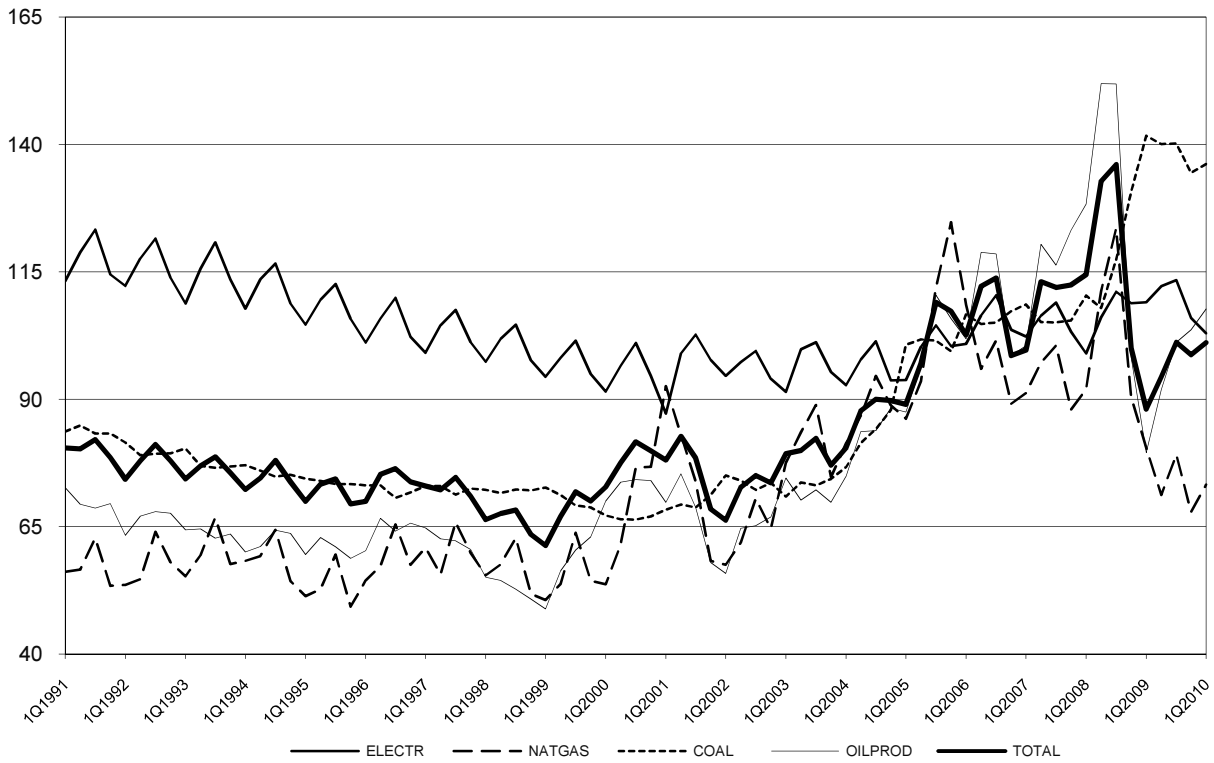
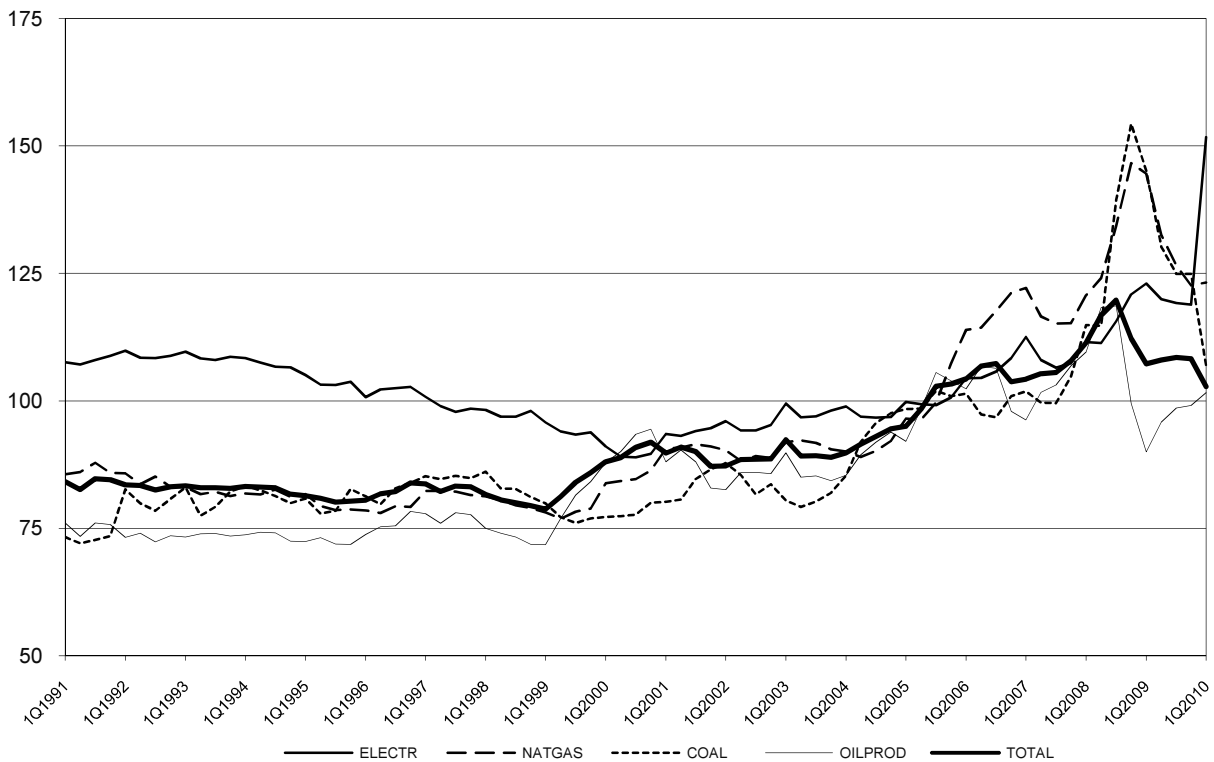


Figure 3.4. OECD Europe - indices of real energy end-use prices (2005=100)



Source: IEA/OECD Energy Prices & Taxes.

PART IV

DETAILED OECD ELECTRICITY AND HEAT DATA

DIRECTORY OF PART IV TABLES

Part IV of *Electricity Information* contains detailed statistical information on electricity and heat for the 30 member countries of the OECD and for OECD/IEA regional aggregates. The tables of regional aggregates are presented before the country tables, which are set out in alphabetical order. As data for some countries were not available for all years (particularly the early years), these aggregate regional table should be used with caution.

A full list of the figures and the tables is set out below. It should be noted that tables are not shown in cases where the data are not applicable. This is particularly the case for tables 13 and 14 which do not appear for countries that do not report electricity trade. However, there are other tables for which the data are not applicable either, and so do not appear.

Figures:

1. Total final consumption by fuel
2. Electricity generation by fuel
3. Electricity consumption by sector
4. Electricity indicators
 - Elec./TFC: relative contribution of electricity to total final energy consumption (1973=100).
 - Elec./GDP: electricity intensity of economic activity (1973=100).
 - Prod./cons.: electricity supply self-sufficiency = Net production / (net production + imports – exports)
 - Elec./population: per capita electricity consumption (1973=100).
 - CO₂/elec.&heat: CO₂ emissions per electricity and heat output (1973=100).
5. Total final electricity consumption by sector

Tables:

1. Energy consumption, GDP and population.
2. Total primary energy supply (TPES) by source.
3. Summary electricity production and consumption.
4. Electricity production and generation by source.
5. Net electricity production by autoproducers
6. Heat production in transformation processes.
- 7A. Fuel use for electricity and heat production.
- 7B. Imputed energy used for electricity and heat production.
8. Electricity production and fuel inputs in electricity plants.
9. Electricity production and heat produced for sale and fuel inputs in CHP plants.
10. Heat produced for sale, and fuel inputs in heat plants.
11. Final consumption of energy by source.
12. Total final industry consumption of energy and electricity.
13. Electricity imports by origin.
14. Electricity exports by destination.
15. Net maximum electricity generating capacity on 31 December.
16. Fuel prices to end-users.

Interpreting energy data and comparing statistics between countries is made difficult by differences in definitions used by countries in the collection and reporting of data. In the section *Introductory Information* such differences are explained. The conventions used by the Secretariat in presenting energy data are also reported in the *Introductory Information*. In particular, readers are strongly advised to read the country notes for historical data. Conversion factors and calorific values are also included for reference.

OECD TOTAL

Figure 1. Total final consumption by fuel

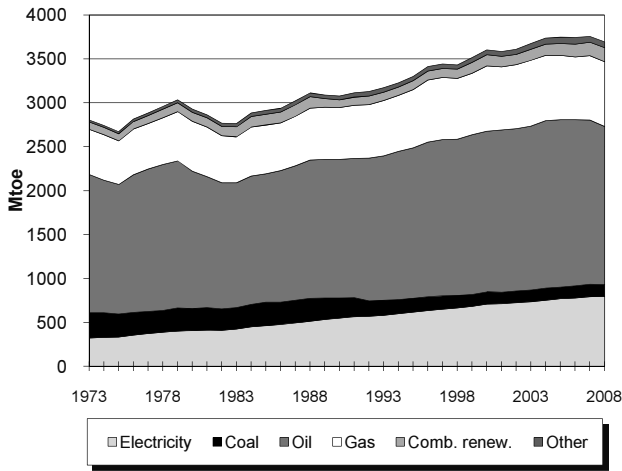


Figure 2. Electricity generation by fuel

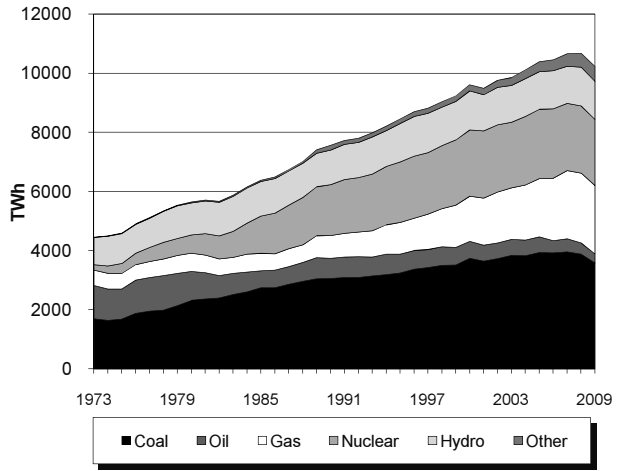


Figure 3. Electricity consumption by sector

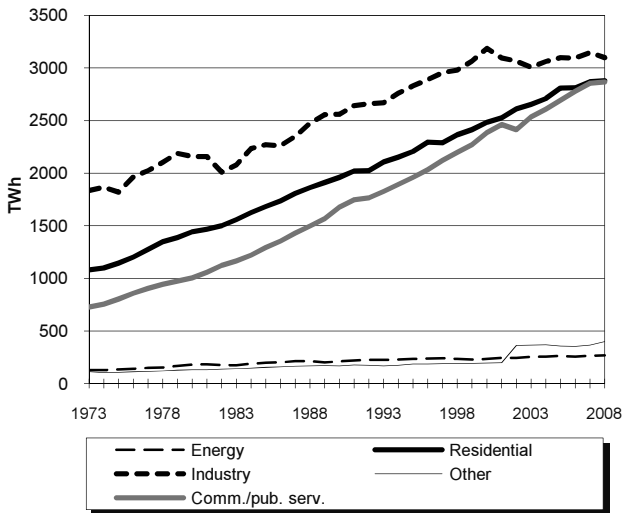


Figure 4. Electricity indicators

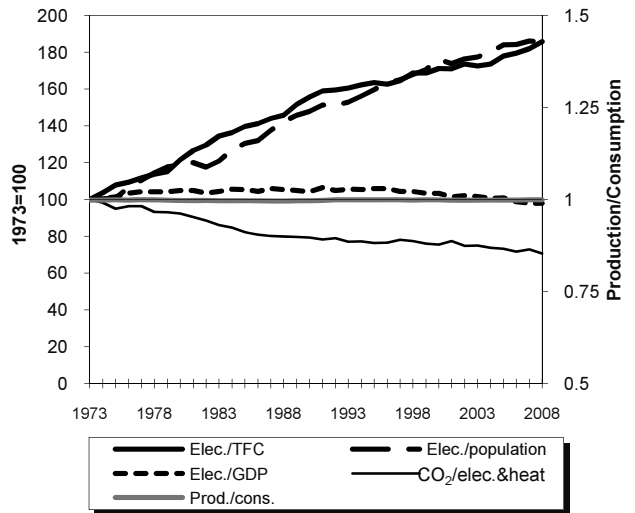
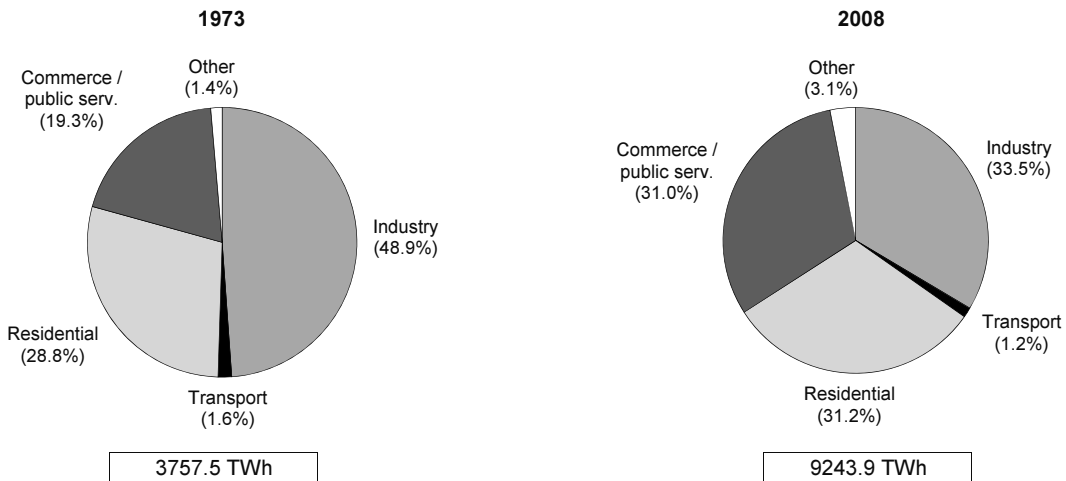


Figure 5. Total final electricity consumption by sector



OECD TOTAL

1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 3724.32 | 4050.96 | 4479.10 | 5233.86 | 5490.13 | 5422.43 | 5171.52 | 1.1 | 0.8 |
| GDP (billion 2000 USD) | 12210.47 | 14785.98 | 20022.35 | 25979.02 | 30371.41 | 30503.68 | 29768.97 | 3.0 | 2.1 |
| TPES/GDP ⁽¹⁾ | 0.31 | 0.27 | 0.22 | 0.20 | 0.18 | 0.18 | 0.17 | -1.8 | -1.3 |
| Population (millions) | 902.32 | 964.86 | 1042.73 | 1126.77 | 1181.86 | 1189.82 | 1195.86 | 0.9 | 0.7 |
| TPES/population ⁽²⁾ | 4.13 | 4.20 | 4.30 | 4.64 | 4.65 | 4.56 | 4.32 | 0.2 | 0.0 |
| TPES/GDP (2000 = 100) | 151 | 136 | 111 | 100 | 90 | 88 | 86 | -1.8 | -1.3 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 97 | 101 | 100 | 100 | 96 | 95 | .. | 0.2 | .. |
| Ele.TFC/population ⁽⁴⁾ | 4166 | 4914 | 6108 | 7327 | 7821 | 7772 | .. | 2.3 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 4454.04 | 5644.07 | 7560.15 | 9614.40 | 10657.75 | 10676.11 | 10229.60 | 3.2 | 1.6 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 3724.32 | 4050.96 | 4479.10 | 5233.86 | 5490.13 | 5422.43 | 5171.52 | 1.1 | 0.8 |
| Coal | 843.35 | 965.02 | 1067.85 | 1084.15 | 1155.31 | 1128.09 | 1018.77 | 1.4 | -0.2 |
| Oil | 1954.76 | 1932.73 | 1849.84 | 2089.89 | 2102.69 | 2035.40 | 1921.90 | -0.3 | 0.2 |
| Gas | 705.83 | 777.24 | 839.63 | 1149.93 | 1262.34 | 1270.98 | 1250.31 | 1.0 | 2.1 |
| Comb. renew & waste | 86.04 | 108.83 | 140.85 | 174.75 | 220.78 | 229.46 | 229.84 | 2.9 | 2.6 |
| Nuclear | 49.22 | 162.25 | 450.01 | 584.94 | 592.38 | 592.32 | 582.47 | 13.9 | 1.4 |
| Geothermal | 6.08 | 10.19 | 26.38 | 30.36 | 30.28 | 30.63 | 31.55 | 9.0 | 0.9 |
| Solar, wind, tide ⁽¹⁾ | 0.05 | 0.07 | 1.87 | 5.81 | 17.15 | 21.12 | 24.34 | 24.0 | 14.5 |
| Hydro | 78.46 | 93.28 | 100.60 | 113.35 | 108.41 | 112.87 | 110.68 | 1.5 | 0.5 |
| Net electricity imports ⁽²⁾ | 0.54 | 1.35 | 2.01 | 0.27 | 0.27 | 0.95 | 1.05 | 8.0 | -3.4 |
| Heat | - | - | 0.06 | 0.41 | 0.51 | 0.61 | 0.60 | - | 13.1 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net electricity imports between OECD and non-OECD countries.

Note: Please refer to definitions in the introductory information.

OECD TOTAL

3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 4467.3 | 5659.8 | 7603.2 | 9682.9 | 10465.5 | 10731.4 | 10744.9 | 10295.3 |
| Nuclear | 188.5 | 620.7 | 1724.8 | 2244.4 | 2345.7 | 2272.6 | 2272.4 | 2234.6 |
| Hydro | 925.6 | 1100.4 | 1212.8 | 1386.5 | 1344.5 | 1334.2 | 1381.2 | 1352.6 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 13.2 | 15.7 | 43.1 | 68.5 | 75.3 | 73.7 | 68.8 | 65.7 |
| Geothermal | 6.6 | 11.1 | 28.6 | 33.0 | 37.6 | 40.3 | 41.0 | 41.5 |
| Solar | - | - | 0.7 | 1.3 | 4.2 | 7.7 | 12.7 | 19.7 |
| Tide, wave, ocean | 0.6 | 0.5 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 |
| Wind | - | 0.0 | 3.8 | 28.6 | 93.7 | 149.7 | 187.9 | 215.6 |
| Combustible fuels | 3346.0 | 3927.1 | 4631.7 | 5987.4 | 6631.3 | 6922.6 | 6845.9 | 6427.5 |
| <i>Coal</i> | 1694.0 | 2317.5 | 3057.1 | 3739.3 | 3937.4 | 3960.0 | 3882.5 | 3578.0 |
| <i>Oil</i> | 1125.2 | 978.7 | 682.7 | 575.6 | 525.7 | 437.2 | 378.2 | 309.9 |
| <i>Gas</i> | 520.2 | 617.7 | 769.1 | 1526.1 | 1973.9 | 2309.6 | 2364.7 | 2313.9 |
| <i>Comb. renew. & waste</i> | 6.6 | 13.3 | 122.8 | 146.5 | 194.3 | 215.7 | 220.5 | 225.6 |
| Other (e.g. fuel cells) | - | - | 0.2 | 1.2 | 7.8 | 3.7 | 3.3 | 3.2 |
| - Own use by power plant | 219.2 | 293.9 | 407.0 | 491.8 | 484.5 | 447.1 | 490.1 | .. |
| Net production | 4248.1 | 5365.9 | 7196.3 | 9191.1 | 9981.0 | 10284.3 | 10254.7 | .. |
| Nuclear | .. | 580.1 | 1630.5 | 2127.7 | 2240.3 | 2170.1 | 2169.2 | .. |
| Hydro | .. | 1087.2 | 1200.0 | 1369.7 | 1330.7 | 1317.9 | 1363.9 | .. |
| Geothermal | .. | 9.7 | 27.1 | 31.4 | 34.3 | 36.9 | 37.6 | .. |
| Solar | .. | - | 0.7 | 1.2 | 4.2 | 7.6 | 12.5 | .. |
| Tide, wave, ocean | .. | 0.5 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | .. |
| Wind | .. | 0.0 | 3.8 | 28.5 | 93.5 | 149.2 | 187.1 | .. |
| Combustible fuels | .. | 3621.7 | 4333.4 | 5630.8 | 6270.3 | 6598.5 | 6480.7 | .. |
| Other (e.g. fuel cells) | .. | - | 0.2 | 1.2 | 7.2 | 3.5 | 3.1 | .. |
| - Used for heat pumps | - | - | 0.0 | 2.3 | 2.0 | 1.8 | 1.8 | 1.8 |
| - Used for electric boilers | - | - | 0.8 | 3.8 | 2.3 | 2.3 | 2.0 | 2.0 |
| - Used for pumped storage | 19.1 | 25.5 | 65.7 | 92.4 | 98.8 | 97.6 | 90.0 | 82.2 |
| + Imports | 87.7 | 140.3 | 255.3 | 342.7 | 412.0 | 408.6 | 401.0 | 372.3 |
| - Exports | 81.4 | 124.6 | 231.9 | 339.6 | 394.7 | 405.5 | 389.9 | 360.1 |
| Electrical energy supplied | 4235.2 | 5356.1 | 7153.2 | 9095.8 | 9895.3 | 10185.7 | 10172.0 | .. |
| - Transmission & distr. losses | 349.1 | 437.7 | 579.5 | 616.1 | 678.3 | 679.7 | 659.4 | .. |
| - Statistical difference | - | -0.0 | -4.8 | -7.1 | -1.2 | -0.5 | -0.4 | .. |
| Total consumption | 3886.2 | 4918.4 | 6578.5 | 8486.8 | 9218.2 | 9506.5 | 9513.0 | .. |
| - Energy industry consumption ⁽²⁾ | 128.7 | 179.1 | 211.5 | 233.8 | 261.2 | 266.9 | 269.1 | .. |
| Final consumption | 3757.5 | 4739.4 | 6367.1 | 8253.0 | 8956.9 | 9239.6 | 9243.9 | .. |
| Industry | 1836.1 | 2159.6 | 2559.0 | 3187.0 | 3097.2 | 3148.4 | 3098.9 | .. |
| Transport | 61.5 | 70.3 | 89.6 | 106.6 | 113.5 | 111.9 | 112.5 | .. |
| Commercial & publ. serv. | 726.8 | 1004.7 | 1677.9 | 2387.8 | 2695.1 | 2853.8 | 2866.9 | .. |
| Residential | 1081.9 | 1443.1 | 1960.7 | 2484.0 | 2808.5 | 2870.0 | 2879.7 | .. |
| Agriculture & fishing | 44.0 | 50.6 | 69.2 | 80.9 | 85.1 | 86.5 | 91.5 | .. |
| Sector non specified | 7.2 | 11.0 | 10.7 | 6.7 | 157.5 | 169.1 | 194.3 | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

OECD TOTAL

4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual | |
|---------------------------------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|----------------|------------|
| | | | | | | | | percent change | 74-90 |
| Total gross production | 4514.09 | 5659.80 | 7603.24 | 9682.93 | 10536.35 | 10731.45 | 10744.86 | 3.3 | 1.9 |
| - Hydro pumped storage | 10.79 | 15.73 | 43.09 | 68.53 | 75.29 | 73.70 | 68.75 | 9.0 | 2.6 |
| Total generation⁽¹⁾ | 4503.30 | 5644.07 | 7560.15 | 9614.40 | 10461.06 | 10657.75 | 10676.11 | 3.3 | 1.9 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 4149.56 | 5293.34 | 6989.21 | 9044.41 | 9848.93 | 10038.42 | 10062.30 | 3.3 | 2.0 |
| - Hydro pumped storage | 10.79 | 15.73 | 43.06 | 68.44 | 75.22 | 73.65 | 68.69 | 9.0 | 2.6 |
| Total generation ⁽¹⁾ | 4138.78 | 5277.62 | 6946.15 | 8975.97 | 9773.71 | 9964.77 | 9993.62 | 3.3 | 2.0 |
| Nuclear | 237.85 | 615.44 | 1718.31 | 2243.66 | 2355.57 | 2272.64 | 2272.42 | 13.2 | 1.6 |
| Hydro | 938.00 | 1005.32 | 1086.94 | 1252.08 | 1229.92 | 1207.37 | 1255.99 | 0.9 | 0.8 |
| Geothermal | 6.97 | 11.07 | 21.39 | 32.70 | 37.80 | 40.06 | 40.71 | 7.3 | 3.6 |
| Solar, wind, tide ⁽²⁾ | 0.60 | 0.51 | 1.42 | 29.47 | 114.32 | 146.72 | 186.76 | 5.6 | 31.1 |
| Coal | 1501.81 | 2184.06 | 2898.94 | 3573.50 | 3787.88 | 3821.83 | 3749.86 | 4.2 | 1.4 |
| Oil | 950.24 | 871.78 | 595.36 | 469.58 | 303.87 | 330.85 | 285.52 | -2.9 | -4.0 |
| Gas | 501.26 | 585.31 | 617.32 | 1324.84 | 1851.08 | 2044.77 | 2093.09 | 1.3 | 7.0 |
| Comb. renew. & waste | 2.06 | 4.13 | 6.48 | 50.14 | 93.26 | 100.54 | 109.27 | 7.4 | 17.0 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 364.52 | 366.45 | 614.04 | 638.53 | 687.42 | 693.03 | 682.56 | 3.3 | 0.6 |
| - Hydro pumped storage | - | - | 0.04 | 0.10 | 0.07 | 0.05 | 0.06 | - | 3.2 |
| Total generation ⁽¹⁾ | 364.52 | 366.45 | 614.00 | 638.43 | 687.35 | 692.98 | 682.50 | 3.3 | 0.6 |
| Nuclear | 4.23 | 5.23 | 6.52 | 0.71 | - | - | - | 2.7 | - |
| Hydro | 71.37 | 79.35 | 82.77 | 65.89 | 58.44 | 53.16 | 56.46 | 0.9 | -2.1 |
| Geothermal | - | 0.01 | 7.23 | 0.27 | 0.26 | 0.25 | 0.25 | - | -17.1 |
| Solar, wind, tide ⁽²⁾ | - | - | 3.90 | 2.17 | 12.67 | 14.96 | 17.63 | - | 8.7 |
| Coal | 137.55 | 133.41 | 158.12 | 165.76 | 136.26 | 138.21 | 132.63 | 0.9 | -1.0 |
| Oil | 116.33 | 106.94 | 87.37 | 106.05 | 109.09 | 106.39 | 92.63 | -1.8 | 0.3 |
| Gas | 29.78 | 32.39 | 151.80 | 201.23 | 259.43 | 264.83 | 271.65 | 10.7 | 3.3 |
| Comb. renew. & waste | 5.27 | 9.13 | 116.28 | 96.35 | 111.21 | 115.18 | 111.25 | 21.3 | -0.2 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

OECD TOTAL

5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---|
| Total | 283861 e | 277427 e | 581757 e | 619017 e | 660135 e | 661028 e | 658875 e | 0.7 |
| Total energy | 12901 | 12004 | 47914 e | 44046 e | 116943 e | 119458 | 118302 e | 5.1 |
| Coal mines | - | - | 1 | 3102 e | 12898 | 14298 | 11610 | 68.2 |
| Oil and gas extraction | - | - | 857 | 1499 | 12219 | 12545 | 12593 | 16.1 |
| Patent fuel plants | - | - | - | - | 29 | 26 | 27 | - |
| Coke ovens | - | - | - | 481 e | 468 | 521 | 576 | - |
| Gas works | - | - | - | - | 1504 | 1716 | 1607 | - |
| BKB | - | - | 13 | 34 | 36 | 28 | 39 | 6.3 |
| Oil refineries | 30 | 27 | 7887 | 28335 e | 68833 e | 69988 | 69397 e | 12.8 |
| Energy non specified/other | 12871 | 11977 | 39156 e | 10595 e | 20956 | 20336 | 22453 e | -3.0 |
| Total industry | 224583 e | 213654 e | 450802 e | 428551 e | 456549 e | 455687 e | 442163 e | -0.1 |
| Iron and steel | 25416 e | 31657 e | 40676 e | 58050 e | 68732 | 69869 | 67618 e | 2.9 |
| Chemical and petrochemical | 54090 e | 65274 e | 80492 e | 88447 e | 138322 e | 136066 e | 130264 e | 2.7 |
| Non-ferrous metals | 7944 e | 14797 e | 7493 e | 19855 e | 17692 e | 18643 e | 19101 e | 5.3 |
| Non-metallic minerals | 1089 e | 2999 | 9823 | 17918 e | 19436 e | 19114 e | 18160 e | 3.5 |
| Transport equipment | 690 e | 586 e | 812 | 1338 | 2362 | 2337 | 2345 e | 6.1 |
| Machinery | 447 e | 481 | 3494 | 6150 e | 7604 e | 7839 e | 5583 e | 2.6 |
| Mining and quarrying | 40859 e | 40552 e | 21969 | 18098 | 5273 | 5917 | 6589 e | -6.5 |
| Food and tobacco | 4361 e | 5459 e | 6284 e | 14319 e | 23322 e | 23563 e | 23846 e | 7.7 |
| Pulp and printing | 12807 | 26928 | 36777 e | 65188 e | 118910 e | 120424 e | 117250 e | 6.7 |
| Wood and wood products | 2144 e | 2179 e | 2858 | 3918 e | 5227 | 5142 | 5182 e | 3.4 |
| Construction | - | - | - | 354 | 478 | 497 | 485 e | - |
| Textile and leather | 3604 e | 2140 e | 1985 | 8926 e | 7030 | 6682 | 5935 | 6.3 |
| Non specified/other industries | 71132 e | 20602 e | 238139 e | 125990 e | 42161 e | 39594 e | 39805 e | -9.5 |
| Total transport | - | - | 2854 | 4401 | 3398 | 3727 | 3721 | 1.5 |
| Rail and pipeline | - | - | - | - | 12 | 9 | 7 | - |
| Transport non specified | - | - | 2854 | 4401 | 3386 | 3718 | 3714 | 1.5 |
| Other | 46377 e | 51769 e | 80187 e | 142019 e | 83245 e | 82156 e | 94689 e | 0.9 |
| Commerce and pub. services | 29 e | 36 e | 1710 e | 12957 e | 25343 | 28286 | 29075 e | 17.0 |
| Residential | - | - | - | 82 | 686 | 868 | 977 | - |
| Agriculture and fishing | 5 | 5 | 113 | 2347 | 4828 | 6124 | 12625 | 30.0 |
| Sector non specified | 46343 e | 51728 e | 78364 e | 126633 e | 52388 e | 46878 e | 52012 e | -2.3 |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

OECD TOTAL

6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---|
| Total | 1671338 | 1947781 | 2347663 | 3165237 | 3067667 | 3045474 | 2942719 | 2.5 |
| Nuclear | .. | .. | 1706 | 5098 | 4848 | 4818 | 5520 | .. |
| Geothermal | .. | .. | 8076 | 10173 | 10337 | 12303 | 12393 | .. |
| Coal | .. | .. | 882309 | 836669 | 866117 | 852065 | 817969 | .. |
| Oil | .. | .. | 215990 | 309111 | 304200 | 272841 | 236691 | .. |
| Gas | .. | .. | 923870 | 1332513 | 1389888 | 1382235 | 1345870 | .. |
| Comb. renew. & waste | .. | .. | 269276 | 369737 | 436619 | 462511 | 470730 | .. |
| Non-spec. comb. fuels | .. | .. | - | 254724 | 3591 | 4668 | - | .. |
| Chemical processes | .. | .. | 2305 | 9267 | 8743 | 12590 | 12594 | .. |
| Heat pumps | .. | .. | 27406 | 22962 | 22252 | 22680 | 22041 | .. |
| Electric boilers | .. | .. | 12885 | 7558 | 7585 | 6844 | 7242 | .. |
| Other sources ⁽¹⁾ | .. | .. | 3840 | 7425 | 13487 | 11919 | 11669 | .. |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 1141243 | 1406895 | 1864250 | 2181827 | 2426536 | 2425293 | .. | 3.1 |
| Nuclear | .. | .. | 1706 | 5098 | 4848 | 4818 | .. | .. |
| Geothermal | .. | .. | 8076 | 10113 | 10226 | 12234 | .. | .. |
| Coal | .. | .. | 761199 | 720776 | 767608 | 761483 | .. | .. |
| Oil | .. | .. | 106073 | 117475 | 119354 | 103042 | .. | .. |
| Gas | .. | .. | 761948 | 929270 | 1160345 | 1156466 | .. | .. |
| Comb. renew. & waste | .. | .. | 185131 | 262844 | 325944 | 347809 | .. | .. |
| Non-spec. comb. fuels | .. | .. | - | 105080 | 3591 | 4668 | .. | .. |
| Chemical processes | .. | .. | - | - | - | - | .. | .. |
| Heat pumps | .. | .. | 27255 | 22832 | 22088 | 22494 | .. | .. |
| Electric boilers | .. | .. | 12862 | 7553 | 7574 | 6836 | .. | .. |
| Other sources ⁽¹⁾ | .. | .. | - | 786 | 4958 | 5443 | .. | .. |
| <u>Autoproducers</u> | | | | | | | | |
| Total | 530095 | 540886 | 483413 | 983410 | 641131 | 620181 | .. | 0.8 |
| Nuclear | .. | .. | - | - | - | - | .. | .. |
| Geothermal | .. | .. | - | 60 | 111 | 69 | .. | .. |
| Coal | .. | .. | 121110 | 115893 | 98509 | 90582 | .. | .. |
| Oil | .. | .. | 109917 | 191636 | 184846 | 169799 | .. | .. |
| Gas | .. | .. | 161922 | 403243 | 229543 | 225769 | .. | .. |
| Comb. renew. & waste | .. | .. | 84145 | 106893 | 110675 | 114702 | .. | .. |
| Non-spec. comb. fuels | .. | .. | - | 149644 | - | - | .. | .. |
| Chemical processes | .. | .. | 2305 | 9267 | 8743 | 12590 | .. | .. |
| Heat pumps | .. | .. | 151 | 130 | 164 | 186 | .. | .. |
| Electric boilers | .. | .. | 23 | 5 | 11 | 8 | .. | .. |
| Other sources ⁽¹⁾ | .. | .. | 3840 | 6639 | 8529 | 6476 | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

OECD TOTAL

7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 825.89 | 971.66 | 1126.30 | 1370.10 | 1477.30 | 1527.83 | 1491.38 | 1.8 | 1.6 |
| Coal | 447.23 | 594.17 | 749.39 | 879.39 | 923.98 | 933.32 | 904.26 | 3.1 | 1.0 |
| Oil | 255.04 | 230.17 | 149.65 | 131.33 | 94.33 | 98.36 | 82.57 | -3.1 | -3.2 |
| Gas | 120.66 | 141.71 | 175.05 | 313.41 | 398.29 | 429.46 | 435.61 | 2.2 | 5.2 |
| Comb. renew. & waste | 2.96 | 5.60 | 52.22 | 45.97 | 60.70 | 66.69 | 68.95 | 18.4 | 1.6 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 891.01 | 977.96 | 1237.11 | 1342.52 | 1395.90 | 1362.97 | .. | 1.9 |
| Coal | .. | 549.68 | 702.29 | 842.02 | 892.93 | 902.40 | 874.41 | .. | 1.2 |
| Oil | .. | 204.69 | 131.90 | 102.06 | 68.96 | 73.95 | 61.60 | .. | -4.1 |
| Gas | .. | 134.72 | 140.13 | 274.33 | 346.64 | 380.40 | 385.31 | .. | 5.8 |
| Comb. renew. & waste | .. | 1.92 | 3.64 | 18.70 | 34.00 | 39.15 | 41.64 | .. | 14.5 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 54.94 | 171.86 | 474.30 | 612.58 | 639.45 | 619.50 | 620.02 | 13.5 | 1.5 |
| Nuclear | 49.22 | 162.25 | 450.01 | 584.94 | 614.00 | 592.38 | 592.32 | 13.9 | 1.5 |
| Geothermal | 5.72 | 9.61 | 24.24 | 27.45 | 24.88 | 26.37 | 26.49 | 8.9 | 0.5 |
| Solar | - | - | 0.06 | 0.20 | 0.57 | 0.76 | 1.21 | - | 18.3 |
| Non-Thermal | | | | | | | | | |
| Total | 78.51 | 93.33 | 100.98 | 115.87 | 120.92 | 121.35 | 129.09 | 1.5 | 1.4 |
| Hydro | 78.46 | 93.28 | 100.60 | 113.35 | 110.80 | 108.41 | 112.87 | 1.5 | 0.6 |
| Tide, wave, ocean | 0.05 | 0.04 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.4 | -0.5 |
| Wind | - | 0.00 | 0.33 | 2.46 | 10.06 | 12.88 | 16.16 | - | 24.1 |
| Other (e.g. fuel cells) | - | - | - | 0.02 | 0.01 | 0.02 | 0.01 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

OECD TOTAL

8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|----------|------------|------------|------------|------------|------------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 710657 | 907216 e | 1148655 e | 1249906 e | 1273131 | 1245851 | 1.8 |
| Fuel input (TJ) | 17621704 | 21935356 e | 27641818 e | 29439115 e | 29676995 e | 28775273 e | 1.5 |
| Electricity production (GWh) | 1750140 | 2279942 e | 2885137 e | 3034096 e | 3048868 e | 3010685 e | 1.6 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 408193 | 501266 e | 497588 e | 472655 | 494170 | 475790 | -0.3 |
| Fuel input (TJ) | 3933268 | 4909256 e | 5035917 e | 4835236 | 4978429 | 4817094 | -0.1 |
| Electricity production (GWh) | 353011 | 455513 e | 481899 e | 488378 e | 514803 e | 484616 e | 0.3 |
| Peat | | | | | | | |
| Fuel input (1000 t) | 3534 | 3814 | 3532 | 5083 | 5315 | 4857 | 1.4 |
| Fuel input (TJ) | 29600 | 32308 | 30112 | 46795 | 48929 | 42214 | 1.5 |
| Electricity production (GWh) | 2236 | 3025 e | 2834 | 5155 | 5705 | 4757 | 2.5 |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 582015 | 540262 e | 641343 e | 615018 | 640522 | 561232 | 0.2 |
| Electricity production (GWh) | 53218 e | 54775 e | 66484 e | 63657 e | 65547 e | 57911 | 0.3 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 219296 | 142722 e | 117233 e | 80084 e | 85504 e | 71261 | -3.8 |
| Fuel input (TJ) | 9046419 | 6251897 e | 5039430 e | 3339040 e | 3563291 e | 2972957 | -4.0 |
| Electricity production (GWh) | 923424 | 644851 e | 506763 e | 342044 e | 370096 e | 319175 e | -3.8 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 6250695 | 6185072 e | 10479704 e | 13230963 e | 14711663 | 14949116 e | 5.0 |
| Electricity production (GWh) | 587343 | 610209 e | 1131201 e | 1582075 e | 1760442 | 1825573 | 6.3 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 9630 | 353578 e | 344576 e | 523978 e | 647253 | 675918 | 3.7 |
| Electricity production (GWh) | 1300 | 25568 e | 32229 e | 46603 e | 54563 | 55981 | 4.4 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 24560 | 33243 | 61010 e | 28046 e | 30096 | 30011 | -0.6 |
| Electricity production (GWh) | 2585 | 3403 | 5561 e | 2684 | 2419 | 2543 | -1.6 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 35978 e | 226258 e | 389655 e | 441980 e | 530809 e | 539878 e | 5.0 |
| Electricity production (GWh) | 3105 e | 15262 e | 29382 e | 31177 e | 38474 e | 38562 e | 5.3 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | 379 | 40099 e | 124893 e | 209055 e | 343046 e | 366718 e | 13.1 |
| Electricity production (GWh) | 32 | 2989 e | 10144 e | 17216 e | 25870 e | 27992 e | 13.2 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 3679186 | 4095537 e | 5151634 e | 5613085 e | 5886787 e | 5827795 e | 2.0 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

OECD TOTAL

**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|----------|-----------|-----------|-----------|-----------|-----------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 95159 | 102386 e | 97021 e | 105413 e | 103417 | 98892 | -0.2 |
| Fuel input (TJ) | 1933892 | 2311942 e | 2311876 e | 2419905 e | 2344121 e | 2246762 e | -0.2 |
| Electricity production (GWh) | 125653 | 179256 e | 200158 e | 217736 e | 211761 e | 202933 e | 0.7 |
| CHP Heat production (TJ) | 566114 e | 608325 e | 497212 e | 566863 e | 541041 e | 526083 e | -0.8 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 55527 | 113172 e | 89704 e | 99277 e | 93080 | 99759 | -0.7 |
| Fuel input (TJ) | 452337 | 1011388 e | 840703 e | 883246 | 848691 | 902680 | -0.6 |
| Electricity production (GWh) | 25901 | 68640 e | 73797 e | 85207 | 80726 | 86765 | 1.3 |
| CHP Heat production (TJ) | 161041 | 296773 e | 170060 e | 104017 e | 105616 | 108101 | -5.5 |
| Peat | | | | | | | |
| Fuel input (1000 t) | 3192 | 2375 | 3846 | 5509 | 5653 | 5324 | 4.6 |
| Fuel input (TJ) | 26726 | 25768 | 40354 | 57247 | 58027 | 55047 | 4.3 |
| Electricity production (GWh) | 4194 | 2050 e | 2968 | 4080 | 4221 | 3849 | 3.6 |
| CHP Heat production (TJ) | 6866 | 14414 e | 23226 | 32900 | 32984 | 32351 | 4.6 |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 61263 e | 190413 e | 270004 e | 288153 | 296200 | 309744 | 2.7 |
| Electricity production (GWh) | 3120 e | 13860 e | 25980 e | 25832 | 28410 e | 30977 | 4.6 |
| CHP Heat production (TJ) | 25865 e | 31709 e | 21670 e | 48140 | 36498 | 40346 | 1.3 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 16886 | 9662 e | 20827 e | 27854 e | 26779 | 23968 | 5.2 |
| Fuel input (TJ) | 680827 e | 392075 e | 718066 e | 829296 e | 783219 | 665041 | 3.0 |
| Electricity production (GWh) | 55294 | 37877 e | 68865 e | 70914 e | 67148 | 58981 | 2.5 |
| CHP Heat production (TJ) | 217857 e | 106346 e | 156517 e | 307466 | 270802 | 246175 | 4.8 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 396231 | 1847188 e | 3831622 e | 5076623 | 5077621 | 5015999 e | 5.7 |
| Electricity production (GWh) | 30356 e | 158912 e | 394867 e | 528437 e | 549152 e | 539170 e | 7.0 |
| CHP Heat production (TJ) | 97176 | 177449 e | 750501 e | 1304583 | 1162612 | 1147865 | 10.9 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 25368 | 1262440 e | 597474 e | 691676 e | 627648 | 645670 | -3.7 |
| Electricity production (GWh) | 1970 e | 67767 e | 50496 e | 68501 e | 65243 | 66099 | -0.1 |
| CHP Heat production (TJ) | 7069 e | 13788 e | 75796 | 159809 e | 164287 | 172791 | 15.1 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 5289 | 80136 | 81438 | 60348 | 62967 | 57695 | -1.8 |
| Electricity production (GWh) | 161 | 4262 | 7971 | 6616 e | 6674 | 6077 | 2.0 |
| CHP Heat production (TJ) | 3077 | 3693 | 6191 | 9200 e | 8024 | 8287 | 4.6 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 21105 | 81005 e | 182044 e | 316490 e | 315982 e | 323903 e | 8.0 |
| Electricity production (GWh) | 1313 e | 2847 e | 7742 e | 20322 e | 15986 e | 16574 e | 10.3 |
| CHP Heat production (TJ) | 3895 e | 37063 e | 91998 e | 130361 e | 126618 e | 138674 e | 7.6 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 7007 | 30503 e | 122157 e | 68204 e | 69104 e | 13.6 |
| Electricity production (GWh) | - | 659 | 2962 | 11351 e | 6489 e | 6690 e | 13.7 |
| CHP Heat production (TJ) | - | 123 | 3892 | 8866 e | 8477 e | 7838 e | 26.0 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 247962 e | 536130 e | 835806 e | 1038996 e | 1035810 e | 1018115 e | 3.6 |
| CHP Heat production (TJ) | 1137281 | 1370991 e | 1797063 e | 2780417 e | 2458441 e | 2430810 e | 3.2 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

OECD TOTAL

10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|----------|----------|----------|----------|----------|----------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 18562 | 19918 e | 8157 e | 6564 | 6974 | 6757 | -5.8 |
| Fuel input (TJ) | 418375 | 428363 e | 181049 e | 153650 | 163636 e | 158482 | -5.4 |
| Heat production (TJ) | 281870 | 307121 e | 147019 e | 119559 | 129627 | 126417 | -4.8 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 4739 | 2769 e | 727 e | 574 e | 965 | 681 | -7.5 |
| Fuel input (TJ) | 54336 | 30408 e | 10275 e | 8395 e | 11510 | 8633 | -6.8 |
| Heat production (TJ) | 39968 | 21674 e | 7748 e | 6362 e | 7824 | 7397 | -5.8 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | 1029 | 582 | 626 | 884 | 801 | -1.4 |
| Fuel input (TJ) | - | 11849 | 6587 | 6588 | 10627 | 9538 | -1.2 |
| Heat production (TJ) | - | 10121 e | 5730 | 5617 | 9115 | 7976 | -1.3 |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 7266 | 6615 e | 11867 e | 5770 | 5820 | 5658 | -0.9 |
| Heat production (TJ) | 5116 e | 4629 e | 9644 e | 3414 | 3412 | 3394 | -1.7 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 2233 | 1623 e | 1835 e | 1215 e | 951 | 767 | -4.1 |
| Fuel input (TJ) | 92509 | 66942 e | 76480 e | 51987 e | 39869 e | 31990 | -4.0 |
| Heat production (TJ) | 70446 e | 51926 e | 59473 e | 43081 e | 33398 e | 26666 | -3.6 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 111244 | 110753 e | 228047 e | 251540 e | 362099 | 332627 e | 6.3 |
| Heat production (TJ) | 79694 e | 78723 e | 173369 e | 182170 e | 227276 | 234370 | 6.2 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 1073 | 28435 e | 51982 | 89632 e | 86675 | 91452 | 6.7 |
| Heat production (TJ) | 750 e | 22852 e | 44902 | 74585 e | 70205 | 74433 | 6.8 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 476 | 261 | 9099 e | 961 | 1280 | 1436 | 9.9 |
| Heat production (TJ) | 323 | 186 | 8098 e | 777 | 1034 | 1242 | 11.1 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 26121 e | 72499 e | 45740 e | 48242 e | 65862 e | 71521 e | -0.1 |
| Heat production (TJ) | 14148 e | 44558 e | 32157 e | 35374 e | 46905 e | 49689 e | 0.6 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 1795 | 6679 | 9934 e | 12494 | 10814 | 10.5 |
| Heat production (TJ) | - | 1313 | 6242 | 9007 e | 11069 | 9557 | 11.7 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | 511522 e | 545216 e | 494382 e | 612518 e | 541974 e | 543510 e | -0.0 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

OECD TOTAL

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 2805.33 | 2929.80 | 3079.90 | 3605.12 | 3746.00 | 3759.89 | 3695.88 | 0.6 | 1.0 |
| Geothermal | 0.35 | 0.51 | 2.07 | 2.78 | 3.53 | 3.65 | 3.88 | 10.9 | 3.5 |
| Solar thermal | - | 0.03 | 1.43 | 3.08 | 3.17 | 3.45 | 3.68 | - | 5.4 |
| Coal | 285.32 | 248.36 | 231.12 | 139.37 | 138.56 | 139.45 | 135.08 | -1.2 | -2.9 |
| Oil | 1577.27 | 1566.07 | 1578.79 | 1830.98 | 1894.01 | 1871.04 | 1801.66 | 0.0 | 0.7 |
| Gas | 515.53 | 568.48 | 590.11 | 742.22 | 715.57 | 734.14 | 737.38 | 0.8 | 1.2 |
| Comb. renew. & waste | 82.99 | 103.11 | 88.47 | 128.74 | 145.55 | 153.84 | 160.17 | 0.4 | 3.4 |
| Electricity | 323.15 | 407.59 | 547.57 | 709.76 | 777.48 | 794.61 | 794.97 | 3.2 | 2.1 |
| Heat | 20.71 | 35.65 | 40.34 | 48.19 | 68.14 | 59.70 | 59.06 | 4.0 | 2.1 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 954.66 | 937.67 | 820.17 | 900.89 | 877.31 | 880.07 | 849.41 | -0.9 | 0.2 |
| Geothermal | 0.03 | 0.02 | 0.26 | 0.31 | 0.30 | 0.29 | 0.29 | 13.7 | 0.5 |
| Solar thermal | - | - | 0.01 | 0.10 | 0.12 | 0.13 | 0.13 | - | 16.7 |
| Coal | 178.92 | 158.18 | 159.19 | 119.78 | 118.42 | 118.76 | 109.76 | -0.7 | -2.0 |
| Oil | 311.20 | 276.54 | 166.12 | 141.55 | 138.43 | 129.43 | 124.50 | -3.6 | -1.6 |
| Gas | 253.72 | 252.68 | 225.23 | 279.97 | 252.19 | 261.95 | 253.10 | -0.7 | 0.7 |
| Comb. renew. & waste | 42.02 | 49.08 | 35.51 | 69.01 | 71.72 | 73.04 | 70.53 | -1.0 | 3.9 |
| Electricity | 157.91 | 185.73 | 220.07 | 274.08 | 266.19 | 270.76 | 266.51 | 2.0 | 1.1 |
| Heat | 10.86 | 15.44 | 13.77 | 16.11 | 29.92 | 25.71 | 24.60 | 1.4 | 3.3 |
| Transport | 692.33 | 778.81 | 933.76 | 1136.51 | 1214.12 | 1227.94 | 1190.97 | 1.8 | 1.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 7.21 | 2.55 | 0.28 | 0.10 | 0.10 | 0.10 | 0.11 | -17.4 | -5.2 |
| Oil | 662.83 | 753.26 | 907.09 | 1102.24 | 1166.47 | 1173.15 | 1128.15 | 1.9 | 1.2 |
| Gas | 17.00 | 16.96 | 18.68 | 20.97 | 20.83 | 22.11 | 22.29 | 0.6 | 1.0 |
| Comb. renew. & waste | 0.00 | 0.00 | 0.01 | 4.03 | 17.08 | 22.96 | 30.75 | 5.4 | 60.5 |
| Electricity | 5.29 | 6.05 | 7.70 | 9.17 | 9.63 | 9.62 | 9.68 | 2.2 | 1.3 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 284.55 | 293.60 | 351.85 | 432.61 | 469.26 | 475.10 | 486.12 | 1.3 | 1.8 |
| Geothermal | 0.01 | 0.02 | 0.15 | 0.55 | 0.75 | 0.76 | 0.81 | 15.8 | 9.6 |
| Solar thermal | - | - | 0.06 | 0.12 | 0.21 | 0.23 | 0.26 | - | 8.0 |
| Coal | 17.04 | 18.38 | 16.03 | 3.02 | 3.67 | 3.63 | 4.85 | -0.4 | -6.4 |
| Oil | 130.50 | 105.84 | 84.00 | 82.20 | 75.13 | 67.83 | 69.50 | -2.6 | -1.0 |
| Gas | 72.84 | 79.64 | 101.13 | 131.20 | 138.59 | 142.21 | 148.36 | 1.9 | 2.2 |
| Comb. renew. & waste | 0.81 | 1.08 | 0.36 | 2.64 | 4.36 | 4.48 | 4.68 | -4.6 | 15.3 |
| Electricity | 62.50 | 86.40 | 144.30 | 205.35 | 238.92 | 245.42 | 246.56 | 5.0 | 3.0 |
| Heat | 0.84 | 2.25 | 5.80 | 7.53 | 7.63 | 10.53 | 11.09 | 12.0 | 3.7 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

OECD TOTAL

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 546.75 | 553.85 | 591.16 | 686.06 | 694.29 | 696.05 | 709.49 | 0.5 | 1.0 |
| Geothermal | 0.29 | 0.45 | 0.97 | 1.55 | 2.09 | 2.21 | 2.39 | 7.3 | 5.1 |
| Solar thermal | - | 0.03 | 1.34 | 2.80 | 2.78 | 3.03 | 3.23 | - | 5.0 |
| Coal | 66.73 | 58.47 | 44.57 | 13.47 | 12.89 | 12.36 | 15.16 | -2.3 | -5.8 |
| Oil | 197.71 | 149.14 | 119.08 | 126.73 | 108.33 | 97.10 | 99.41 | -2.9 | -1.0 |
| Gas | 154.01 | 179.20 | 200.32 | 257.67 | 260.47 | 264.73 | 271.00 | 1.6 | 1.7 |
| Comb. renew. & waste | 27.21 | 28.86 | 37.42 | 50.20 | 50.53 | 51.44 | 52.28 | 1.9 | 1.9 |
| Electricity | 93.05 | 124.11 | 168.62 | 213.62 | 241.93 | 246.82 | 247.65 | 3.6 | 2.2 |
| Heat | 7.75 | 13.60 | 18.84 | 20.02 | 15.26 | 18.37 | 18.37 | 5.4 | -0.1 |
| Agriculture & fishing | 43.70 | 49.89 | 61.74 | 64.42 | 65.36 | 63.70 | 63.08 | 2.1 | 0.1 |
| Geothermal | 0.02 | 0.02 | 0.09 | 0.17 | 0.18 | 0.18 | 0.16 | 8.6 | 3.7 |
| Solar thermal | - | - | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | - | 28.0 |
| Coal | 1.61 | 1.77 | 1.68 | 1.08 | 1.28 | 1.14 | 1.18 | 0.2 | -1.9 |
| Oil | 37.71 | 42.50 | 48.24 | 49.83 | 50.05 | 48.42 | 47.86 | 1.5 | -0.0 |
| Gas | 0.13 | 0.62 | 4.31 | 4.58 | 4.25 | 4.30 | 3.74 | 23.2 | -0.8 |
| Comb. renew. & waste | 0.08 | 0.14 | 0.78 | 1.33 | 1.85 | 1.91 | 1.91 | 14.3 | 5.1 |
| Electricity | 3.78 | 4.36 | 5.95 | 6.96 | 7.42 | 7.44 | 7.87 | 2.7 | 1.6 |
| Heat | 0.37 | 0.49 | 0.70 | 0.47 | 0.32 | 0.30 | 0.33 | 3.8 | -4.1 |
| Other | 62.99 | 72.63 | 32.40 | 15.50 | 40.58 | 30.05 | 33.00 | -3.8 | 0.1 |
| Geothermal | - | - | 0.60 | 0.21 | 0.21 | 0.21 | 0.21 | - | -5.5 |
| Solar thermal | - | - | 0.02 | 0.06 | 0.04 | 0.05 | 0.06 | - | 5.3 |
| Coal | 10.72 | 6.72 | 6.92 | 0.31 | 0.11 | 0.09 | 0.75 | -2.5 | -11.6 |
| Oil | 25.60 | 14.75 | 2.98 | 2.21 | 2.08 | 1.95 | 1.74 | -11.9 | -2.9 |
| Gas | 12.31 | 22.38 | 5.35 | 6.53 | 9.74 | 8.41 | 8.85 | -4.8 | 2.8 |
| Comb. renew. & waste | 12.86 | 23.95 | 14.39 | 1.53 | 0.01 | 0.01 | 0.01 | 0.7 | -32.3 |
| Electricity | 0.62 | 0.94 | 0.92 | 0.58 | 13.39 | 14.54 | 16.71 | 2.3 | 17.5 |
| Heat | 0.88 | 3.88 | 1.22 | 4.06 | 15.00 | 4.78 | 4.67 | 2.0 | 7.7 |
| Non-energy use⁽¹⁾ | 220.34 | 243.35 | 288.82 | 369.12 | 385.09 | 386.98 | 363.81 | 1.60 | 1.29 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

OECD TOTAL

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| TFC (Mtoe) | 2805.33 | 2929.80 | 3079.90 | 3605.12 | 3749.14 | 3746.00 | 3759.89 | 3695.88 |
| Total industry (Mtoe) | 954.66 | 937.67 | 820.17 | 900.89 | 864.49 | 877.31 | 880.07 | 849.41 |
| Iron and steel | 162.80 | 136.07 | 107.06 | 112.12 | 105.15 | 106.36 | 107.87 | 104.91 |
| Chem. and petrochemical | 104.48 | 109.90 | 160.71 | 186.55 | 171.99 | 166.82 | 170.61 | 164.18 |
| Non-ferrous metals | 30.08 | 38.78 | 33.41 | 50.31 | 46.43 | 46.38 | 46.41 | 46.70 |
| Non-metallic minerals | 67.08 | 73.18 | 72.77 | 89.93 | 90.73 | 94.02 | 95.68 | 93.35 |
| Transport equipment | 14.44 | 15.24 | 12.63 | 25.42 | 20.88 | 22.32 | 22.75 | 22.38 |
| Machinery | 28.40 | 32.78 | 46.68 | 55.77 | 54.08 | 55.97 | 57.28 | 56.35 |
| Mining and quarrying | 13.58 | 18.49 | 18.04 | 19.32 | 22.11 | 22.14 | 24.86 | 24.88 |
| Food and tobacco | 39.94 | 46.35 | 49.32 | 71.83 | 72.72 | 74.82 | 75.57 | 74.16 |
| Paper, pulp and printing | 62.43 | 63.05 | 74.57 | 126.36 | 122.59 | 125.76 | 125.87 | 120.66 |
| Wood and wood products | 6.97 | 8.73 | 8.80 | 20.94 | 20.05 | 20.80 | 21.41 | 22.88 |
| Construction | 10.37 | 12.47 | 15.13 | 15.66 | 17.03 | 17.38 | 16.40 | 17.39 |
| Textile and leather | 24.91 | 24.28 | 18.38 | 24.85 | 18.91 | 18.49 | 17.81 | 15.95 |
| Non specified/other | 389.18 | 358.36 | 202.66 | 101.84 | 101.80 | 106.04 | 97.54 | 85.60 |
| Electricity consumption (Mtoe) | 323.15 | 407.59 | 547.57 | 709.76 | 770.30 | 777.48 | 794.61 | 794.97 |
| Total industry (Mtoe) | 157.91 | 185.73 | 220.07 | 274.08 | 266.36 | 266.19 | 270.76 | 266.51 |
| Iron and steel | 22.10 | 24.83 | 26.08 | 29.70 | 31.36 | 31.86 | 32.59 | 31.26 |
| Chem. and petrochemical | 32.88 | 35.43 | 44.15 | 50.98 | 50.75 | 50.14 | 50.56 | 49.74 |
| Non-ferrous metals | 19.33 | 23.95 | 19.79 | 25.83 | 27.56 | 27.51 | 27.80 | 28.58 |
| Non-metallic minerals | 7.99 | 9.71 | 12.03 | 14.38 | 15.07 | 15.23 | 15.59 | 15.67 |
| Transport equipment | 5.79 | 6.91 | 6.63 | 10.91 | 10.10 | 10.20 | 10.39 | 10.38 |
| Machinery | 10.38 | 12.87 | 25.00 | 28.49 | 28.92 | 30.14 | 30.73 | 30.84 |
| Mining and quarrying | 4.85 | 5.72 | 8.49 | 8.89 | 8.48 | 8.56 | 8.27 | 8.13 |
| Food and tobacco | 7.33 | 9.55 | 13.75 | 18.04 | 20.08 | 20.20 | 20.54 | 20.40 |
| Paper, pulp and printing | 14.06 | 16.96 | 28.14 | 33.87 | 33.70 | 33.44 | 32.94 | 31.96 |
| Wood and wood products | 2.81 | 3.62 | 4.55 | 5.02 | 5.09 | 5.13 | 5.17 | 5.14 |
| Construction | 0.58 | 0.87 | 1.21 | 1.36 | 1.54 | 1.64 | 1.74 | 1.74 |
| Textile and leather | 7.38 | 7.70 | 8.17 | 8.99 | 7.51 | 7.26 | 7.33 | 6.90 |
| Non specified/other | 22.42 | 27.61 | 22.08 | 37.60 | 26.20 | 24.88 | 27.12 | 25.75 |
| Total industry (TWh) | 1836.12 | 2159.62 | 2558.98 | 3186.98 | 3097.25 | 3095.29 | 3148.41 | 3098.92 |
| Iron and steel | 256.99 | 288.74 | 303.29 | 345.40 | 364.68 | 370.43 | 378.96 | 363.48 |
| Chem. and petrochemical | 382.27 | 412.01 | 513.43 | 592.83 | 590.12 | 583.05 | 587.95 | 578.39 |
| Non-ferrous metals | 224.78 | 278.44 | 230.12 | 300.37 | 320.50 | 319.85 | 323.24 | 332.35 |
| Non-metallic minerals | 92.94 | 112.96 | 139.94 | 167.25 | 175.27 | 177.14 | 181.29 | 182.20 |
| Transport equipment | 67.37 | 80.34 | 77.04 | 126.88 | 117.40 | 118.65 | 120.78 | 120.70 |
| Machinery | 120.69 | 149.63 | 290.68 | 331.25 | 336.29 | 350.43 | 357.32 | 358.65 |
| Mining and quarrying | 56.45 | 66.50 | 98.71 | 103.39 | 98.61 | 99.54 | 96.14 | 94.54 |
| Food and tobacco | 85.23 | 111.04 | 159.86 | 209.78 | 233.47 | 234.91 | 238.87 | 237.27 |
| Paper, pulp and printing | 163.52 | 197.23 | 327.24 | 393.89 | 391.91 | 388.87 | 382.97 | 371.59 |
| Wood and wood products | 32.68 | 42.13 | 52.89 | 58.40 | 59.20 | 59.64 | 60.16 | 59.80 |
| Construction | 6.77 | 10.10 | 14.06 | 15.78 | 17.91 | 19.11 | 20.21 | 20.26 |
| Textile and leather | 85.78 | 89.50 | 95.03 | 104.58 | 87.28 | 84.38 | 85.18 | 80.26 |
| Non specified/other | 260.66 | 321.00 | 256.71 | 437.17 | 304.60 | 289.30 | 315.37 | 299.44 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

OECD TOTAL

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Total imports⁽¹⁾ | 87744 | 140286 | 255347 | 258737 | 342722 | 412042 | 403463 | 408592 | 401008 |
| Imports from: | | | | | | | | | |
| Total OECD | 36025 | 74734 | 211506 | 247950 | 325553 | 376774 | 369316 | 380540 | 368396 |
| Austria | 498 | 991 | 6910 | 8597 | 12517 | 20636 | 16815 | 17310 | 16863 |
| Belgium | 89 | 7810 | 4488 | 3550 | 4502 | 8008 | 8684 | 9038 | 6537 |
| Canada | 16848 | 30181 | 20555 | 44503 | 48515 | 42930 | 41544 | 50118 | 55732 |
| Czech Republic | - | - | 2975 | 6116 | 18634 | 24404 | 23413 | 26350 | 19986 |
| Denmark | 289 | 1372 | 4940 | 5648 | 8177 | 11629 | 13617 | 11172 | 11006 |
| Finland | 260 | 1163 | 362 | 276 | 1004 | 1524 | 2542 | 2675 | 3147 |
| France | 2496 | 4338 | 55503 | 77740 | 77677 | 66651 | 69793 | 66323 | 56967 |
| Germany | 1238 | 5067 | 22160 | 27167 | 39913 | 59655 | 64068 | 61138 | 59783 |
| Greece | - | - | - | - | - | 713 | 945 | 174 | 209 |
| Hungary | - | - | 212 | 622 | 843 | 854 | 1063 | 243 | 722 |
| Ireland | - | - | - | 30 | 41 | 1 | 10 | 53 | 152 |
| Italy | 318 | 736 | 253 | 357 | 470 | 1146 | 1619 | 2416 | 3362 |
| Luxembourg | - | - | 965 | 778 | 738 | 2367 | 2479 | 2084 | 1629 |
| Mexico | - | - | 1951 | 2257 | 77 | 1597 | 1147 | 1278 | 1288 |
| Netherlands | 215 | 3906 | 3499 | 3902 | 4031 | 5398 | 5990 | 5568 | 9272 |
| Norway | 5401 | 1503 | 16413 | 8573 | 20486 | 15692 | 7728 | 14370 | 15700 |
| Poland | - | 828 | 7878 | 7150 | 9658 | 16110 | 15669 | 13076 | 9632 |
| Portugal | 78 | 514 | 1697 | 1742 | 3767 | 2801 | 3175 | 2153 | 1314 |
| Slovak Republic | 303 | 549 | 778 | 2484 | 8825 | 8832 | 8635 | 9058 | 7487 |
| Spain | 2239 | 3631 | 3606 | 3031 | 5293 | 10378 | 10098 | 10748 | 12400 |
| Sweden | 20 | 1321 | 14605 | 8627 | 12955 | 21129 | 13032 | 15992 | 16480 |
| Switzerland | 3071 | 7247 | 23354 | 26168 | 29785 | 31718 | 30417 | 35651 | 31511 |
| Turkey | - | - | - | - | - | - | - | 89 | - |
| United Kingdom | 96 | 19 | 45 | 46 | 1234 | 2837 | 2686 | 3806 | 1677 |
| United States | 2566 | 3558 | 18357 | 8586 | 16411 | 19764 | 24147 | 19657 | 25540 |
| Total non-OECD | 5384 | 12150 | 19607 | 10787 | 16878 | 33922 | 32779 | 27024 | 30918 |
| Albania | - | 151 | 165 | 198 | 50 | 15 | 26 | - | - |
| Azerbaijan | - | - | - | - | - | - | - | 15 | 94 |
| Belarus | - | - | - | - | 163 | 874 | 1045 | - | - |
| Bulgaria | - | 750 | 320 | 652 | 4364 | 4543 | 4460 | 4293 | 4628 |
| Croatia | - | - | 1 | 1 | - | - | 54 | - | 5 |
| Estonia | - | - | - | - | - | - | 4 | 1921 | 2250 |
| F.Y.R. of Macedonia | - | - | - | - | - | 795 | 1201 | 901 | 1188 |
| Georgia | - | 649 | 176 | - | 204 | 101 | 40 | 216 | 215 |
| Romania | 1428 | 955 | - | 283 | - | 1187 | 1432 | 252 | 720 |
| Russian Federation | 46 | 49 | 4531 | 4839 | 4755 | 11528 | 11767 | 10362 | 11059 |
| Serbia | 115 | 545 | 891 | 496 | 612 | 18 | 1 | - | - |
| Slovenia | - | 725 | 1363 | 816 | 4554 | 8522 | 6443 | 3817 | 5599 |
| Turkmenistan | - | - | - | - | - | 535 | 533 | 633 | 450 |
| Ukraine | 3795 | 8326 | 12160 | 3502 | 2176 | 5804 | 5773 | 4614 | 4710 |
| Non-specified/others | 46335 | 53402 | 24234 | - | 291 | 1346 | 1368 | 1028 | 1694 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

OECD TOTAL

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Total exports⁽¹⁾ | 81441 | 124551 | 231924 | 252319 | 339616 | 394683 | 388924 | 405502 | 389928 |
| Exports to: | | | | | | | | | |
| Total OECD | 45184 | 71313 | 209176 | 247479 | 325929 | 376202 | 371819 | 381044 | 369303 |
| Austria | 614 | 1067 | 7789 | 9750 | 13922 | 22487 | 22229 | 23436 | 22333 |
| Belgium | 1320 | 1086 | 2322 | 6058 | 11557 | 14313 | 18851 | 15848 | 17177 |
| Canada | 2570 | 3461 | 19936 | 7992 | 12685 | 19332 | 23405 | 19559 | 23499 |
| Czech Republic | - | - | 47 | 4405 | 8699 | 12324 | 11461 | 10209 | 8523 |
| Denmark | 918 | 1841 | 12106 | 3825 | 8571 | 13035 | 6687 | 10225 | 12432 |
| Finland | 4136 | 678 | 6481 | 3873 | 8365 | 7357 | 2515 | 3290 | 2933 |
| France | 2686 | 9845 | 7019 | 3256 | 3676 | 7986 | 8560 | 10358 | 10563 |
| Germany | 3211 | 3930 | 24998 | 39439 | 45610 | 52657 | 45352 | 43379 | 38626 |
| Greece | - | - | - | - | - | 272 | 453 | 1218 | 1810 |
| Hungary | - | - | 233 | 1288 | 7826 | 9616 | 9056 | 10513 | 8304 |
| Ireland | - | - | - | - | 133 | 2074 | 1788 | 1382 | 373 |
| Italy | 761 | 1425 | 34226 | 37900 | 40408 | 42560 | 41303 | 45868 | 38867 |
| Luxembourg | 913 | 1073 | 4364 | 5651 | 6409 | 5302 | 5692 | 5725 | 5666 |
| Mexico | - | - | 590 | 1154 | 1993 | 471 | 866 | 584 | 584 |
| Netherlands | 1288 | 10 | 12657 | 15497 | 21835 | 23691 | 27353 | 23149 | 25231 |
| Norway | 165 | 991 | 407 | 1911 | 1231 | 3434 | 8373 | 4144 | 1824 |
| Poland | - | 4 | 13 | 4088 | 2494 | 3081 | 2914 | 7100 | 7673 |
| Portugal | 132 | 2342 | 1734 | 2661 | 4698 | 9630 | 8633 | 9650 | 10753 |
| Slovak Republic | 552 | 3652 | 4602 | 2101 | 5967 | 7822 | 8568 | 13476 | 7830 |
| Spain | 322 | 2337 | 3209 | 7632 | 12271 | 10366 | 9393 | 9060 | 5890 |
| Sweden | 5256 | 1825 | 12749 | 8221 | 17688 | 13953 | 19275 | 17494 | 14686 |
| Switzerland | 3893 | 5540 | 21694 | 19083 | 24070 | 38255 | 33446 | 34410 | 31100 |
| Turkey | - | - | - | - | - | - | - | - | 30 |
| United Kingdom | 161 | 22 | 11925 | 16330 | 14768 | 12475 | 11822 | 9412 | 13720 |
| United States | 16286 | 30184 | 20075 | 45364 | 51053 | 43709 | 43824 | 51555 | 58876 |
| Total non-OECD | 87 | 265 | 3980 | 4359 | 10725 | 13147 | 11119 | 16967 | 12446 |
| Albania | - | - | 541 | 391 | 1111 | 1056 | 978 | 1773 | 1657 |
| Azerbaijan | - | - | - | 495 | 437 | 384 | 326 | 15 | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | 573 | 9 | 205 | - | - | - | - |
| Croatia | - | - | - | 117 | 4472 | 6690 | 5561 | 6537 | 5300 |
| Estonia | - | - | - | - | - | - | 7 | 21 | 10 |
| F.Y.R. of Macedonia | - | - | - | - | - | 70 | 15 | 111 | 95 |
| Georgia | - | - | 122 | 178 | - | 9 | 107 | 118 | 54 |
| Romania | 2 | 15 | 256 | 88 | - | 146 | 29 | 379 | 105 |
| Russian Federation | - | - | - | 1 | - | - | - | - | - |
| Serbia | 58 | 154 | 389 | 258 | 1189 | 1693 | 1519 | 3430 | 2653 |
| Slovenia | 27 | 72 | 2089 | 2805 | 3307 | 1349 | 846 | 1733 | 1309 |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | 24 | 10 | 17 | 4 | 1750 | 1731 | 2850 | 1263 |
| Non-specified/others | 36170 | 52973 | 18768 | 481 | 2962 | 5334 | 5986 | 7491 | 8179 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

OECD TOTAL

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|--------------------------------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total Capacity ⁽¹⁾ | 924.78 | 1291.09 | 1590.11 | 1735.89 | 1765.20 | 2203.19 | 2240.90 | 2278.08 | 2323.66 |
| Nuclear | 52.37 | 119.91 | 265.84 | 294.61 | 301.92 | 314.40 | 313.98 | 313.06 | 312.27 |
| Hydro | 166.67 | 282.05 | 356.59 | 389.15 | 403.56 | 420.53 | 425.56 | 430.62 | 433.21 |
| <i>of which: pumped storage</i> | <i>2.36</i> | <i>17.99</i> | <i>48.53</i> | <i>82.03</i> | <i>84.67</i> | <i>88.54</i> | <i>91.75</i> | <i>92.93</i> | <i>94.71</i> |
| Geothermal | 0.64 | 1.87 | 3.37 | 3.78 | 5.35 | 5.10 | 5.30 | 5.32 | 5.60 |
| Solar | - | - | 0.01 | 0.07 | 0.63 | 2.12 | 3.63 | 5.38 | 10.34 |
| Tide, wave, ocean | 0.24 | 0.24 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| Wind | - | - | 0.41 | 1.12 | 14.82 | 49.32 | 59.62 | 73.42 | 90.26 |
| Other (e.g. fuel cells) | - | - | - | 0.08 | 0.17 | 0.30 | 0.26 | 0.46 | 0.45 |
| Combustible fuels | 704.86 | 887.02 | 965.97 | 1046.83 | 1038.50 | 1411.16 | 1432.30 | 1449.57 | 1471.27 |
| <i>of which ⁽²⁾:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid fuels | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Comb. renew. & waste | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / liquid / gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Internal combustion | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Gas turbine | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Combined cycle | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Other | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Capacity data are not available for Czech Republic before 1993, Korea before 1994 and for Slovak Republic before 1995.

(2) Breakdown of electrical capacity by type of fuel are shown in the individual country chapters.

Note: Please refer to notes in the introductory information for data coverage.

OECD TOTAL

15. Net maximum electricity generating capacity on 31 December (continued)

(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|--------------------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total Capacity ⁽¹⁾ | 68.54 | 75.93 | 127.86 | 166.57 | 291.55 | 147.03 | 150.34 | 152.65 | 158.54 |
| Nuclear | 0.55 | 1.01 | 0.95 | 0.70 | 0.17 | - | - | - | - |
| Hydro | 12.13 | 14.24 | 16.35 | 18.23 | 16.72 | 10.11 | 10.27 | 10.38 | 10.60 |
| <i>of which: pumped storage</i> | - | - | 0.07 | 0.23 | 0.27 | 0.14 | 0.14 | 0.15 | 0.16 |
| Geothermal | - | 0.04 | 1.09 | 1.27 | 0.05 | 0.05 | 0.04 | 0.04 | 0.04 |
| Solar | - | - | 0.34 | 0.47 | 0.55 | 2.06 | 2.58 | 3.10 | 3.87 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 1.97 | 3.09 | 0.58 | 3.06 | 4.13 | 4.52 | 6.00 |
| Other (e.g. fuel cells) | - | - | - | 0.11 | 0.03 | 0.66 | 0.67 | 0.68 | 0.64 |
| Combustible fuels | 55.87 | 60.64 | 107.15 | 142.70 | 273.45 | 131.09 | 132.65 | 133.93 | 137.39 |
| <i>of which</i> ⁽²⁾ : | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid fuels | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Comb. renew. & waste | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / liquid / gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Internal combustion | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Gas turbine | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Combined cycle | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Other | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Capacity data are not available for Czech Republic before 1993, Korea before 1996 and Slovak Republic before 2001.

(2) Breakdown of electrical capacity by type of fuel are shown in the individual country chapters.

Note: Please refer to notes in the introductory information for data coverage.

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Figure 1. Total final consumption by fuel

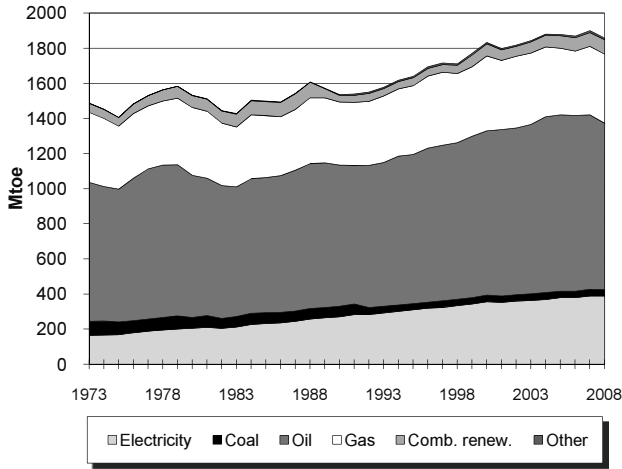


Figure 2. Electricity generation by fuel

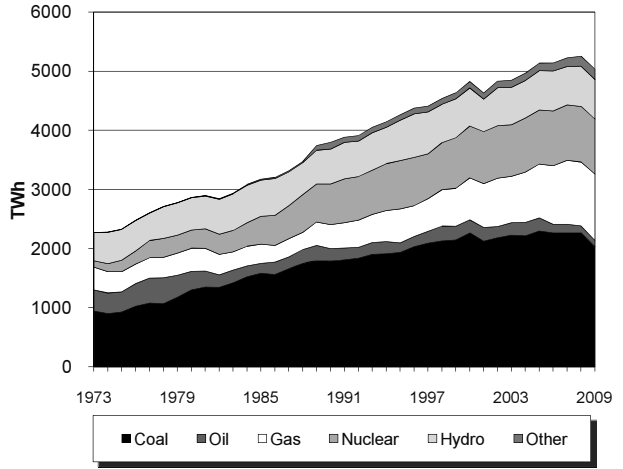


Figure 3. Electricity consumption by sector

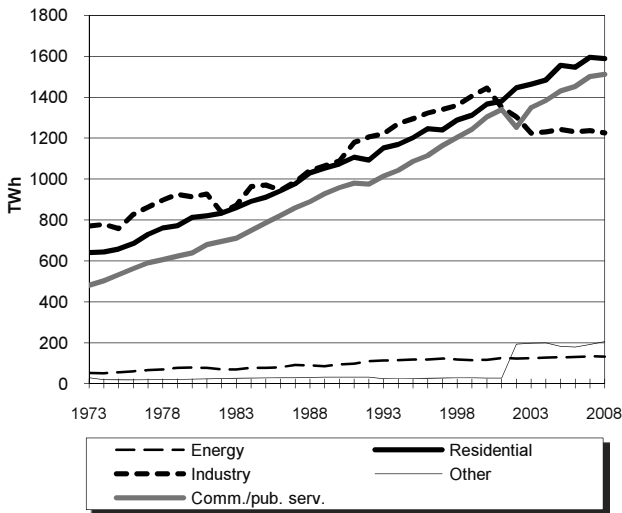


Figure 4. Electricity indicators

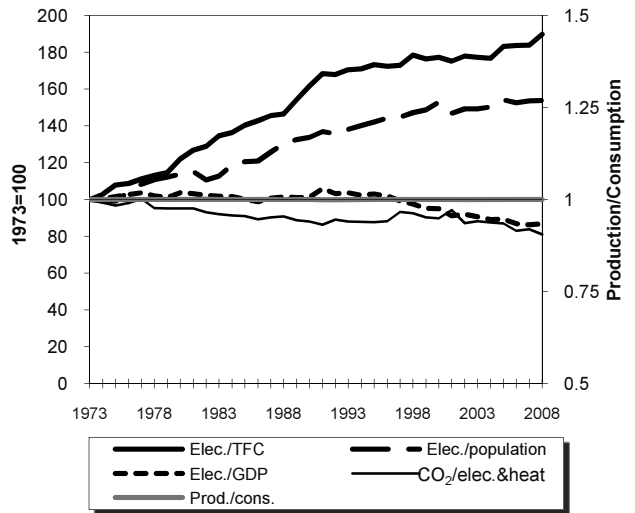
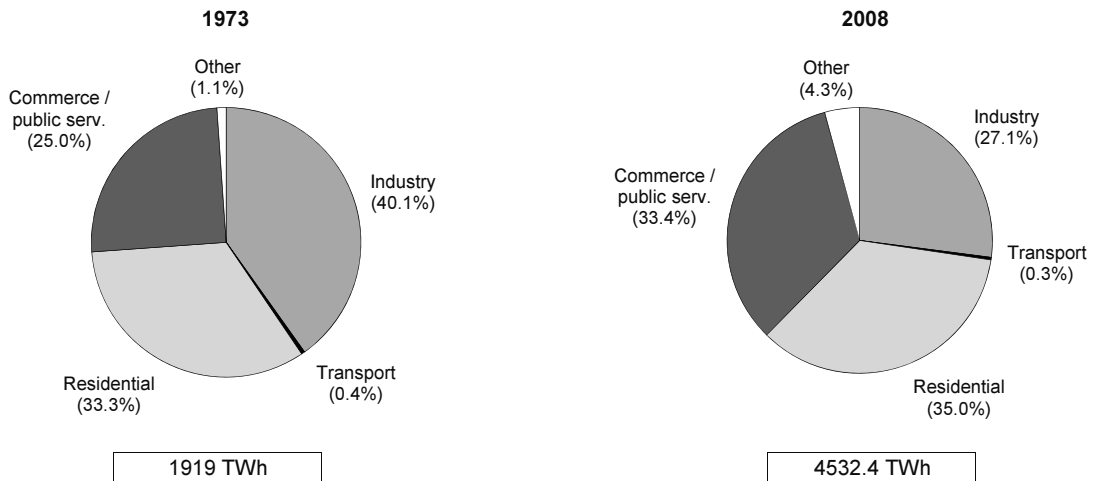


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--------------------------------------|---------|---------|---------|----------|----------|----------|----------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 1941.85 | 2092.39 | 2244.94 | 2669.56 | 2784.93 | 2731.10 | 2598.94 | 0.9 | 0.8 |
| GDP (billion 2000 USD) | 4891.72 | 5932.47 | 8060.19 | 11260.45 | 13319.00 | 13381.93 | 13162.86 | 3.0 | 2.6 |
| TPES/GDP ⁽¹⁾ | 0.40 | 0.35 | 0.28 | 0.24 | 0.21 | 0.20 | 0.20 | -2.1 | -1.8 |
| Population (millions) | 287.70 | 317.94 | 359.12 | 411.36 | 440.35 | 444.42 | 448.53 | 1.3 | 1.2 |
| TPES/population ⁽²⁾ | 6.75 | 6.58 | 6.25 | 6.49 | 6.32 | 6.15 | 5.79 | -0.5 | -0.4 |
| TPES/GDP (2000 = 100) | 167 | 149 | 117 | 100 | 88 | 86 | 83 | -2.1 | -1.8 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 107 | 109 | 106 | 100 | 92 | 92 | .. | -0.0 | .. |
| Ele.TFC/population ⁽⁴⁾ | 6672 | 7507 | 8780 | 10076 | 10280 | 10202 | .. | 1.6 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 2272.69 | 2867.56 | 3800.69 | 4828.00 | 5229.37 | 5253.94 | 5036.51 | 3.1 | 1.5 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 1941.85 | 2092.39 | 2244.94 | 2669.56 | 2784.93 | 2731.10 | 2598.94 | 0.9 | 0.8 |
| Coal | 328.15 | 399.82 | 487.94 | 572.13 | 590.31 | 579.56 | 516.04 | 2.4 | 0.3 |
| Oil | 929.35 | 949.90 | 913.62 | 1048.48 | 1102.41 | 1051.73 | 987.88 | -0.1 | 0.4 |
| Gas | 562.28 | 541.47 | 516.08 | 651.40 | 670.39 | 668.89 | 670.49 | -0.5 | 1.4 |
| Comb. renew & waste | 51.52 | 69.01 | 77.87 | 92.86 | 101.00 | 105.13 | 101.42 | 2.5 | 1.4 |
| Nuclear | 27.31 | 79.77 | 179.55 | 229.00 | 245.11 | 245.38 | 242.63 | 11.7 | 1.6 |
| Geothermal | 2.25 | 5.39 | 18.51 | 18.16 | 15.15 | 15.15 | 14.84 | 13.2 | -1.2 |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.32 | 2.15 | 4.93 | 6.98 | 8.38 | - | 18.7 |
| Hydro | 40.96 | 47.03 | 51.03 | 55.46 | 55.69 | 58.34 | 57.45 | 1.3 | 0.6 |
| Net electricity imports ⁽²⁾ | 0.05 | 0.01 | 0.02 | -0.07 | -0.07 | -0.06 | -0.20 | -4.3 | - |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 2272.8 | 2867.7 | 3816.6 | 4854.9 | 5164.1 | 5255.4 | 5279.3 | 5059.8 |
| Nuclear | 104.4 | 304.2 | 687.5 | 878.7 | 913.6 | 940.5 | 941.6 | 931.0 |
| Hydro | 476.3 | 546.9 | 609.3 | 671.7 | 689.3 | 673.6 | 703.8 | 691.3 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 0.1 | 0.1 | 15.9 | 26.9 | 25.6 | 26.0 | 25.4 | 23.2 |
| Geothermal | 2.6 | 6.3 | 21.1 | 20.5 | 24.1 | 24.2 | 24.1 | 23.3 |
| Solar | - | - | 0.7 | 0.7 | 1.1 | 1.7 | 2.5 | 2.5 |
| Tide, wave, ocean | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Wind | - | - | 3.1 | 5.9 | 19.4 | 37.9 | 59.8 | 75.2 |
| Combustible fuels | 1689.4 | 2010.3 | 2494.9 | 3277.2 | 3516.0 | 3576.3 | 3546.9 | 3335.6 |
| <i>Coal</i> | 942.5 | 1302.7 | 1789.6 | 2266.2 | 2296.8 | 2265.7 | 2266.0 | 2034.6 |
| <i>Oil</i> | 360.3 | 315.8 | 209.2 | 223.2 | 225.0 | 146.2 | 116.9 | 105.0 |
| <i>Gas</i> | 386.4 | 390.0 | 405.8 | 707.4 | 910.7 | 1081.5 | 1082.3 | 1119.8 |
| <i>Comb. renew. & waste</i> | 0.3 | 1.8 | 90.3 | 80.4 | 83.5 | 82.8 | 81.6 | 76.2 |
| Other (e.g. fuel cells) | - | - | - | - | 0.6 | 1.1 | 0.8 | 0.9 |
| - Own use by power plant | 108.9 | 150.3 | 209.0 | 264.7 | 240.3 | 198.1 | 243.8 | .. |
| Net production | 2163.9 | 2717.3 | 3607.6 | 4590.2 | 4923.9 | 5057.3 | 5035.5 | .. |
| Nuclear | .. | 287.0 | 648.6 | 830.5 | 879.1 | 904.6 | 904.6 | .. |
| Hydro | .. | 543.8 | 603.4 | 662.7 | 683.2 | 667.5 | 696.2 | .. |
| Geothermal | .. | 5.9 | 20.0 | 19.7 | 21.6 | 21.7 | 21.7 | .. |
| Solar | .. | - | 0.7 | 0.7 | 1.1 | 1.6 | 2.4 | .. |
| Tide, wave, ocean | .. | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Wind | .. | - | 3.0 | 5.9 | 19.3 | 37.7 | 59.4 | .. |
| Combustible fuels | .. | 1880.6 | 2331.8 | 3070.7 | 3318.9 | 3423.0 | 3350.4 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | 0.6 | 1.1 | 0.8 | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | 0.3 | 0.2 | 22.8 | 32.0 | 32.2 | 33.0 | 31.8 | 27.7 |
| + Imports | 19.4 | 33.7 | 40.9 | 65.0 | 64.3 | 71.1 | 82.6 | 70.7 |
| - Exports | 18.9 | 33.6 | 40.6 | 65.9 | 64.6 | 71.9 | 83.2 | 73.1 |
| Electrical energy supplied | 2164.2 | 2717.2 | 3585.1 | 4557.4 | 4891.3 | 5023.4 | 5003.1 | .. |
| - Transmission & distr. losses | 193.5 | 252.8 | 345.8 | 305.1 | 349.8 | 365.4 | 339.6 | .. |
| - Statistical difference | - | - | -6.6 | -7.4 | -0.0 | -0.0 | -0.8 | .. |
| Total consumption | 1970.7 | 2464.4 | 3245.8 | 4259.7 | 4541.5 | 4658.1 | 4664.2 | .. |
| - Energy industry consumption ⁽²⁾ | 51.7 | 78.5 | 93.9 | 116.4 | 129.0 | 132.9 | 131.7 | .. |
| Final consumption | 1919.0 | 2385.9 | 3151.9 | 4143.2 | 4412.5 | 4525.2 | 4532.4 | .. |
| Industry | 769.8 | 912.0 | 1087.9 | 1444.9 | 1242.4 | 1236.8 | 1226.1 | .. |
| Transport | 7.9 | 5.8 | 8.2 | 10.0 | 12.9 | 13.4 | 13.0 | .. |
| Commercial & publ. serv. | 480.5 | 639.2 | 958.1 | 1303.7 | 1431.1 | 1501.9 | 1512.5 | .. |
| Residential | 639.9 | 812.4 | 1074.2 | 1366.8 | 1556.4 | 1595.0 | 1588.1 | .. |
| Agriculture & fishing | 18.3 | 11.6 | 15.3 | 17.5 | 19.0 | 17.7 | 17.8 | .. |
| Sector non specified | 2.7 | 4.9 | 8.1 | 0.3 | 150.6 | 160.4 | 175.0 | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 2281.94 | 2867.66 | 3816.61 | 4854.89 | 5168.81 | 5255.41 | 5279.34 | 3.3 | 1.8 |
| - Hydro pumped storage | 0.11 | 0.10 | 15.92 | 26.89 | 25.93 | 26.04 | 25.39 | 36.7 | 2.6 |
| Total generation⁽¹⁾ | 2281.83 | 2867.56 | 3800.69 | 4828.00 | 5142.88 | 5229.37 | 5253.94 | 3.2 | 1.8 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 2239.90 | 2823.89 | 3543.83 | 4611.60 | 4925.42 | 5015.43 | 5049.10 | 2.9 | 2.0 |
| - Hydro pumped storage | 0.11 | 0.10 | 15.92 | 26.89 | 25.93 | 26.04 | 25.39 | 36.7 | 2.6 |
| Total generation ⁽¹⁾ | 2239.79 | 2823.79 | 3527.91 | 4584.71 | 4899.49 | 4989.39 | 5023.71 | 2.9 | 2.0 |
| Nuclear | 135.95 | 304.22 | 687.38 | 878.74 | 925.03 | 940.55 | 941.56 | 10.7 | 1.8 |
| Hydro | 498.61 | 515.99 | 555.72 | 609.30 | 641.07 | 616.03 | 642.74 | 0.7 | 0.8 |
| Geothermal | 3.06 | 6.27 | 14.22 | 20.52 | 23.27 | 24.20 | 24.07 | 10.1 | 3.0 |
| Solar, wind, tide ⁽²⁾ | - | - | 0.03 | 6.50 | 30.07 | 38.84 | 61.01 | - | 52.7 |
| Coal | 899.51 | 1302.61 | 1764.57 | 2210.31 | 2242.00 | 2243.06 | 2243.24 | 4.3 | 1.3 |
| Oil | 344.57 | 308.43 | 201.89 | 214.62 | 123.82 | 121.76 | 100.03 | -3.3 | -3.8 |
| Gas | 357.82 | 385.83 | 301.90 | 611.38 | 879.56 | 970.18 | 974.15 | -1.1 | 6.7 |
| Comb. renew. & waste | 0.26 | 0.46 | 2.21 | 33.34 | 34.68 | 34.78 | 36.92 | 14.2 | 16.9 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 42.05 | 43.77 | 272.78 | 243.29 | 243.40 | 239.98 | 230.24 | 12.4 | -0.9 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 42.05 | 43.77 | 272.78 | 243.29 | 243.40 | 239.98 | 230.24 | 12.4 | -0.9 |
| Nuclear | - | - | 0.12 | - | - | - | - | - | - |
| Hydro | 32.84 | 30.83 | 37.65 | 35.55 | 36.54 | 31.56 | 35.63 | 0.9 | -0.3 |
| Geothermal | - | - | 6.92 | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 3.73 | 0.20 | 1.71 | 1.93 | 2.09 | - | -3.2 |
| Coal | 0.18 | 0.07 | 25.07 | 55.86 | 25.68 | 22.68 | 22.73 | 36.0 | -0.5 |
| Oil | 6.38 | 7.38 | 7.29 | 8.60 | 20.26 | 24.48 | 16.91 | 0.8 | 4.8 |
| Gas | 2.64 | 4.19 | 103.89 | 96.04 | 110.70 | 111.33 | 108.16 | 25.8 | 0.2 |
| Comb. renew. & waste | - | 1.30 | 88.12 | 47.05 | 48.51 | 48.00 | 44.73 | - | -3.7 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

OECD NORTH AMERICA

5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|-------------|--------------|-----------------|-----------------|-----------------|-----------------|-----------------|---|
| Total | 8758 | 12842 | 257286 e | 235852 e | 231050 e | 223073 e | 221429 e | -0.8 |
| Total energy | - | - | - | 5533 e | 38664 | 37261 | 38049 | - |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | 10422 | 10771 | 10856 | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | - | 21151 | 19846 | 20006 | - |
| Energy non specified/other | - | - | - | 5533 e | 7091 | 6644 | 7187 | - |
| Total industry | 5924 | 7991 | 219491 | 113308 e | 140843 | 136762 | 130132 | -2.9 |
| Iron and steel | - | - | - | 295 | 563 | 484 | 626 | - |
| Chemical and petrochemical | - | - | - | 585 | 60172 | 59915 | 54960 | - |
| Non-ferrous metals | - | - | - | - | - | - | - | - |
| Non-metallic minerals | - | - | - | - | 499 | 442 | 261 | - |
| Transport equipment | - | - | - | - | 306 | 307 | 409 | - |
| Machinery | - | - | - | - | 97 | 106 | 92 | - |
| Mining and quarrying | - | - | - | 57 | 2350 | 2350 | 2724 | - |
| Food and tobacco | - | - | - | 280 | 7007 | 6878 | 6394 | - |
| Pulp and printing | - | - | - | 263 | 45651 | 45367 | 43976 | - |
| Wood and wood products | - | - | - | - | 1383 | 1303 | 1360 | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | - | - | - | - | 306 | 285 | 307 | - |
| Non specified/other industries | 5924 | 7991 | 219491 | 111828 e | 22509 | 19325 | 19023 | -12.7 |
| Total transport | - | - | - | - | 374 | 483 | 419 | - |
| Rail and pipeline | - | - | - | - | 10 | 4 | 3 | - |
| Transport non specified | - | - | - | - | 364 | 479 | 416 | - |
| Other | 2834 | 4851 | 37795 e | 117011 e | 51169 e | 48567 e | 52829 e | 1.9 |
| Commerce and pub. services | - | - | 23 | 708 | 8084 | 7892 | 7592 | 38.0 |
| Residential | - | - | - | - | 49 | 47 | 22 | - |
| Agriculture and fishing | - | - | - | - | 229 | 220 | 264 | - |
| Sector non specified | 2834 | 4851 | 37772 e | 116303 e | 42807 e | 40408 e | 44951 e | 1.0 |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

OECD NORTH AMERICA

6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---|
| Total | 43140 | 129895 | 359761 | 290819 | 587170 | 567369 | 559294 | 8.5 |
| Nuclear | .. | .. | - | - | - | - | - | .. |
| Geothermal | .. | .. | - | - | - | - | - | .. |
| Coal | .. | .. | 81572 | 50316 | 100382 | 96438 | 85766 | .. |
| Oil | .. | .. | 9181 | 29596 | 39356 | 42135 | 41548 | .. |
| Gas | .. | .. | 239876 | 192185 | 397900 | 382392 | 380875 | .. |
| Comb. renew. & waste | .. | .. | 29132 | 18722 | 49532 | 46404 | 51105 | .. |
| Non-spec. comb. fuels | .. | .. | - | - | - | - | - | .. |
| Chemical processes | .. | .. | - | - | - | - | - | .. |
| Heat pumps | .. | .. | - | - | - | - | - | .. |
| Electric boilers | .. | .. | - | - | - | - | - | .. |
| Other sources ⁽¹⁾ | .. | .. | - | - | - | - | - | .. |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 43140 | 114236 | 357747 | 288805 | 585365 | 565564 | .. | 9.3 |
| Nuclear | .. | .. | - | - | - | - | .. | .. |
| Geothermal | .. | .. | - | - | - | - | .. | .. |
| Coal | .. | .. | 81572 | 50316 | 100382 | 96438 | .. | .. |
| Oil | .. | .. | 9181 | 29596 | 39356 | 42135 | .. | .. |
| Gas | .. | .. | 239876 | 192185 | 397900 | 382392 | .. | .. |
| Comb. renew. & waste | .. | .. | 27118 | 16708 | 47727 | 44599 | .. | .. |
| Non-spec. comb. fuels | .. | .. | - | - | - | - | .. | .. |
| Chemical processes | .. | .. | - | - | - | - | .. | .. |
| Heat pumps | .. | .. | - | - | - | - | .. | .. |
| Electric boilers | .. | .. | - | - | - | - | .. | .. |
| Other sources ⁽¹⁾ | .. | .. | - | - | - | - | .. | .. |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | 15659 | 2014 | 2014 | 1805 | 1805 | .. | -11.3 |
| Nuclear | .. | .. | - | - | - | - | .. | .. |
| Geothermal | .. | .. | - | - | - | - | .. | .. |
| Coal | .. | .. | - | - | - | - | .. | .. |
| Oil | .. | .. | - | - | - | - | .. | .. |
| Gas | .. | .. | - | - | - | - | .. | .. |
| Comb. renew. & waste | .. | .. | 2014 | 2014 | 1805 | 1805 | .. | .. |
| Non-spec. comb. fuels | .. | .. | - | - | - | - | .. | .. |
| Chemical processes | .. | .. | - | - | - | - | .. | .. |
| Heat pumps | .. | .. | - | - | - | - | .. | .. |
| Electric boilers | .. | .. | - | - | - | - | .. | .. |
| Other sources ⁽¹⁾ | .. | .. | - | - | - | - | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

OECD NORTH AMERICA

7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 402.88 | 471.04 | 600.68 | 765.74 | 770.53 | 796.17 | 772.75 | 2.4 | 1.4 |
| Coal | 225.26 | 307.07 | 418.84 | 534.15 | 527.16 | 534.78 | 523.69 | 3.7 | 1.2 |
| Oil | 88.09 | 73.45 | 46.16 | 54.43 | 35.24 | 34.96 | 27.17 | -3.7 | -2.9 |
| Gas | 89.26 | 90.18 | 95.04 | 153.04 | 186.03 | 204.16 | 199.44 | 0.4 | 4.2 |
| Comb. renew. & waste | 0.27 | 0.34 | 40.64 | 24.12 | 22.10 | 22.27 | 22.45 | 34.4 | -3.2 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 470.04 | 530.78 | 710.11 | 732.35 | 758.66 | 738.16 | .. | 1.8 |
| Coal | .. | 307.06 | 414.50 | 521.87 | 522.56 | 530.96 | 519.91 | .. | 1.3 |
| Oil | .. | 73.18 | 45.69 | 42.75 | 28.86 | 28.84 | 23.12 | .. | -3.7 |
| Gas | .. | 89.70 | 70.01 | 134.95 | 168.07 | 185.81 | 181.65 | .. | 5.4 |
| Comb. renew. & waste | .. | 0.11 | 0.57 | 10.54 | 12.86 | 13.06 | 13.47 | .. | 19.2 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 29.55 | 85.16 | 197.78 | 246.80 | 254.72 | 259.47 | 259.69 | 11.8 | 1.5 |
| Nuclear | 27.31 | 79.77 | 179.55 | 229.00 | 241.07 | 245.11 | 245.38 | 11.7 | 1.8 |
| Geothermal | 2.25 | 5.39 | 18.17 | 17.64 | 13.46 | 14.12 | 13.98 | 13.1 | -1.4 |
| Solar | - | - | 0.06 | 0.15 | 0.19 | 0.24 | 0.33 | - | 10.3 |
| Non-Thermal | | | | | | | | | |
| Total | 40.96 | 47.03 | 51.30 | 55.97 | 60.79 | 58.95 | 63.48 | 1.3 | 1.2 |
| Hydro | 40.96 | 47.03 | 51.03 | 55.46 | 58.27 | 55.69 | 58.34 | 1.3 | 0.7 |
| Tide, wave, ocean | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 1.3 |
| Wind | - | - | 0.26 | 0.51 | 2.51 | 3.26 | 5.14 | - | 17.9 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

OECD NORTH AMERICA

8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|----------|------------|------------|------------|------------|------------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 491319 | 641730 e | 830444 e | 875373 | 886552 | 877598 | 1.8 |
| Fuel input (TJ) | 12580392 | 15637874 e | 19766755 e | 19893839 e | 20059765 e | 19597056 e | 1.3 |
| Electricity production (GWh) | 1229549 | 1608567 e | 2025208 e | 2044919 e | 2025861 e | 2029078 e | 1.3 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 53019 | 100889 | 108847 | 103886 | 110176 | 108785 | 0.4 |
| Fuel input (TJ) | 801533 | 1579605 | 1678476 | 1588668 | 1714679 | 1705711 | 0.4 |
| Electricity production (GWh) | 73097 | 143310 | 154372 | 162491 | 179022 | 174126 | 1.1 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 356 | 577 e | 31002 e | 17979 | 19145 | 13912 | 19.3 |
| Electricity production (GWh) | 33 e | 51 e | 1729 e | 1072 | 1014 | 874 | 17.1 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 76327 | 48353 | 51518 | 32645 | 33601 | 26294 | -3.3 |
| Fuel input (TJ) | 3329523 | 2179772 | 2236348 | 1316769 | 1332450 | 1067796 | -3.9 |
| Electricity production (GWh) | 315806 | 203728 e | 209280 | 124630 | 127475 | 101664 | -3.8 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 4236270 | 3275277 | 5050305 | 6689014 | 7472768 | 7373453 | 4.6 |
| Electricity production (GWh) | 390021 | 306459 e | 489265 e | 779719 | 858100 | 873072 | 6.0 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 9630 | 258964 e | 218551 e | 267635 | 274563 | 272340 | 0.3 |
| Electricity production (GWh) | 1300 | 15368 e | 18310 | 19852 | 19785 | 18798 | 1.1 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | 9138 | 10421 | 15779 e | 12975 | 14832 | 2.7 |
| Electricity production (GWh) | - | 749 | 923 | 1427 | 1116 | 1288 | 3.1 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 162000 e | 219034 e | 243535 | 242065 e | 245673 e | 2.3 |
| Electricity production (GWh) | - | 9693 e | 14561 e | 15513 | 15237 e | 15149 e | 2.5 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 30950 e | 58576 e | 82912 e | 83355 e | 97685 e | 6.6 |
| Electricity production (GWh) | - | 2517 e | 4622 e | 6862 e | 7264 e | 8208 e | 6.8 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 2010263 | 2290442 e | 2918270 e | 3156485 e | 3234874 e | 3222257 e | 1.9 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

OECD NORTH AMERICA

9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|---------|-----------|----------|----------|----------|----------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | 11445 e | 30402 e | 24060 | 24427 | 24845 | 4.4 |
| Fuel input (TJ) | - | 302045 e | 788540 e | 548110 e | 554741 e | 565326 e | 3.5 |
| Electricity production (GWh) | - | 35063 e | 75408 e | 55645 e | 56548 e | 58352 e | 2.9 |
| CHP Heat production (TJ) | - | 19742 e | 81572 e | 88979 e | 88453 e | 85898 e | 8.5 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | 1096 e | 1246 e | - | - | - | - |
| Fuel input (TJ) | - | 16154 e | 18583 e | - | 5 | - | - |
| Electricity production (GWh) | - | 2651 e | 3134 e | - | 1 | - | - |
| CHP Heat production (TJ) | - | 258 e | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 83858 e | 47711 | 42975 | 45083 | - |
| Electricity production (GWh) | - | - | 6323 | 3553 | 3292 | 3545 | - |
| CHP Heat production (TJ) | - | - | - | 15676 | 11929 | 10540 | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 283 | 77 | 4020 | 4083 | 3862 | 3075 | 22.7 |
| Fuel input (TJ) | 12311 e | 3358 | 145927 | 158855 | 149797 | 118136 | 21.9 |
| Electricity production (GWh) | - | 5451 | 13940 | 19445 | 18758 | 15268 | 5.9 |
| CHP Heat production (TJ) | 8618 e | 2943 | 9181 e | 39500 | 39356 | 42135 | 15.9 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 1147018 | 2078966 | 1931586 | 2047382 | 1934633 | 2.9 |
| Electricity production (GWh) | - | 99324 | 218156 | 210544 | 223407 | 209232 | 4.2 |
| CHP Heat production (TJ) | - | 7601 | 239876 e | 390800 | 397900 | 382392 | 24.3 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 1153493 e | 388431 | 232829 | 238708 | 225001 | -8.7 |
| Electricity production (GWh) | - | 57006 e | 32074 | 32292 | 32355 | 31082 | -3.3 |
| CHP Heat production (TJ) | - | - | 9489 | 27903 | 32164 | 28358 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | 71583 | 58985 | 36864 | 33668 | 35515 | -3.8 |
| Electricity production (GWh) | - | 3961 | 6247 | 4178 | 3890 | 3915 | -0.1 |
| CHP Heat production (TJ) | - | - | 187 | 3899 | 3525 | 3751 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 13083 e | 40737 e | 31583 | 32437 e | 33304 e | 5.3 |
| Electricity production (GWh) | - | 1037 e | 2319 e | 1947 | 2024 e | 1995 e | 3.7 |
| CHP Heat production (TJ) | - | 633 e | 15884 e | 10730 | 11362 e | 12033 e | 17.8 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 12790 | 12859 | 12577 e | 13310 e | - |
| Electricity production (GWh) | - | - | 1325 | 1112 | 1109 e | 1211 e | - |
| CHP Heat production (TJ) | - | - | 2191 | 1095 | 1331 e | 1112 e | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | - | 204493 e | 358926 e | 328716 | 341384 e | 324600 e | 2.6 |
| CHP Heat production (TJ) | 22654 | 112485 e | 358380 e | 578582 | 586020 e | 566219 e | 9.4 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

OECD NORTH AMERICA

10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|--------|--------|------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 2629 e | 2629 e | 2260 | 2260 e | 2260 e | -0.8 |
| Heat production (TJ) | - | 1381 e | 1381 e | 1150 | 1150 e | 1150 e | -1.0 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | - | 1381 e | 1381 e | 1150 | 1150 e | 1150 e | -1.0 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

OECD NORTH AMERICA

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 1486.35 | 1532.27 | 1535.46 | 1833.73 | 1870.73 | 1900.74 | 1859.91 | 0.2 | 1.1 |
| Geothermal | - | - | 0.34 | 0.52 | 0.92 | 1.04 | 1.16 | - | 7.1 |
| Solar thermal | - | - | - | 1.48 | 1.37 | 1.43 | 1.50 | - | - |
| Coal | 80.34 | 62.10 | 60.30 | 37.47 | 37.28 | 37.43 | 36.41 | -1.7 | -2.8 |
| Oil | 791.33 | 808.82 | 803.29 | 936.77 | 1000.87 | 995.09 | 947.56 | 0.1 | 0.9 |
| Gas | 398.30 | 386.47 | 360.45 | 426.12 | 366.93 | 389.86 | 393.08 | -0.6 | 0.5 |
| Comb. renew. & waste | 51.25 | 68.67 | 37.23 | 68.97 | 76.14 | 78.73 | 82.68 | -1.9 | 4.5 |
| Electricity | 165.03 | 205.19 | 271.06 | 356.32 | 379.29 | 389.16 | 389.79 | 3.0 | 2.0 |
| Heat | 0.10 | 1.03 | 2.79 | 6.09 | 7.93 | 8.00 | 7.72 | 21.9 | 5.8 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 453.42 | 459.67 | 356.98 | 414.39 | 383.17 | 384.20 | 379.32 | -1.4 | 0.3 |
| Geothermal | - | - | - | 0.11 | 0.11 | 0.12 | 0.13 | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 66.22 | 53.95 | 50.26 | 34.95 | 35.34 | 34.58 | 33.73 | -1.6 | -2.2 |
| Oil | 89.77 | 107.11 | 58.48 | 39.29 | 49.01 | 45.24 | 47.15 | -2.5 | -1.2 |
| Gas | 195.53 | 178.18 | 137.56 | 166.07 | 141.43 | 148.36 | 145.73 | -2.0 | 0.3 |
| Comb. renew. & waste | 35.61 | 40.99 | 16.48 | 44.73 | 45.01 | 43.14 | 40.96 | -4.4 | 5.2 |
| Electricity | 66.20 | 78.43 | 93.56 | 124.26 | 105.88 | 106.36 | 105.44 | 2.1 | 0.7 |
| Heat | 0.10 | 1.00 | 0.63 | 4.98 | 6.39 | 6.40 | 6.17 | 11.7 | 13.5 |
| Transport | 460.27 | 492.39 | 559.22 | 676.53 | 727.80 | 736.04 | 710.00 | 1.2 | 1.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.12 | - | - | - | - | - | - | - | - |
| Oil | 442.63 | 475.51 | 540.21 | 652.41 | 696.95 | 700.64 | 669.33 | 1.2 | 1.2 |
| Gas | 16.84 | 16.38 | 18.31 | 19.94 | 18.28 | 19.23 | 18.96 | 0.5 | 0.2 |
| Comb. renew. & waste | - | - | - | 3.32 | 11.45 | 15.02 | 20.59 | - | - |
| Electricity | 0.68 | 0.50 | 0.71 | 0.86 | 1.12 | 1.15 | 1.12 | 0.2 | 2.6 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 166.31 | 162.81 | 182.47 | 223.93 | 230.85 | 239.43 | 243.51 | 0.5 | 1.6 |
| Geothermal | - | - | - | 0.19 | 0.35 | 0.36 | 0.37 | - | - |
| Solar thermal | - | - | - | 0.04 | 0.09 | 0.11 | 0.13 | - | - |
| Coal | 3.41 | 1.84 | 2.42 | 0.89 | 1.53 | 1.70 | 1.75 | -2.0 | -1.8 |
| Oil | 55.76 | 38.24 | 25.92 | 24.17 | 24.76 | 24.31 | 24.31 | -4.4 | -0.4 |
| Gas | 65.82 | 67.72 | 69.57 | 84.16 | 75.45 | 80.08 | 83.01 | 0.3 | 1.0 |
| Comb. renew. & waste | - | - | - | 1.24 | 2.16 | 2.11 | 2.31 | - | - |
| Electricity | 41.32 | 54.98 | 82.40 | 112.12 | 124.95 | 129.16 | 130.08 | 4.1 | 2.6 |
| Heat | - | 0.03 | 2.16 | 1.12 | 1.54 | 1.60 | 1.55 | - | -1.8 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

OECD NORTH AMERICA

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 271.53 | 255.03 | 253.45 | 312.14 | 301.27 | 317.14 | 317.97 | -0.4 | 1.3 |
| Geothermal | - | - | - | 0.22 | 0.46 | 0.55 | 0.67 | - | - |
| Solar thermal | - | - | - | 1.44 | 1.28 | 1.32 | 1.37 | - | - |
| Coal | 3.34 | 1.65 | 1.53 | 1.36 | 0.04 | 0.03 | 0.03 | -4.5 | -19.4 |
| Oil | 86.78 | 56.62 | 37.60 | 42.79 | 33.42 | 34.28 | 31.86 | -4.8 | -0.9 |
| Gas | 119.59 | 119.66 | 114.72 | 130.61 | 115.82 | 125.70 | 129.00 | -0.2 | 0.7 |
| Comb. renew. & waste | 6.79 | 7.25 | 7.21 | 18.18 | 17.22 | 18.09 | 18.47 | 0.4 | 5.4 |
| Electricity | 55.03 | 69.86 | 92.38 | 117.54 | 133.03 | 137.17 | 136.58 | 3.1 | 2.2 |
| Heat | - | - | 0.00 | - | 0.00 | 0.00 | - | - | - |
| Agriculture & fishing | 18.75 | 18.41 | 19.89 | 21.14 | 24.64 | 23.52 | 22.80 | 0.3 | 0.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | 0.02 | 0.05 | - | - | - |
| Oil | 17.18 | 17.13 | 18.08 | 19.05 | 22.29 | 21.09 | 20.43 | 0.3 | 0.7 |
| Gas | - | 0.27 | 0.50 | 0.59 | 0.44 | 0.48 | 0.49 | - | -0.1 |
| Comb. renew. & waste | - | - | - | - | 0.29 | 0.37 | 0.36 | - | - |
| Electricity | 1.57 | 1.00 | 1.32 | 1.51 | 1.59 | 1.53 | 1.53 | -1.0 | 0.8 |
| Heat | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 7.7 |
| Other | 17.68 | 25.39 | 20.31 | 1.52 | 12.71 | 13.79 | 15.05 | 0.8 | -1.7 |
| Geothermal | - | - | 0.34 | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 7.24 | 4.53 | 5.74 | - | - | - | - | -1.4 | - |
| Oil | 1.35 | - | - | - | - | - | - | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | 8.85 | 20.44 | 13.54 | 1.50 | - | - | - | 2.5 | - |
| Electricity | 0.23 | 0.42 | 0.70 | 0.03 | 12.71 | 13.79 | 15.05 | 6.7 | 18.6 |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 98.38 | 118.58 | 143.14 | 184.08 | 190.29 | 186.61 | 171.27 | 2.23 | 1.00 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

OECD NORTH AMERICA

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| TFC (Mtoe) | 1486.35 | 1532.27 | 1535.46 | 1833.73 | 1878.59 | 1870.73 | 1900.74 | 1859.91 |
| Total industry (Mtoe) | 453.42 | 459.67 | 356.98 | 414.39 | 369.95 | 383.17 | 384.20 | 379.32 |
| Iron and steel | 49.96 | 39.93 | 27.34 | 38.16 | 31.06 | 30.83 | 30.93 | 30.70 |
| Chem. and petrochemical | 24.47 | 34.90 | 79.95 | 102.29 | 85.61 | 82.22 | 82.47 | 83.09 |
| Non-ferrous metals | 12.61 | 15.92 | 10.65 | 25.23 | 19.60 | 19.52 | 19.47 | 19.40 |
| Non-metallic minerals | 8.67 | 13.14 | 14.86 | 29.27 | 30.68 | 34.13 | 34.29 | 32.63 |
| Transport equipment | 5.19 | 5.23 | 4.35 | 13.42 | 9.55 | 11.19 | 11.38 | 11.29 |
| Machinery | 5.14 | 7.03 | 11.49 | 24.89 | 20.41 | 21.51 | 21.98 | 21.27 |
| Mining and quarrying | 4.90 | 9.06 | 9.61 | 12.88 | 14.76 | 14.85 | 17.49 | 17.48 |
| Food and tobacco | 9.64 | 10.49 | 12.46 | 29.92 | 31.55 | 34.65 | 34.79 | 34.42 |
| Paper, pulp and printing | 31.74 | 32.98 | 34.25 | 75.90 | 73.04 | 75.56 | 73.17 | 70.78 |
| Wood and wood products | 2.36 | 3.07 | 2.78 | 13.63 | 12.27 | 13.06 | 12.42 | 13.68 |
| Construction | - | 1.14 | 2.62 | 1.86 | 3.25 | 3.32 | 3.02 | 3.00 |
| Textile and leather | 4.07 | 5.40 | 3.77 | 8.67 | 6.22 | 6.50 | 6.54 | 6.02 |
| Non specified/other | 294.66 | 281.38 | 142.84 | 38.27 | 31.95 | 35.83 | 36.25 | 35.56 |
| Electricity consumption (Mtoe) | 165.03 | 205.19 | 271.06 | 356.32 | 379.47 | 379.29 | 389.16 | 389.79 |
| Total industry (Mtoe) | 66.20 | 78.43 | 93.56 | 124.26 | 106.85 | 105.88 | 106.36 | 105.44 |
| Iron and steel | 6.00 | 6.70 | 7.69 | 8.26 | 8.53 | 8.39 | 8.49 | 8.50 |
| Chem. and petrochemical | 12.89 | 14.20 | 19.95 | 24.99 | 24.03 | 23.80 | 24.03 | 23.59 |
| Non-ferrous metals | 10.58 | 12.66 | 8.08 | 12.52 | 12.28 | 12.33 | 12.04 | 12.07 |
| Non-metallic minerals | 2.71 | 3.04 | 3.41 | 4.04 | 4.40 | 4.41 | 4.45 | 4.30 |
| Transport equipment | 2.66 | 2.84 | 3.36 | 5.29 | 4.18 | 4.15 | 4.22 | 4.14 |
| Machinery | 4.46 | 5.36 | 10.30 | 11.83 | 9.93 | 9.86 | 10.02 | 9.84 |
| Mining and quarrying | 2.98 | 3.33 | 5.77 | 6.57 | 5.93 | 5.92 | 5.66 | 5.56 |
| Food and tobacco | 3.55 | 4.08 | 5.17 | 6.72 | 7.48 | 7.43 | 7.52 | 7.41 |
| Paper, pulp and printing | 6.54 | 8.22 | 15.28 | 17.08 | 16.14 | 15.71 | 15.44 | 14.87 |
| Wood and wood products | 1.65 | 1.96 | 2.47 | 2.83 | 2.52 | 2.50 | 2.54 | 2.49 |
| Construction | - | - | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 |
| Textile and leather | 3.16 | 3.07 | 3.21 | 3.28 | 2.47 | 2.45 | 2.49 | 2.45 |
| Non specified/other | 9.02 | 13.00 | 8.83 | 20.81 | 8.92 | 8.90 | 9.40 | 10.18 |
| Total industry (TWh) | 769.75 | 912.01 | 1087.88 | 1444.86 | 1242.42 | 1231.19 | 1236.75 | 1226.09 |
| Iron and steel | 69.75 | 77.89 | 89.40 | 96.06 | 99.15 | 97.53 | 98.71 | 98.82 |
| Chem. and petrochemical | 149.87 | 165.15 | 232.02 | 290.53 | 279.43 | 276.69 | 279.46 | 274.34 |
| Non-ferrous metals | 123.06 | 147.17 | 93.98 | 145.59 | 142.84 | 143.38 | 140.04 | 140.32 |
| Non-metallic minerals | 31.48 | 35.31 | 39.61 | 47.01 | 51.14 | 51.28 | 51.79 | 49.96 |
| Transport equipment | 30.92 | 33.01 | 39.12 | 61.50 | 48.56 | 48.29 | 49.12 | 48.19 |
| Machinery | 51.85 | 62.32 | 119.78 | 137.54 | 115.51 | 114.62 | 116.50 | 114.40 |
| Mining and quarrying | 34.69 | 38.71 | 67.06 | 76.42 | 69.01 | 68.87 | 65.76 | 64.66 |
| Food and tobacco | 41.25 | 47.39 | 60.17 | 78.19 | 87.00 | 86.45 | 87.46 | 86.21 |
| Paper, pulp and printing | 76.08 | 95.53 | 177.66 | 198.62 | 187.68 | 182.62 | 179.58 | 172.93 |
| Wood and wood products | 19.20 | 22.74 | 28.75 | 32.85 | 29.25 | 29.02 | 29.49 | 28.96 |
| Construction | - | - | 0.30 | 0.40 | 0.47 | 0.50 | 0.52 | 0.47 |
| Textile and leather | 36.73 | 35.65 | 37.34 | 38.19 | 28.72 | 28.50 | 28.96 | 28.44 |
| Non specified/other | 104.89 | 151.16 | 102.70 | 241.95 | 103.67 | 103.43 | 109.36 | 118.40 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

OECD NORTH AMERICA

13. Electricity imports by origin

(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total imports⁽¹⁾ | 19414 | 33739 | 40863 | 55346 | 65003 | 64291 | 66838 | 71053 | 82560 |
| Imports from: | | | | | | | | | |
| Total OECD | 19414 | 33739 | 40863 | 55346 | 65003 | 64291 | 66838 | 71053 | 82560 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | 16848 | 30181 | 20555 | 44503 | 48515 | 42930 | 41544 | 50118 | 55732 |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | 1951 | 2257 | 77 | 1597 | 1147 | 1278 | 1288 |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | 2566 | 3558 | 18357 | 8586 | 16411 | 19764 | 24147 | 19657 | 25540 |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

OECD NORTH AMERICA

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total exports⁽¹⁾ | 18856 | 33645 | 40601 | 54534 | 65856 | 64622 | 68306 | 71925 | 83210 |
| Exports to: | | | | | | | | | |
| Total OECD | 18856 | 33645 | 40601 | 54510 | 65731 | 63512 | 68095 | 71698 | 82959 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | 2570 | 3461 | 19936 | 7992 | 12685 | 19332 | 23405 | 19559 | 23499 |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | 590 | 1154 | 1993 | 471 | 866 | 584 | 584 |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | 16286 | 30184 | 20075 | 45364 | 51053 | 43709 | 43824 | 51555 | 58876 |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | 24 | 125 | 1110 | 211 | 227 | 251 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

OECD NORTH AMERICA

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 480.13 | 714.33 | 813.78 | 848.05 | 761.65 | 1109.96 | 1121.29 | 1134.82 | 1151.51 |
| Nuclear | 34.33 | 62.36 | 113.84 | 117.22 | 109.84 | 114.70 | 115.04 | 114.98 | 115.47 |
| Hydro | 35.90 | 124.27 | 153.78 | 166.29 | 164.52 | 176.11 | 177.43 | 179.29 | 180.24 |
| <i>of which: pumped storage</i> | - | - | 0.19 | 21.56 | 19.70 | 21.52 | 21.64 | 22.06 | 22.04 |
| Geothermal | 0.08 | 1.16 | 2.31 | 2.50 | 3.65 | 3.25 | 3.23 | 3.17 | 3.22 |
| Solar | - | - | - | 0.01 | 0.43 | 0.41 | 0.43 | 0.53 | 0.57 |
| Tide, wave, ocean | - | - | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| Wind | - | - | - | 0.03 | 2.47 | 9.39 | 12.87 | 18.37 | 27.11 |
| Other (e.g. fuel cells) | - | - | - | 0.05 | - | 0.04 | 0.04 | 0.04 | 0.03 |
| Combustible fuels | 409.83 | 526.55 | 543.82 | 561.94 | 480.72 | 806.05 | 812.21 | 818.43 | 824.87 |
| <i>of which⁽¹⁾:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid fuels | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Comb. renew. & waste | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / liquid / gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Internal combustion | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Gas turbine | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Combined cycle | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Other | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Breakdown of electrical capacity by type of fuel are shown in the individual country chapters.

Note: Please refer to notes in the introductory information for data coverage.

OECD NORTH AMERICA

15. Net maximum electricity generating capacity on 31 December (continued)

(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|--------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 7.42 | 10.10 | 52.22 | 79.64 | 202.83 | 42.49 | 43.41 | 43.67 | 44.96 |
| Nuclear | - | - | 0.02 | - | - | - | - | - | - |
| Hydro | 4.43 | 6.07 | 5.84 | 7.85 | 11.41 | 5.33 | 5.42 | 5.46 | 5.55 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | 1.06 | 1.22 | - | - | - | - | - |
| Solar | - | - | 0.34 | 0.41 | 0.19 | 0.50 | 0.70 | 0.96 | 1.44 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 1.91 | 1.72 | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | 0.44 | 0.44 | 0.44 | 0.40 |
| Combustible fuels | 2.98 | 4.03 | 43.06 | 68.44 | 191.23 | 36.22 | 36.85 | 36.81 | 37.57 |
| <i>of which⁽¹⁾:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid fuels | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Comb. renew. & waste | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / liquid / gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Internal combustion | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Gas turbine | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Combined cycle | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Other | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Breakdown of electrical capacity by type of fuel are shown in the individual country chapters.

Note: Please refer to notes in the introductory information for data coverage.

OECD/IEA PACIFIC*

Figure 1. Total final consumption by fuel

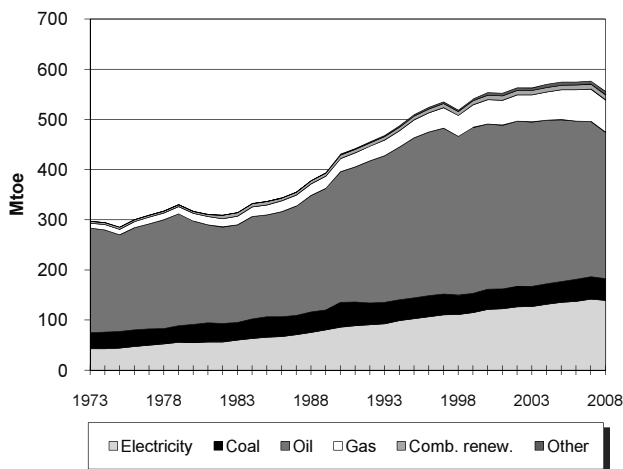


Figure 2. Electricity generation by fuel

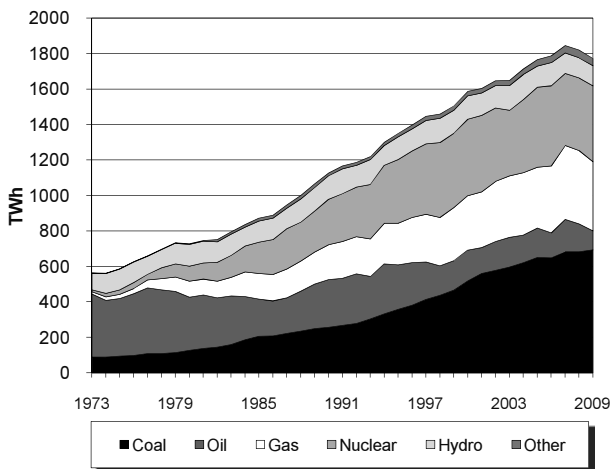


Figure 3. Electricity consumption by sector

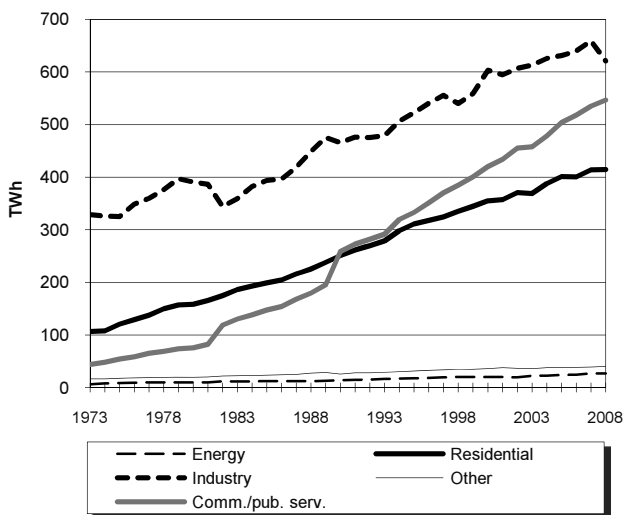


Figure 4. Electricity indicators

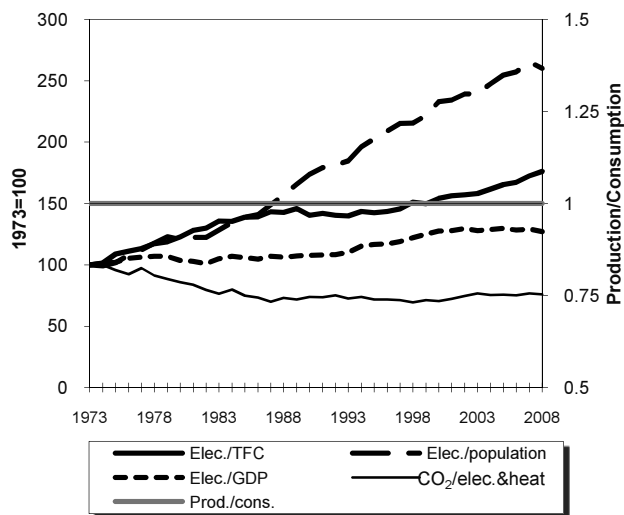
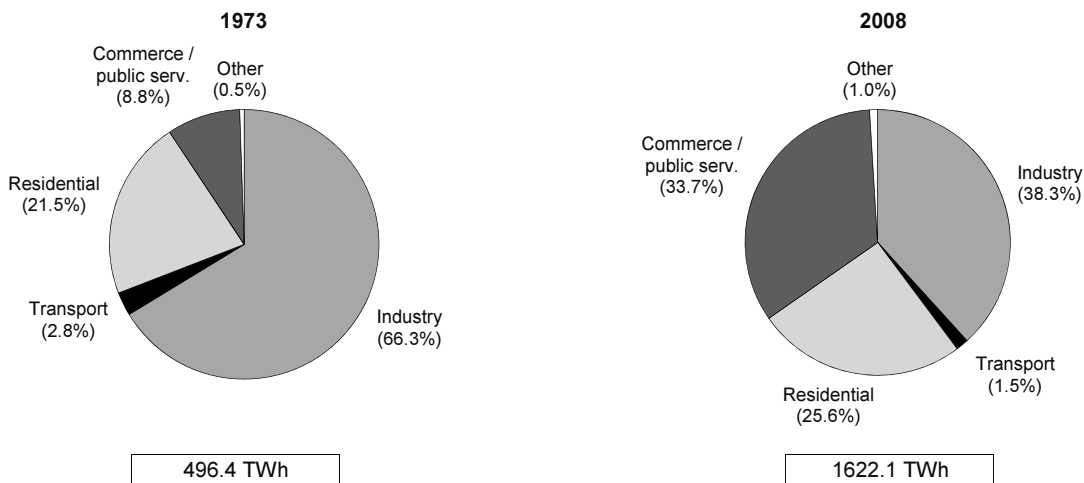


Figure 5. Total final electricity consumption by sector



* Geographic coverage of OECD and IEA Pacific is the same.

OECD/IEA PACIFIC*

1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|---------|---------|---------|---------|---------|---------|---------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 406.99 | 464.32 | 631.33 | 829.40 | 878.62 | 869.83 | 851.67 | 2.6 | 1.6 |
| GDP (billion 2000 USD) | 2507.04 | 3171.93 | 4739.01 | 5653.12 | 6509.03 | 6499.74 | 6275.83 | 3.8 | 1.5 |
| TPES/GDP ⁽¹⁾ | 0.16 | 0.15 | 0.13 | 0.15 | 0.13 | 0.13 | 0.14 | -1.2 | 0.1 |
| Population (millions) | 159.59 | 173.14 | 187.14 | 197.08 | 201.64 | 202.12 | 201.91 | 0.9 | 0.4 |
| TPES/population ⁽²⁾ | 2.55 | 2.68 | 3.37 | 4.21 | 4.36 | 4.30 | 4.22 | 1.7 | 1.2 |
| TPES/GDP (2000 = 100) | 111 | 100 | 91 | 100 | 92 | 91 | 92 | -1.2 | 0.1 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 79 | 81 | 84 | 100 | 101 | 100 | .. | 0.4 | .. |
| Ele.TFC/population ⁽⁴⁾ | 3111 | 3725 | 5351 | 7180 | 8174 | 8028 | .. | 3.2 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 563.15 | 727.60 | 1127.43 | 1586.63 | 1845.96 | 1819.77 | 1772.47 | 4.2 | 2.4 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 406.99 | 464.32 | 631.33 | 829.40 | 878.62 | 869.83 | 851.67 | 2.6 | 1.6 |
| Coal | 89.84 | 101.38 | 138.29 | 185.51 | 229.39 | 235.93 | 223.48 | 2.6 | 2.6 |
| Oil | 292.99 | 294.41 | 334.86 | 394.11 | 366.69 | 349.48 | 340.18 | 0.8 | 0.1 |
| Gas | 8.74 | 29.65 | 65.57 | 106.98 | 143.64 | 144.68 | 143.29 | 12.6 | 4.2 |
| Comb. renew & waste | 3.53 | 4.13 | 10.22 | 13.12 | 16.47 | 16.53 | 15.85 | 6.5 | 2.3 |
| Nuclear | 2.53 | 22.43 | 66.50 | 112.32 | 106.01 | 106.61 | 111.41 | 21.2 | 2.8 |
| Geothermal | 1.30 | 1.79 | 3.15 | 4.96 | 5.00 | 5.14 | 5.72 | 5.4 | 3.2 |
| Solar, wind, tide ⁽¹⁾ | - | 0.02 | 1.26 | 0.99 | 1.44 | 1.63 | 1.82 | - | 2.0 |
| Hydro | 8.07 | 10.50 | 11.44 | 11.36 | 9.94 | 9.76 | 9.85 | 2.1 | -0.8 |
| Net electricity imports ⁽²⁾ | - | - | - | - | - | - | - | - | - |
| Heat | - | - | 0.04 | 0.04 | 0.05 | 0.07 | 0.07 | - | 3.4 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

OECD/IEA PACIFIC*

3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 568.4 | 732.2 | 1134.7 | 1598.2 | 1777.7 | 1857.8 | 1829.5 | 1782.0 |
| Nuclear | 9.7 | 86.1 | 255.2 | 431.0 | 451.5 | 406.8 | 409.1 | 427.5 |
| Hydro | 99.1 | 126.8 | 140.3 | 143.6 | 130.5 | 127.4 | 123.2 | 124.1 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 5.3 | 4.6 | 7.3 | 11.5 | 11.8 | 11.9 | 9.7 | 9.6 |
| Geothermal | 1.5 | 2.1 | 3.9 | 6.3 | 6.4 | 6.6 | 7.0 | 7.7 |
| Solar | - | - | 0.0 | 0.4 | 1.6 | 2.2 | 2.7 | 3.4 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.3 | 3.4 | 6.5 | 8.1 | 9.4 |
| Combustible fuels | 458.1 | 517.3 | 735.3 | 1016.5 | 1184.2 | 1308.2 | 1279.3 | 1209.8 |
| <i>Coal</i> | 88.5 | 127.6 | 256.5 | 519.4 | 651.1 | 682.3 | 682.5 | 693.8 |
| <i>Oil</i> | 355.8 | 299.2 | 270.3 | 173.4 | 165.5 | 183.5 | 157.4 | 107.3 |
| <i>Gas</i> | 13.5 | 89.8 | 196.8 | 306.6 | 342.9 | 416.2 | 413.6 | 389.3 |
| <i>Comb. renew. & waste</i> | 0.3 | 0.7 | 11.8 | 17.0 | 24.8 | 26.2 | 25.8 | 19.5 |
| Other (e.g. fuel cells) | - | - | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| - Own use by power plant | 20.5 | 30.4 | 48.1 | 67.7 | 75.9 | 78.5 | 78.0 | .. |
| Net production | 548.0 | 701.8 | 1086.6 | 1530.4 | 1701.8 | 1779.3 | 1751.5 | .. |
| Nuclear | .. | 81.9 | 244.2 | 412.2 | 430.6 | 388.3 | 390.4 | .. |
| Hydro | .. | 126.0 | 139.2 | 142.6 | 129.4 | 126.4 | 122.2 | .. |
| Geothermal | .. | 1.2 | 3.6 | 5.9 | 5.9 | 6.1 | 6.5 | .. |
| Solar | .. | - | 0.0 | 0.4 | 1.6 | 2.2 | 2.7 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | - | 0.3 | 3.4 | 6.5 | 8.0 | .. |
| Combustible fuels | .. | 492.7 | 699.4 | 969.1 | 1130.7 | 1249.6 | 1221.6 | .. |
| Other (e.g. fuel cells) | .. | - | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | 0.3 | 1.1 | 1.1 | 1.2 | 1.1 | 1.1 |
| - Used for pumped storage | 5.3 | 7.4 | 13.4 | 17.5 | 15.9 | 17.1 | 12.5 | 11.4 |
| + Imports | - | - | - | - | - | - | - | - |
| - Exports | - | - | - | - | - | - | - | - |
| Electrical energy supplied | 542.7 | 694.4 | 1072.9 | 1511.9 | 1684.7 | 1761.0 | 1737.8 | .. |
| - Transmission & distr. losses | 39.8 | 39.8 | 57.5 | 77.3 | 86.1 | 85.6 | 87.5 | .. |
| - Statistical difference | - | -0.0 | 0.0 | -0.0 | -0.5 | 0.6 | 1.3 | .. |
| Total consumption | 502.9 | 654.6 | 1015.4 | 1434.6 | 1599.2 | 1674.9 | 1649.0 | .. |
| - Energy industry consumption ⁽²⁾ | 6.5 | 9.9 | 14.4 | 20.0 | 24.0 | 27.2 | 27.0 | .. |
| Final consumption | 496.4 | 644.8 | 1001.0 | 1414.6 | 1575.2 | 1647.7 | 1622.1 | .. |
| Industry | 329.0 | 390.7 | 465.5 | 603.1 | 631.0 | 659.3 | 620.7 | .. |
| Transport | 14.1 | 16.5 | 19.7 | 23.4 | 24.6 | 24.5 | 24.4 | .. |
| Commercial & publ. serv. | 43.8 | 75.9 | 259.0 | 420.2 | 504.1 | 535.2 | 546.6 | .. |
| Residential | 106.9 | 158.4 | 250.7 | 355.1 | 401.5 | 413.9 | 414.5 | .. |
| Agriculture & fishing | 2.6 | 3.2 | 6.2 | 11.1 | 11.2 | 12.4 | 13.0 | .. |
| Sector non specified | - | - | - | 1.6 | 2.8 | 2.5 | 2.8 | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

OECD/IEA PACIFIC*

4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 564.76 | 732.24 | 1134.70 | 1598.15 | 1799.55 | 1857.83 | 1829.46 | 4.5 | 2.7 |
| - Hydro pumped storage | 2.51 | 4.64 | 7.26 | 11.52 | 11.90 | 11.87 | 9.70 | 6.9 | 1.6 |
| Total generation⁽¹⁾ | 562.24 | 727.60 | 1127.43 | 1586.63 | 1787.65 | 1845.96 | 1819.77 | 4.4 | 2.7 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 496.24 | 659.46 | 1037.03 | 1441.34 | 1628.76 | 1685.73 | 1662.95 | 4.7 | 2.7 |
| - Hydro pumped storage | 2.51 | 4.64 | 7.26 | 11.52 | 11.90 | 11.87 | 9.70 | 6.9 | 1.6 |
| Total generation ⁽¹⁾ | 493.72 | 654.82 | 1029.77 | 1429.82 | 1616.87 | 1673.86 | 1653.26 | 4.7 | 2.7 |
| Nuclear | 19.70 | 85.49 | 254.29 | 430.30 | 452.18 | 406.77 | 409.09 | 17.3 | 2.7 |
| Hydro | 105.82 | 115.14 | 125.91 | 124.57 | 121.92 | 108.17 | 106.14 | 1.1 | -0.9 |
| Geothermal | 1.39 | 2.09 | 3.56 | 6.00 | 6.19 | 6.35 | 6.70 | 6.0 | 3.6 |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.19 | 2.58 | 3.94 | 5.64 | - | - |
| Coal | 76.83 | 107.27 | 225.80 | 462.72 | 589.31 | 619.64 | 619.19 | 7.0 | 5.8 |
| Oil | 271.31 | 255.73 | 226.19 | 110.01 | 87.81 | 133.33 | 112.45 | -1.1 | -3.8 |
| Gas | 18.57 | 89.08 | 193.42 | 293.89 | 350.33 | 388.68 | 386.94 | 15.8 | 3.9 |
| Comb. renew. & waste | 0.11 | 0.03 | 0.61 | 2.14 | 6.56 | 6.98 | 7.10 | 11.6 | 14.7 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 68.52 | 72.78 | 97.67 | 156.81 | 170.79 | 172.10 | 166.51 | 2.2 | 3.0 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 68.52 | 72.78 | 97.67 | 156.81 | 170.79 | 172.10 | 166.51 | 2.2 | 3.0 |
| Nuclear | - | 0.58 | 0.87 | 0.71 | - | - | - | - | - |
| Hydro | 6.17 | 7.01 | 7.09 | 7.49 | 8.35 | 7.39 | 7.39 | 0.9 | 0.2 |
| Geothermal | - | - | 0.31 | 0.27 | 0.26 | 0.25 | 0.25 | - | -1.3 |
| Solar, wind, tide ⁽²⁾ | - | - | 0.07 | 0.58 | 4.28 | 4.94 | 5.24 | - | 27.2 |
| Coal | 12.09 | 20.34 | 30.71 | 56.72 | 58.92 | 62.64 | 63.27 | 6.0 | 4.1 |
| Oil | 49.12 | 43.49 | 44.12 | 63.43 | 53.94 | 50.22 | 44.96 | -0.7 | 0.1 |
| Gas | 0.53 | 0.70 | 3.34 | 12.72 | 26.42 | 27.49 | 26.70 | 12.2 | 12.2 |
| Comb. renew. & waste | 0.61 | 0.67 | 11.16 | 14.89 | 18.62 | 19.18 | 18.71 | 19.9 | 2.9 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

* Geographic coverage of OECD and IEA Pacific is the same.

Note: Please refer to definitions in the introductory information.

OECD/IEA PACIFIC*

5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|--------------|---------------|----------------|-----------------|---------------|---------------|---------------|---|
| Total | 58528 | 61242 | 96981 e | 155976 e | 169836 | 171047 | 165378 | 3.0 |
| Total energy | - | - | 5113 | 11682 | 20514 | 21337 | 21958 | 8.4 |
| Coal mines | - | - | 1 | 1 | - | - | - | - |
| Oil and gas extraction | - | - | 831 | 1252 | 1339 | 1256 | 1314 | 2.6 |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | 4281 | 10429 | 19175 | 20072 | 20644 | 9.1 |
| Energy non specified/other | - | - | - | - | - | 9 | - | - |
| Total industry | 58223 | 58171 | 91430 | 143156 e | 146861 | 146898 | 140309 | 2.4 |
| Iron and steel | 970 | 11969 | 21717 | 39138 e | 43567 | 45274 | 43503 | 3.9 |
| Chemical and petrochemical | 240 | 17419 | 28214 | 39935 e | 32592 | 31250 | 29023 | 0.2 |
| Non-ferrous metals | 1953 | 8604 | 2648 | 6240 e | 8054 | 8133 | 8824 | 6.9 |
| Non-metallic minerals | 246 | 2155 | 8889 | 12557 e | 13181 | 13335 | 13028 | 2.1 |
| Transport equipment | - | 2 | - | - | - | - | - | - |
| Machinery | 6 | 9 | 2006 | 4389 e | 5150 | 5112 | 3942 | 3.8 |
| Mining and quarrying | 2228 | 3200 | 36 | 1991 | 1622 | 1903 | 2204 | 25.7 |
| Food and tobacco | 287 | 769 | 80 | 825 e | 1238 | 1027 | 1269 | 16.6 |
| Pulp and printing | 473 | 11061 | 17111 | 26816 e | 26458 | 25970 | 23698 | 1.8 |
| Wood and wood products | 25 | 21 | 390 | 739 e | 502 | 486 | 492 | 1.3 |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | - | 30 | - | 2328 e | 1978 | 2228 | 2103 | - |
| Non specified/other industries | 51795 | 2932 | 10339 | 8198 | 12519 | 12180 | 12223 | 0.9 |
| Total transport | - | - | 1 | 1 | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | 1 | 1 | - | - | - | - |
| Other | 305 e | 3071 e | 437 e | 1137 e | 2461 | 2812 | 3111 | 11.5 |
| Commerce and pub. services | - | - | 317 e | 516 e | 673 | 788 | 836 | 5.5 |
| Residential | - | - | - | - | - | 17 | 32 | - |
| Agriculture and fishing | - | - | - | - | - | - | - | - |
| Sector non specified | 305 e | 3071 e | 120 | 621 e | 1788 | 2007 | 2243 | 17.7 |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

OECD/IEA PACIFIC*

6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|-------------|--------------|---------------|---------------|---------------|---------------|---------------|---|
| Total | 9713 | 12341 | 165131 | 220067 | 225975 | 227458 | 179416 | 17.6 |
| Nuclear | .. | .. | - | - | - | - | - | .. |
| Geothermal | .. | .. | - | - | - | - | - | .. |
| Coal | .. | .. | 33713 | 35761 | 34314 | 42502 | 42005 | .. |
| Oil | .. | .. | 67244 | 101556 | 105621 | 87292 | 56887 | .. |
| Gas | .. | .. | 50402 | 63458 | 63927 | 72013 | 58035 | .. |
| Comb. renew. & waste | .. | .. | 8765 | 13706 | 16350 | 19055 | 15562 | .. |
| Non-spec. comb. fuels | .. | .. | - | - | - | - | - | .. |
| Chemical processes | .. | .. | 1608 | 2086 | 2059 | 2963 | 3023 | .. |
| Heat pumps | .. | .. | - | - | - | - | - | .. |
| Electric boilers | .. | .. | 3399 | 3500 | 3704 | 3633 | 3904 | .. |
| Other sources ⁽¹⁾ | .. | .. | - | - | - | - | - | .. |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 9713 | 10733 | 70990 | 90264 | 87137 | 85215 | .. | 12.2 |
| Nuclear | .. | .. | - | - | - | - | .. | .. |
| Geothermal | .. | .. | - | - | - | - | .. | .. |
| Coal | .. | .. | 611 | 536 | 519 | 497 | .. | .. |
| Oil | .. | .. | 11222 | 16997 | 12831 | 6944 | .. | .. |
| Gas | .. | .. | 50346 | 63229 | 63709 | 68297 | .. | .. |
| Comb. renew. & waste | .. | .. | 5412 | 6002 | 6374 | 5844 | .. | .. |
| Non-spec. comb. fuels | .. | .. | - | - | - | - | .. | .. |
| Chemical processes | .. | .. | - | - | - | - | .. | .. |
| Heat pumps | .. | .. | - | - | - | - | .. | .. |
| Electric boilers | .. | .. | 3399 | 3500 | 3704 | 3633 | .. | .. |
| Other sources ⁽¹⁾ | .. | .. | - | - | - | - | .. | .. |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | 1608 | 94141 | 129803 | 138838 | 142243 | .. | 28.3 |
| Nuclear | .. | .. | - | - | - | - | .. | .. |
| Geothermal | .. | .. | - | - | - | - | .. | .. |
| Coal | .. | .. | 33102 | 35225 | 33795 | 42005 | .. | .. |
| Oil | .. | .. | 56022 | 84559 | 92790 | 80348 | .. | .. |
| Gas | .. | .. | 56 | 229 | 218 | 3716 | .. | .. |
| Comb. renew. & waste | .. | .. | 3353 | 7704 | 9976 | 13211 | .. | .. |
| Non-spec. comb. fuels | .. | .. | - | - | - | - | .. | .. |
| Chemical processes | .. | .. | 1608 | 2086 | 2059 | 2963 | .. | .. |
| Heat pumps | .. | .. | - | - | - | - | .. | .. |
| Electric boilers | .. | .. | - | - | - | - | .. | .. |
| Other sources ⁽¹⁾ | .. | .. | - | - | - | - | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

* Geographic coverage of OECD and IEA Pacific is the same.

Note: Please refer to definitions in the introductory information.

OECD/IEA PACIFIC*

7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 103.89 | 120.16 | 159.93 | 213.49 | 259.45 | 275.74 | 270.20 | 2.6 | 3.0 |
| Coal | 26.47 | 31.67 | 60.48 | 114.41 | 152.26 | 152.68 | 154.96 | 5.0 | 5.4 |
| Oil | 74.51 | 70.86 | 56.10 | 36.09 | 30.06 | 38.67 | 31.28 | -1.7 | -3.2 |
| Gas | 2.87 | 17.45 | 40.17 | 58.85 | 70.97 | 78.00 | 77.53 | 16.8 | 3.7 |
| Comb. renew. & waste | 0.03 | 0.19 | 3.19 | 4.14 | 6.15 | 6.39 | 6.43 | 30.4 | 4.0 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 105.02 | 139.47 | 184.69 | 226.87 | 242.77 | 238.56 | .. | 3.0 |
| Coal | .. | 28.66 | 52.74 | 102.97 | 139.64 | 139.72 | 142.03 | .. | 5.7 |
| Oil | .. | 59.05 | 47.21 | 25.07 | 20.21 | 29.05 | 22.90 | .. | -3.9 |
| Gas | .. | 17.30 | 39.34 | 56.06 | 65.31 | 72.22 | 71.76 | .. | 3.4 |
| Comb. renew. & waste | .. | 0.01 | 0.18 | 0.59 | 1.70 | 1.78 | 1.86 | .. | 14.0 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|--------------|--------------|---------------|---------------|---------------|---------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 3.83 | 24.22 | 69.30 | 116.88 | 122.49 | 110.75 | 111.53 | 18.6 | 2.7 |
| Nuclear | 2.53 | 22.43 | 66.50 | 112.32 | 117.84 | 106.01 | 106.61 | 21.2 | 2.7 |
| Geothermal | 1.30 | 1.79 | 2.80 | 4.52 | 4.49 | 4.55 | 4.69 | 4.6 | 2.9 |
| Solar | - | - | 0.00 | 0.03 | 0.17 | 0.19 | 0.23 | - | 49.2 |
| Non-Thermal | | | | | | | | | |
| Total | 8.07 | 10.50 | 11.44 | 11.38 | 11.61 | 10.50 | 10.46 | 2.1 | -0.5 |
| Hydro | 8.07 | 10.50 | 11.44 | 11.36 | 11.20 | 9.94 | 9.76 | 2.1 | -0.9 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.03 | 0.41 | 0.56 | 0.69 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

* Geographic coverage of OECD and IEA Pacific is the same.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

OECD/IEA PACIFIC*

8. Electricity production from combustible fuels In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|---------|-----------|-----------|-----------|-----------|---------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 38017 | 77154 | 152723 e | 199918 | 211186 | 215731 | 5.9 |
| Fuel input (TJ) | 685708 | 1734094 | 3764600 e | 5103036 | 5208827 | 5347644 | 6.5 |
| Electricity production (GWh) | 81428 | 184450 | 414274 e | 528740 | 564724 | 571970 | 6.5 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 29798 | 43043 | 66446 e | 65480 | 60421 | 60511 | 1.9 |
| Fuel input (TJ) | 285435 | 402415 | 644763 e | 699506 | 605500 | 606300 | 2.3 |
| Electricity production (GWh) | 19034 | 33341 | 50476 e | 59975 | 55600 | 52740 | 2.6 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 278254 | 300575 | 359932 e | 347386 | 347986 | 296904 | -0.1 |
| Electricity production (GWh) | 27084 | 32099 | 40774 e | 39910 | 40115 | 33982 | 0.3 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 70969 | 55073 e | 33417 e | 27559 e | 35595 e | 29110 | -3.5 |
| Fuel input (TJ) | 2846517 | 2474125 e | 1503670 e | 1226843 e | 1595063 e | 1303430 | -3.5 |
| Electricity production (GWh) | 299211 | 270303 e | 165401 e | 136650 e | 178415 e | 153634 | -3.1 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 919706 | 1870275 | 2580684 e | 3025334 | 3351454 | 3309925 | 3.2 |
| Electricity production (GWh) | 89757 | 196695 | 293150 e | 352707 | 391835 | 387301 | 3.8 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 78611 | 85205 e | 124613 | 129333 | 126672 | 2.7 |
| Electricity production (GWh) | - | 8713 | 10456 | 15221 | 15926 | 15360 | 3.2 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | 814 | 3677 | 3465 | 3860 | - |
| Electricity production (GWh) | - | - | 97 | 461 | 436 | 489 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 16439 e | 40934 e | 58451 | 58548 | 58060 | 7.3 |
| Electricity production (GWh) | - | 1807 | 4706 | 6837 | 6837 | 6837 | 7.7 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | 379 | 319 | 1030 | 13678 | 15666 | 17675 | 25.0 |
| Electricity production (GWh) | 32 | 27 | 87 | 1109 | 1289 | 1508 | 25.0 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 516931 | 727435 | 979421 e | 1141610 | 1255177 | 1223821 | 2.9 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

OECD/IEA PACIFIC*

**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|-------|---------|----------|--------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | 156 | 2356 | 4739 | 4804 | 5127 | 21.4 |
| Fuel input (TJ) | - | 3501 | 62973 | 107838 | 102773 | 110869 | 21.2 |
| Electricity production (GWh) | - | 180 | 2614 | 6435 | 6498 | 6751 | 22.3 |
| CHP Heat production (TJ) | - | - | 33102 | 35637 | 33441 | 41616 | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | 1249 | 13 | 1684 | 1315 | 1320 | 0.3 |
| Fuel input (TJ) | - | 12416 | 205 | 19310 | 19087 | 14871 | 1.0 |
| Electricity production (GWh) | - | 548 | 17 | 1784 | 1765 | 1371 | 5.2 |
| CHP Heat production (TJ) | 5443 | 2269 | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 724 e | 85897 | 94717 | 106695 | 116897 | 123645 | 2.0 |
| Electricity production (GWh) | 60 e | 5891 | 11280 | 11380 | 13576 | 15642 | 5.6 |
| CHP Heat production (TJ) | - | - | - | 422 | 354 | 389 | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | - | 3396 e | 3126 | 3557 | 2659 | - |
| Fuel input (TJ) | - | - | 154012 e | 142776 | 164061 | 116980 | - |
| Electricity production (GWh) | - | - | 8044 e | 5094 | 5134 | 3776 | - |
| CHP Heat production (TJ) | - | - | 59190 | 89990 | 101006 | 84822 | - |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 272 | 714 | 139529 e | 253834 | 257301 | 278246 | 39.3 |
| Electricity production (GWh) | 30 e | 60 e | 13463 e | 24047 | 24335 | 26340 | 40.2 |
| CHP Heat production (TJ) | - | - | 36767 | 39231 | 45880 | 54640 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 2876 | 34867 e | 29903 e | 35004 | 35843 | 37252 | 0.4 |
| Electricity production (GWh) | 280 | 1110 | 1163 e | 1255 | 1286 | 1302 | 0.9 |
| CHP Heat production (TJ) | - | - | - | - | - | 422 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | 344 e | 6861 | 8720 | 9375 | - |
| Electricity production (GWh) | - | - | 36 e | 137 | 195 | 157 | - |
| CHP Heat production (TJ) | - | - | - | 1595 | 2735 | 4429 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 1360 | 6182 | 1918 | 2763 | 2360 | 3.1 |
| Electricity production (GWh) | - | 113 | 482 | 159 | 187 | 161 | 2.0 |
| CHP Heat production (TJ) | - | - | - | - | 627 | 369 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 370 e | 7902 | 37099 e | 50291 | 52976 | 55500 | 11.4 |
| CHP Heat production (TJ) | 5443 | 2269 | 129059 | 166875 | 184043 | 186687 | 27.8 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

OECD/IEA PACIFIC*

10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|---------|-------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 38 | 32 | 27 | 24 | 23 | 22 | -2.1 |
| Fuel input (TJ) | 960 | 803 | 690 | 600 | 580 | 540 | -2.2 |
| Heat production (TJ) | 637 | 541 | 611 | 526 | 519 | 497 | -0.5 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 40 | 57 | 213 | 255 | 128 | 69 | 1.1 |
| Fuel input (TJ) | 1816 | 2512 | 9609 | 11171 | 5440 | 2819 | 0.6 |
| Heat production (TJ) | 1201 | 1729 | 8054 | 9496 | 4615 | 2470 | 2.0 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 2946 | 6169 | 15750 | 23418 | 20777 | 19539 | 6.6 |
| Heat production (TJ) | 1949 | 4054 | 13635 | 19867 | 18047 | 17373 | 8.4 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | 80 | 173 | 106 | 80 | 74 | -0.4 |
| Heat production (TJ) | - | 54 | 153 | 93 | 72 | 68 | 1.3 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | 3353 e | 6818 | 7241 | 8245 | - |
| Heat production (TJ) | - | - | 3353 e | 6818 | 7241 | 8245 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 1751 | 5488 | 6448 | 5886 | 5750 | 6.8 |
| Heat production (TJ) | - | 1279 | 5259 | 6067 | 5675 | 5522 | 8.5 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | 4270 | 7657 | 31065 e | 42867 | 36169 | 34175 | 8.7 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

OECD/IEA PACIFIC*

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 296.92 | 316.87 | 430.84 | 553.86 | 574.76 | 576.90 | 555.48 | 2.2 | 1.4 |
| Geothermal | - | - | 0.35 | 0.45 | 0.44 | 0.45 | 0.45 | - | 1.4 |
| Solar thermal | - | 0.02 | 1.26 | 0.93 | 0.64 | 0.69 | 0.70 | - | -3.2 |
| Coal | 32.46 | 36.11 | 49.27 | 40.15 | 44.28 | 45.02 | 43.02 | 2.5 | -0.8 |
| Oil | 208.71 | 205.82 | 260.60 | 329.35 | 315.15 | 309.57 | 292.14 | 1.3 | 0.6 |
| Gas | 9.54 | 15.42 | 26.03 | 48.52 | 62.30 | 64.22 | 64.28 | 6.1 | 5.2 |
| Comb. renew. & waste | 3.49 | 3.94 | 7.05 | 8.97 | 9.60 | 10.06 | 10.08 | 4.2 | 2.0 |
| Electricity | 42.69 | 55.45 | 86.08 | 121.65 | 137.37 | 141.70 | 139.50 | 4.2 | 2.7 |
| Heat | 0.03 | 0.10 | 0.20 | 3.83 | 4.98 | 5.19 | 5.29 | 12.3 | 20.0 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 128.54 | 121.54 | 144.53 | 164.47 | 168.43 | 168.65 | 160.46 | 0.7 | 0.6 |
| Geothermal | - | - | 0.22 | 0.13 | 0.14 | 0.14 | 0.14 | - | -2.5 |
| Solar thermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Coal | 23.93 | 26.70 | 38.90 | 38.38 | 41.94 | 42.42 | 40.32 | 2.9 | 0.2 |
| Oil | 71.13 | 52.49 | 50.73 | 49.68 | 40.52 | 37.67 | 34.60 | -2.0 | -2.1 |
| Gas | 3.69 | 6.53 | 9.97 | 15.65 | 20.50 | 20.92 | 21.25 | 6.0 | 4.3 |
| Comb. renew. & waste | 1.49 | 2.22 | 4.67 | 6.63 | 7.47 | 7.81 | 7.77 | 6.9 | 2.9 |
| Electricity | 28.30 | 33.60 | 40.03 | 51.87 | 55.00 | 56.70 | 53.38 | 2.1 | 1.6 |
| Heat | - | - | - | 2.12 | 2.86 | 3.00 | 2.99 | - | - |
| Transport | 58.12 | 77.87 | 110.38 | 144.01 | 144.42 | 143.88 | 139.22 | 3.8 | 1.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.23 | 0.01 | 0.07 | 0.09 | 0.09 | 0.09 | 0.10 | -6.7 | 2.0 |
| Oil | 56.68 | 76.43 | 108.55 | 141.61 | 141.30 | 140.52 | 135.63 | 3.9 | 1.2 |
| Gas | - | 0.01 | 0.07 | 0.31 | 0.84 | 0.98 | 1.12 | - | 17.0 |
| Comb. renew. & waste | - | - | - | - | 0.10 | 0.18 | 0.26 | - | - |
| Electricity | 1.21 | 1.42 | 1.69 | 2.01 | 2.10 | 2.11 | 2.10 | 2.0 | 1.2 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 22.74 | 26.00 | 59.00 | 85.25 | 93.96 | 93.20 | 91.64 | 5.8 | 2.5 |
| Geothermal | - | - | 0.04 | 0.22 | 0.22 | 0.22 | 0.22 | - | 9.3 |
| Solar thermal | - | - | 0.05 | 0.03 | 0.03 | 0.03 | 0.03 | - | -3.2 |
| Coal | 0.19 | 0.37 | 1.11 | 0.73 | 0.68 | 0.67 | 0.67 | 10.9 | -2.8 |
| Oil | 17.26 | 17.11 | 30.42 | 35.36 | 28.50 | 24.91 | 22.68 | 3.4 | -1.6 |
| Gas | 1.50 | 1.87 | 4.88 | 12.00 | 18.88 | 20.22 | 19.86 | 7.2 | 8.1 |
| Comb. renew. & waste | - | 0.02 | 0.05 | 0.17 | 0.35 | 0.36 | 0.38 | - | 11.6 |
| Electricity | 3.76 | 6.52 | 22.27 | 36.14 | 44.58 | 46.03 | 47.01 | 11.0 | 4.2 |
| Heat | 0.03 | 0.10 | 0.17 | 0.61 | 0.73 | 0.77 | 0.80 | 11.2 | 9.0 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

* Geographic coverage of OECD and IEA Pacific is the same.

Note: Please refer to notes in the introductory information for data coverage.

OECD/IEA PACIFIC*

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 33.06 | 42.05 | 59.54 | 74.06 | 78.19 | 78.69 | 77.60 | 3.5 | 1.5 |
| Geothermal | - | - | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | - | -15.6 |
| Solar thermal | - | 0.02 | 1.21 | 0.90 | 0.61 | 0.66 | 0.67 | - | -3.2 |
| Coal | 8.08 | 9.04 | 8.75 | 0.59 | 1.12 | 1.02 | 1.06 | 0.5 | -11.1 |
| Oil | 9.69 | 10.98 | 15.78 | 20.86 | 18.37 | 17.73 | 16.71 | 2.9 | 0.3 |
| Gas | 4.11 | 6.68 | 9.83 | 17.89 | 20.53 | 20.54 | 20.35 | 5.3 | 4.1 |
| Comb. renew. & waste | 2.00 | 1.70 | 2.33 | 2.17 | 1.68 | 1.72 | 1.67 | 0.9 | -1.8 |
| Electricity | 9.19 | 13.62 | 21.56 | 30.53 | 34.47 | 35.59 | 35.65 | 5.1 | 2.8 |
| Heat | - | - | 0.03 | 1.10 | 1.40 | 1.42 | 1.50 | - | 24.1 |
| Agriculture & fishing | 4.17 | 5.22 | 10.24 | 11.07 | 10.01 | 9.69 | 8.92 | 5.4 | -0.8 |
| Geothermal | - | - | 0.03 | 0.09 | 0.09 | 0.09 | 0.09 | - | 5.4 |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | 0.01 | 0.01 | 0.04 | 0.03 | 0.04 | - | 7.4 |
| Oil | 3.94 | 4.94 | 9.66 | 9.98 | 8.80 | 8.46 | 7.63 | 5.4 | -1.3 |
| Gas | - | - | 0.00 | 0.03 | 0.07 | 0.04 | 0.04 | - | 22.8 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.23 | 0.28 | 0.53 | 0.95 | 1.01 | 1.07 | 1.12 | 5.1 | 4.2 |
| Heat | - | - | - | - | - | - | - | - | - |
| Other | 9.50 | 9.61 | 1.08 | 1.61 | 1.12 | 1.15 | 1.09 | -12.0 | 0.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.03 | - | 0.02 | - | - | - | - | -2.0 | - |
| Oil | 9.41 | 9.59 | 1.06 | 1.47 | 0.91 | 0.94 | 0.85 | -12.1 | -1.2 |
| Gas | 0.06 | 0.02 | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | - | - | 0.14 | 0.21 | 0.21 | 0.24 | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 40.79 | 34.58 | 46.07 | 73.39 | 78.65 | 81.63 | 76.54 | 0.72 | 2.86 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

* Geographic coverage of OECD and IEA Pacific is the same.

Note: Please refer to notes in the introductory information for data coverage.

OECD/IEA PACIFIC*

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| TFC (Mtoe) | 296.92 | 316.87 | 430.84 | 553.86 | 574.58 | 574.76 | 576.90 | 555.48 |
| Total industry (Mtoe) | 128.54 | 121.54 | 144.53 | 164.47 | 165.56 | 168.43 | 168.65 | 160.46 |
| Iron and steel | 38.48 | 32.98 | 26.84 | 29.32 | 32.27 | 33.37 | 34.62 | 33.12 |
| Chem. and petrochemical | 15.19 | 12.31 | 23.33 | 27.20 | 27.62 | 28.82 | 29.18 | 26.62 |
| Non-ferrous metals | 4.71 | 7.75 | 9.02 | 10.83 | 12.06 | 12.20 | 12.14 | 12.97 |
| Non-metallic minerals | 12.57 | 13.95 | 16.39 | 17.13 | 16.61 | 17.09 | 17.09 | 16.99 |
| Transport equipment | 0.89 | 1.45 | 0.31 | 2.68 | 2.31 | 2.34 | 2.23 | 2.28 |
| Machinery | 0.82 | 1.65 | 12.38 | 11.71 | 13.56 | 14.62 | 15.40 | 14.93 |
| Mining and quarrying | 0.55 | 1.58 | 2.01 | 2.74 | 3.97 | 4.05 | 4.05 | 4.31 |
| Food and tobacco | 4.04 | 6.82 | 8.84 | 10.65 | 10.70 | 10.48 | 10.14 | 10.11 |
| Paper, pulp and printing | 6.06 | 5.71 | 12.45 | 13.81 | 12.90 | 12.78 | 12.69 | 12.30 |
| Wood and wood products | 0.14 | 0.88 | 0.84 | 1.12 | 1.28 | 1.30 | 1.32 | 1.31 |
| Construction | 3.34 | 4.42 | 6.36 | 6.51 | 5.48 | 5.62 | 5.45 | 5.39 |
| Textile and leather | 5.87 | 4.76 | 2.79 | 4.60 | 3.59 | 3.31 | 3.19 | 2.90 |
| Non specified/other | 35.89 | 27.28 | 22.97 | 26.17 | 23.21 | 22.45 | 21.17 | 17.25 |
| Electricity consumption (Mtoe) | 42.69 | 55.45 | 86.08 | 121.65 | 135.47 | 137.37 | 141.70 | 139.50 |
| Total industry (Mtoe) | 28.30 | 33.60 | 40.03 | 51.87 | 54.26 | 55.00 | 56.70 | 53.38 |
| Iron and steel | 6.45 | 7.37 | 7.77 | 9.43 | 10.37 | 10.57 | 11.08 | 10.07 |
| Chem. and petrochemical | 4.58 | 4.46 | 6.51 | 8.30 | 8.46 | 8.64 | 8.73 | 8.42 |
| Non-ferrous metals | 2.48 | 3.10 | 3.49 | 4.85 | 5.87 | 5.97 | 6.22 | 6.64 |
| Non-metallic minerals | 1.31 | 1.90 | 2.79 | 3.12 | 3.19 | 3.27 | 3.36 | 3.34 |
| Transport equipment | 0.87 | 1.28 | 0.12 | 1.08 | 1.27 | 1.36 | 1.47 | 1.53 |
| Machinery | 0.82 | 1.42 | 6.13 | 8.37 | 10.20 | 11.22 | 11.59 | 11.24 |
| Mining and quarrying | 0.20 | 0.47 | 0.78 | 1.00 | 1.21 | 1.22 | 1.18 | 1.21 |
| Food and tobacco | 0.53 | 1.07 | 1.75 | 2.43 | 2.75 | 2.85 | 2.93 | 2.95 |
| Paper, pulp and printing | 1.83 | 2.34 | 3.52 | 4.62 | 4.47 | 4.47 | 4.52 | 4.34 |
| Wood and wood products | 0.13 | 0.28 | 0.29 | 0.25 | 0.26 | 0.30 | 0.27 | 0.27 |
| Construction | 0.01 | 0.01 | 0.20 | 0.18 | 0.12 | 0.12 | 0.11 | 0.10 |
| Textile and leather | 0.76 | 1.08 | 1.00 | 1.63 | 1.29 | 1.20 | 1.20 | 1.15 |
| Non specified/other | 8.34 | 8.82 | 5.68 | 6.61 | 4.81 | 3.81 | 4.02 | 2.11 |
| Total industry (TWh) | 329.04 | 390.70 | 465.46 | 603.15 | 630.95 | 639.57 | 659.27 | 620.74 |
| Iron and steel | 75.05 | 85.68 | 90.39 | 109.68 | 120.54 | 122.90 | 128.87 | 117.07 |
| Chem. and petrochemical | 53.30 | 51.86 | 75.71 | 96.47 | 98.33 | 100.50 | 101.51 | 97.94 |
| Non-ferrous metals | 28.78 | 36.02 | 40.58 | 56.45 | 68.24 | 69.45 | 72.32 | 77.24 |
| Non-metallic minerals | 15.23 | 22.11 | 32.39 | 36.27 | 37.04 | 38.02 | 39.04 | 38.83 |
| Transport equipment | 10.06 | 14.83 | 1.38 | 12.53 | 14.77 | 15.81 | 17.15 | 17.83 |
| Machinery | 9.48 | 16.53 | 71.25 | 97.34 | 118.59 | 130.46 | 134.83 | 130.70 |
| Mining and quarrying | 2.37 | 5.49 | 9.08 | 11.66 | 14.03 | 14.21 | 13.73 | 14.02 |
| Food and tobacco | 6.15 | 12.43 | 20.33 | 28.22 | 31.95 | 33.11 | 34.07 | 34.31 |
| Paper, pulp and printing | 21.26 | 27.21 | 40.89 | 53.75 | 51.97 | 52.00 | 52.56 | 50.52 |
| Wood and wood products | 1.50 | 3.30 | 3.40 | 2.87 | 3.06 | 3.50 | 3.19 | 3.10 |
| Construction | 0.06 | 0.10 | 2.38 | 2.10 | 1.41 | 1.37 | 1.29 | 1.18 |
| Textile and leather | 8.81 | 12.55 | 11.62 | 19.01 | 15.05 | 13.97 | 13.92 | 13.43 |
| Non specified/other | 96.98 | 102.59 | 66.06 | 76.81 | 55.97 | 44.27 | 46.80 | 24.57 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

* Geographic coverage of OECD and IEA Pacific is the same.

Note: Please refer to notes in the introductory information for data coverage.

OECD/IEA PACIFIC*

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|--------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total Capacity ⁽¹⁾ | 116.33 | 159.32 | 217.74 | 282.04 | 328.06 | 351.80 | 355.29 | 361.03 | 369.47 |
| Nuclear | 3.89 | 15.51 | 31.48 | 49.81 | 58.80 | 66.76 | 67.18 | 67.18 | 65.65 |
| Hydro | 31.28 | 38.72 | 51.73 | 59.00 | 62.40 | 64.41 | 66.08 | 66.04 | 66.05 |
| <i>of which: pumped storage</i> | - | 11.50 | 18.95 | 24.83 | 27.40 | 28.95 | 30.55 | 30.88 | 30.88 |
| Geothermal | 0.18 | 0.27 | 0.50 | 0.73 | 0.91 | 0.92 | 0.92 | 0.94 | 1.07 |
| Solar | - | - | - | 0.01 | 0.03 | 0.06 | 0.08 | 0.10 | 0.40 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 0.07 | 1.01 | 1.16 | 1.77 | 2.41 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 80.97 | 104.81 | 136.38 | 172.49 | 205.86 | 218.64 | 219.86 | 225.00 | 233.89 |
| <i>of which</i> ⁽²⁾ : | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid fuels | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Comb. renew. & waste | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / liquid / gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Internal combustion | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Gas turbine | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Combined cycle | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Other | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

* Geographic coverage of OECD and IEA Pacific is the same.

(1) Capacity data are not available for Korea before 1994.

(2) Breakdown of electrical capacity by type of fuel are shown in the individual country chapters.

Note: Please refer to notes in the introductory information for data coverage.

OECD/IEA PACIFIC*

15. Net maximum electricity generating capacity on 31 December (continued)

(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total Capacity ⁽¹⁾ | 11.74 | 14.34 | 22.61 | 27.77 | 40.79 | 51.39 | 53.53 | 54.08 | 55.81 |
| Nuclear | 0.01 | 0.18 | 0.17 | 0.17 | 0.17 | - | - | - | - |
| Hydro | 1.07 | 1.11 | 1.38 | 1.37 | 1.47 | 1.40 | 1.40 | 1.43 | 1.47 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | 0.03 | 0.04 | 0.05 | 0.05 | 0.05 | 0.04 | 0.04 | 0.04 |
| Solar | - | - | - | 0.05 | 0.33 | 1.43 | 1.74 | 1.98 | 2.21 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 0.09 | 1.23 | 1.81 | 1.53 | 1.86 |
| Other (e.g. fuel cells) | - | - | - | - | - | 0.02 | 0.02 | 0.02 | 0.02 |
| Combustible fuels | 10.66 | 13.02 | 21.04 | 26.14 | 38.68 | 47.27 | 48.53 | 49.08 | 50.20 |
| <i>of which</i> ⁽²⁾ : | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid fuels | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Comb. renew. & waste | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / liquid / gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Internal combustion | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Gas turbine | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Combined cycle | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Other | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

* Geographic coverage of OECD and IEA Pacific is the same.

(1) Capacity data are not available for Korea before 1996.

(2) Breakdown of electrical capacity by type of fuel are shown in the individual country chapters.

Note: Please refer to notes in the introductory information for data coverage.

OECD EUROPE

Figure 1. Total final consumption by fuel

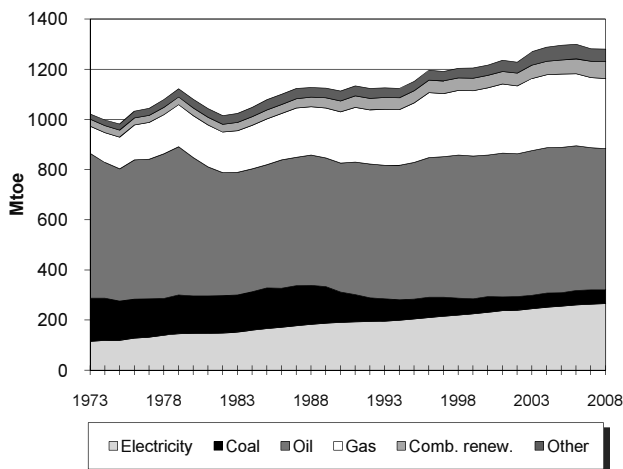


Figure 2. Electricity generation by fuel

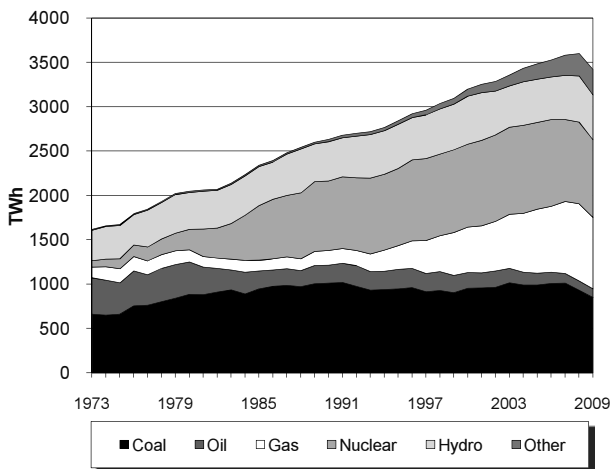


Figure 3. Electricity consumption by sector

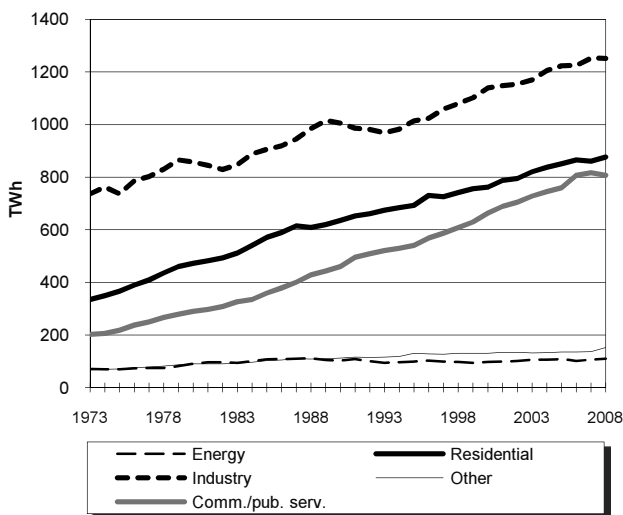


Figure 4. Electricity indicators

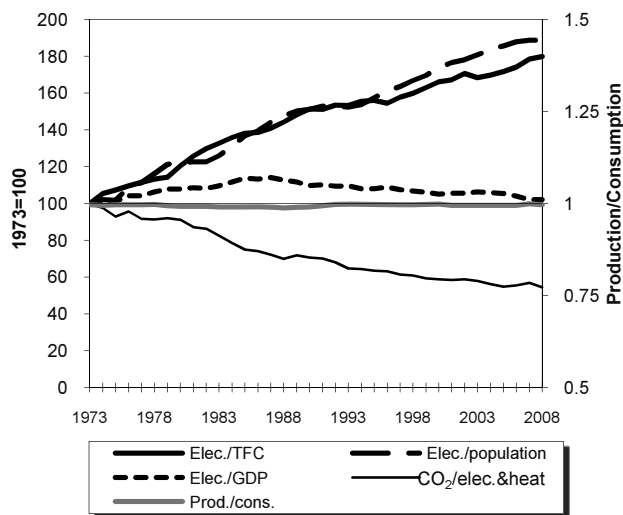
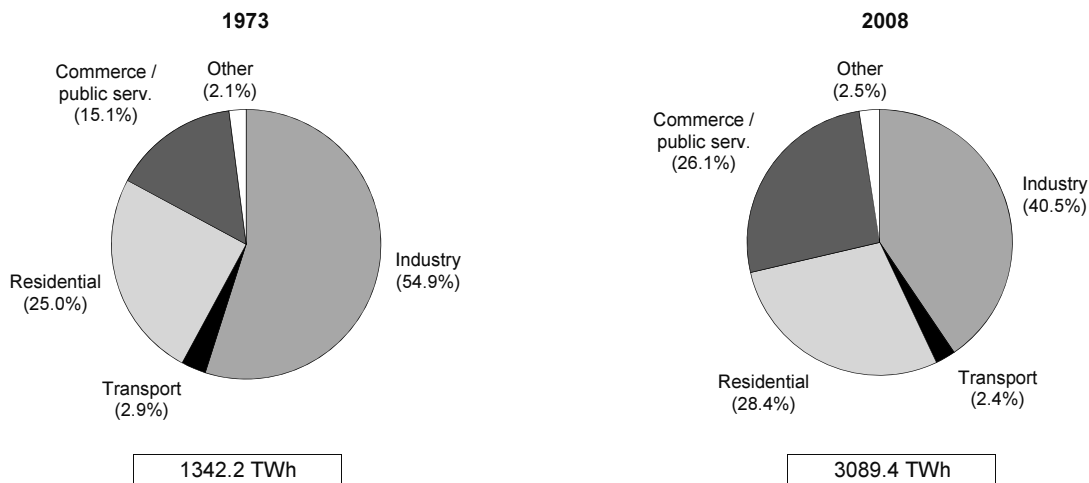


Figure 5. Total final electricity consumption by sector



OECD EUROPE

1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--------------------------------------|---------|---------|---------|---------|----------|----------|----------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 1375.48 | 1494.24 | 1602.83 | 1734.89 | 1826.57 | 1821.50 | 1720.90 | 0.9 | 0.4 |
| GDP (billion 2000 USD) | 4811.71 | 5681.59 | 7223.16 | 9065.45 | 10543.37 | 10622.01 | 10330.28 | 2.4 | 1.9 |
| TPES/GDP ⁽¹⁾ | 0.29 | 0.26 | 0.22 | 0.19 | 0.17 | 0.17 | 0.17 | -1.5 | -1.5 |
| Population (millions) | 455.03 | 473.78 | 496.47 | 518.33 | 539.87 | 543.28 | 545.42 | 0.5 | 0.5 |
| TPES/population ⁽²⁾ | 3.02 | 3.15 | 3.23 | 3.35 | 3.38 | 3.35 | 3.16 | 0.4 | -0.1 |
| TPES/GDP (2000 = 100) | 149 | 137 | 116 | 100 | 91 | 90 | 87 | -1.5 | -1.5 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 94 | 101 | 103 | 100 | 98 | 98 | .. | 0.6 | .. |
| Ele.TFC/population ⁽⁴⁾ | 2951 | 3608 | 4461 | 5202 | 5683 | 5689 | .. | 2.5 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 1618.19 | 2048.91 | 2632.03 | 3199.78 | 3582.42 | 3602.40 | 3420.62 | 2.9 | 1.4 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 1375.48 | 1494.24 | 1602.83 | 1734.89 | 1826.57 | 1821.50 | 1720.90 | 0.9 | 0.4 |
| Coal | 425.36 | 463.81 | 441.62 | 326.51 | 335.61 | 312.60 | 279.24 | 0.2 | -2.4 |
| Oil | 732.41 | 688.42 | 601.35 | 647.30 | 633.59 | 634.19 | 593.84 | -1.2 | -0.1 |
| Gas | 134.81 | 206.12 | 257.98 | 391.55 | 448.32 | 457.41 | 436.53 | 3.9 | 2.8 |
| Comb. renew & waste | 30.99 | 35.68 | 52.76 | 68.77 | 103.31 | 107.80 | 112.56 | 3.2 | 4.1 |
| Nuclear | 19.38 | 60.05 | 203.96 | 243.61 | 241.26 | 240.34 | 228.42 | 14.8 | 0.6 |
| Geothermal | 2.53 | 3.01 | 4.72 | 7.24 | 10.13 | 10.34 | 11.00 | 3.7 | 4.6 |
| Solar, wind, tide ⁽¹⁾ | 0.05 | 0.05 | 0.29 | 2.67 | 10.78 | 12.51 | 14.14 | 11.1 | 22.7 |
| Hydro | 29.44 | 35.75 | 38.13 | 46.53 | 42.78 | 44.77 | 43.38 | 1.5 | 0.7 |
| Net electricity imports ⁽²⁾ | 0.49 | 1.35 | 1.99 | 0.34 | 0.34 | 1.01 | 1.26 | 8.5 | -2.4 |
| Heat | - | - | 0.02 | 0.38 | 0.46 | 0.54 | 0.53 | - | 19.0 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

OECD EUROPE

3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 1626.0 | 2059.9 | 2651.9 | 3229.9 | 3523.7 | 3618.2 | 3636.1 | 3453.5 |
| Nuclear | 74.4 | 230.4 | 782.2 | 934.6 | 980.6 | 925.3 | 921.8 | 876.0 |
| Hydro | 350.1 | 426.7 | 463.3 | 571.2 | 524.8 | 533.2 | 554.2 | 537.2 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 7.8 | 11.0 | 19.9 | 30.1 | 37.9 | 35.8 | 33.7 | 32.9 |
| Geothermal | 2.5 | 2.7 | 3.6 | 6.2 | 7.1 | 9.5 | 9.9 | 10.6 |
| Solar | - | - | 0.0 | 0.1 | 1.5 | 3.8 | 7.5 | 13.8 |
| Tide, wave, ocean | 0.6 | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 |
| Wind | - | 0.0 | 0.8 | 22.3 | 70.9 | 105.3 | 120.1 | 131.1 |
| Combustible fuels | 1198.4 | 1399.6 | 1401.4 | 1693.7 | 1931.2 | 2038.2 | 2019.7 | 1882.1 |
| <i>Coal</i> | 663.1 | 887.2 | 1010.9 | 953.6 | 989.5 | 1012.0 | 934.1 | 849.7 |
| <i>Oil</i> | 409.0 | 363.7 | 203.2 | 179.0 | 135.2 | 107.5 | 103.8 | 97.6 |
| <i>Gas</i> | 120.4 | 137.9 | 166.6 | 512.0 | 720.4 | 811.9 | 868.8 | 804.9 |
| <i>Comb. renew. & waste</i> | 6.0 | 10.8 | 20.7 | 49.1 | 86.1 | 106.8 | 113.1 | 129.9 |
| Other (e.g. fuel cells) | - | - | 0.1 | 1.2 | 7.1 | 2.4 | 2.4 | 2.2 |
| - Own use by power plant | 89.8 | 113.2 | 149.9 | 159.4 | 168.3 | 170.5 | 168.3 | .. |
| Net production | 1536.2 | 1946.7 | 2502.1 | 3070.5 | 3355.3 | 3447.7 | 3467.7 | .. |
| Nuclear | .. | 211.2 | 737.7 | 885.1 | 930.6 | 877.2 | 874.2 | .. |
| Hydro | .. | 417.3 | 457.4 | 564.4 | 518.1 | 524.0 | 545.6 | .. |
| Geothermal | .. | 2.6 | 3.4 | 5.8 | 6.7 | 9.0 | 9.4 | .. |
| Solar | .. | - | 0.0 | 0.1 | 1.5 | 3.8 | 7.4 | .. |
| Tide, wave, ocean | .. | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | .. |
| Wind | .. | 0.0 | 0.8 | 22.3 | 70.8 | 105.0 | 119.7 | .. |
| Combustible fuels | .. | 1248.5 | 1302.1 | 1591.1 | 1820.6 | 1925.9 | 1908.7 | .. |
| Other (e.g. fuel cells) | .. | - | 0.1 | 1.1 | 6.5 | 2.3 | 2.2 | .. |
| - Used for heat pumps | - | - | 0.0 | 2.3 | 2.0 | 1.8 | 1.8 | 1.8 |
| - Used for electric boilers | - | - | 0.5 | 2.7 | 1.2 | 1.1 | 0.9 | 0.9 |
| - Used for pumped storage | 13.6 | 17.8 | 29.6 | 43.0 | 50.7 | 47.4 | 45.6 | 43.2 |
| + Imports | 68.3 | 106.5 | 214.5 | 277.7 | 347.8 | 337.5 | 318.4 | 301.6 |
| - Exports | 62.6 | 90.9 | 191.3 | 273.8 | 330.1 | 333.6 | 306.7 | 287.0 |
| Electrical energy supplied | 1528.4 | 1944.5 | 2495.2 | 3026.5 | 3319.2 | 3401.3 | 3431.1 | .. |
| - Transmission & distr. losses | 115.8 | 145.1 | 176.2 | 233.6 | 242.4 | 228.8 | 232.2 | .. |
| - Statistical difference | - | - | 1.7 | 0.3 | -0.6 | -1.1 | -0.9 | .. |
| Total consumption | 1412.6 | 1799.4 | 2317.3 | 2792.6 | 3077.5 | 3173.6 | 3199.8 | .. |
| - Energy industry consumption ⁽²⁾ | 70.4 | 90.6 | 103.2 | 97.4 | 108.2 | 106.8 | 110.4 | .. |
| Final consumption | 1342.2 | 1708.7 | 2214.2 | 2695.2 | 2969.3 | 3066.7 | 3089.4 | .. |
| Industry | 737.3 | 856.9 | 1005.6 | 1139.0 | 1223.9 | 1252.4 | 1252.1 | .. |
| Transport | 39.5 | 48.0 | 61.7 | 73.2 | 75.9 | 74.0 | 75.1 | .. |
| Commercial & publ. serv. | 202.5 | 289.6 | 460.8 | 663.8 | 759.9 | 816.7 | 807.9 | .. |
| Residential | 335.2 | 472.3 | 635.8 | 762.1 | 850.6 | 861.1 | 877.1 | .. |
| Agriculture & fishing | 23.1 | 35.8 | 47.7 | 52.3 | 54.8 | 56.3 | 60.7 | .. |
| Sector non specified | 4.5 | 6.1 | 2.5 | 4.7 | 4.1 | 6.3 | 16.5 | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

OECD EUROPE

4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 1667.39 | 2059.90 | 2651.94 | 3229.89 | 3567.99 | 3618.21 | 3636.06 | 2.9 | 1.8 |
| - Hydro pumped storage | 8.17 | 10.99 | 19.91 | 30.12 | 37.46 | 35.79 | 33.66 | 5.7 | 3.0 |
| Total generation⁽¹⁾ | 1659.22 | 2048.91 | 2632.03 | 3199.78 | 3530.53 | 3582.42 | 3602.40 | 2.9 | 1.8 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 1413.43 | 1809.99 | 2408.34 | 2991.47 | 3294.75 | 3337.26 | 3350.25 | 3.4 | 1.9 |
| - Hydro pumped storage | 8.17 | 10.99 | 19.88 | 30.02 | 37.40 | 35.74 | 33.60 | 5.7 | 3.0 |
| Total generation ⁽¹⁾ | 1405.27 | 1799.00 | 2388.47 | 2961.45 | 3257.36 | 3301.52 | 3316.65 | 3.4 | 1.8 |
| Nuclear | 82.20 | 225.74 | 776.64 | 934.63 | 978.37 | 925.32 | 921.78 | 15.1 | 1.0 |
| Hydro | 333.57 | 374.19 | 405.32 | 518.21 | 466.94 | 483.17 | 507.11 | 1.2 | 1.3 |
| Geothermal | 2.51 | 2.72 | 3.61 | 6.18 | 8.34 | 9.51 | 9.93 | 2.3 | 5.8 |
| Solar, wind, tide ⁽²⁾ | 0.60 | 0.51 | 1.39 | 22.78 | 81.67 | 103.94 | 120.10 | 5.4 | 28.1 |
| Coal | 525.47 | 774.19 | 908.57 | 900.47 | 956.57 | 959.13 | 887.43 | 3.5 | -0.1 |
| Oil | 334.36 | 307.63 | 167.29 | 144.95 | 92.25 | 75.77 | 73.05 | -4.2 | -4.5 |
| Gas | 124.86 | 110.39 | 122.00 | 419.56 | 621.19 | 685.91 | 732.01 | -0.1 | 10.5 |
| Comb. renew. & waste | 1.69 | 3.64 | 3.66 | 14.67 | 52.03 | 58.78 | 65.24 | 4.9 | 17.4 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 253.96 | 249.91 | 243.59 | 238.43 | 273.24 | 280.95 | 285.81 | -0.3 | 0.9 |
| - Hydro pumped storage | - | - | 0.04 | 0.10 | 0.07 | 0.05 | 0.06 | - | 3.2 |
| Total generation ⁽¹⁾ | 253.96 | 249.91 | 243.56 | 238.33 | 273.17 | 280.90 | 285.75 | -0.3 | 0.9 |
| Nuclear | 4.23 | 4.65 | 5.54 | - | - | - | - | 1.7 | - |
| Hydro | 32.37 | 41.52 | 38.03 | 22.86 | 13.56 | 14.22 | 13.44 | 1.0 | -5.6 |
| Geothermal | - | 0.01 | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 0.11 | 1.39 | 6.67 | 8.08 | 10.31 | - | 29.0 |
| Coal | 125.28 | 113.00 | 102.35 | 53.17 | 51.67 | 52.90 | 46.63 | -1.3 | -4.3 |
| Oil | 60.82 | 56.07 | 35.96 | 34.02 | 34.89 | 31.70 | 30.77 | -3.2 | -0.9 |
| Gas | 26.60 | 27.50 | 44.58 | 92.48 | 122.30 | 126.01 | 136.79 | 3.3 | 6.4 |
| Comb. renew. & waste | 4.65 | 7.17 | 17.00 | 34.41 | 44.08 | 48.00 | 47.81 | 8.4 | 5.9 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

OECD EUROPE

5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---|
| Total | 216575 e | 203343 e | 227490 e | 227189 e | 259249 e | 266908 | 272068 | 1.0 |
| Total energy | 12901 | 12004 | 42801 e | 26831 | 57765 e | 60860 | 58295 e | 1.7 |
| Coal mines | - | - | - | 3101 e | 12898 | 14298 | 11610 | - |
| Oil and gas extraction | - | - | 26 | 247 | 458 | 518 | 423 | 16.8 |
| Patent fuel plants | - | - | - | - | 29 | 26 | 27 | - |
| Coke ovens | - | - | - | 481 e | 468 | 521 | 576 | - |
| Gas works | - | - | - | - | 1504 | 1716 | 1607 | - |
| BKB | - | - | 13 | 34 | 36 | 28 | 39 | 6.3 |
| Oil refineries | 30 | 27 | 3606 | 17906 e | 28507 e | 30070 | 28747 e | 12.2 |
| Energy non specified/other | 12871 | 11977 | 39156 e | 5062 | 13865 | 13683 | 15266 e | -5.1 |
| Total industry | 160436 e | 147492 e | 139881 e | 172087 e | 168845 e | 172027 e | 171722 e | 1.1 |
| Iron and steel | 24446 e | 19688 e | 18959 e | 18617 | 24602 | 24111 | 23489 e | 1.2 |
| Chemical and petrochemical | 53850 e | 47855 e | 52278 e | 47927 e | 45558 e | 44901 e | 46281 e | -0.7 |
| Non-ferrous metals | 5991 e | 6193 e | 4845 e | 13615 e | 9638 e | 10510 e | 10277 e | 4.3 |
| Non-metallic minerals | 843 e | 844 | 934 | 5361 e | 5756 e | 5337 e | 4871 e | 9.6 |
| Transport equipment | 690 e | 584 e | 812 | 1338 | 2056 | 2030 | 1936 e | 4.9 |
| Machinery | 441 e | 472 | 1488 | 1761 e | 2357 e | 2621 e | 1549 e | 0.2 |
| Mining and quarrying | 38631 e | 37352 e | 21933 | 16050 | 1301 | 1664 | 1661 e | -13.4 |
| Food and tobacco | 4074 e | 4690 e | 6204 e | 13214 e | 15077 e | 15658 e | 16183 e | 5.5 |
| Pulp and printing | 12334 | 15867 | 19666 e | 38109 e | 46801 e | 49087 e | 49576 e | 5.3 |
| Wood and wood products | 2119 e | 2158 e | 2468 | 3179 | 3342 | 3353 | 3330 e | 1.7 |
| Construction | - | - | - | 354 | 478 | 497 | 485 e | - |
| Textile and leather | 3604 e | 2110 e | 1985 | 6598 | 4746 | 4169 | 3525 | 3.2 |
| Non specified/other industries | 13413 e | 9679 e | 8309 e | 5964 e | 7133 e | 8089 e | 8559 e | 0.2 |
| Total transport | - | - | 2853 | 4400 | 3024 | 3244 | 3302 | 0.8 |
| Rail and pipeline | - | - | - | - | 2 | 5 | 4 | - |
| Transport non specified | - | - | 2853 | 4400 | 3022 | 3239 | 3298 | 0.8 |
| Other | 43238 e | 43847 | 41955 | 23871 e | 29615 e | 30777 e | 38749 e | -0.4 |
| Commerce and pub. services | 29 e | 36 e | 1370 | 11733 e | 16586 | 19606 | 20647 e | 16.3 |
| Residential | - | - | - | 82 | 637 | 804 | 923 | - |
| Agriculture and fishing | 5 | 5 | 113 | 2347 | 4599 | 5904 | 12361 | 29.8 |
| Sector non specified | 43204 | 43806 | 40472 | 9709 e | 7793 e | 4463 e | 4818 e | -11.2 |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---|
| Total | 1618485 | 1805545 | 1822771 | 2654351 | 2254522 | 2250647 | 2204009 | 1.2 |
| Nuclear | .. | .. | 1706 | 5098 | 4848 | 4818 | 5520 | .. |
| Geothermal | .. | .. | 8076 | 10173 | 10337 | 12303 | 12393 | .. |
| Coal | .. | .. | 767024 | 750592 | 731421 | 713125 | 690198 | .. |
| Oil | .. | .. | 139565 | 177959 | 159223 | 143414 | 138256 | .. |
| Gas | .. | .. | 633592 | 1076870 | 928061 | 927830 | 906960 | .. |
| Comb. renew. & waste | .. | .. | 231379 | 337309 | 370737 | 397052 | 404063 | .. |
| Non-spec. comb. fuels | .. | .. | - | 254724 | 3591 | 4668 | - | .. |
| Chemical processes | .. | .. | 697 | 7181 | 6684 | 9627 | 9571 | .. |
| Heat pumps | .. | .. | 27406 | 22962 | 22252 | 22680 | 22041 | .. |
| Electric boilers | .. | .. | 9486 | 4058 | 3881 | 3211 | 3338 | .. |
| Other sources ⁽¹⁾ | .. | .. | 3840 | 7425 | 13487 | 11919 | 11669 | .. |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 1088390 | 1281926 | 1435513 | 1802758 | 1754034 | 1774514 | .. | 1.8 |
| Nuclear | .. | .. | 1706 | 5098 | 4848 | 4818 | .. | .. |
| Geothermal | .. | .. | 8076 | 10113 | 10226 | 12234 | .. | .. |
| Coal | .. | .. | 679016 | 669924 | 666707 | 664548 | .. | .. |
| Oil | .. | .. | 85670 | 70882 | 67167 | 53963 | .. | .. |
| Gas | .. | .. | 471726 | 673856 | 698736 | 705777 | .. | .. |
| Comb. renew. & waste | .. | .. | 152601 | 240134 | 271843 | 297366 | .. | .. |
| Non-spec. comb. fuels | .. | .. | - | 105080 | 3591 | 4668 | .. | .. |
| Chemical processes | .. | .. | - | - | - | - | .. | .. |
| Heat pumps | .. | .. | 27255 | 22832 | 22088 | 22494 | .. | .. |
| Electric boilers | .. | .. | 9463 | 4053 | 3870 | 3203 | .. | .. |
| Other sources ⁽¹⁾ | .. | .. | - | 786 | 4958 | 5443 | .. | .. |
| <u>Autoproducers</u> | | | | | | | | |
| Total | 530095 | 523619 | 387258 | 851593 | 500488 | 476133 | .. | -0.5 |
| Nuclear | .. | .. | - | - | - | - | .. | .. |
| Geothermal | .. | .. | - | 60 | 111 | 69 | .. | .. |
| Coal | .. | .. | 88008 | 80668 | 64714 | 48577 | .. | .. |
| Oil | .. | .. | 53895 | 107077 | 92056 | 89451 | .. | .. |
| Gas | .. | .. | 161866 | 403014 | 229325 | 222053 | .. | .. |
| Comb. renew. & waste | .. | .. | 78778 | 97175 | 98894 | 99686 | .. | .. |
| Non-spec. comb. fuels | .. | .. | - | 149644 | - | - | .. | .. |
| Chemical processes | .. | .. | 697 | 7181 | 6684 | 9627 | .. | .. |
| Heat pumps | .. | .. | 151 | 130 | 164 | 186 | .. | .. |
| Electric boilers | .. | .. | 23 | 5 | 11 | 8 | .. | .. |
| Other sources ⁽¹⁾ | .. | .. | 3840 | 6639 | 8529 | 6476 | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

OECD EUROPE

**7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)**

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 319.13 | 380.46 | 365.69 | 390.87 | 447.33 | 455.93 | 448.43 | 0.8 | 1.1 |
| Coal | 195.49 | 255.43 | 270.06 | 230.82 | 244.56 | 245.86 | 225.61 | 1.9 | -1.0 |
| Oil | 92.45 | 85.87 | 47.39 | 40.82 | 29.04 | 24.73 | 24.12 | -3.9 | -3.7 |
| Gas | 28.53 | 34.09 | 39.84 | 101.52 | 141.29 | 147.30 | 158.64 | 2.0 | 8.0 |
| Comb. renew. & waste | 2.66 | 5.08 | 8.39 | 17.71 | 32.45 | 38.03 | 40.07 | 7.0 | 9.1 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 315.95 | 307.71 | 342.32 | 383.31 | 394.46 | 386.25 | .. | 1.3 |
| Coal | .. | 213.96 | 235.04 | 217.19 | 230.72 | 231.72 | 212.47 | .. | -0.6 |
| Oil | .. | 72.46 | 39.00 | 34.23 | 19.88 | 16.07 | 15.58 | .. | -5.0 |
| Gas | .. | 27.73 | 30.78 | 83.32 | 113.26 | 122.37 | 131.89 | .. | 8.4 |
| Comb. renew. & waste | .. | 1.80 | 2.89 | 7.58 | 19.44 | 24.30 | 26.31 | .. | 13.1 |

Source: IEA/OECD Energy Balances of OECD Countries.

**7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)**

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 21.55 | 62.49 | 207.23 | 248.91 | 262.24 | 249.29 | 248.79 | 14.2 | 1.0 |
| Nuclear | 19.38 | 60.05 | 203.96 | 243.61 | 255.10 | 241.26 | 240.34 | 14.8 | 0.9 |
| Geothermal | 2.17 | 2.43 | 3.26 | 5.29 | 6.93 | 7.70 | 7.81 | 2.4 | 5.0 |
| Solar | - | - | 0.00 | 0.01 | 0.22 | 0.33 | 0.65 | - | 42.4 |
| Non-Thermal | | | | | | | | | |
| Total | 29.49 | 35.79 | 38.24 | 48.52 | 48.51 | 51.89 | 55.15 | 1.5 | 2.1 |
| Hydro | 29.44 | 35.75 | 38.13 | 46.53 | 41.32 | 42.78 | 44.77 | 1.5 | 0.9 |
| Tide, wave, ocean | 0.05 | 0.04 | 0.05 | 0.05 | 0.04 | 0.04 | 0.04 | 0.1 | -0.6 |
| Wind | - | 0.00 | 0.07 | 1.92 | 7.13 | 9.06 | 10.33 | - | 32.3 |
| Other (e.g. fuel cells) | - | - | - | 0.02 | 0.01 | 0.02 | 0.01 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

OECD EUROPE

8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|---------|-----------|-----------|-----------|-----------|-----------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 181321 | 188332 e | 165488 e | 174615 e | 175393 | 152522 | -1.2 |
| Fuel input (TJ) | 4355604 | 4563388 e | 4110463 e | 4442240 | 4408403 | 3830573 | -1.0 |
| Electricity production (GWh) | 439163 | 486925 e | 445655 e | 460437 e | 458283 e | 409637 e | -1.0 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 325376 | 357334 e | 322295 e | 303289 | 323573 | 306494 | -0.8 |
| Fuel input (TJ) | 2846300 | 2927236 e | 2712678 e | 2547062 | 2658250 | 2505083 | -0.9 |
| Electricity production (GWh) | 260880 | 278862 e | 277051 e | 265912 e | 280181 e | 257750 e | -0.4 |
| Peat | | | | | | | |
| Fuel input (1000 t) | 3534 | 3814 | 3532 | 5083 | 5315 | 4857 | 1.4 |
| Fuel input (TJ) | 29600 | 32308 | 30112 | 46795 | 48929 | 42214 | 1.5 |
| Electricity production (GWh) | 2236 | 3025 e | 2834 | 5155 | 5705 | 4757 | 2.5 |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 303405 | 239110 e | 250409 e | 249653 | 273391 | 250416 | 0.3 |
| Electricity production (GWh) | 26101 | 22625 e | 23981 e | 22675 e | 24418 e | 23055 | 0.1 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 72000 | 39296 e | 32298 e | 19880 e | 16308 | 15857 | -4.9 |
| Fuel input (TJ) | 2870379 | 1598000 e | 1299412 e | 795428 e | 635778 | 601731 | -5.3 |
| Electricity production (GWh) | 308407 | 170820 e | 132082 e | 80764 e | 64206 | 63877 e | -5.3 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 1094719 | 1039520 e | 2848715 e | 3516615 e | 3887441 | 4265738 e | 8.2 |
| Electricity production (GWh) | 107565 | 107055 e | 348786 e | 449649 e | 510507 | 565200 | 9.7 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 16003 | 40820 e | 131730 e | 243357 | 276906 | 17.2 |
| Electricity production (GWh) | - | 1487 e | 3463 e | 11530 e | 18852 | 21823 | 16.1 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 24560 | 24105 | 49775 e | 8590 e | 13656 | 11319 | -4.1 |
| Electricity production (GWh) | 2585 | 2654 | 4541 e | 796 | 867 | 766 | -6.7 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 35978 e | 47819 e | 129687 e | 139994 e | 230196 | 236145 | 9.3 |
| Electricity production (GWh) | 3105 e | 3762 e | 10115 e | 8827 e | 16400 | 16576 | 8.6 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 8830 e | 65287 e | 112465 e | 244025 | 251358 | 20.4 |
| Electricity production (GWh) | - | 445 | 5435 e | 9245 e | 17317 | 18276 | 22.9 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 1151992 | 1077660 e | 1253943 e | 1314990 e | 1396736 e | 1381717 | 1.4 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|----------|-----------|-----------|-----------|----------|-----------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 95159 | 90785 e | 64263 e | 76614 e | 74186 | 68920 | -1.5 |
| Fuel input (TJ) | 1933892 | 2006396 e | 1460363 e | 1763957 | 1686607 | 1570567 | -1.4 |
| Electricity production (GWh) | 125653 | 144013 e | 122136 e | 155656 | 148715 e | 137830 | -0.2 |
| CHP Heat production (TJ) | 566114 e | 588583 e | 382538 e | 442247 e | 419147 | 398569 | -2.1 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 55527 | 110827 e | 88445 e | 97593 e | 91765 | 98439 | -0.7 |
| Fuel input (TJ) | 452337 | 982818 e | 821915 e | 863936 | 829599 | 887809 | -0.6 |
| Electricity production (GWh) | 25901 | 65441 e | 70646 e | 83423 | 78960 | 85394 | 1.5 |
| CHP Heat production (TJ) | 155598 | 294246 e | 170060 e | 104017 e | 105616 | 108101 | -5.4 |
| Peat | | | | | | | |
| Fuel input (1000 t) | 3192 | 2375 | 3846 | 5509 | 5653 | 5324 | 4.6 |
| Fuel input (TJ) | 26726 | 25768 | 40354 | 57247 | 58027 | 55047 | 4.3 |
| Electricity production (GWh) | 4194 | 2050 e | 2968 | 4080 | 4221 | 3849 | 3.6 |
| CHP Heat production (TJ) | 6866 | 14414 e | 23226 | 32900 | 32984 | 32351 | 4.6 |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 60539 | 104516 e | 91429 e | 133747 | 136328 | 141016 | 1.7 |
| Electricity production (GWh) | 3060 | 7969 e | 8377 e | 10899 | 11542 e | 11790 | 2.2 |
| CHP Heat production (TJ) | 25865 e | 31709 e | 21670 e | 32042 | 24215 | 29417 | -0.4 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 16603 | 9585 e | 13411 e | 20645 e | 19360 | 18234 | 3.6 |
| Fuel input (TJ) | 668516 | 388717 e | 418127 e | 527665 e | 469361 | 429925 | 0.6 |
| Electricity production (GWh) | 55294 | 32426 e | 46881 e | 46375 e | 43256 | 39937 | 1.2 |
| CHP Heat production (TJ) | 209239 e | 103403 e | 88146 e | 177976 | 130440 | 119218 | 0.8 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 395959 | 699456 e | 1613127 e | 2891203 | 2772938 | 2803120 e | 8.0 |
| Electricity production (GWh) | 30326 | 59528 e | 163248 e | 293846 e | 301410 e | 303598 e | 9.5 |
| CHP Heat production (TJ) | 97176 | 169848 e | 473858 e | 874552 | 718832 | 710833 | 8.3 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 22492 | 74080 e | 179140 e | 423843 e | 353097 | 383417 | 9.6 |
| Electricity production (GWh) | 1690 e | 9651 e | 17259 e | 34954 e | 31602 | 33715 | 7.2 |
| CHP Heat production (TJ) | 7069 e | 13788 e | 66307 | 131906 e | 132123 | 144011 | 13.9 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 5289 | 8553 | 22453 | 23484 | 29299 | 22180 | 5.4 |
| Electricity production (GWh) | 161 | 301 | 1724 | 2438 e | 2784 | 2162 | 11.6 |
| CHP Heat production (TJ) | 3077 | 3693 | 6004 | 5301 e | 4499 | 4536 | 1.1 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 21105 | 67922 | 140963 e | 278046 e | 274825 | 281224 | 8.2 |
| Electricity production (GWh) | 1313 e | 1810 e | 5387 e | 18238 e | 13767 | 14422 | 12.2 |
| CHP Heat production (TJ) | 3895 e | 36430 e | 76114 e | 118036 e | 112521 | 122212 | 7.0 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 5647 | 11531 e | 107380 e | 52864 | 53434 | 13.3 |
| Electricity production (GWh) | - | 546 | 1155 | 10080 e | 5193 | 5318 | 13.5 |
| CHP Heat production (TJ) | - | 123 | 1701 | 7771 e | 6519 | 6357 | 24.5 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 247592 | 323735 e | 439781 e | 659989 e | 641450 e | 638015 | 3.8 |
| CHP Heat production (TJ) | 1109184 | 1256237 e | 1309624 e | 2034960 e | 1688378 | 1677904 | 1.6 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|----------|----------|----------|----------|----------|----------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 18524 | 19886 e | 8130 e | 6540 | 6951 | 6735 | -5.8 |
| Fuel input (TJ) | 417415 | 427560 e | 180359 e | 153050 | 163056 e | 157942 | -5.4 |
| Heat production (TJ) | 281233 | 306580 e | 146408 e | 119033 | 129108 | 125920 | -4.8 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 4739 | 2769 e | 727 e | 574 e | 965 | 681 | -7.5 |
| Fuel input (TJ) | 54336 | 30408 e | 10275 e | 8395 e | 11510 | 8633 | -6.8 |
| Heat production (TJ) | 39968 | 21674 e | 7748 e | 6362 e | 7824 | 7397 | -5.8 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | 1029 | 582 | 626 | 884 | 801 | -1.4 |
| Fuel input (TJ) | - | 11849 | 6587 | 6588 | 10627 | 9538 | -1.2 |
| Heat production (TJ) | - | 10121 e | 5730 | 5617 | 9115 | 7976 | -1.3 |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 7266 | 6615 e | 11867 e | 5770 | 5820 | 5658 | -0.9 |
| Heat production (TJ) | 5116 e | 4629 e | 9644 e | 3414 | 3412 | 3394 | -1.7 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 2193 | 1566 e | 1622 e | 960 e | 823 | 698 | -4.4 |
| Fuel input (TJ) | 90693 | 64430 e | 66871 e | 40816 e | 34429 e | 29171 | -4.3 |
| Heat production (TJ) | 69245 e | 50197 e | 51419 e | 33585 e | 28783 e | 24196 | -4.0 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 108298 | 104584 e | 212297 e | 228122 e | 341322 | 313088 e | 6.3 |
| Heat production (TJ) | 77745 e | 74669 e | 159734 e | 162303 e | 209229 | 216997 | 6.1 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 1073 | 28435 e | 51982 | 89632 e | 86675 | 91452 | 6.7 |
| Heat production (TJ) | 750 e | 22852 e | 44902 | 74585 e | 70205 | 74433 | 6.8 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 476 | 181 | 8926 e | 855 | 1200 | 1362 | 11.9 |
| Heat production (TJ) | 323 | 132 | 7945 e | 684 | 962 | 1174 | 12.9 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 26121 e | 69870 e | 39758 e | 39164 e | 56361 | 61016 | -0.7 |
| Heat production (TJ) | 14148 e | 43177 e | 27423 e | 27406 e | 38514 | 40294 | -0.4 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 44 | 1191 | 3486 e | 6608 | 5064 | 30.2 |
| Heat production (TJ) | - | 34 | 983 | 2940 e | 5394 | 4035 | 30.4 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | 507252 e | 536178 e | 461936 e | 568501 e | 504655 | 508185 | -0.3 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

OECD EUROPE

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 1022.06 | 1080.65 | 1113.60 | 1217.53 | 1300.51 | 1282.25 | 1280.49 | 0.5 | 0.8 |
| Geothermal | 0.35 | 0.51 | 1.39 | 1.82 | 2.16 | 2.17 | 2.26 | 8.3 | 2.8 |
| Solar thermal | - | 0.01 | 0.17 | 0.67 | 1.16 | 1.33 | 1.48 | - | 12.7 |
| Coal | 172.52 | 150.15 | 121.55 | 61.75 | 57.00 | 57.00 | 55.65 | -2.0 | -4.2 |
| Oil | 577.22 | 551.43 | 514.90 | 564.86 | 577.99 | 566.37 | 561.95 | -0.7 | 0.5 |
| Gas | 107.70 | 166.59 | 203.63 | 267.58 | 286.34 | 280.07 | 280.02 | 3.8 | 1.8 |
| Comb. renew. & waste | 28.25 | 30.49 | 44.19 | 50.79 | 59.81 | 65.05 | 67.41 | 2.7 | 2.4 |
| Electricity | 115.43 | 146.95 | 190.42 | 231.79 | 260.82 | 263.74 | 265.69 | 3.0 | 1.9 |
| Heat | 20.59 | 34.52 | 37.35 | 38.27 | 55.23 | 46.51 | 46.04 | 3.6 | 1.2 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 372.70 | 356.46 | 318.66 | 322.04 | 325.71 | 327.22 | 309.63 | -0.9 | -0.2 |
| Geothermal | 0.03 | 0.02 | 0.05 | 0.06 | 0.05 | 0.03 | 0.03 | 2.5 | -2.9 |
| Solar thermal | - | - | 0.01 | 0.10 | 0.12 | 0.13 | 0.13 | - | 16.7 |
| Coal | 88.77 | 77.53 | 70.02 | 46.45 | 41.14 | 41.75 | 35.71 | -1.4 | -3.7 |
| Oil | 150.31 | 116.94 | 56.90 | 52.58 | 48.91 | 46.51 | 42.75 | -5.6 | -1.6 |
| Gas | 54.50 | 67.97 | 77.70 | 98.24 | 90.26 | 92.67 | 86.12 | 2.1 | 0.6 |
| Comb. renew. & waste | 4.92 | 5.87 | 14.36 | 17.64 | 19.24 | 22.10 | 21.79 | 6.5 | 2.3 |
| Electricity | 63.41 | 73.69 | 86.49 | 97.95 | 105.31 | 107.71 | 107.68 | 1.8 | 1.2 |
| Heat | 10.77 | 14.43 | 13.14 | 9.01 | 20.67 | 16.32 | 15.43 | 1.2 | 0.9 |
| Transport | 173.93 | 208.55 | 264.16 | 315.96 | 341.89 | 348.01 | 341.75 | 2.5 | 1.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 6.85 | 2.54 | 0.21 | 0.01 | 0.01 | 0.00 | 0.01 | -18.6 | -18.6 |
| Oil | 163.52 | 201.32 | 258.33 | 308.22 | 328.23 | 331.99 | 323.18 | 2.7 | 1.3 |
| Gas | 0.16 | 0.57 | 0.30 | 0.73 | 1.72 | 1.90 | 2.21 | 4.0 | 11.6 |
| Comb. renew. & waste | 0.00 | 0.00 | 0.01 | 0.71 | 5.53 | 7.76 | 9.90 | 5.4 | 50.7 |
| Electricity | 3.40 | 4.13 | 5.31 | 6.30 | 6.40 | 6.36 | 6.46 | 2.7 | 1.1 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 95.50 | 104.79 | 110.38 | 123.43 | 144.45 | 142.46 | 150.96 | 0.9 | 1.8 |
| Geothermal | 0.01 | 0.02 | 0.11 | 0.14 | 0.18 | 0.18 | 0.22 | 13.5 | 3.9 |
| Solar thermal | - | - | 0.02 | 0.05 | 0.09 | 0.10 | 0.10 | - | 10.6 |
| Coal | 13.44 | 16.18 | 12.51 | 1.40 | 1.45 | 1.25 | 2.43 | -0.4 | -8.7 |
| Oil | 57.49 | 50.48 | 27.65 | 22.67 | 21.87 | 18.61 | 22.51 | -4.2 | -1.1 |
| Gas | 5.52 | 10.05 | 26.68 | 35.04 | 44.26 | 41.91 | 45.49 | 9.7 | 3.0 |
| Comb. renew. & waste | 0.81 | 1.05 | 0.31 | 1.23 | 1.85 | 2.01 | 2.00 | -5.5 | 10.9 |
| Electricity | 17.42 | 24.90 | 39.63 | 57.09 | 69.39 | 70.23 | 69.48 | 5.0 | 3.2 |
| Heat | 0.82 | 2.12 | 3.47 | 5.81 | 5.36 | 8.16 | 8.74 | 8.9 | 5.3 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

OECD EUROPE

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 242.15 | 256.77 | 278.17 | 299.87 | 314.83 | 300.22 | 313.92 | 0.8 | 0.7 |
| Geothermal | 0.29 | 0.45 | 0.92 | 1.33 | 1.63 | 1.65 | 1.72 | 7.0 | 3.6 |
| Solar thermal | - | 0.01 | 0.13 | 0.45 | 0.89 | 1.04 | 1.18 | - | 13.3 |
| Coal | 55.31 | 47.78 | 34.28 | 11.51 | 11.73 | 11.31 | 14.06 | -2.8 | -4.8 |
| Oil | 101.24 | 81.54 | 65.70 | 63.08 | 56.54 | 45.09 | 50.85 | -2.5 | -1.4 |
| Gas | 30.31 | 52.86 | 75.77 | 109.18 | 124.12 | 118.49 | 121.66 | 5.5 | 2.7 |
| Comb. renew. & waste | 18.42 | 19.91 | 27.88 | 29.85 | 31.62 | 31.63 | 32.15 | 2.5 | 0.8 |
| Electricity | 28.83 | 40.62 | 54.68 | 65.54 | 74.42 | 74.06 | 75.43 | 3.8 | 1.8 |
| Heat | 7.75 | 13.60 | 18.81 | 18.92 | 13.87 | 16.95 | 16.87 | 5.4 | -0.6 |
| Agriculture & fishing | 20.79 | 26.26 | 31.61 | 32.21 | 30.72 | 30.49 | 31.36 | 2.5 | -0.0 |
| Geothermal | 0.02 | 0.02 | 0.05 | 0.07 | 0.09 | 0.09 | 0.08 | 5.4 | 2.3 |
| Solar thermal | - | - | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | - | 28.0 |
| Coal | 1.61 | 1.77 | 1.67 | 1.07 | 1.21 | 1.05 | 1.14 | 0.2 | -2.1 |
| Oil | 16.59 | 20.42 | 20.50 | 20.80 | 18.96 | 18.87 | 19.80 | 1.3 | -0.2 |
| Gas | 0.13 | 0.34 | 3.81 | 3.97 | 3.74 | 3.77 | 3.21 | 22.3 | -1.0 |
| Comb. renew. & waste | 0.08 | 0.14 | 0.78 | 1.33 | 1.56 | 1.54 | 1.56 | 14.3 | 3.9 |
| Electricity | 1.98 | 3.08 | 4.10 | 4.50 | 4.82 | 4.85 | 5.22 | 4.4 | 1.3 |
| Heat | 0.37 | 0.49 | 0.70 | 0.47 | 0.32 | 0.30 | 0.33 | 3.8 | -4.1 |
| Other | 35.82 | 37.63 | 11.01 | 12.36 | 26.76 | 15.10 | 16.86 | -6.7 | 2.4 |
| Geothermal | - | - | 0.26 | 0.21 | 0.21 | 0.21 | 0.21 | - | -1.1 |
| Solar thermal | - | - | 0.02 | 0.06 | 0.04 | 0.05 | 0.06 | - | 5.3 |
| Coal | 3.45 | 2.19 | 1.16 | 0.31 | 0.11 | 0.09 | 0.75 | -6.2 | -2.4 |
| Oil | 14.84 | 5.16 | 1.92 | 0.74 | 1.18 | 1.01 | 0.89 | -11.3 | -4.2 |
| Gas | 12.25 | 22.36 | 5.35 | 6.53 | 9.74 | 8.41 | 8.85 | -4.8 | 2.8 |
| Comb. renew. & waste | 4.01 | 3.51 | 0.85 | 0.03 | 0.01 | 0.01 | 0.01 | -8.7 | -20.7 |
| Electricity | 0.39 | 0.53 | 0.22 | 0.41 | 0.47 | 0.54 | 1.42 | -3.3 | 11.0 |
| Heat | 0.88 | 3.88 | 1.22 | 4.06 | 15.00 | 4.78 | 4.67 | 2.0 | 7.7 |
| Non-energy use⁽¹⁾ | 81.17 | 90.18 | 99.61 | 111.66 | 116.15 | 118.74 | 116.01 | 1.21 | 0.85 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

OECD EUROPE

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| TFC (Mtoe) | 1022.06 | 1080.65 | 1113.60 | 1217.53 | 1295.96 | 1300.51 | 1282.25 | 1280.49 |
| Total industry (Mtoe) | 372.70 | 356.46 | 318.66 | 322.04 | 328.98 | 325.71 | 327.22 | 309.63 |
| Iron and steel | 74.36 | 63.15 | 52.87 | 44.65 | 41.82 | 42.17 | 42.32 | 41.09 |
| Chem. and petrochemical | 64.82 | 62.70 | 57.43 | 57.06 | 58.76 | 55.79 | 58.96 | 54.48 |
| Non-ferrous metals | 12.75 | 15.12 | 13.74 | 14.25 | 14.78 | 14.66 | 14.81 | 14.33 |
| Non-metallic minerals | 45.84 | 46.09 | 41.53 | 43.53 | 43.44 | 42.79 | 44.30 | 43.73 |
| Transport equipment | 8.37 | 8.56 | 7.97 | 9.32 | 9.03 | 8.79 | 9.15 | 8.81 |
| Machinery | 22.44 | 24.10 | 22.81 | 19.17 | 20.11 | 19.83 | 19.90 | 20.16 |
| Mining and quarrying | 8.13 | 7.85 | 6.42 | 3.69 | 3.38 | 3.24 | 3.31 | 3.10 |
| Food and tobacco | 26.26 | 29.04 | 28.02 | 31.26 | 30.47 | 29.70 | 30.64 | 29.63 |
| Paper, pulp and printing | 24.63 | 24.36 | 27.86 | 36.65 | 36.65 | 37.42 | 40.01 | 37.58 |
| Wood and wood products | 4.47 | 4.78 | 5.18 | 6.20 | 6.50 | 6.44 | 7.67 | 7.89 |
| Construction | 7.02 | 6.91 | 6.15 | 7.29 | 8.30 | 8.44 | 7.93 | 9.00 |
| Textile and leather | 14.97 | 14.12 | 11.82 | 11.58 | 9.10 | 8.68 | 8.09 | 7.03 |
| Non specified/other | 58.64 | 49.69 | 36.85 | 37.39 | 46.65 | 47.75 | 40.13 | 32.79 |
| Electricity consumption (Mtoe) | 115.43 | 146.95 | 190.42 | 231.79 | 255.36 | 260.82 | 263.74 | 265.69 |
| Total industry (Mtoe) | 63.41 | 73.69 | 86.49 | 97.95 | 105.25 | 105.31 | 107.71 | 107.68 |
| Iron and steel | 9.65 | 10.76 | 10.62 | 12.01 | 12.47 | 12.90 | 13.02 | 12.69 |
| Chem. and petrochemical | 15.40 | 16.77 | 17.69 | 17.70 | 18.26 | 17.70 | 17.80 | 17.73 |
| Non-ferrous metals | 6.27 | 8.19 | 8.22 | 8.46 | 9.41 | 9.20 | 9.54 | 9.87 |
| Non-metallic minerals | 3.98 | 4.78 | 5.84 | 7.22 | 7.49 | 7.55 | 7.78 | 8.03 |
| Transport equipment | 2.27 | 2.80 | 3.14 | 4.55 | 4.65 | 4.69 | 4.69 | 4.70 |
| Machinery | 5.11 | 6.09 | 8.57 | 8.29 | 8.79 | 9.06 | 9.12 | 9.77 |
| Mining and quarrying | 1.67 | 1.92 | 1.94 | 1.32 | 1.34 | 1.42 | 1.43 | 1.36 |
| Food and tobacco | 3.25 | 4.41 | 6.83 | 8.89 | 9.85 | 9.92 | 10.09 | 10.04 |
| Paper, pulp and printing | 5.69 | 6.41 | 9.35 | 12.17 | 13.09 | 13.26 | 12.97 | 12.74 |
| Wood and wood products | 1.03 | 1.38 | 1.78 | 1.95 | 2.31 | 2.33 | 2.36 | 2.39 |
| Construction | 0.58 | 0.86 | 0.98 | 1.14 | 1.38 | 1.48 | 1.58 | 1.60 |
| Textile and leather | 3.46 | 3.55 | 3.96 | 4.07 | 3.74 | 3.60 | 3.64 | 3.30 |
| Non specified/other | 5.06 | 5.78 | 7.56 | 10.18 | 12.47 | 12.18 | 13.69 | 13.46 |
| Total industry (TWh) | 737.32 | 856.91 | 1005.64 | 1138.98 | 1223.88 | 1224.53 | 1252.39 | 1252.10 |
| Iron and steel | 112.20 | 125.17 | 123.50 | 139.65 | 145.00 | 150.00 | 151.37 | 147.59 |
| Chem. and petrochemical | 179.09 | 195.00 | 205.70 | 205.83 | 212.36 | 205.86 | 206.97 | 206.12 |
| Non-ferrous metals | 72.94 | 95.25 | 95.56 | 98.34 | 109.43 | 107.01 | 110.88 | 114.78 |
| Non-metallic minerals | 46.23 | 55.54 | 67.94 | 83.97 | 87.10 | 87.84 | 90.46 | 93.42 |
| Transport equipment | 26.39 | 32.51 | 36.54 | 52.85 | 54.07 | 54.55 | 54.51 | 54.69 |
| Machinery | 59.36 | 70.78 | 99.65 | 96.37 | 102.19 | 105.35 | 106.00 | 113.56 |
| Mining and quarrying | 19.38 | 22.30 | 22.56 | 15.32 | 15.58 | 16.47 | 16.64 | 15.86 |
| Food and tobacco | 37.83 | 51.22 | 79.36 | 103.37 | 114.51 | 115.35 | 117.34 | 116.75 |
| Paper, pulp and printing | 66.19 | 74.49 | 108.69 | 141.51 | 152.26 | 154.24 | 150.84 | 148.15 |
| Wood and wood products | 11.98 | 16.10 | 20.74 | 22.69 | 26.89 | 27.12 | 27.47 | 27.74 |
| Construction | 6.70 | 10.00 | 11.39 | 13.29 | 16.03 | 17.24 | 18.41 | 18.60 |
| Textile and leather | 40.24 | 41.30 | 46.07 | 47.38 | 43.51 | 41.91 | 42.29 | 38.39 |
| Non specified/other | 58.79 | 67.25 | 87.96 | 118.41 | 144.97 | 141.59 | 159.21 | 156.47 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

OECD EUROPE

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Total imports⁽¹⁾ | 68330 | 106547 | 214484 | 203391 | 277719 | 347751 | 336625 | 337539 | 318448 |
| Imports from: | | | | | | | | | |
| Total OECD | 16611 | 40995 | 170643 | 192604 | 260550 | 312483 | 302478 | 309487 | 285836 |
| Austria | 498 | 991 | 6910 | 8597 | 12517 | 20636 | 16815 | 17310 | 16863 |
| Belgium | 89 | 7810 | 4488 | 3550 | 4502 | 8008 | 8684 | 9038 | 6537 |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | 2975 | 6116 | 18634 | 24404 | 23413 | 26350 | 19986 |
| Denmark | 289 | 1372 | 4940 | 5648 | 8177 | 11629 | 13617 | 11172 | 11006 |
| Finland | 260 | 1163 | 362 | 276 | 1004 | 1524 | 2542 | 2675 | 3147 |
| France | 2496 | 4338 | 55503 | 77740 | 77677 | 66651 | 69793 | 66323 | 56967 |
| Germany | 1238 | 5067 | 22160 | 27167 | 39913 | 59655 | 64068 | 61138 | 59783 |
| Greece | - | - | - | - | - | 713 | 945 | 174 | 209 |
| Hungary | - | - | 212 | 622 | 843 | 854 | 1063 | 243 | 722 |
| Ireland | - | - | - | 30 | 41 | 1 | 10 | 53 | 152 |
| Italy | 318 | 736 | 253 | 357 | 470 | 1146 | 1619 | 2416 | 3362 |
| Luxembourg | - | - | 965 | 778 | 738 | 2367 | 2479 | 2084 | 1629 |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | 215 | 3906 | 3499 | 3902 | 4031 | 5398 | 5990 | 5568 | 9272 |
| Norway | 5401 | 1503 | 16413 | 8573 | 20486 | 15692 | 7728 | 14370 | 15700 |
| Poland | - | 828 | 7878 | 7150 | 9658 | 16110 | 15669 | 13076 | 9632 |
| Portugal | 78 | 514 | 1697 | 1742 | 3767 | 2801 | 3175 | 2153 | 1314 |
| Slovak Republic | 303 | 549 | 778 | 2484 | 8825 | 8832 | 8635 | 9058 | 7487 |
| Spain | 2239 | 3631 | 3606 | 3031 | 5293 | 10378 | 10098 | 10748 | 12400 |
| Sweden | 20 | 1321 | 14605 | 8627 | 12955 | 21129 | 13032 | 15992 | 16480 |
| Switzerland | 3071 | 7247 | 23354 | 26168 | 29785 | 31718 | 30417 | 35651 | 31511 |
| Turkey | - | - | - | - | - | - | - | 89 | - |
| United Kingdom | 96 | 19 | 45 | 46 | 1234 | 2837 | 2686 | 3806 | 1677 |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | 5384 | 12150 | 19607 | 10787 | 16878 | 33922 | 32779 | 27024 | 30918 |
| Albania | - | 151 | 165 | 198 | 50 | 15 | 26 | - | - |
| Azerbaijan | - | - | - | - | - | - | - | 15 | 94 |
| Belarus | - | - | - | - | 163 | 874 | 1045 | - | - |
| Bulgaria | - | 750 | 320 | 652 | 4364 | 4543 | 4460 | 4293 | 4628 |
| Croatia | - | - | 1 | 1 | - | - | 54 | - | 5 |
| Estonia | - | - | - | - | - | - | 4 | 1921 | 2250 |
| F.Y.R. of Macedonia | - | - | - | - | - | 795 | 1201 | 901 | 1188 |
| Georgia | - | 649 | 176 | - | 204 | 101 | 40 | 216 | 215 |
| Romania | 1428 | 955 | - | 283 | - | 1187 | 1432 | 252 | 720 |
| Russian Federation | 46 | 49 | 4531 | 4839 | 4755 | 11528 | 11767 | 10362 | 11059 |
| Serbia | 115 | 545 | 891 | 496 | 612 | 18 | 1 | - | - |
| Slovenia | - | 725 | 1363 | 816 | 4554 | 8522 | 6443 | 3817 | 5599 |
| Turkmenistan | - | - | - | - | - | 535 | 533 | 633 | 450 |
| Ukraine | 3795 | 8326 | 12160 | 3502 | 2176 | 5804 | 5773 | 4614 | 4710 |
| Non-specified/others | 46335 | 53402 | 24234 | - | 291 | 1346 | 1368 | 1028 | 1694 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

OECD EUROPE

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Total exports⁽¹⁾ | 62585 | 90906 | 191323 | 197785 | 273760 | 330061 | 320618 | 333577 | 306718 |
| Exports to: | | | | | | | | | |
| Total OECD | 26328 | 37668 | 168575 | 192969 | 260198 | 312690 | 303724 | 309346 | 286344 |
| Austria | 614 | 1067 | 7789 | 9750 | 13922 | 22487 | 22229 | 23436 | 22333 |
| Belgium | 1320 | 1086 | 2322 | 6058 | 11557 | 14313 | 18851 | 15848 | 17177 |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | 47 | 4405 | 8699 | 12324 | 11461 | 10209 | 8523 |
| Denmark | 918 | 1841 | 12106 | 3825 | 8571 | 13035 | 6687 | 10225 | 12432 |
| Finland | 4136 | 678 | 6481 | 3873 | 8365 | 7357 | 2515 | 3290 | 2933 |
| France | 2686 | 9845 | 7019 | 3256 | 3676 | 7986 | 8560 | 10358 | 10563 |
| Germany | 3211 | 3930 | 24998 | 39439 | 45610 | 52657 | 45352 | 43379 | 38626 |
| Greece | - | - | - | - | - | 272 | 453 | 1218 | 1810 |
| Hungary | - | - | 233 | 1288 | 7826 | 9616 | 9056 | 10513 | 8304 |
| Ireland | - | - | - | - | 133 | 2074 | 1788 | 1382 | 373 |
| Italy | 761 | 1425 | 34226 | 37900 | 40408 | 42560 | 41303 | 45868 | 38867 |
| Luxembourg | 913 | 1073 | 4364 | 5651 | 6409 | 5302 | 5692 | 5725 | 5666 |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | 1288 | 10 | 12657 | 15497 | 21835 | 23691 | 27353 | 23149 | 25231 |
| Norway | 165 | 991 | 407 | 1911 | 1231 | 3434 | 8373 | 4144 | 1824 |
| Poland | - | 4 | 13 | 4088 | 2494 | 3081 | 2914 | 7100 | 7673 |
| Portugal | 132 | 2342 | 1734 | 2661 | 4698 | 9630 | 8633 | 9650 | 10753 |
| Slovak Republic | 552 | 3652 | 4602 | 2101 | 5967 | 7822 | 8568 | 13476 | 7830 |
| Spain | 322 | 2337 | 3209 | 7632 | 12271 | 10366 | 9393 | 9060 | 5890 |
| Sweden | 5256 | 1825 | 12749 | 8221 | 17688 | 13953 | 19275 | 17494 | 14686 |
| Switzerland | 3893 | 5540 | 21694 | 19083 | 24070 | 38255 | 33446 | 34410 | 31100 |
| Turkey | - | - | - | - | - | - | - | - | 30 |
| United Kingdom | 161 | 22 | 11925 | 16330 | 14768 | 12475 | 11822 | 9412 | 13720 |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | 87 | 265 | 3980 | 4359 | 10725 | 13147 | 11119 | 16967 | 12446 |
| Albania | - | - | 541 | 391 | 1111 | 1056 | 978 | 1773 | 1657 |
| Azerbaijan | - | - | - | 495 | 437 | 384 | 326 | 15 | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | 573 | 9 | 205 | - | - | - | - |
| Croatia | - | - | - | 117 | 4472 | 6690 | 5561 | 6537 | 5300 |
| Estonia | - | - | - | - | - | - | 7 | 21 | 10 |
| F.Y.R. of Macedonia | - | - | - | - | - | 70 | 15 | 111 | 95 |
| Georgia | - | - | 122 | 178 | - | 9 | 107 | 118 | 54 |
| Romania | 2 | 15 | 256 | 88 | - | 146 | 29 | 379 | 105 |
| Russian Federation | - | - | - | 1 | - | - | - | - | - |
| Serbia | 58 | 154 | 389 | 258 | 1189 | 1693 | 1519 | 3430 | 2653 |
| Slovenia | 27 | 72 | 2089 | 2805 | 3307 | 1349 | 846 | 1733 | 1309 |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | 24 | 10 | 17 | 4 | 1750 | 1731 | 2850 | 1263 |
| Non-specified/others | 36170 | 52973 | 18768 | 457 | 2837 | 4224 | 5775 | 7264 | 7928 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

OECD EUROPE

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|--------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total Capacity ⁽¹⁾ | 328.33 | 417.44 | 558.59 | 605.80 | 675.49 | 741.43 | 764.33 | 782.23 | 802.67 |
| Nuclear | 14.15 | 42.05 | 120.52 | 127.58 | 133.28 | 132.95 | 131.75 | 130.90 | 131.15 |
| Hydro | 99.49 | 119.07 | 151.07 | 163.87 | 176.65 | 180.01 | 182.05 | 185.30 | 186.92 |
| <i>of which: pumped storage</i> | <i>2.36</i> | <i>6.49</i> | <i>29.40</i> | <i>35.64</i> | <i>37.57</i> | <i>38.07</i> | <i>39.56</i> | <i>39.99</i> | <i>41.80</i> |
| Geothermal | 0.39 | 0.44 | 0.56 | 0.55 | 0.79 | 0.93 | 1.14 | 1.21 | 1.31 |
| Solar | - | - | 0.01 | 0.05 | 0.17 | 1.64 | 3.12 | 4.75 | 9.36 |
| Tide, wave, ocean | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| Wind | - | - | 0.41 | 1.08 | 12.27 | 38.92 | 45.58 | 53.28 | 60.75 |
| Other (e.g. fuel cells) | - | - | - | 0.03 | 0.17 | 0.27 | 0.22 | 0.42 | 0.42 |
| Combustible fuels | 214.06 | 255.65 | 285.77 | 312.40 | 351.92 | 386.47 | 400.22 | 406.14 | 412.51 |
| <i>of which</i> ⁽²⁾ : | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid fuels | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Comb. renew. & waste | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / liquid / gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Internal combustion | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Gas turbine | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Combined cycle | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Other | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Capacity data are not available for Czech Republic before 1993 and for Slovak Republic before 1995.

(2) Breakdown of electrical capacity by type of fuel are shown in the individual country chapters.

Note: Please refer to notes in the introductory information for data coverage.

OECD EUROPE

15. Net maximum electricity generating capacity on 31 December (continued)

(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total Capacity ⁽¹⁾ | 49.39 | 51.49 | 53.02 | 59.15 | 47.93 | 53.15 | 53.39 | 54.90 | 57.77 |
| Nuclear | 0.54 | 0.84 | 0.77 | 0.54 | - | - | - | - | - |
| Hydro | 6.63 | 7.06 | 9.13 | 9.01 | 3.84 | 3.39 | 3.45 | 3.48 | 3.58 |
| <i>of which: pumped storage</i> | - | - | 0.07 | 0.23 | 0.27 | 0.14 | 0.14 | 0.15 | 0.16 |
| Geothermal | - | 0.01 | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.02 | 0.04 | 0.13 | 0.14 | 0.17 | 0.22 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.06 | 1.37 | 0.49 | 1.83 | 2.32 | 2.99 | 4.14 |
| Other (e.g. fuel cells) | - | - | - | 0.11 | 0.03 | 0.19 | 0.20 | 0.22 | 0.22 |
| Combustible fuels | 42.22 | 43.59 | 43.05 | 48.12 | 43.54 | 47.60 | 47.28 | 48.04 | 49.62 |
| <i>of which</i> ⁽²⁾ : | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid fuels | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Comb. renew. & waste | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / liquid / gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Internal combustion | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Gas turbine | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Combined cycle | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Other | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Capacity data are not available for Czech Republic before 1993 and for Slovak Republic before 2001.

(2) Breakdown of electrical capacity by type of fuel are shown in the individual country chapters.

Note: Please refer to notes in the introductory information for data coverage.

IEA TOTAL

Figure 1. Total final consumption by fuel

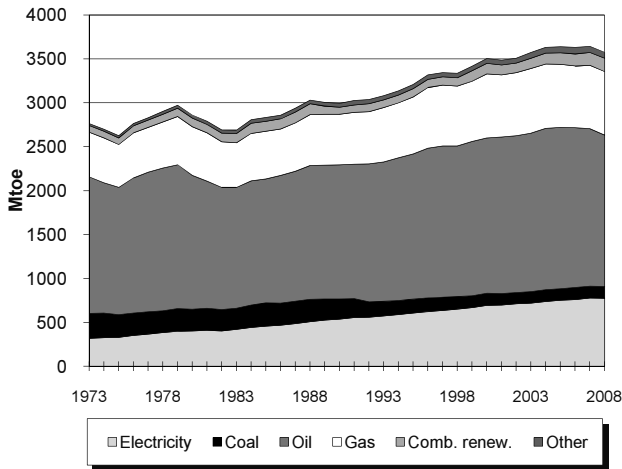


Figure 2. Electricity generation by fuel

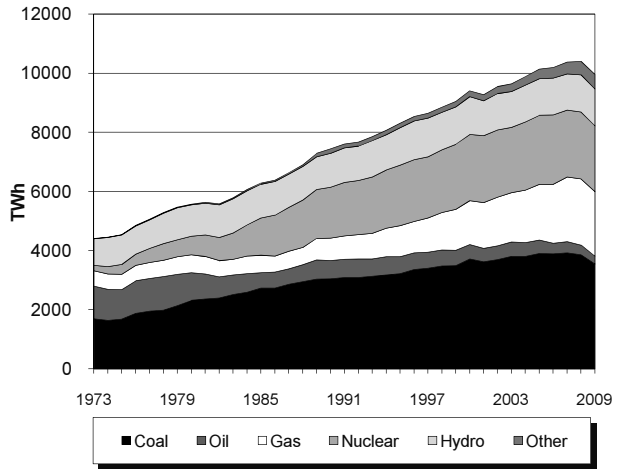


Figure 3. Electricity consumption by sector

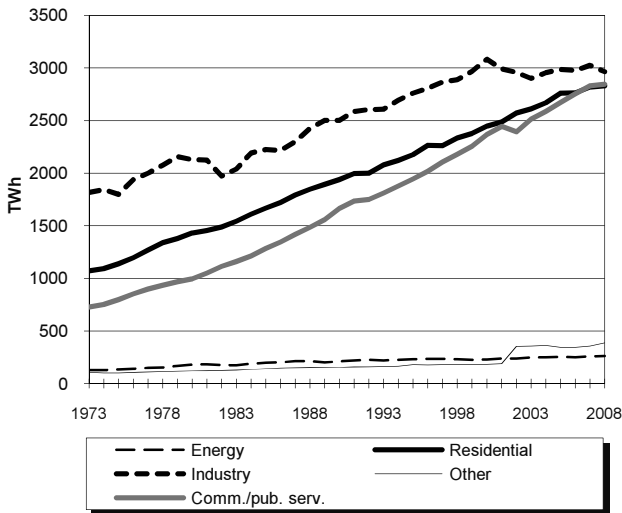


Figure 4. Electricity indicators

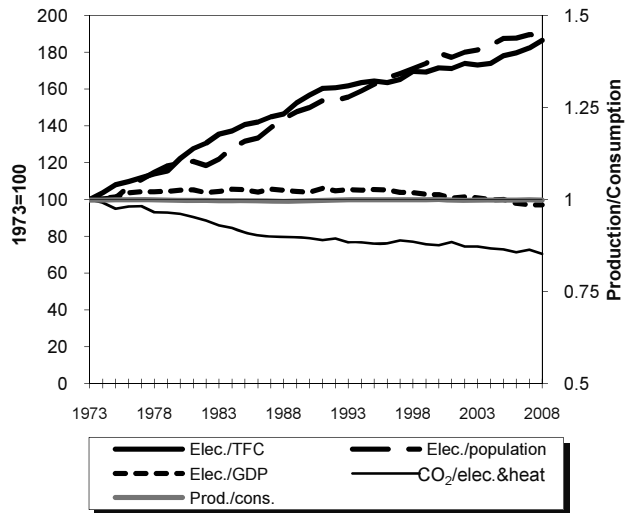
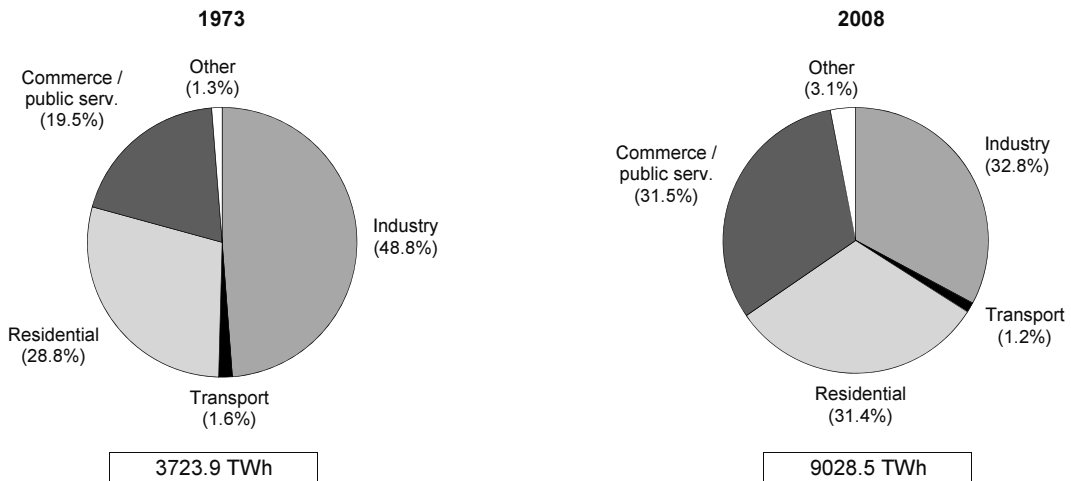


Figure 5. Total final electricity consumption by sector



IEA TOTAL

1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 3670.63 | 3954.34 | 4355.74 | 5085.97 | 5308.94 | 5236.57 | 4989.21 | 1.0 | 0.7 |
| GDP (billion 2000 USD) | 11962.26 | 14402.46 | 19563.03 | 25333.59 | 29600.56 | 29722.45 | 29044.58 | 2.9 | 2.1 |
| TPES/GDP ⁽¹⁾ | 0.31 | 0.27 | 0.22 | 0.20 | 0.18 | 0.18 | 0.17 | -1.9 | -1.4 |
| Population (millions) | 848.84 | 898.93 | 961.23 | 1028.23 | 1075.87 | 1082.93 | 1088.07 | 0.7 | 0.7 |
| TPES/population ⁽²⁾ | 4.32 | 4.40 | 4.53 | 4.95 | 4.93 | 4.84 | 4.59 | 0.3 | 0.1 |
| TPES/GDP (2000 = 100) | 153 | 137 | 111 | 100 | 89 | 88 | 86 | -1.9 | -1.4 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 98 | 102 | 100 | 100 | 96 | 95 | .. | 0.2 | .. |
| Ele.TFC/population ⁽⁴⁾ | 4389 | 5207 | 6518 | 7865 | 8398 | 8340 | .. | 2.4 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 4414.62 | 5573.93 | 7439.80 | 9410.20 | 10382.31 | 10400.73 | 9960.00 | 3.1 | 1.5 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 3670.63 | 3954.34 | 4355.74 | 5085.97 | 5308.94 | 5236.57 | 4989.21 | 1.0 | 0.7 |
| Coal | 841.51 | 962.63 | 1064.31 | 1077.21 | 1146.10 | 1120.48 | 1009.81 | 1.4 | -0.3 |
| Oil | 1921.71 | 1867.71 | 1768.95 | 1998.96 | 2001.49 | 1930.88 | 1821.58 | -0.5 | 0.2 |
| Gas | 695.33 | 758.11 | 816.51 | 1120.35 | 1215.23 | 1221.91 | 1201.38 | 0.9 | 2.1 |
| Comb. renew & waste | 79.83 | 101.95 | 133.51 | 166.80 | 212.53 | 221.22 | 221.27 | 3.1 | 2.7 |
| Nuclear | 49.22 | 162.25 | 449.24 | 582.80 | 589.66 | 589.77 | 579.73 | 13.9 | 1.4 |
| Geothermal | 5.59 | 8.76 | 20.94 | 23.53 | 20.69 | 21.28 | 22.21 | 8.1 | 0.3 |
| Solar, wind, tide ⁽¹⁾ | 0.05 | 0.07 | 1.87 | 5.76 | 17.02 | 20.96 | 24.17 | 24.0 | 14.4 |
| Hydro | 76.88 | 91.56 | 98.21 | 109.95 | 105.34 | 108.43 | 107.33 | 1.5 | 0.5 |
| Net electricity imports ⁽²⁾ | 0.51 | 1.30 | 2.13 | 0.19 | 0.37 | 1.05 | 1.13 | 8.7 | -3.3 |
| Heat | - | - | 0.06 | 0.41 | 0.51 | 0.61 | 0.60 | - | 13.1 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

IEA TOTAL

3. Summary electricity production and consumption ⁽¹⁾

(TWh)

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
|--|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|
| Gross production | 4427.8 | 5589.7 | 7482.9 | 9478.7 | 10213.2 | 10456.0 | 10469.5 | 10025.7 |
| Nuclear | 188.5 | 620.7 | 1721.9 | 2236.2 | 2334.9 | 2262.2 | 2262.6 | 2224.1 |
| Hydro | 907.2 | 1080.4 | 1185.1 | 1347.0 | 1309.9 | 1298.6 | 1329.6 | 1313.7 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 13.2 | 15.7 | 43.1 | 68.5 | 75.3 | 73.7 | 68.8 | 65.7 |
| Geothermal | 6.4 | 10.1 | 23.2 | 25.8 | 28.7 | 29.3 | 29.9 | 30.2 |
| Solar | - | - | 0.7 | 1.3 | 4.2 | 7.7 | 12.7 | 19.7 |
| Tide, wave, ocean | 0.6 | 0.5 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 |
| Wind | - | 0.0 | 3.8 | 28.5 | 93.6 | 149.5 | 187.6 | 215.4 |
| Combustible fuels | 3325.2 | 3877.9 | 4547.4 | 5838.2 | 6433.5 | 6704.5 | 6643.3 | 6218.9 |
| <i>Coal</i> | 1693.8 | 2317.5 | 3049.3 | 3720.2 | 3904.6 | 3928.5 | 3861.1 | 3548.6 |
| <i>Oil</i> | 1109.8 | 939.9 | 620.7 | 485.6 | 457.3 | 379.0 | 328.8 | 264.4 |
| <i>Gas</i> | 515.0 | 607.3 | 754.7 | 1486.4 | 1880.4 | 2184.0 | 2233.7 | 2181.1 |
| <i>Comb. renew. & waste</i> | 6.6 | 13.3 | 122.8 | 146.0 | 191.3 | 213.0 | 219.7 | 224.8 |
| Other (e.g. fuel cells) | - | - | 0.2 | 1.2 | 7.8 | 3.7 | 3.3 | 3.2 |
| - Own use by power plant | 217.9 | 290.9 | 401.1 | 482.0 | 470.5 | 429.4 | 482.5 | .. |
| Net production | 4209.9 | 5298.7 | 7081.8 | 8996.8 | 9742.7 | 10026.6 | 9987.0 | .. |
| Nuclear | .. | 580.1 | 1627.7 | 2119.8 | 2230.0 | 2160.1 | 2159.5 | .. |
| Hydro | .. | 1067.3 | 1172.5 | 1330.8 | 1296.4 | 1282.6 | 1314.3 | .. |
| Geothermal | .. | 8.8 | 21.9 | 24.5 | 25.8 | 26.3 | 27.0 | .. |
| Solar | .. | - | 0.7 | 1.2 | 4.1 | 7.6 | 12.5 | .. |
| Tide, wave, ocean | .. | 0.5 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | .. |
| Wind | .. | 0.0 | 3.8 | 28.4 | 93.5 | 148.9 | 186.9 | .. |
| Combustible fuels | .. | 3575.3 | 4254.5 | 5490.3 | 6085.1 | 6396.8 | 6283.2 | .. |
| Other (e.g. fuel cells) | .. | - | 0.2 | 1.2 | 7.2 | 3.5 | 3.1 | .. |
| - Used for heat pumps | - | - | 0.0 | 2.3 | 2.0 | 1.8 | 1.8 | 1.8 |
| - Used for electric boilers | - | - | 0.7 | 3.6 | 2.1 | 2.1 | 1.9 | 1.8 |
| - Used for pumped storage | 19.1 | 25.5 | 65.7 | 92.4 | 98.8 | 97.6 | 90.0 | 82.2 |
| + Imports | 87.4 | 139.7 | 254.8 | 341.7 | 412.0 | 408.3 | 400.7 | 372.0 |
| - Exports | 81.4 | 124.6 | 230.0 | 339.4 | 393.4 | 404.1 | 388.5 | 358.8 |
| Electrical energy supplied | 4196.8 | 5288.3 | 7040.2 | 8900.7 | 9658.3 | 9929.4 | 9905.5 | .. |
| - Transmission & distr. losses | 344.2 | 429.9 | 564.1 | 587.0 | 639.9 | 637.3 | 615.8 | .. |
| - Statistical difference | - | -0.0 | 1.7 | 0.3 | -1.2 | -0.5 | -0.4 | .. |
| Total consumption | 3852.5 | 4858.4 | 6474.4 | 8313.4 | 9019.6 | 9292.6 | 9290.1 | .. |
| - Energy industry consumption ⁽²⁾ | 128.7 | 179.1 | 211.5 | 229.5 | 254.6 | 260.2 | 261.6 | .. |
| Final consumption | 3723.9 | 4679.4 | 6262.9 | 8083.9 | 8765.0 | 9032.4 | 9028.5 | .. |
| Industry | 1816.5 | 2127.4 | 2503.0 | 3082.3 | 2984.4 | 3024.8 | 2963.1 | .. |
| Transport | 61.1 | 69.9 | 88.8 | 105.5 | 112.3 | 110.7 | 111.4 | .. |
| Commercial & publ. serv. | 726.7 | 996.6 | 1666.5 | 2369.4 | 2673.1 | 2830.8 | 2845.2 | .. |
| Residential | 1072.9 | 1432.4 | 1939.8 | 2447.3 | 2761.6 | 2819.3 | 2831.4 | .. |
| Agriculture & fishing | 42.2 | 46.9 | 62.3 | 72.8 | 76.1 | 77.7 | 83.1 | .. |
| Sector non specified | 4.4 | 6.1 | 2.6 | 6.6 | 157.5 | 169.1 | 194.3 | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

IEA TOTAL

4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 4470.74 | 5589.65 | 7482.90 | 9478.73 | 10274.40 | 10456.01 | 10469.48 | 3.3 | 1.9 |
| - Hydro pumped storage | 10.79 | 15.73 | 43.09 | 68.53 | 75.29 | 73.70 | 68.75 | 9.0 | 2.6 |
| Total generation⁽¹⁾ | 4459.95 | 5573.93 | 7439.80 | 9410.20 | 10199.11 | 10382.31 | 10400.73 | 3.2 | 1.9 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 4109.19 | 5228.30 | 6869.01 | 8844.15 | 9613.94 | 9793.96 | 9809.96 | 3.3 | 2.0 |
| - Hydro pumped storage | 10.79 | 15.73 | 43.06 | 68.44 | 75.22 | 73.65 | 68.69 | 9.0 | 2.6 |
| Total generation ⁽¹⁾ | 4098.41 | 5212.58 | 6825.95 | 8775.72 | 9538.72 | 9720.31 | 9741.28 | 3.2 | 2.0 |
| Nuclear | 237.85 | 615.44 | 1715.37 | 2235.44 | 2344.71 | 2262.22 | 2262.62 | 13.1 | 1.6 |
| Hydro | 919.12 | 985.50 | 1059.41 | 1212.65 | 1192.33 | 1171.94 | 1204.67 | 0.9 | 0.7 |
| Geothermal | 6.49 | 10.11 | 15.96 | 25.48 | 28.48 | 29.08 | 29.61 | 5.8 | 3.5 |
| Solar, wind, tide ⁽²⁾ | 0.60 | 0.51 | 1.42 | 29.46 | 114.28 | 146.47 | 186.50 | 5.6 | 31.1 |
| Coal | 1501.59 | 2184.06 | 2891.16 | 3554.96 | 3756.38 | 3790.50 | 3728.95 | 4.2 | 1.4 |
| Oil | 934.37 | 837.89 | 533.29 | 379.53 | 254.16 | 283.50 | 241.62 | -3.4 | -4.3 |
| Gas | 496.34 | 574.94 | 602.86 | 1288.06 | 1755.13 | 1936.08 | 1978.04 | 1.2 | 6.8 |
| Comb. renew. & waste | 2.06 | 4.13 | 6.48 | 50.14 | 93.26 | 100.53 | 109.27 | 7.4 | 17.0 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 361.54 | 361.35 | 613.89 | 634.58 | 660.47 | 662.04 | 659.52 | 3.4 | 0.4 |
| - Hydro pumped storage | - | - | 0.04 | 0.10 | 0.07 | 0.05 | 0.06 | - | 3.2 |
| Total generation ⁽¹⁾ | 361.54 | 361.35 | 613.85 | 634.48 | 660.40 | 662.00 | 659.46 | 3.4 | 0.4 |
| Nuclear | 4.23 | 5.23 | 6.52 | 0.71 | - | - | - | 2.7 | - |
| Hydro | 71.26 | 79.20 | 82.62 | 65.83 | 58.35 | 52.93 | 56.17 | 0.9 | -2.1 |
| Geothermal | - | - | 7.23 | 0.27 | 0.26 | 0.25 | 0.25 | - | -17.1 |
| Solar, wind, tide ⁽²⁾ | - | - | 3.90 | 2.15 | 12.64 | 14.93 | 17.60 | - | 8.7 |
| Coal | 137.55 | 133.41 | 158.12 | 165.21 | 136.03 | 137.98 | 132.13 | 0.9 | -1.0 |
| Oil | 113.46 | 101.99 | 87.37 | 106.05 | 102.60 | 95.49 | 87.23 | -1.6 | -0.0 |
| Gas | 29.78 | 32.39 | 151.80 | 198.35 | 241.77 | 247.91 | 255.63 | 10.7 | 2.9 |
| Comb. renew. & waste | 5.27 | 9.13 | 116.28 | 95.91 | 108.76 | 112.51 | 110.45 | 21.3 | -0.3 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

IEA TOTAL

5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---|
| Total | 281022 e | 272566 e | 581617 e | 615296 e | 637110 e | 637818 e | 636159 e | 0.5 |
| Total energy | 12901 | 11999 | 47914 e | 42716 e | 110235 e | 112845 | 111238 e | 4.8 |
| Coal mines | - | - | 1 | 3102 e | 12898 | 14298 | 11610 | 68.2 |
| Oil and gas extraction | - | - | 857 | 1499 | 8441 | 8645 | 8407 | 13.5 |
| Patent fuel plants | - | - | - | - | 29 | 26 | 27 | - |
| Coke ovens | - | - | - | 481 e | 468 | 521 | 576 | - |
| Gas works | - | - | - | - | 1504 | 1716 | 1607 | - |
| BKB | - | - | 13 | 34 | 36 | 28 | 39 | 6.3 |
| Oil refineries | 30 | 27 | 7887 | 28335 e | 65903 e | 67275 | 66519 e | 12.6 |
| Energy non specified/other | 12871 | 11972 | 39156 e | 9265 e | 20956 | 20336 | 22453 e | -3.0 |
| Total industry | 224583 e | 213654 e | 450802 e | 426165 e | 440371 e | 439239 e | 426620 e | -0.3 |
| Iron and steel | 25416 e | 31657 e | 40676 e | 57755 e | 68169 | 69385 | 66992 e | 2.8 |
| Chemical and petrochemical | 54090 e | 65274 e | 80492 e | 87862 e | 135909 e | 134197 e | 129602 e | 2.7 |
| Non-ferrous metals | 7944 e | 14797 e | 7493 e | 19855 e | 17692 e | 18643 e | 19101 e | 5.3 |
| Non-metallic minerals | 1089 e | 2999 | 9823 | 17918 e | 19436 e | 19114 e | 18160 e | 3.5 |
| Transport equipment | 690 e | 586 e | 812 | 1338 | 2362 | 2337 | 2345 e | 6.1 |
| Machinery | 447 e | 481 | 3494 | 6150 e | 7604 e | 7839 e | 5583 e | 2.6 |
| Mining and quarrying | 40859 e | 40552 e | 21969 | 18041 | 5158 | 5790 | 6352 e | -6.7 |
| Food and tobacco | 4361 e | 5459 e | 6284 e | 14039 e | 22153 e | 22430 e | 22363 e | 7.3 |
| Pulp and printing | 12807 | 26928 | 36777 e | 64925 e | 118225 e | 119733 e | 116673 e | 6.6 |
| Wood and wood products | 2144 e | 2179 e | 2858 | 3918 e | 5227 | 5142 | 5182 e | 3.4 |
| Construction | - | - | - | 354 | 478 | 497 | 485 e | - |
| Textile and leather | 3604 e | 2140 e | 1985 | 8926 e | 7013 | 6667 | 5886 | 6.2 |
| Non specified/other industries | 71132 e | 20602 e | 238139 e | 125084 e | 30945 e | 27465 e | 27896 e | -11.2 |
| Total transport | - | - | 2854 | 4401 | 3398 | 3727 | 3721 | 1.5 |
| Rail and pipeline | - | - | - | - | 12 | 9 | 7 | - |
| Transport non specified | - | - | 2854 | 4401 | 3386 | 3718 | 3714 | 1.5 |
| Other | 43538 e | 46913 e | 80047 e | 142014 e | 83106 e | 82007 e | 94580 e | 0.9 |
| Commerce and pub. services | 29 e | 36 e | 1710 e | 12957 e | 25233 | 28160 | 28966 e | 17.0 |
| Residential | - | - | - | 82 | 662 | 845 | 977 | - |
| Agriculture and fishing | - | - | 108 | 2342 | 4823 | 6124 | 12625 | 30.3 |
| Sector non specified | 43509 e | 46877 e | 78229 e | 126633 e | 52388 e | 46878 e | 52012 e | -2.2 |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

IEA TOTAL

6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---|
| Total | 1669762 | 1942499 | 2339656 | 3155944 | 3058417 | 3034571 | 2931830 | 2.5 |
| Nuclear | .. | .. | 1706 | 5098 | 4848 | 4818 | 5520 | .. |
| Geothermal | .. | .. | 707 | 1503 | 1822 | 2108 | 2198 | .. |
| Coal | .. | .. | 882309 | 836669 | 866117 | 852065 | 817969 | .. |
| Oil | .. | .. | 215970 | 309111 | 304162 | 272804 | 236668 | .. |
| Gas | .. | .. | 923870 | 1332513 | 1389888 | 1382235 | 1345870 | .. |
| Comb. renew. & waste | .. | .. | 269231 | 369681 | 436579 | 462477 | 470702 | .. |
| Non-spec. comb. fuels | .. | .. | - | 254724 | 3591 | 4668 | - | .. |
| Chemical processes | .. | .. | 2305 | 9267 | 8743 | 12590 | 12594 | .. |
| Heat pumps | .. | .. | 27406 | 22962 | 22252 | 22680 | 22041 | .. |
| Electric boilers | .. | .. | 12312 | 6991 | 6928 | 6207 | 6599 | .. |
| Other sources ⁽¹⁾ | .. | .. | 3840 | 7425 | 13487 | 11919 | 11669 | .. |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 1139667 | 1401613 | 1856243 | 2172534 | 2417306 | 2414404 | .. | 3.1 |
| Nuclear | .. | .. | 1706 | 5098 | 4848 | 4818 | .. | .. |
| Geothermal | .. | .. | 707 | 1443 | 1711 | 2039 | .. | .. |
| Coal | .. | .. | 761199 | 720776 | 767608 | 761483 | .. | .. |
| Oil | .. | .. | 106053 | 117475 | 119329 | 103014 | .. | .. |
| Gas | .. | .. | 761948 | 929270 | 1160345 | 1156466 | .. | .. |
| Comb. renew. & waste | .. | .. | 185086 | 262788 | 325904 | 347775 | .. | .. |
| Non-spec. comb. fuels | .. | .. | - | 105080 | 3591 | 4668 | .. | .. |
| Chemical processes | .. | .. | - | - | - | - | .. | .. |
| Heat pumps | .. | .. | 27255 | 22832 | 22088 | 22494 | .. | .. |
| Electric boilers | .. | .. | 12289 | 6986 | 6924 | 6204 | .. | .. |
| Other sources ⁽¹⁾ | .. | .. | - | 786 | 4958 | 5443 | .. | .. |
| <u>Autoproducers</u> | | | | | | | | |
| Total | 530095 | 540886 | 483413 | 983410 | 641111 | 620167 | .. | 0.8 |
| Nuclear | .. | .. | - | - | - | - | .. | .. |
| Geothermal | .. | .. | - | 60 | 111 | 69 | .. | .. |
| Coal | .. | .. | 121110 | 115893 | 98509 | 90582 | .. | .. |
| Oil | .. | .. | 109917 | 191636 | 184833 | 169790 | .. | .. |
| Gas | .. | .. | 161922 | 403243 | 229543 | 225769 | .. | .. |
| Comb. renew. & waste | .. | .. | 84145 | 106893 | 110675 | 114702 | .. | .. |
| Non-spec. comb. fuels | .. | .. | - | 149644 | - | - | .. | .. |
| Chemical processes | .. | .. | 2305 | 9267 | 8743 | 12590 | .. | .. |
| Heat pumps | .. | .. | 151 | 130 | 164 | 186 | .. | .. |
| Electric boilers | .. | .. | 23 | 5 | 4 | 3 | .. | .. |
| Other sources ⁽¹⁾ | .. | .. | 3840 | 6639 | 8529 | 6476 | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

IEA TOTAL

7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 820.27 | 959.05 | 1105.94 | 1333.74 | 1435.38 | 1482.76 | 1450.04 | 1.8 | 1.5 |
| Coal | 447.18 | 594.17 | 747.57 | 874.60 | 916.88 | 925.71 | 898.95 | 3.1 | 1.0 |
| Oil | 251.08 | 220.40 | 134.53 | 109.39 | 81.01 | 84.42 | 71.15 | -3.6 | -3.5 |
| Gas | 119.06 | 138.88 | 171.62 | 304.60 | 377.79 | 407.07 | 412.03 | 2.2 | 5.0 |
| Comb. renew. & waste | 2.96 | 5.60 | 52.22 | 45.15 | 59.70 | 65.56 | 67.91 | 18.4 | 1.5 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 878.39 | 957.60 | 1202.98 | 1306.38 | 1357.70 | 1327.23 | .. | 1.8 |
| Coal | .. | 549.68 | 700.47 | 837.65 | 885.93 | 894.89 | 869.24 | .. | 1.2 |
| Oil | .. | 194.91 | 116.78 | 80.12 | 57.47 | 62.90 | 51.69 | .. | -4.4 |
| Gas | .. | 131.89 | 136.70 | 266.51 | 328.98 | 360.77 | 364.67 | .. | 5.6 |
| Comb. renew. & waste | .. | 1.92 | 3.64 | 18.70 | 34.00 | 39.14 | 41.64 | .. | 14.5 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 54.76 | 170.94 | 468.71 | 604.26 | 628.85 | 607.83 | 608.66 | 13.5 | 1.5 |
| Nuclear | 49.22 | 162.25 | 449.24 | 582.80 | 611.17 | 589.66 | 589.77 | 13.9 | 1.5 |
| Geothermal | 5.54 | 8.69 | 19.41 | 21.26 | 17.11 | 17.41 | 17.69 | 7.7 | -0.5 |
| Solar | - | - | 0.06 | 0.20 | 0.57 | 0.75 | 1.21 | - | 18.3 |
| Non-Thermal | | | | | | | | | |
| Total | 76.93 | 91.61 | 98.60 | 112.48 | 117.67 | 118.26 | 124.63 | 1.5 | 1.3 |
| Hydro | 76.88 | 91.56 | 98.21 | 109.95 | 107.56 | 105.34 | 108.43 | 1.5 | 0.6 |
| Tide, wave, ocean | 0.05 | 0.04 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.4 | -0.5 |
| Wind | - | 0.00 | 0.33 | 2.45 | 10.05 | 12.85 | 16.14 | - | 24.1 |
| Other (e.g. fuel cells) | - | - | - | 0.02 | 0.01 | 0.02 | 0.01 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

IEA TOTAL

8. Electricity production from combustible fuels In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|----------|------------|------------|------------|------------|------------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 710657 | 903246 e | 1139089 e | 1235209 e | 1258470 | 1235014 | 1.8 |
| Fuel input (TJ) | 17621704 | 21859312 e | 27458763 e | 29122018 e | 29362731 e | 28558676 e | 1.5 |
| Electricity production (GWh) | 1750140 | 2272168 e | 2866590 e | 3002596 e | 3017539 e | 2989777 e | 1.5 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 408193 | 501266 e | 497588 e | 472655 | 494170 | 475790 | -0.3 |
| Fuel input (TJ) | 3933268 | 4909256 e | 5035917 e | 4835236 | 4978429 | 4817094 | -0.1 |
| Electricity production (GWh) | 353011 | 455513 e | 481899 e | 488378 e | 514803 e | 484616 e | 0.3 |
| Peat | | | | | | | |
| Fuel input (1000 t) | 3534 | 3814 | 3532 | 5083 | 5315 | 4857 | 1.4 |
| Fuel input (TJ) | 29600 | 32308 | 30112 | 46795 | 48929 | 42214 | 1.5 |
| Electricity production (GWh) | 2236 | 3025 e | 2834 | 5155 | 5705 | 4757 | 2.5 |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 582015 | 540262 e | 623882 e | 610452 | 636034 | 555584 | 0.2 |
| Electricity production (GWh) | 53218 e | 54775 e | 65943 e | 63420 e | 65318 e | 57409 | 0.3 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 208755 | 126989 e | 94415 e | 66018 e | 70787 e | 59181 | -4.2 |
| Fuel input (TJ) | 8619389 | 5564008 e | 4009660 e | 2739488 e | 2975025 e | 2452753 | -4.4 |
| Electricity production (GWh) | 884582 | 582783 e | 416710 e | 285836 e | 311842 e | 269862 e | -4.2 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 6118695 | 6025406 e | 10061980 e | 12312883 e | 13650037 | 13824550 e | 4.7 |
| Electricity production (GWh) | 576977 | 595749 e | 1091542 e | 1468467 e | 1634831 | 1694497 | 6.0 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 9630 | 353578 e | 310679 e | 482783 e | 601144 | 633759 | 3.3 |
| Electricity production (GWh) | 1300 | 25568 e | 31796 e | 44173 e | 51941 | 55248 | 4.4 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 24560 | 33243 | 61010 e | 28046 e | 30096 | 30011 | -0.6 |
| Electricity production (GWh) | 2585 | 3403 | 5561 e | 2684 | 2419 | 2543 | -1.6 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 35978 e | 226258 e | 389655 e | 441966 e | 530607 e | 539766 e | 4.9 |
| Electricity production (GWh) | 3105 e | 15262 e | 29382 e | 31176 e | 38472 e | 38561 e | 5.3 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | 379 | 40099 e | 124636 e | 208404 e | 341996 e | 365532 e | 13.1 |
| Electricity production (GWh) | 32 | 2989 e | 10135 e | 17194 e | 25820 e | 27925 e | 13.2 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 3629978 | 4011235 e | 5002392 e | 5409079 e | 5668690 e | 5625195 e | 1.9 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

IEA TOTAL

**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|----------|-----------|-----------|-----------|-----------|-----------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 95159 | 102386 e | 97021 e | 105413 e | 103417 | 98892 | -0.2 |
| Fuel input (TJ) | 1933892 | 2311942 e | 2311876 e | 2419905 e | 2344121 e | 2246762 e | -0.2 |
| Electricity production (GWh) | 125653 | 179256 e | 200158 e | 217736 e | 211761 e | 202933 e | 0.7 |
| CHP Heat production (TJ) | 566114 e | 608325 e | 497212 e | 566863 e | 541041 e | 526083 e | -0.8 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 55527 | 113172 e | 89704 e | 99277 e | 93080 | 99759 | -0.7 |
| Fuel input (TJ) | 452337 | 1011388 e | 840703 e | 883246 | 848691 | 902680 | -0.6 |
| Electricity production (GWh) | 25901 | 68640 e | 73797 e | 85207 | 80726 | 86765 | 1.3 |
| CHP Heat production (TJ) | 161041 | 296773 e | 170060 e | 104017 e | 105616 | 108101 | -5.5 |
| Peat | | | | | | | |
| Fuel input (1000 t) | 3192 | 2375 | 3846 | 5509 | 5653 | 5324 | 4.6 |
| Fuel input (TJ) | 26726 | 25768 | 40354 | 57247 | 58027 | 55047 | 4.3 |
| Electricity production (GWh) | 4194 | 2050 e | 2968 | 4080 | 4221 | 3849 | 3.6 |
| CHP Heat production (TJ) | 6866 | 14414 e | 23226 | 32900 | 32984 | 32351 | 4.6 |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 61263 e | 190413 e | 270004 e | 288153 | 296200 | 309744 | 2.7 |
| Electricity production (GWh) | 3120 e | 13860 e | 25980 e | 25832 | 28410 e | 30977 | 4.6 |
| CHP Heat production (TJ) | 25865 e | 31709 e | 21670 e | 48140 | 36498 | 40346 | 1.3 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 16886 | 9662 e | 20827 e | 27854 e | 26779 | 23968 | 5.2 |
| Fuel input (TJ) | 680827 e | 392075 e | 718066 e | 829296 e | 783219 | 665041 | 3.0 |
| Electricity production (GWh) | 55294 | 37877 e | 68865 e | 70914 e | 67148 | 58981 | 2.5 |
| CHP Heat production (TJ) | 217857 e | 106346 e | 156517 e | 307466 | 270802 | 246175 | 4.8 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 396231 | 1847188 e | 3831622 e | 5076623 | 5077621 | 5015999 e | 5.7 |
| Electricity production (GWh) | 30356 e | 158912 e | 394867 e | 528437 e | 549152 e | 539170 e | 7.0 |
| CHP Heat production (TJ) | 97176 | 177449 e | 750501 e | 1304583 | 1162612 | 1147865 | 10.9 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 25368 | 1262440 e | 597474 e | 691676 e | 627648 | 645670 | -3.7 |
| Electricity production (GWh) | 1970 e | 67767 e | 50496 e | 68501 e | 65243 | 66099 | -0.1 |
| CHP Heat production (TJ) | 7069 e | 13788 e | 75796 | 159809 e | 164287 | 172791 | 15.1 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 5289 | 80136 | 81438 | 60348 | 62967 | 57695 | -1.8 |
| Electricity production (GWh) | 161 | 4262 | 7971 | 6616 e | 6674 | 6077 | 2.0 |
| CHP Heat production (TJ) | 3077 | 3693 | 6191 | 9200 e | 8024 | 8287 | 4.6 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 21105 | 81005 e | 182044 e | 316490 e | 315982 e | 323903 e | 8.0 |
| Electricity production (GWh) | 1313 e | 2847 e | 7742 e | 20322 e | 15986 e | 16574 e | 10.3 |
| CHP Heat production (TJ) | 3895 e | 37063 e | 91998 e | 130361 e | 126618 e | 138674 e | 7.6 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 7007 | 30503 e | 122157 e | 68204 e | 69104 e | 13.6 |
| Electricity production (GWh) | - | 659 | 2962 | 11351 e | 6489 e | 6690 e | 13.7 |
| CHP Heat production (TJ) | - | 123 | 3892 | 8866 e | 8477 e | 7838 e | 26.0 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 247962 e | 536130 e | 835806 e | 1038996 e | 1035810 e | 1018115 e | 3.6 |
| CHP Heat production (TJ) | 1137281 | 1370991 e | 1797063 e | 2780417 e | 2458441 e | 2430810 e | 3.2 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

IEA TOTAL

10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|----------|----------|----------|----------|----------|----------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 18562 | 19918 e | 8157 e | 6564 | 6974 | 6757 | -5.8 |
| Fuel input (TJ) | 418375 | 428363 e | 181049 e | 153650 | 163636 e | 158482 | -5.4 |
| Heat production (TJ) | 281870 | 307121 e | 147019 e | 119559 | 129627 | 126417 | -4.8 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 4739 | 2769 e | 727 e | 574 e | 965 | 681 | -7.5 |
| Fuel input (TJ) | 54336 | 30408 e | 10275 e | 8395 e | 11510 | 8633 | -6.8 |
| Heat production (TJ) | 39968 | 21674 e | 7748 e | 6362 e | 7824 | 7397 | -5.8 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | 1029 | 582 | 626 | 884 | 801 | -1.4 |
| Fuel input (TJ) | - | 11849 | 6587 | 6588 | 10627 | 9538 | -1.2 |
| Heat production (TJ) | - | 10121 e | 5730 | 5617 | 9115 | 7976 | -1.3 |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 7266 | 6615 e | 11867 e | 5770 | 5820 | 5658 | -0.9 |
| Heat production (TJ) | 5116 e | 4629 e | 9644 e | 3414 | 3412 | 3394 | -1.7 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 2233 | 1623 e | 1835 e | 1215 e | 951 | 766 | -4.1 |
| Fuel input (TJ) | 92509 | 66942 e | 76458 e | 51987 e | 39830 e | 31948 | -4.0 |
| Heat production (TJ) | 70446 e | 51926 e | 59453 e | 43081 e | 33360 e | 26629 | -3.6 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 111244 | 110753 e | 228047 e | 251540 e | 362099 | 332627 e | 6.3 |
| Heat production (TJ) | 79694 e | 78723 e | 173369 e | 182170 e | 227276 | 234370 | 6.2 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 1073 | 28435 e | 51982 | 89632 e | 86675 | 91452 | 6.7 |
| Heat production (TJ) | 750 e | 22852 e | 44902 | 74585 e | 70205 | 74433 | 6.8 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 476 | 261 | 9099 e | 961 | 1280 | 1436 | 9.9 |
| Heat production (TJ) | 323 | 186 | 8098 e | 777 | 1034 | 1242 | 11.1 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 26121 e | 72499 e | 45684 e | 48172 e | 65812 e | 71479 e | -0.1 |
| Heat production (TJ) | 14148 e | 44558 e | 32112 e | 35318 e | 46865 e | 49655 e | 0.6 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 1795 | 6679 | 9934 e | 12494 | 10814 | 10.5 |
| Heat production (TJ) | - | 1313 | 6242 | 9007 e | 11069 | 9557 | 11.7 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | 511522 e | 545216 e | 494317 e | 612462 e | 541896 e | 543439 e | -0.0 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

IEA TOTAL

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 2764.56 | 2862.60 | 2995.37 | 3505.14 | 3633.35 | 3643.60 | 3577.66 | 0.5 | 1.0 |
| Geothermal | 0.05 | 0.07 | 1.52 | 2.24 | 3.03 | 3.20 | 3.50 | 22.3 | 4.7 |
| Solar thermal | - | 0.03 | 1.43 | 3.04 | 3.07 | 3.34 | 3.55 | - | 5.2 |
| Coal | 283.95 | 246.74 | 229.50 | 137.89 | 136.54 | 137.35 | 132.90 | -1.2 | -3.0 |
| Oil | 1554.54 | 1525.84 | 1526.98 | 1767.72 | 1820.69 | 1795.06 | 1724.60 | -0.1 | 0.7 |
| Gas | 508.27 | 555.65 | 575.95 | 729.40 | 703.42 | 721.61 | 724.88 | 0.7 | 1.3 |
| Comb. renew. & waste | 76.78 | 96.23 | 81.13 | 121.60 | 138.38 | 146.72 | 152.96 | 0.3 | 3.6 |
| Electricity | 320.25 | 402.42 | 538.61 | 695.22 | 760.29 | 776.78 | 776.45 | 3.1 | 2.1 |
| Heat | 20.71 | 35.62 | 40.24 | 48.02 | 67.92 | 59.52 | 58.82 | 4.0 | 2.1 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 940.27 | 915.09 | 793.62 | 873.03 | 847.66 | 849.46 | 818.60 | -1.0 | 0.2 |
| Geothermal | - | - | 0.22 | 0.25 | 0.26 | 0.27 | 0.28 | - | 1.4 |
| Solar thermal | - | - | 0.01 | 0.10 | 0.12 | 0.13 | 0.13 | - | 16.7 |
| Coal | 177.55 | 156.55 | 157.59 | 118.30 | 116.41 | 116.66 | 107.58 | -0.7 | -2.1 |
| Oil | 307.59 | 270.37 | 158.59 | 134.26 | 130.82 | 121.57 | 117.56 | -3.8 | -1.6 |
| Gas | 247.36 | 242.23 | 214.41 | 271.09 | 243.49 | 253.12 | 244.47 | -0.8 | 0.7 |
| Comb. renew. & waste | 40.69 | 47.54 | 33.77 | 67.84 | 70.59 | 71.87 | 69.17 | -1.1 | 4.1 |
| Electricity | 156.22 | 182.96 | 215.26 | 265.08 | 256.04 | 260.13 | 254.83 | 1.9 | 0.9 |
| Heat | 10.86 | 15.44 | 13.77 | 16.11 | 29.92 | 25.71 | 24.59 | 1.4 | 3.3 |
| Transport | 679.80 | 755.85 | 905.01 | 1100.14 | 1166.88 | 1178.01 | 1138.84 | 1.7 | 1.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 7.21 | 2.55 | 0.28 | 0.10 | 0.10 | 0.10 | 0.11 | -17.4 | -5.2 |
| Oil | 650.33 | 730.33 | 878.42 | 1065.97 | 1119.35 | 1123.34 | 1076.13 | 1.8 | 1.1 |
| Gas | 17.00 | 16.96 | 18.68 | 20.97 | 20.81 | 22.09 | 22.27 | 0.6 | 1.0 |
| Comb. renew. & waste | 0.00 | 0.00 | 0.01 | 4.03 | 17.08 | 22.96 | 30.75 | 5.4 | 60.5 |
| Electricity | 5.26 | 6.01 | 7.64 | 9.08 | 9.53 | 9.52 | 9.58 | 2.2 | 1.3 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 283.83 | 291.61 | 350.30 | 429.04 | 465.29 | 471.19 | 482.28 | 1.2 | 1.8 |
| Geothermal | - | - | 0.13 | 0.51 | 0.70 | 0.72 | 0.74 | - | 10.0 |
| Solar thermal | - | - | 0.06 | 0.07 | 0.12 | 0.13 | 0.12 | - | 3.7 |
| Coal | 17.04 | 18.38 | 16.03 | 3.02 | 3.67 | 3.63 | 4.85 | -0.4 | -6.4 |
| Oil | 129.80 | 104.55 | 83.46 | 80.47 | 73.45 | 66.26 | 68.00 | -2.6 | -1.1 |
| Gas | 72.84 | 79.64 | 101.13 | 131.03 | 138.39 | 142.01 | 148.15 | 1.9 | 2.1 |
| Comb. renew. & waste | 0.81 | 1.08 | 0.36 | 2.64 | 4.36 | 4.48 | 4.68 | -4.6 | 15.3 |
| Electricity | 62.49 | 85.71 | 143.32 | 203.77 | 236.99 | 243.45 | 244.69 | 5.0 | 3.0 |
| Heat | 0.84 | 2.25 | 5.79 | 7.52 | 7.62 | 10.52 | 11.05 | 12.0 | 3.7 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

IEA TOTAL

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 537.71 | 542.16 | 575.85 | 668.23 | 675.85 | 677.68 | 691.61 | 0.4 | 1.0 |
| Geothermal | 0.05 | 0.07 | 0.53 | 1.16 | 1.73 | 1.88 | 2.13 | 14.9 | 8.0 |
| Solar thermal | - | 0.03 | 1.34 | 2.80 | 2.78 | 3.03 | 3.23 | - | 5.0 |
| Coal | 66.73 | 58.47 | 44.57 | 13.47 | 12.89 | 12.36 | 15.16 | -2.3 | -5.8 |
| Oil | 194.96 | 144.58 | 112.50 | 119.08 | 101.43 | 90.27 | 92.69 | -3.2 | -1.1 |
| Gas | 153.62 | 178.73 | 199.51 | 257.16 | 259.75 | 263.99 | 270.26 | 1.5 | 1.7 |
| Comb. renew. & waste | 22.33 | 23.53 | 31.82 | 44.23 | 44.49 | 45.49 | 46.44 | 2.1 | 2.1 |
| Electricity | 92.27 | 123.19 | 166.82 | 210.46 | 237.70 | 242.46 | 243.50 | 3.5 | 2.1 |
| Heat | 7.75 | 13.57 | 18.77 | 19.88 | 15.07 | 18.21 | 18.20 | 5.3 | -0.2 |
| Agriculture & fishing | 42.24 | 47.34 | 59.23 | 61.28 | 61.81 | 60.07 | 59.38 | 2.0 | 0.0 |
| Geothermal | 0.00 | 0.00 | 0.04 | 0.11 | 0.12 | 0.12 | 0.13 | 49.0 | 6.4 |
| Solar thermal | - | - | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | - | 28.0 |
| Coal | 1.61 | 1.77 | 1.68 | 1.08 | 1.28 | 1.14 | 1.18 | 0.2 | -1.9 |
| Oil | 36.42 | 40.29 | 46.36 | 47.44 | 47.32 | 45.60 | 44.95 | 1.4 | -0.2 |
| Gas | 0.13 | 0.62 | 4.31 | 4.58 | 4.25 | 4.30 | 3.74 | 23.2 | -0.8 |
| Comb. renew. & waste | 0.08 | 0.14 | 0.78 | 1.33 | 1.85 | 1.91 | 1.91 | 14.3 | 5.1 |
| Electricity | 3.63 | 4.03 | 5.36 | 6.26 | 6.65 | 6.69 | 7.15 | 2.3 | 1.6 |
| Heat | 0.37 | 0.49 | 0.70 | 0.47 | 0.32 | 0.30 | 0.31 | 3.8 | -4.4 |
| Other | 62.75 | 72.20 | 31.68 | 15.47 | 40.55 | 30.05 | 33.00 | -3.9 | 0.2 |
| Geothermal | - | - | 0.60 | 0.21 | 0.21 | 0.21 | 0.21 | - | -5.5 |
| Solar thermal | - | - | 0.02 | 0.06 | 0.04 | 0.05 | 0.06 | - | 5.3 |
| Coal | 10.72 | 6.72 | 6.92 | 0.31 | 0.11 | 0.09 | 0.75 | -2.5 | -11.6 |
| Oil | 25.60 | 14.75 | 2.98 | 2.21 | 2.07 | 1.95 | 1.74 | -11.9 | -2.9 |
| Gas | 12.31 | 22.38 | 5.35 | 6.53 | 9.74 | 8.41 | 8.85 | -4.8 | 2.8 |
| Comb. renew. & waste | 12.86 | 23.95 | 14.39 | 1.53 | 0.01 | 0.01 | 0.01 | 0.7 | -32.3 |
| Electricity | 0.38 | 0.52 | 0.22 | 0.57 | 13.39 | 14.54 | 16.71 | -3.1 | 27.2 |
| Heat | 0.88 | 3.88 | 1.21 | 4.04 | 14.98 | 4.78 | 4.67 | 1.9 | 7.8 |
| Non-energy use⁽¹⁾ | 217.97 | 238.35 | 279.68 | 357.94 | 375.31 | 377.14 | 353.94 | 1.48 | 1.32 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

IEA TOTAL

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| TFC (Mtoe) | 2764.56 | 2862.60 | 2995.37 | 3505.14 | 3641.21 | 3633.35 | 3643.60 | 3577.66 |
| Total industry (Mtoe) | 940.27 | 915.09 | 793.62 | 873.03 | 836.40 | 847.66 | 849.46 | 818.60 |
| Iron and steel | 160.37 | 132.83 | 102.34 | 106.90 | 100.14 | 101.11 | 102.49 | 99.24 |
| Chem. and petrochemical | 102.72 | 105.90 | 153.53 | 181.78 | 168.72 | 163.99 | 167.61 | 161.33 |
| Non-ferrous metals | 29.97 | 38.66 | 33.14 | 49.75 | 45.87 | 45.67 | 45.54 | 45.44 |
| Non-metallic minerals | 66.48 | 72.21 | 69.84 | 86.65 | 86.30 | 89.15 | 90.41 | 88.79 |
| Transport equipment | 14.38 | 15.13 | 12.52 | 25.25 | 20.67 | 22.09 | 22.52 | 22.15 |
| Machinery | 28.40 | 32.78 | 46.65 | 55.70 | 54.06 | 55.91 | 57.24 | 56.30 |
| Mining and quarrying | 13.29 | 18.17 | 16.76 | 17.62 | 20.47 | 20.48 | 23.13 | 23.19 |
| Food and tobacco | 38.58 | 44.76 | 46.07 | 69.27 | 70.25 | 72.60 | 73.30 | 71.89 |
| Paper, pulp and printing | 62.25 | 62.74 | 73.28 | 125.07 | 121.45 | 124.65 | 124.71 | 119.56 |
| Wood and wood products | 6.97 | 8.73 | 8.80 | 20.94 | 20.05 | 20.80 | 21.41 | 22.88 |
| Construction | 10.37 | 12.47 | 14.96 | 15.41 | 16.74 | 17.02 | 16.02 | 17.02 |
| Textile and leather | 24.91 | 24.28 | 18.38 | 24.85 | 18.90 | 18.49 | 17.81 | 15.95 |
| Non specified/other | 381.58 | 346.44 | 197.34 | 93.85 | 92.75 | 95.68 | 87.26 | 74.85 |
| Electricity consumption (Mtoe) | 320.25 | 402.42 | 538.61 | 695.22 | 753.79 | 760.29 | 776.78 | 776.45 |
| Total industry (Mtoe) | 156.22 | 182.96 | 215.26 | 265.08 | 256.66 | 256.04 | 260.13 | 254.83 |
| Iron and steel | 22.10 | 24.81 | 25.33 | 28.74 | 30.60 | 31.08 | 31.79 | 30.46 |
| Chem. and petrochemical | 32.88 | 35.42 | 43.37 | 50.27 | 50.27 | 49.65 | 50.05 | 49.29 |
| Non-ferrous metals | 19.24 | 23.84 | 19.56 | 25.50 | 27.12 | 26.97 | 27.10 | 27.51 |
| Non-metallic minerals | 7.99 | 9.71 | 11.74 | 13.94 | 14.50 | 14.62 | 15.00 | 15.17 |
| Transport equipment | 5.79 | 6.91 | 6.56 | 10.80 | 9.93 | 10.03 | 10.21 | 10.21 |
| Machinery | 10.38 | 12.87 | 25.00 | 28.49 | 28.92 | 30.14 | 30.73 | 30.84 |
| Mining and quarrying | 4.85 | 5.72 | 8.08 | 8.38 | 7.98 | 8.04 | 7.73 | 7.63 |
| Food and tobacco | 7.33 | 9.55 | 13.69 | 17.80 | 19.88 | 20.00 | 20.33 | 20.21 |
| Paper, pulp and printing | 14.06 | 16.96 | 27.92 | 33.55 | 33.45 | 33.18 | 32.68 | 31.72 |
| Wood and wood products | 2.81 | 3.62 | 4.55 | 5.02 | 5.09 | 5.13 | 5.17 | 5.14 |
| Construction | 0.58 | 0.87 | 1.18 | 1.32 | 1.49 | 1.59 | 1.68 | 1.69 |
| Textile and leather | 7.38 | 7.70 | 8.17 | 8.99 | 7.51 | 7.26 | 7.32 | 6.90 |
| Non specified/other | 20.83 | 24.98 | 20.11 | 32.29 | 19.91 | 18.36 | 20.33 | 18.04 |
| Total industry (TWh) | 1816.52 | 2127.44 | 2503.03 | 3082.31 | 2984.36 | 2977.24 | 3024.76 | 2963.09 |
| Iron and steel | 256.99 | 288.47 | 294.54 | 334.15 | 355.76 | 361.39 | 369.62 | 354.14 |
| Chem. and petrochemical | 382.27 | 411.89 | 504.32 | 584.50 | 584.51 | 577.27 | 581.94 | 573.15 |
| Non-ferrous metals | 223.68 | 277.22 | 227.48 | 296.45 | 315.40 | 313.63 | 315.17 | 319.93 |
| Non-metallic minerals | 92.94 | 112.96 | 136.50 | 162.10 | 168.63 | 170.04 | 174.40 | 176.43 |
| Transport equipment | 67.37 | 80.34 | 76.30 | 125.56 | 115.51 | 116.67 | 118.73 | 118.74 |
| Machinery | 120.69 | 149.63 | 290.68 | 331.25 | 336.28 | 350.42 | 357.31 | 358.64 |
| Mining and quarrying | 56.45 | 66.50 | 93.97 | 97.39 | 92.80 | 93.52 | 89.90 | 88.72 |
| Food and tobacco | 85.23 | 111.04 | 159.13 | 207.02 | 231.16 | 232.50 | 236.43 | 234.96 |
| Paper, pulp and printing | 163.52 | 197.23 | 324.64 | 390.07 | 388.98 | 385.81 | 379.95 | 368.82 |
| Wood and wood products | 32.68 | 42.13 | 52.89 | 58.40 | 59.19 | 59.64 | 60.15 | 59.80 |
| Construction | 6.77 | 10.10 | 13.75 | 15.38 | 17.33 | 18.45 | 19.56 | 19.71 |
| Textile and leather | 85.78 | 89.50 | 95.00 | 104.56 | 87.27 | 84.37 | 85.17 | 80.26 |
| Non specified/other | 242.16 | 290.45 | 233.84 | 375.49 | 231.54 | 213.53 | 236.43 | 209.80 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

IEA TOTAL

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Total imports⁽¹⁾ | 87427 | 139668 | 254771 | 257573 | 341653 | 411955 | 402940 | 408315 | 400657 |
| Imports from: | | | | | | | | | |
| Total OECD | 35708 | 74116 | 210930 | 246786 | 324484 | 376687 | 368793 | 380263 | 368045 |
| Austria | 498 | 991 | 6910 | 8597 | 12517 | 20636 | 16815 | 17310 | 16863 |
| Belgium | 89 | 7810 | 4488 | 3550 | 4502 | 8008 | 8684 | 9038 | 6537 |
| Canada | 16848 | 30181 | 20555 | 44503 | 48515 | 42930 | 41544 | 50118 | 55732 |
| Czech Republic | - | - | 2975 | 6116 | 18634 | 24404 | 23413 | 26350 | 19986 |
| Denmark | 289 | 1372 | 4940 | 5648 | 8177 | 11629 | 13617 | 11172 | 11006 |
| Finland | 260 | 1163 | 362 | 276 | 1004 | 1524 | 2542 | 2675 | 3147 |
| France | 2496 | 4338 | 55503 | 77740 | 77677 | 66651 | 69793 | 66323 | 56967 |
| Germany | 1238 | 5067 | 22160 | 27167 | 39913 | 59655 | 64068 | 61138 | 59783 |
| Greece | - | - | - | - | - | 713 | 945 | 174 | 209 |
| Hungary | - | - | 212 | 622 | 843 | 854 | 1063 | 243 | 722 |
| Ireland | - | - | - | 30 | 41 | 1 | 10 | 53 | 152 |
| Italy | 318 | 736 | 253 | 357 | 470 | 1146 | 1619 | 2416 | 3362 |
| Luxembourg | - | - | 965 | 778 | 738 | 2367 | 2479 | 2084 | 1629 |
| Mexico | - | - | 1951 | 2257 | 77 | 1597 | 1147 | 1278 | 1288 |
| Netherlands | 215 | 3906 | 3499 | 3902 | 4031 | 5398 | 5990 | 5568 | 9272 |
| Norway | 5401 | 1503 | 16413 | 8573 | 20486 | 15692 | 7728 | 14370 | 15700 |
| Poland | - | 828 | 7878 | 7150 | 9658 | 16110 | 15669 | 13076 | 9632 |
| Portugal | 78 | 514 | 1697 | 1742 | 3767 | 2801 | 3175 | 2153 | 1314 |
| Slovak Republic | 303 | 549 | 778 | 2484 | 8825 | 8832 | 8635 | 9058 | 7487 |
| Spain | 2239 | 3631 | 3606 | 3031 | 5293 | 10378 | 10098 | 10748 | 12400 |
| Sweden | 20 | 1321 | 14605 | 8627 | 12955 | 21129 | 13032 | 15992 | 16480 |
| Switzerland | 3071 | 7247 | 23354 | 26168 | 29785 | 31718 | 30417 | 35651 | 31511 |
| Turkey | - | - | - | - | - | - | - | 89 | - |
| United Kingdom | 96 | 19 | 45 | 46 | 1234 | 2837 | 2686 | 3806 | 1677 |
| United States | 2249 | 2940 | 17781 | 7422 | 15342 | 19677 | 23624 | 19380 | 25189 |
| Total non-OECD | 5384 | 12150 | 19607 | 10787 | 16878 | 33922 | 32779 | 27024 | 30918 |
| Albania | - | 151 | 165 | 198 | 50 | 15 | 26 | - | - |
| Azerbaijan | - | - | - | - | - | - | - | 15 | 94 |
| Belarus | - | - | - | - | 163 | 874 | 1045 | - | - |
| Bulgaria | - | 750 | 320 | 652 | 4364 | 4543 | 4460 | 4293 | 4628 |
| Croatia | - | - | 1 | 1 | - | - | 54 | - | 5 |
| Estonia | - | - | - | - | - | - | 4 | 1921 | 2250 |
| F.Y.R. of Macedonia | - | - | - | - | - | 795 | 1201 | 901 | 1188 |
| Georgia | - | 649 | 176 | - | 204 | 101 | 40 | 216 | 215 |
| Romania | 1428 | 955 | - | 283 | - | 1187 | 1432 | 252 | 720 |
| Russian Federation | 46 | 49 | 4531 | 4839 | 4755 | 11528 | 11767 | 10362 | 11059 |
| Serbia | 115 | 545 | 891 | 496 | 612 | 18 | 1 | - | - |
| Slovenia | - | 725 | 1363 | 816 | 4554 | 8522 | 6443 | 3817 | 5599 |
| Turkmenistan | - | - | - | - | - | 535 | 533 | 633 | 450 |
| Ukraine | 3795 | 8326 | 12160 | 3502 | 2176 | 5804 | 5773 | 4614 | 4710 |
| Non-specified/others | 46335 | 53402 | 24234 | - | 291 | 1346 | 1368 | 1028 | 1694 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

IEA TOTAL

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Total exports⁽¹⁾ | 81441 | 124551 | 229979 | 250375 | 339421 | 393392 | 387625 | 404051 | 388476 |
| Exports to: | | | | | | | | | |
| Total OECD | 45184 | 71313 | 207231 | 245559 | 325859 | 376021 | 370731 | 379820 | 368102 |
| Austria | 614 | 1067 | 7789 | 9750 | 13922 | 22487 | 22229 | 23436 | 22333 |
| Belgium | 1320 | 1086 | 2322 | 6058 | 11557 | 14313 | 18851 | 15848 | 17177 |
| Canada | 2570 | 3461 | 19936 | 7992 | 12685 | 19332 | 23405 | 19559 | 23499 |
| Czech Republic | - | - | 47 | 4405 | 8699 | 12324 | 11461 | 10209 | 8523 |
| Denmark | 918 | 1841 | 12106 | 3825 | 8571 | 13035 | 6687 | 10225 | 12432 |
| Finland | 4136 | 678 | 6481 | 3873 | 8365 | 7357 | 2515 | 3290 | 2933 |
| France | 2686 | 9845 | 7019 | 3256 | 3676 | 7986 | 8560 | 10358 | 10563 |
| Germany | 3211 | 3930 | 24998 | 39439 | 45610 | 52657 | 45352 | 43379 | 38626 |
| Greece | - | - | - | - | - | 272 | 453 | 1218 | 1810 |
| Hungary | - | - | 233 | 1288 | 7826 | 9616 | 9056 | 10513 | 8304 |
| Ireland | - | - | - | - | 133 | 2074 | 1788 | 1382 | 373 |
| Italy | 761 | 1425 | 34226 | 37900 | 40408 | 42560 | 41303 | 45868 | 38867 |
| Luxembourg | 913 | 1073 | 4364 | 5651 | 6409 | 5302 | 5692 | 5725 | 5666 |
| Mexico | - | - | 590 | 1154 | 1993 | 471 | 866 | 584 | 584 |
| Netherlands | 1288 | 10 | 12657 | 15497 | 21835 | 23691 | 27353 | 23149 | 25231 |
| Norway | 165 | 991 | 407 | 1911 | 1231 | 3434 | 8373 | 4144 | 1824 |
| Poland | - | 4 | 13 | 4088 | 2494 | 3081 | 2914 | 7100 | 7673 |
| Portugal | 132 | 2342 | 1734 | 2661 | 4698 | 9630 | 8633 | 9650 | 10753 |
| Slovak Republic | 552 | 3652 | 4602 | 2101 | 5967 | 7822 | 8568 | 13476 | 7830 |
| Spain | 322 | 2337 | 3209 | 7632 | 12271 | 10366 | 9393 | 9060 | 5890 |
| Sweden | 5256 | 1825 | 12749 | 8221 | 17688 | 13953 | 19275 | 17494 | 14686 |
| Switzerland | 3893 | 5540 | 21694 | 19083 | 24070 | 38255 | 33446 | 34410 | 31100 |
| Turkey | - | - | - | - | - | - | - | - | 30 |
| United Kingdom | 161 | 22 | 11925 | 16330 | 14768 | 12475 | 11822 | 9412 | 13720 |
| United States | 16286 | 30184 | 18130 | 43444 | 50983 | 43528 | 42736 | 50331 | 57675 |
| Total non-OECD | 87 | 265 | 3980 | 4359 | 10725 | 13147 | 11119 | 16967 | 12446 |
| Albania | - | - | 541 | 391 | 1111 | 1056 | 978 | 1773 | 1657 |
| Azerbaijan | - | - | - | 495 | 437 | 384 | 326 | 15 | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | 573 | 9 | 205 | - | - | - | - |
| Croatia | - | - | - | 117 | 4472 | 6690 | 5561 | 6537 | 5300 |
| Estonia | - | - | - | - | - | - | 7 | 21 | 10 |
| F.Y.R. of Macedonia | - | - | - | - | - | 70 | 15 | 111 | 95 |
| Georgia | - | - | 122 | 178 | - | 9 | 107 | 118 | 54 |
| Romania | 2 | 15 | 256 | 88 | - | 146 | 29 | 379 | 105 |
| Russian Federation | - | - | - | 1 | - | - | - | - | - |
| Serbia | 58 | 154 | 389 | 258 | 1189 | 1693 | 1519 | 3430 | 2653 |
| Slovenia | 27 | 72 | 2089 | 2805 | 3307 | 1349 | 846 | 1733 | 1309 |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | 24 | 10 | 17 | 4 | 1750 | 1731 | 2850 | 1263 |
| Non-specified/others | 36170 | 52973 | 18768 | 457 | 2837 | 4224 | 5775 | 7264 | 7928 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

IEA TOTAL

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|--------------------------------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total Capacity ⁽¹⁾ | 915.93 | 1275.80 | 1563.89 | 1701.80 | 1727.15 | 2155.15 | 2190.09 | 2224.55 | 2269.98 |
| Nuclear | 52.37 | 119.91 | 265.16 | 293.30 | 300.56 | 313.04 | 312.61 | 311.69 | 310.91 |
| Hydro | 162.77 | 275.52 | 348.03 | 378.94 | 392.88 | 408.83 | 413.70 | 417.39 | 419.98 |
| <i>of which: pumped storage</i> | <i>2.36</i> | <i>17.99</i> | <i>48.53</i> | <i>82.03</i> | <i>84.67</i> | <i>88.54</i> | <i>91.75</i> | <i>92.93</i> | <i>94.71</i> |
| Geothermal | 0.56 | 1.70 | 2.63 | 2.98 | 4.32 | 3.91 | 3.92 | 3.88 | 4.06 |
| Solar | - | - | 0.01 | 0.07 | 0.63 | 2.12 | 3.63 | 5.38 | 10.34 |
| Tide, wave, ocean | 0.24 | 0.24 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| Wind | - | - | 0.41 | 1.11 | 14.81 | 49.32 | 59.54 | 73.33 | 90.18 |
| Other (e.g. fuel cells) | - | - | - | 0.08 | 0.17 | 0.30 | 0.26 | 0.46 | 0.45 |
| Combustible fuels | 699.99 | 878.42 | 949.73 | 1025.07 | 1013.52 | 1377.37 | 1396.18 | 1412.17 | 1433.80 |
| <i>of which ⁽²⁾:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid fuels | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Comb. renew. & waste | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / liquid / gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Internal combustion | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Gas turbine | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Combined cycle | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Other | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Capacity data are not available for Czech Republic before 1993, Korea before 1994 and for Slovak Republic before 1995.

(2) Breakdown of electrical capacity by type of fuel are shown in the individual country chapters.

Note: Please refer to notes in the introductory information for data coverage.

IEA TOTAL

15. Net maximum electricity generating capacity on 31 December (continued)

(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|--------------------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total Capacity ⁽¹⁾ | 66.98 | 73.66 | 124.86 | 163.72 | 287.69 | 142.46 | 145.63 | 147.58 | 152.42 |
| Nuclear | 0.55 | 1.01 | 0.95 | 0.70 | 0.17 | - | - | - | - |
| Hydro | 12.10 | 14.17 | 16.27 | 18.23 | 16.70 | 10.08 | 10.23 | 10.33 | 10.56 |
| <i>of which: pumped storage</i> | - | - | 0.07 | 0.23 | 0.27 | 0.14 | 0.14 | 0.15 | 0.16 |
| Geothermal | - | 0.03 | 1.09 | 1.27 | 0.05 | 0.05 | 0.04 | 0.04 | 0.04 |
| Solar | - | - | 0.34 | 0.46 | 0.54 | 2.05 | 2.56 | 3.09 | 3.85 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 1.97 | 3.09 | 0.58 | 3.06 | 4.13 | 4.52 | 6.00 |
| Other (e.g. fuel cells) | - | - | - | 0.11 | 0.03 | 0.66 | 0.67 | 0.68 | 0.64 |
| Combustible fuels | 54.34 | 58.45 | 104.23 | 139.86 | 269.64 | 126.58 | 127.99 | 128.92 | 131.33 |
| <i>of which</i> ⁽²⁾ : | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid fuels | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Comb. renew. & waste | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / liquid / gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Internal combustion | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Gas turbine | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Combined cycle | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Other | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Capacity data are not available for Czech Republic before 1993, Korea before 1996 and Slovak Republic before 2001.

(2) Breakdown of electrical capacity by type of fuel are shown in the individual country chapters.

Note: Please refer to notes in the introductory information for data coverage.

IEA NORTH AMERICA

Figure 1. Total final consumption by fuel

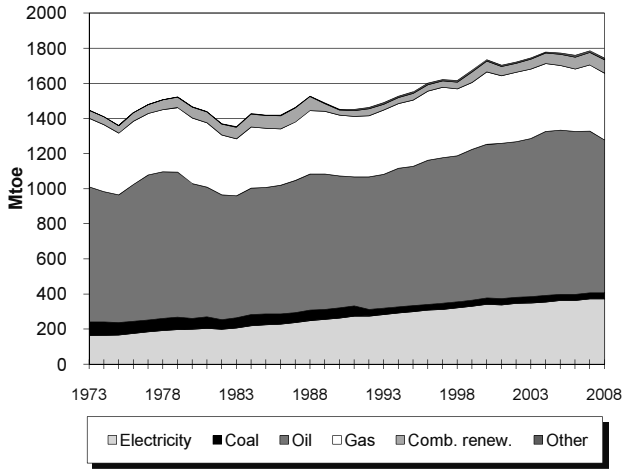


Figure 2. Electricity generation by fuel

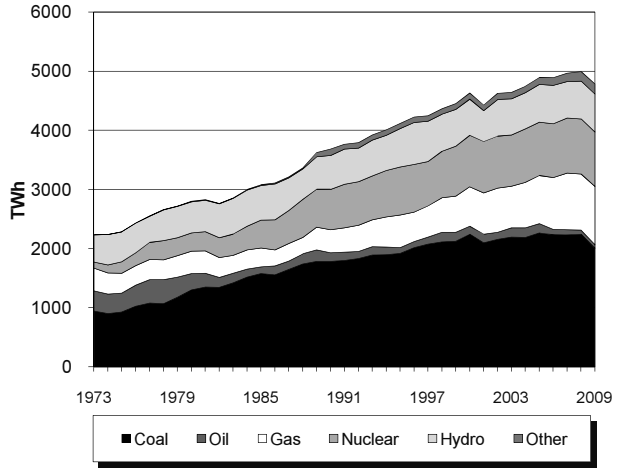


Figure 3. Electricity consumption by sector

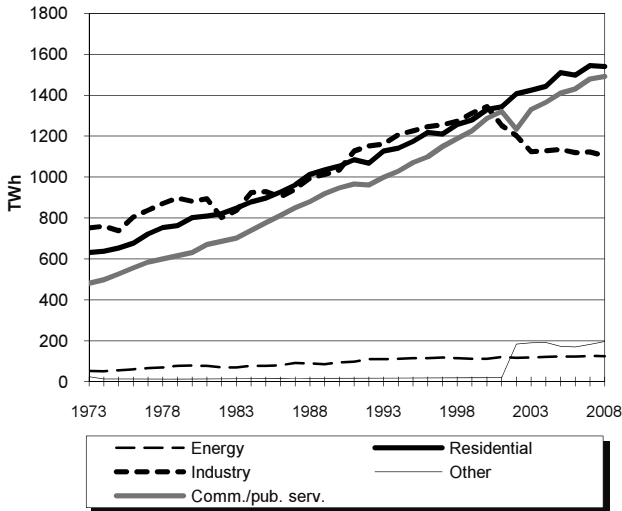


Figure 4. Electricity indicators

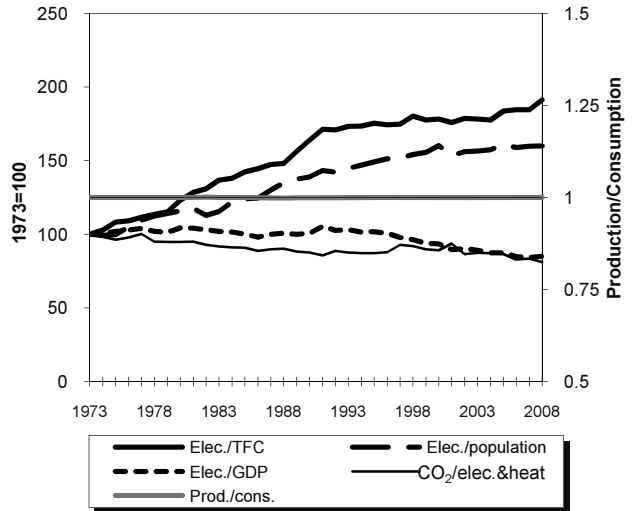
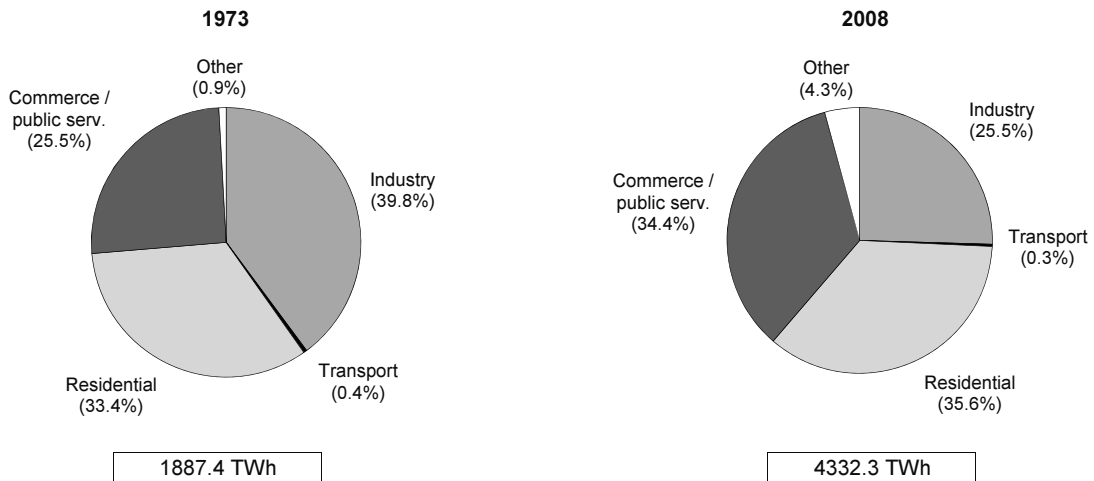


Figure 5. Total final electricity consumption by sector



IEA NORTH AMERICA

1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|---------|---------|---------|----------|----------|----------|----------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 1889.28 | 1997.28 | 2123.68 | 2524.77 | 2608.65 | 2550.49 | 2422.15 | 0.7 | 0.7 |
| GDP (billion 2000 USD) | 4647.08 | 5554.11 | 7607.63 | 10623.71 | 12559.98 | 12612.67 | 12449.83 | 2.9 | 2.6 |
| TPES/GDP ⁽¹⁾ | 0.41 | 0.36 | 0.28 | 0.24 | 0.21 | 0.20 | 0.19 | -2.2 | -1.9 |
| Population (millions) | 234.43 | 252.24 | 277.87 | 313.10 | 334.67 | 337.86 | 341.06 | 1.0 | 1.1 |
| TPES/population ⁽²⁾ | 8.06 | 7.92 | 7.64 | 8.06 | 7.79 | 7.55 | 7.10 | -0.3 | -0.4 |
| TPES/GDP (2000 = 100) | 171 | 151 | 117 | 100 | 87 | 85 | 82 | -2.2 | -1.9 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 108 | 112 | 107 | 100 | 92 | 92 | .. | -0.1 | .. |
| Ele.TFC/population ⁽⁴⁾ | 8054 | 9235 | 10986 | 12720 | 12939 | 12827 | .. | 1.8 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 2235.59 | 2800.60 | 3684.85 | 4631.48 | 4965.91 | 4995.03 | 4783.74 | 3.0 | 1.4 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 1889.28 | 1997.28 | 2123.68 | 2524.77 | 2608.65 | 2550.49 | 2422.15 | 0.7 | 0.7 |
| Coal | 326.31 | 397.46 | 484.48 | 565.29 | 581.22 | 572.03 | 507.17 | 2.4 | 0.2 |
| Oil | 896.88 | 885.45 | 833.36 | 958.25 | 1002.04 | 948.02 | 888.40 | -0.4 | 0.3 |
| Gas | 551.78 | 522.34 | 492.96 | 621.82 | 623.28 | 619.82 | 621.56 | -0.7 | 1.2 |
| Comb. renew & waste | 45.31 | 62.14 | 70.53 | 84.91 | 92.75 | 96.89 | 92.87 | 2.6 | 1.5 |
| Nuclear | 27.31 | 79.77 | 178.78 | 226.86 | 242.40 | 242.82 | 239.89 | 11.7 | 1.6 |
| Geothermal | 2.11 | 4.60 | 14.10 | 13.09 | 8.79 | 9.08 | 9.04 | 11.8 | -2.3 |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.32 | 2.10 | 4.80 | 6.82 | 8.20 | - | 18.6 |
| Hydro | 39.56 | 45.57 | 49.01 | 52.61 | 53.35 | 54.97 | 55.16 | 1.3 | 0.6 |
| Net electricity imports ⁽²⁾ | 0.02 | -0.05 | 0.14 | -0.15 | 0.03 | 0.04 | -0.12 | 11.9 | - |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

IEA NORTH AMERICA

3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 2235.7 | 2800.7 | 3700.8 | 4658.4 | 4920.5 | 4991.9 | 5020.4 | 4807.0 |
| Nuclear | 104.4 | 304.2 | 684.6 | 870.5 | 902.8 | 930.1 | 931.8 | 920.5 |
| Hydro | 460.2 | 530.0 | 585.8 | 638.6 | 661.7 | 646.4 | 664.6 | 664.6 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 0.1 | 0.1 | 15.9 | 26.9 | 25.6 | 26.0 | 25.4 | 23.2 |
| Geothermal | 2.5 | 5.4 | 16.0 | 14.6 | 16.8 | 16.8 | 17.0 | 16.5 |
| Solar | - | - | 0.7 | 0.7 | 1.1 | 1.7 | 2.5 | 2.5 |
| Tide, wave, ocean | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Wind | - | - | 3.1 | 5.9 | 19.4 | 37.6 | 59.5 | 74.9 |
| Combustible fuels | 1668.7 | 1961.1 | 2410.6 | 3128.0 | 3318.1 | 3358.2 | 3344.3 | 3127.0 |
| <i>Coal</i> | 942.3 | 1302.7 | 1781.9 | 2247.1 | 2263.9 | 2234.2 | 2244.6 | 2005.2 |
| <i>Oil</i> | 345.0 | 277.0 | 147.1 | 133.2 | 156.6 | 88.0 | 67.6 | 59.5 |
| <i>Gas</i> | 381.1 | 379.7 | 391.3 | 667.8 | 817.2 | 955.9 | 951.2 | 987.0 |
| <i>Comb. renew. & waste</i> | 0.3 | 1.8 | 90.3 | 79.9 | 80.4 | 80.1 | 80.8 | 75.3 |
| Other (e.g. fuel cells) | - | - | - | - | 0.6 | 1.1 | 0.8 | 0.9 |
| - Own use by power plant | 107.7 | 147.4 | 203.2 | 255.0 | 226.5 | 180.6 | 236.5 | .. |
| Net production | 2128.0 | 2653.3 | 3497.6 | 4403.4 | 4694.0 | 4811.4 | 4783.9 | .. |
| Nuclear | .. | 287.0 | 645.8 | 822.6 | 868.8 | 894.6 | 894.8 | .. |
| Hydro | .. | 527.0 | 580.0 | 630.1 | 655.8 | 640.6 | 658.9 | .. |
| Geothermal | .. | 5.1 | 15.1 | 14.1 | 14.7 | 14.6 | 15.0 | .. |
| Solar | .. | - | 0.7 | 0.7 | 1.1 | 1.6 | 2.4 | .. |
| Tide, wave, ocean | .. | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Wind | .. | - | 3.0 | 5.9 | 19.3 | 37.4 | 59.1 | .. |
| Combustible fuels | .. | 1834.2 | 2252.9 | 2930.1 | 3133.7 | 3221.3 | 3152.9 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | 0.6 | 1.1 | 0.8 | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | 0.3 | 0.2 | 22.8 | 32.0 | 32.2 | 33.0 | 31.8 | 27.7 |
| + Imports | 19.1 | 33.1 | 40.3 | 63.9 | 64.2 | 70.8 | 82.2 | 70.4 |
| - Exports | 18.9 | 33.6 | 38.7 | 65.7 | 63.3 | 70.5 | 81.8 | 71.8 |
| Electrical energy supplied | 2128.0 | 2652.6 | 3476.4 | 4369.7 | 4662.7 | 4778.7 | 4752.6 | .. |
| - Transmission & distr. losses | 188.9 | 245.3 | 330.8 | 276.4 | 311.8 | 323.5 | 296.6 | .. |
| - Statistical difference | - | - | -0.0 | -0.0 | -0.0 | -0.0 | -0.8 | .. |
| Total consumption | 1939.1 | 2407.3 | 3145.6 | 4093.3 | 4350.8 | 4455.2 | 4456.7 | .. |
| - Energy industry consumption ⁽²⁾ | 51.7 | 78.5 | 93.9 | 112.2 | 122.5 | 126.4 | 124.4 | .. |
| Final consumption | 1887.4 | 2328.7 | 3051.7 | 3981.1 | 4228.3 | 4328.8 | 4332.3 | .. |
| Industry | 751.7 | 881.8 | 1034.5 | 1345.4 | 1135.4 | 1121.9 | 1103.3 | .. |
| Transport | 7.5 | 5.4 | 7.4 | 8.9 | 11.8 | 12.2 | 11.9 | .. |
| Commercial & publ. serv. | 480.5 | 631.4 | 947.2 | 1286.1 | 1410.1 | 1479.9 | 1491.8 | .. |
| Residential | 631.2 | 802.3 | 1053.8 | 1330.7 | 1510.2 | 1545.1 | 1540.7 | .. |
| Agriculture & fishing | 16.5 | 7.8 | 8.6 | 9.6 | 10.2 | 9.2 | 9.6 | .. |
| Sector non specified | - | - | 0.1 | 0.3 | 150.6 | 160.4 | 175.0 | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

IEA NORTH AMERICA

4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 2240.96 | 2800.70 | 3700.77 | 4658.37 | 4916.80 | 4991.94 | 5020.42 | 3.2 | 1.7 |
| - Hydro pumped storage | 0.11 | 0.10 | 15.92 | 26.89 | 25.93 | 26.04 | 25.39 | 36.7 | 2.6 |
| Total generation⁽¹⁾ | 2240.85 | 2800.60 | 3684.85 | 4631.48 | 4890.87 | 4965.91 | 4995.03 | 3.2 | 1.7 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 2201.89 | 2762.03 | 3428.14 | 4419.03 | 4700.35 | 4782.95 | 4813.23 | 2.8 | 1.9 |
| - Hydro pumped storage | 0.11 | 0.10 | 15.92 | 26.89 | 25.93 | 26.04 | 25.39 | 36.7 | 2.6 |
| Total generation ⁽¹⁾ | 2201.78 | 2761.93 | 3412.22 | 4392.13 | 4674.42 | 4756.92 | 4787.84 | 2.8 | 1.9 |
| Nuclear | 135.95 | 304.22 | 684.44 | 870.52 | 914.16 | 930.13 | 931.76 | 10.6 | 1.7 |
| Hydro | 482.01 | 499.25 | 532.38 | 576.22 | 610.76 | 588.99 | 603.84 | 0.6 | 0.7 |
| Geothermal | 2.60 | 5.35 | 9.10 | 14.62 | 16.58 | 16.80 | 17.01 | 8.1 | 3.5 |
| Solar, wind, tide ⁽²⁾ | - | - | 0.03 | 6.49 | 30.03 | 38.59 | 60.76 | - | 52.6 |
| Coal | 899.29 | 1302.61 | 1756.80 | 2191.76 | 2210.50 | 2211.73 | 2222.33 | 4.3 | 1.3 |
| Oil | 328.77 | 274.58 | 139.83 | 124.57 | 74.10 | 74.41 | 56.12 | -5.2 | -4.9 |
| Gas | 352.90 | 375.47 | 287.44 | 574.61 | 783.61 | 861.49 | 859.09 | -1.3 | 6.3 |
| Comb. renew. & waste | 0.26 | 0.46 | 2.21 | 33.34 | 34.68 | 34.78 | 36.92 | 14.2 | 16.9 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 39.07 | 38.67 | 272.64 | 239.35 | 216.45 | 208.99 | 207.20 | 12.9 | -1.5 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 39.07 | 38.67 | 272.64 | 239.35 | 216.45 | 208.99 | 207.20 | 12.9 | -1.5 |
| Nuclear | - | - | 0.12 | - | - | - | - | - | - |
| Hydro | 32.73 | 30.68 | 37.51 | 35.49 | 36.45 | 31.32 | 35.34 | 0.9 | -0.3 |
| Geothermal | - | - | 6.92 | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 3.73 | 0.18 | 1.69 | 1.91 | 2.06 | - | -3.2 |
| Coal | 0.18 | 0.07 | 25.07 | 55.32 | 25.44 | 22.45 | 22.23 | 36.0 | -0.7 |
| Oil | 3.52 | 2.43 | 7.29 | 8.60 | 13.77 | 13.57 | 11.50 | 4.7 | 2.6 |
| Gas | 2.64 | 4.19 | 103.89 | 93.16 | 93.05 | 94.41 | 92.14 | 25.8 | -0.7 |
| Comb. renew. & waste | - | 1.30 | 88.12 | 46.60 | 46.06 | 45.33 | 43.93 | - | -3.8 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

IEA NORTH AMERICA

5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|-------------|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|---|
| Total | 5924 | 7991 | 257151 e | 232136 e | 208030 e | 199863 e | 198713 e | -1.4 |
| Total energy | - | - | - | 4203 e | 31956 | 30648 | 30985 | - |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | 6644 | 6871 | 6670 | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | - | 18221 | 17133 | 17128 | - |
| Energy non specified/other | - | - | - | 4203 e | 7091 | 6644 | 7187 | - |
| Total industry | 5924 | 7991 | 219491 | 110922 e | 124665 | 120314 | 114589 | -3.5 |
| Iron and steel | - | - | - | - | - | - | - | - |
| Chemical and petrochemical | - | - | - | - | 57759 | 58046 | 54298 | - |
| Non-ferrous metals | - | - | - | - | - | - | - | - |
| Non-metallic minerals | - | - | - | - | 499 | 442 | 261 | - |
| Transport equipment | - | - | - | - | 306 | 307 | 409 | - |
| Machinery | - | - | - | - | 97 | 106 | 92 | - |
| Mining and quarrying | - | - | - | - | 2235 | 2223 | 2487 | - |
| Food and tobacco | - | - | - | - | 5838 | 5745 | 4911 | - |
| Pulp and printing | - | - | - | - | 44966 | 44676 | 43399 | - |
| Wood and wood products | - | - | - | - | 1383 | 1303 | 1360 | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | - | - | - | - | 289 | 270 | 258 | - |
| Non specified/other industries | 5924 | 7991 | 219491 | 110922 e | 11293 | 7196 | 7114 | -17.3 |
| Total transport | - | - | - | - | 374 | 483 | 419 | - |
| Rail and pipeline | - | - | - | - | 10 | 4 | 3 | - |
| Transport non specified | - | - | - | - | 364 | 479 | 416 | - |
| Other | - | - | 37660 e | 117011 e | 51035 e | 48418 e | 52720 e | 1.9 |
| Commerce and pub. services | - | - | 23 | 708 | 7974 | 7766 | 7483 | 37.9 |
| Residential | - | - | - | - | 25 | 24 | 22 | - |
| Agriculture and fishing | - | - | - | - | 229 | 220 | 264 | - |
| Sector non specified | - | - | 37637 e | 116303 e | 42807 e | 40408 e | 44951 e | 1.0 |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---|
| Total | 43140 | 129895 | 359761 | 290819 | 587170 | 567369 | 559294 | 8.5 |
| Nuclear | .. | .. | - | - | - | - | - | .. |
| Geothermal | .. | .. | - | - | - | - | - | .. |
| Coal | .. | .. | 81572 | 50316 | 100382 | 96438 | 85766 | .. |
| Oil | .. | .. | 9181 | 29596 | 39356 | 42135 | 41548 | .. |
| Gas | .. | .. | 239876 | 192185 | 397900 | 382392 | 380875 | .. |
| Comb. renew. & waste | .. | .. | 29132 | 18722 | 49532 | 46404 | 51105 | .. |
| Non-spec. comb. fuels | .. | .. | - | - | - | - | - | .. |
| Chemical processes | .. | .. | - | - | - | - | - | .. |
| Heat pumps | .. | .. | - | - | - | - | - | .. |
| Electric boilers | .. | .. | - | - | - | - | - | .. |
| Other sources ⁽¹⁾ | .. | .. | - | - | - | - | - | .. |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 43140 | 114236 | 357747 | 288805 | 585365 | 565564 | .. | 9.3 |
| Nuclear | .. | .. | - | - | - | - | .. | .. |
| Geothermal | .. | .. | - | - | - | - | .. | .. |
| Coal | .. | .. | 81572 | 50316 | 100382 | 96438 | .. | .. |
| Oil | .. | .. | 9181 | 29596 | 39356 | 42135 | .. | .. |
| Gas | .. | .. | 239876 | 192185 | 397900 | 382392 | .. | .. |
| Comb. renew. & waste | .. | .. | 27118 | 16708 | 47727 | 44599 | .. | .. |
| Non-spec. comb. fuels | .. | .. | - | - | - | - | .. | .. |
| Chemical processes | .. | .. | - | - | - | - | .. | .. |
| Heat pumps | .. | .. | - | - | - | - | .. | .. |
| Electric boilers | .. | .. | - | - | - | - | .. | .. |
| Other sources ⁽¹⁾ | .. | .. | - | - | - | - | .. | .. |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | 15659 | 2014 | 2014 | 1805 | 1805 | .. | -11.3 |
| Nuclear | .. | .. | - | - | - | - | .. | .. |
| Geothermal | .. | .. | - | - | - | - | .. | .. |
| Coal | .. | .. | - | - | - | - | .. | .. |
| Oil | .. | .. | - | - | - | - | .. | .. |
| Gas | .. | .. | - | - | - | - | .. | .. |
| Comb. renew. & waste | .. | .. | 2014 | 2014 | 1805 | 1805 | .. | .. |
| Non-spec. comb. fuels | .. | .. | - | - | - | - | .. | .. |
| Chemical processes | .. | .. | - | - | - | - | .. | .. |
| Heat pumps | .. | .. | - | - | - | - | .. | .. |
| Electric boilers | .. | .. | - | - | - | - | .. | .. |
| Other sources ⁽¹⁾ | .. | .. | - | - | - | - | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 397.27 | 458.44 | 580.31 | 729.39 | 728.61 | 751.11 | 731.41 | 2.3 | 1.3 |
| Coal | 225.21 | 307.07 | 417.03 | 529.37 | 520.06 | 527.17 | 518.39 | 3.7 | 1.2 |
| Oil | 84.14 | 63.68 | 31.04 | 32.48 | 21.91 | 21.02 | 15.75 | -5.7 | -3.7 |
| Gas | 87.66 | 87.34 | 91.60 | 144.23 | 165.53 | 181.77 | 175.86 | 0.3 | 3.7 |
| Comb. renew. & waste | 0.27 | 0.34 | 40.64 | 23.31 | 21.10 | 21.15 | 21.41 | 34.4 | -3.5 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 457.44 | 510.41 | 675.98 | 696.21 | 720.47 | 702.43 | .. | 1.8 |
| Coal | .. | 307.06 | 412.68 | 517.49 | 515.57 | 523.45 | 514.73 | .. | 1.2 |
| Oil | .. | 63.41 | 30.57 | 20.81 | 17.38 | 17.78 | 13.22 | .. | -4.6 |
| Gas | .. | 86.86 | 66.58 | 127.14 | 150.41 | 166.17 | 161.01 | .. | 5.0 |
| Comb. renew. & waste | .. | 0.11 | 0.57 | 10.54 | 12.86 | 13.06 | 13.47 | .. | 19.2 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 29.42 | 84.37 | 192.60 | 239.58 | 246.14 | 250.38 | 251.07 | 11.7 | 1.5 |
| Nuclear | 27.31 | 79.77 | 178.78 | 226.86 | 238.24 | 242.40 | 242.82 | 11.7 | 1.7 |
| Geothermal | 2.11 | 4.60 | 13.77 | 12.57 | 7.71 | 7.75 | 7.92 | 11.7 | -3.0 |
| Solar | - | - | 0.06 | 0.15 | 0.19 | 0.24 | 0.33 | - | 10.3 |
| Non-Thermal | | | | | | | | | |
| Total | 39.56 | 45.57 | 49.28 | 53.12 | 58.17 | 56.59 | 60.09 | 1.3 | 1.1 |
| Hydro | 39.56 | 45.57 | 49.01 | 52.61 | 55.66 | 53.35 | 54.97 | 1.3 | 0.6 |
| Tide, wave, ocean | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 1.3 |
| Wind | - | - | 0.26 | 0.51 | 2.51 | 3.24 | 5.12 | - | 17.9 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

IEA NORTH AMERICA

8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|----------|------------|------------|------------|------------|------------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 491319 | 637760 e | 820878 e | 860676 | 871891 | 866761 | 1.7 |
| Fuel input (TJ) | 12580392 | 15561830 e | 19583700 e | 19576742 e | 19745501 e | 19380459 e | 1.2 |
| Electricity production (GWh) | 1229549 | 1600793 e | 2006661 e | 2013419 e | 1994532 e | 2008170 e | 1.3 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 53019 | 100889 | 108847 | 103886 | 110176 | 108785 | 0.4 |
| Fuel input (TJ) | 801533 | 1579605 | 1678476 | 1588668 | 1714679 | 1705711 | 0.4 |
| Electricity production (GWh) | 73097 | 143310 | 154372 | 162491 | 179022 | 174126 | 1.1 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 356 | 577 e | 13541 e | 13413 | 14657 | 8264 | 15.9 |
| Electricity production (GWh) | 33 e | 51 e | 1188 e | 835 | 785 | 372 | 11.7 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 65796 | 32621 | 28701 | 18580 | 18884 | 14215 | -4.5 |
| Fuel input (TJ) | 2902892 | 1491949 | 1206624 | 717263 | 744199 | 547614 | -5.4 |
| Electricity production (GWh) | 277011 | 141666 e | 119232 | 68426 | 69223 | 52353 | -5.4 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 4104270 | 3115611 | 4632581 | 5770934 | 6411142 | 6248887 | 3.9 |
| Electricity production (GWh) | 379655 | 291999 e | 449606 e | 666111 | 732489 | 741996 | 5.3 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 9630 | 258964 e | 184654 e | 226440 | 228454 | 230181 | -0.7 |
| Electricity production (GWh) | 1300 | 15368 e | 17877 | 17422 | 17163 | 18065 | 0.9 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | 9138 | 10421 | 15779 e | 12975 | 14832 | 2.7 |
| Electricity production (GWh) | - | 749 | 923 | 1427 | 1116 | 1288 | 3.1 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 162000 e | 219034 e | 243535 | 242065 e | 245673 e | 2.3 |
| Electricity production (GWh) | - | 9693 e | 14561 e | 15513 | 15237 e | 15149 e | 2.5 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 30950 e | 58319 e | 82273 e | 82307 e | 96501 e | 6.5 |
| Electricity production (GWh) | - | 2517 e | 4613 e | 6841 e | 7214 e | 8141 e | 6.7 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 1961102 | 2206146 e | 2769033 e | 2952485 e | 3016781 e | 3019660 e | 1.8 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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9. Electricity and heat produced for sale from combustible fuels in combined heat and power plants (CHP plants)

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|---------|-----------|----------|----------|----------|----------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | 11445 e | 30402 e | 24060 | 24427 | 24845 | 4.4 |
| Fuel input (TJ) | - | 302045 e | 788540 e | 548110 e | 554741 e | 565326 e | 3.5 |
| Electricity production (GWh) | - | 35063 e | 75408 e | 55645 e | 56548 e | 58352 e | 2.9 |
| CHP Heat production (TJ) | - | 19742 e | 81572 e | 88979 e | 88453 e | 85898 e | 8.5 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | 1096 e | 1246 e | - | - | - | - |
| Fuel input (TJ) | - | 16154 e | 18583 e | - | 5 | - | - |
| Electricity production (GWh) | - | 2651 e | 3134 e | - | 1 | - | - |
| CHP Heat production (TJ) | - | 258 e | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 83858 e | 47711 | 42975 | 45083 | - |
| Electricity production (GWh) | - | - | 6323 | 3553 | 3292 | 3545 | - |
| CHP Heat production (TJ) | - | - | - | 15676 | 11929 | 10540 | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 283 | 77 | 4020 | 4083 | 3862 | 3075 | 22.7 |
| Fuel input (TJ) | 12311 e | 3358 | 145927 | 158855 | 149797 | 118136 | 21.9 |
| Electricity production (GWh) | - | 5451 | 13940 | 19445 | 18758 | 15268 | 5.9 |
| CHP Heat production (TJ) | 8618 e | 2943 | 9181 e | 39500 | 39356 | 42135 | 15.9 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 1147018 | 2078966 | 1931586 | 2047382 | 1934633 | 2.9 |
| Electricity production (GWh) | - | 99324 | 218156 | 210544 | 223407 | 209232 | 4.2 |
| CHP Heat production (TJ) | - | 7601 | 239876 e | 390800 | 397900 | 382392 | 24.3 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 1153493 e | 388431 | 232829 | 238708 | 225001 | -8.7 |
| Electricity production (GWh) | - | 57006 e | 32074 | 32292 | 32355 | 31082 | -3.3 |
| CHP Heat production (TJ) | - | - | 9489 | 27903 | 32164 | 28358 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | 71583 | 58985 | 36864 | 33668 | 35515 | -3.8 |
| Electricity production (GWh) | - | 3961 | 6247 | 4178 | 3890 | 3915 | -0.1 |
| CHP Heat production (TJ) | - | - | 187 | 3899 | 3525 | 3751 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 13083 e | 40737 e | 31583 | 32437 e | 33304 e | 5.3 |
| Electricity production (GWh) | - | 1037 e | 2319 e | 1947 | 2024 e | 1995 e | 3.7 |
| CHP Heat production (TJ) | - | 633 e | 15884 e | 10730 | 11362 e | 12033 e | 17.8 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 12790 | 12859 | 12577 e | 13310 e | - |
| Electricity production (GWh) | - | - | 1325 | 1112 | 1109 e | 1211 e | - |
| CHP Heat production (TJ) | - | - | 2191 | 1095 | 1331 e | 1112 e | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | - | 204493 e | 358926 e | 328716 | 341384 e | 324600 e | 2.6 |
| CHP Heat production (TJ) | 22654 | 112485 e | 358380 e | 578582 | 586020 e | 566219 e | 9.4 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|--------|--------|------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 2629 e | 2629 e | 2260 | 2260 e | 2260 e | -0.8 |
| Heat production (TJ) | - | 1381 e | 1381 e | 1150 | 1150 e | 1150 e | -1.0 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | - | 1381 e | 1381 e | 1150 | 1150 e | 1150 e | -1.0 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

IEA NORTH AMERICA

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 1446.61 | 1466.35 | 1452.57 | 1735.85 | 1760.46 | 1786.95 | 1744.51 | 0.0 | 1.0 |
| Geothermal | - | - | 0.34 | 0.52 | 0.92 | 1.04 | 1.16 | - | 7.1 |
| Solar thermal | - | - | - | 1.44 | 1.28 | 1.32 | 1.37 | - | - |
| Coal | 78.97 | 60.49 | 58.74 | 36.09 | 35.35 | 35.44 | 34.31 | -1.7 | -2.9 |
| Oil | 769.15 | 769.13 | 752.08 | 874.20 | 928.34 | 919.94 | 871.30 | -0.1 | 0.8 |
| Gas | 391.04 | 373.63 | 346.29 | 413.30 | 354.79 | 377.33 | 380.58 | -0.7 | 0.5 |
| Comb. renew. & waste | 45.04 | 61.80 | 29.89 | 61.84 | 68.97 | 71.61 | 75.48 | -2.4 | 5.3 |
| Electricity | 162.32 | 200.27 | 262.45 | 342.37 | 362.88 | 372.28 | 372.58 | 2.9 | 2.0 |
| Heat | 0.10 | 1.03 | 2.79 | 6.09 | 7.93 | 8.00 | 7.72 | 21.9 | 5.8 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 439.31 | 437.44 | 330.84 | 387.25 | 354.36 | 354.59 | 349.84 | -1.7 | 0.3 |
| Geothermal | - | - | - | 0.11 | 0.11 | 0.12 | 0.13 | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 64.85 | 52.34 | 48.73 | 33.57 | 33.42 | 32.60 | 31.64 | -1.7 | -2.4 |
| Oil | 86.27 | 101.08 | 51.04 | 32.12 | 41.51 | 37.49 | 40.33 | -3.0 | -1.3 |
| Gas | 189.17 | 167.73 | 126.74 | 157.19 | 132.73 | 139.54 | 137.09 | -2.3 | 0.4 |
| Comb. renew. & waste | 34.28 | 39.45 | 14.74 | 43.57 | 43.87 | 41.96 | 39.60 | -4.8 | 5.6 |
| Electricity | 64.64 | 75.84 | 88.97 | 115.71 | 96.33 | 96.48 | 94.89 | 1.9 | 0.4 |
| Heat | 0.10 | 1.00 | 0.63 | 4.98 | 6.39 | 6.40 | 6.17 | 11.7 | 13.5 |
| Transport | 447.87 | 469.59 | 530.69 | 640.38 | 680.86 | 686.43 | 658.17 | 1.0 | 1.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.12 | - | - | - | - | - | - | - | - |
| Oil | 430.25 | 452.74 | 511.75 | 616.35 | 650.13 | 651.14 | 617.62 | 1.0 | 1.1 |
| Gas | 16.84 | 16.38 | 18.31 | 19.93 | 18.26 | 19.22 | 18.95 | 0.5 | 0.2 |
| Comb. renew. & waste | - | - | - | 3.32 | 11.45 | 15.02 | 20.59 | - | - |
| Electricity | 0.65 | 0.46 | 0.64 | 0.77 | 1.02 | 1.05 | 1.02 | -0.1 | 2.7 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 165.61 | 160.85 | 180.99 | 220.47 | 227.03 | 235.66 | 239.89 | 0.5 | 1.6 |
| Geothermal | - | - | - | 0.19 | 0.35 | 0.36 | 0.37 | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 3.41 | 1.84 | 2.42 | 0.89 | 1.53 | 1.70 | 1.75 | -2.0 | -1.8 |
| Oil | 55.06 | 36.96 | 25.38 | 22.43 | 23.08 | 22.74 | 22.81 | -4.5 | -0.6 |
| Gas | 65.82 | 67.72 | 69.57 | 83.99 | 75.25 | 79.88 | 82.80 | 0.3 | 1.0 |
| Comb. renew. & waste | - | - | - | 1.24 | 2.16 | 2.11 | 2.31 | - | - |
| Electricity | 41.32 | 54.30 | 81.46 | 110.61 | 123.10 | 127.27 | 128.29 | 4.1 | 2.6 |
| Heat | - | 0.03 | 2.16 | 1.12 | 1.54 | 1.60 | 1.55 | - | -1.8 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

IEA NORTH AMERICA

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 262.94 | 243.88 | 238.71 | 294.91 | 283.46 | 299.34 | 300.59 | -0.6 | 1.3 |
| Geothermal | - | - | - | 0.22 | 0.46 | 0.55 | 0.67 | - | - |
| Solar thermal | - | - | - | 1.44 | 1.28 | 1.32 | 1.37 | - | - |
| Coal | 3.34 | 1.65 | 1.53 | 1.36 | 0.04 | 0.03 | 0.03 | -4.5 | -19.4 |
| Oil | 84.20 | 52.13 | 31.03 | 35.15 | 26.53 | 27.46 | 25.14 | -5.7 | -1.2 |
| Gas | 119.20 | 119.19 | 113.91 | 130.09 | 115.09 | 124.95 | 128.26 | -0.3 | 0.7 |
| Comb. renew. & waste | 1.91 | 1.91 | 1.61 | 12.21 | 11.19 | 12.15 | 12.62 | -1.0 | 12.1 |
| Electricity | 54.28 | 69.00 | 90.63 | 114.44 | 128.87 | 132.88 | 132.50 | 3.1 | 2.1 |
| Heat | - | - | 0.00 | - | 0.00 | 0.00 | - | - | - |
| Agriculture & fishing | 17.41 | 16.03 | 17.65 | 18.30 | 21.35 | 20.15 | 19.37 | 0.1 | 0.5 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | 0.02 | 0.05 | - | - | - |
| Oil | 15.99 | 15.09 | 16.41 | 16.89 | 19.74 | 18.45 | 17.69 | 0.2 | 0.4 |
| Gas | - | 0.27 | 0.50 | 0.59 | 0.44 | 0.48 | 0.49 | - | -0.1 |
| Comb. renew. & waste | - | - | - | - | 0.29 | 0.37 | 0.36 | - | - |
| Electricity | 1.42 | 0.67 | 0.74 | 0.83 | 0.85 | 0.80 | 0.83 | -3.8 | 0.6 |
| Heat | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 7.7 |
| Other | 17.44 | 24.97 | 19.62 | 1.52 | 12.71 | 13.79 | 15.05 | 0.7 | -1.5 |
| Geothermal | - | - | 0.34 | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 7.24 | 4.53 | 5.74 | - | - | - | - | -1.4 | - |
| Oil | 1.35 | - | - | - | - | - | - | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | 8.85 | 20.44 | 13.54 | 1.50 | - | - | - | 2.5 | - |
| Electricity | - | - | 0.01 | 0.03 | 12.71 | 13.79 | 15.05 | - | 51.6 |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 96.03 | 113.60 | 134.07 | 173.02 | 180.70 | 176.99 | 161.60 | 1.98 | 1.04 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

IEA NORTH AMERICA

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| TFC (Mtoe) | 1446.61 | 1466.35 | 1452.57 | 1735.85 | 1772.89 | 1760.46 | 1786.95 | 1744.51 |
| Total industry (Mtoe) | 439.31 | 437.44 | 330.84 | 387.25 | 342.62 | 354.36 | 354.59 | 349.84 |
| Iron and steel | 47.53 | 36.73 | 22.73 | 33.11 | 26.23 | 25.74 | 25.74 | 25.16 |
| Chem. and petrochemical | 22.71 | 30.91 | 72.78 | 97.52 | 82.34 | 79.38 | 79.47 | 80.24 |
| Non-ferrous metals | 12.60 | 15.90 | 10.51 | 24.99 | 19.40 | 19.27 | 19.21 | 19.13 |
| Non-metallic minerals | 8.08 | 12.16 | 11.94 | 26.00 | 26.27 | 29.29 | 29.04 | 28.11 |
| Transport equipment | 5.12 | 5.12 | 4.24 | 13.25 | 9.34 | 10.97 | 11.15 | 11.06 |
| Machinery | 5.14 | 7.03 | 11.47 | 24.82 | 20.40 | 21.45 | 21.94 | 21.22 |
| Mining and quarrying | 4.62 | 8.74 | 8.33 | 11.23 | 13.16 | 13.23 | 15.77 | 15.79 |
| Food and tobacco | 8.29 | 8.90 | 9.27 | 27.45 | 29.17 | 32.49 | 32.57 | 32.21 |
| Paper, pulp and printing | 31.56 | 32.67 | 32.97 | 74.62 | 71.90 | 74.46 | 72.02 | 69.68 |
| Wood and wood products | 2.36 | 3.07 | 2.78 | 13.63 | 12.27 | 13.06 | 12.42 | 13.68 |
| Construction | - | 1.14 | 2.48 | 1.67 | 3.04 | 3.04 | 2.73 | 2.71 |
| Textile and leather | 4.07 | 5.40 | 3.77 | 8.67 | 6.22 | 6.50 | 6.54 | 6.02 |
| Non specified/other | 287.24 | 269.66 | 137.57 | 30.29 | 22.90 | 25.50 | 26.00 | 24.85 |
| Electricity consumption (Mtoe) | 162.32 | 200.27 | 262.45 | 342.37 | 363.64 | 362.88 | 372.28 | 372.58 |
| Total industry (Mtoe) | 64.64 | 75.84 | 88.97 | 115.71 | 97.65 | 96.33 | 96.48 | 94.89 |
| Iron and steel | 6.00 | 6.70 | 6.98 | 7.38 | 7.84 | 7.69 | 7.77 | 7.77 |
| Chem. and petrochemical | 12.89 | 14.20 | 19.19 | 24.28 | 23.55 | 23.30 | 23.52 | 23.14 |
| Non-ferrous metals | 10.58 | 12.66 | 7.98 | 12.49 | 12.21 | 12.25 | 11.96 | 11.99 |
| Non-metallic minerals | 2.71 | 3.04 | 3.11 | 3.60 | 3.83 | 3.80 | 3.87 | 3.80 |
| Transport equipment | 2.66 | 2.84 | 3.30 | 5.18 | 4.01 | 3.98 | 4.05 | 3.98 |
| Machinery | 4.46 | 5.36 | 10.30 | 11.83 | 9.93 | 9.86 | 10.02 | 9.84 |
| Mining and quarrying | 2.98 | 3.33 | 5.36 | 6.06 | 5.44 | 5.40 | 5.12 | 5.06 |
| Food and tobacco | 3.55 | 4.08 | 5.13 | 6.52 | 7.32 | 7.27 | 7.35 | 7.25 |
| Paper, pulp and printing | 6.54 | 8.22 | 15.06 | 16.75 | 15.89 | 15.44 | 15.19 | 14.63 |
| Wood and wood products | 1.65 | 1.96 | 2.47 | 2.83 | 2.52 | 2.50 | 2.54 | 2.49 |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | 3.16 | 3.07 | 3.21 | 3.28 | 2.47 | 2.45 | 2.49 | 2.45 |
| Non specified/other | 7.46 | 10.40 | 6.87 | 15.50 | 2.63 | 2.38 | 2.62 | 2.48 |
| Total industry (TWh) | 751.66 | 881.81 | 1034.49 | 1345.42 | 1135.42 | 1120.13 | 1121.91 | 1103.32 |
| Iron and steel | 69.75 | 77.89 | 81.22 | 85.80 | 91.21 | 89.47 | 90.38 | 90.36 |
| Chem. and petrochemical | 149.87 | 165.15 | 223.13 | 282.31 | 273.84 | 270.93 | 273.50 | 269.12 |
| Non-ferrous metals | 123.06 | 147.17 | 92.78 | 145.28 | 141.95 | 142.46 | 139.09 | 139.46 |
| Non-metallic minerals | 31.48 | 35.31 | 36.20 | 41.90 | 44.55 | 44.23 | 44.95 | 44.24 |
| Transport equipment | 30.92 | 33.01 | 38.38 | 60.18 | 46.68 | 46.32 | 47.07 | 46.23 |
| Machinery | 51.85 | 62.32 | 119.78 | 137.54 | 115.51 | 114.62 | 116.50 | 114.40 |
| Mining and quarrying | 34.69 | 38.71 | 62.33 | 70.43 | 63.20 | 62.84 | 59.53 | 58.85 |
| Food and tobacco | 41.25 | 47.39 | 59.62 | 75.83 | 85.14 | 84.48 | 85.42 | 84.31 |
| Paper, pulp and printing | 76.08 | 95.53 | 175.09 | 194.82 | 184.77 | 179.59 | 176.58 | 170.17 |
| Wood and wood products | 19.20 | 22.74 | 28.75 | 32.85 | 29.25 | 29.02 | 29.49 | 28.96 |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | 36.73 | 35.65 | 37.34 | 38.19 | 28.72 | 28.50 | 28.96 | 28.44 |
| Non specified/other | 86.79 | 120.95 | 79.88 | 180.29 | 30.62 | 27.69 | 30.43 | 28.79 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

Note: Please refer to notes in the introductory information for data coverage.

IEA NORTH AMERICA

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total imports⁽¹⁾ | 19097 | 33121 | 40287 | 54182 | 63934 | 64204 | 66315 | 70776 | 82209 |
| Imports from: | | | | | | | | | |
| Total OECD | 19097 | 33121 | 40287 | 54182 | 63934 | 64204 | 66315 | 70776 | 82209 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | 16848 | 30181 | 20555 | 44503 | 48515 | 42930 | 41544 | 50118 | 55732 |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | 1951 | 2257 | 77 | 1597 | 1147 | 1278 | 1288 |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | 2249 | 2940 | 17781 | 7422 | 15342 | 19677 | 23624 | 19380 | 25189 |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

IEA NORTH AMERICA

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total exports⁽¹⁾ | 18856 | 33645 | 38656 | 52590 | 65661 | 63331 | 67007 | 70474 | 81758 |
| Exports to: | | | | | | | | | |
| Total OECD | 18856 | 33645 | 38656 | 52590 | 65661 | 63331 | 67007 | 70474 | 81758 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | 2570 | 3461 | 19936 | 7992 | 12685 | 19332 | 23405 | 19559 | 23499 |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | 590 | 1154 | 1993 | 471 | 866 | 584 | 584 |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | 16286 | 30184 | 18130 | 43444 | 50983 | 43528 | 42736 | 50331 | 57675 |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

IEA NORTH AMERICA

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 471.76 | 699.70 | 788.48 | 815.02 | 724.95 | 1063.42 | 1072.17 | 1083.66 | 1100.41 |
| Nuclear | 34.33 | 62.36 | 113.16 | 115.91 | 108.48 | 113.33 | 113.68 | 113.61 | 114.10 |
| Hydro | 32.38 | 118.27 | 145.98 | 156.96 | 154.90 | 165.57 | 166.73 | 167.81 | 168.89 |
| <i>of which: pumped storage</i> | - | - | 0.19 | 21.56 | 19.70 | 21.52 | 21.64 | 22.06 | 22.04 |
| Geothermal | - | 1.01 | 1.61 | 1.75 | 2.79 | 2.29 | 2.27 | 2.21 | 2.26 |
| Solar | - | - | - | 0.01 | 0.43 | 0.41 | 0.43 | 0.53 | 0.57 |
| Tide, wave, ocean | - | - | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| Wind | - | - | - | 0.03 | 2.47 | 9.39 | 12.79 | 18.29 | 27.02 |
| Other (e.g. fuel cells) | - | - | - | 0.05 | - | 0.04 | 0.04 | 0.04 | 0.03 |
| Combustible fuels | 405.05 | 518.07 | 527.70 | 540.30 | 455.87 | 772.38 | 776.21 | 781.15 | 787.52 |
| <i>of which⁽¹⁾:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid fuels | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Comb. renew. & waste | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / liquid / gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Internal combustion | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Gas turbine | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Combined cycle | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Other | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Breakdown of electrical capacity by type of fuel are shown in the individual country chapters.

Note: Please refer to notes in the introductory information for data coverage.

IEA NORTH AMERICA

15. Net maximum electricity generating capacity on 31 December (continued)

(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|--------------|--------------|---------------|--------------|--------------|--------------|--------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 5.87 | 7.86 | 49.25 | 76.82 | 199.00 | 37.95 | 38.73 | 38.60 | 38.84 |
| Nuclear | - | - | 0.02 | - | - | - | - | - | - |
| Hydro | 4.40 | 6.00 | 5.77 | 7.85 | 11.39 | 5.30 | 5.39 | 5.42 | 5.51 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | 1.06 | 1.22 | - | - | - | - | - |
| Solar | - | - | 0.34 | 0.40 | 0.17 | 0.48 | 0.69 | 0.94 | 1.42 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 1.91 | 1.72 | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | 0.44 | 0.44 | 0.44 | 0.40 |
| Combustible fuels | 1.47 | 1.86 | 40.17 | 65.63 | 187.44 | 31.74 | 32.22 | 31.80 | 31.51 |
| <i>of which⁽¹⁾:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid fuels | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Comb. renew. & waste | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / liquid / gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Internal combustion | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Gas turbine | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Combined cycle | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Other | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Breakdown of electrical capacity by type of fuel are shown in the individual country chapters.

Note: Please refer to notes in the introductory information for data coverage.

IEA EUROPE

Figure 1. Total final consumption by fuel

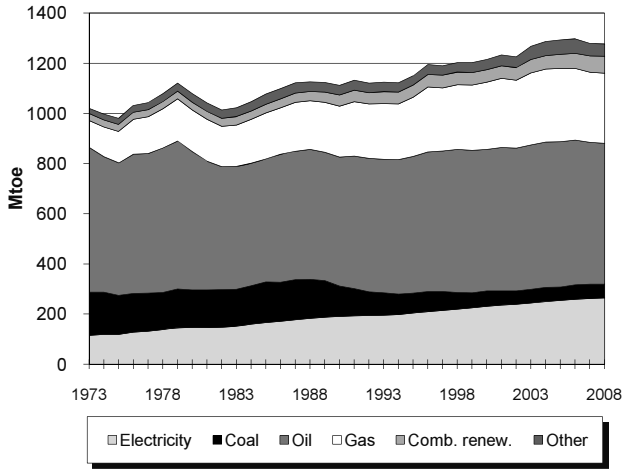


Figure 2. Electricity generation by fuel

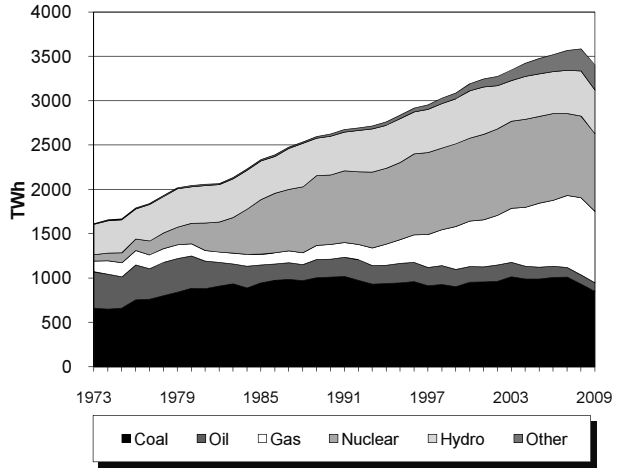


Figure 3. Electricity consumption by sector

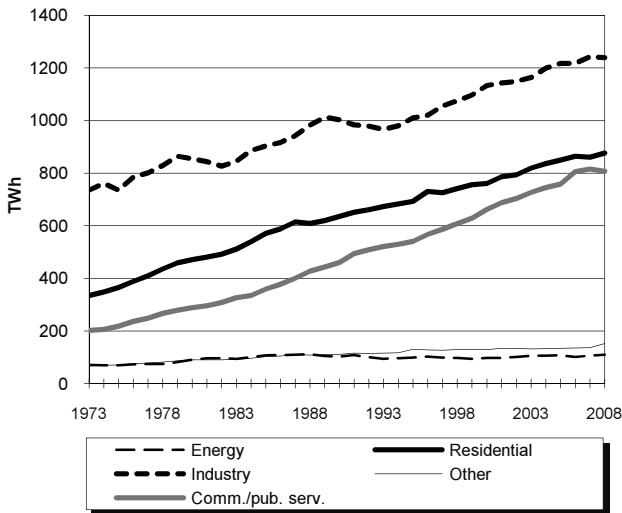


Figure 4. Electricity indicators

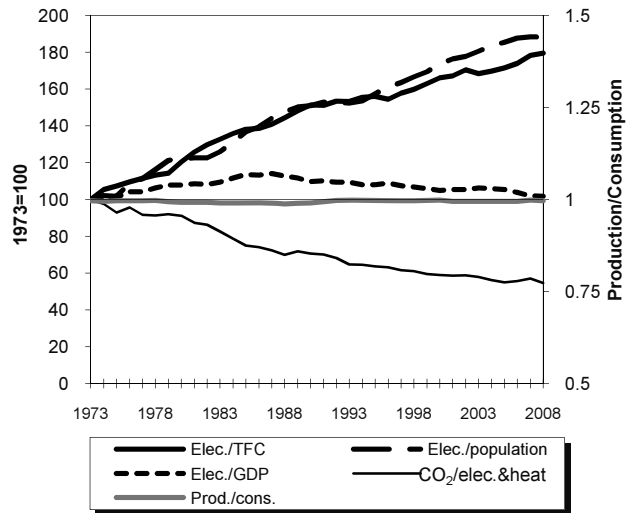
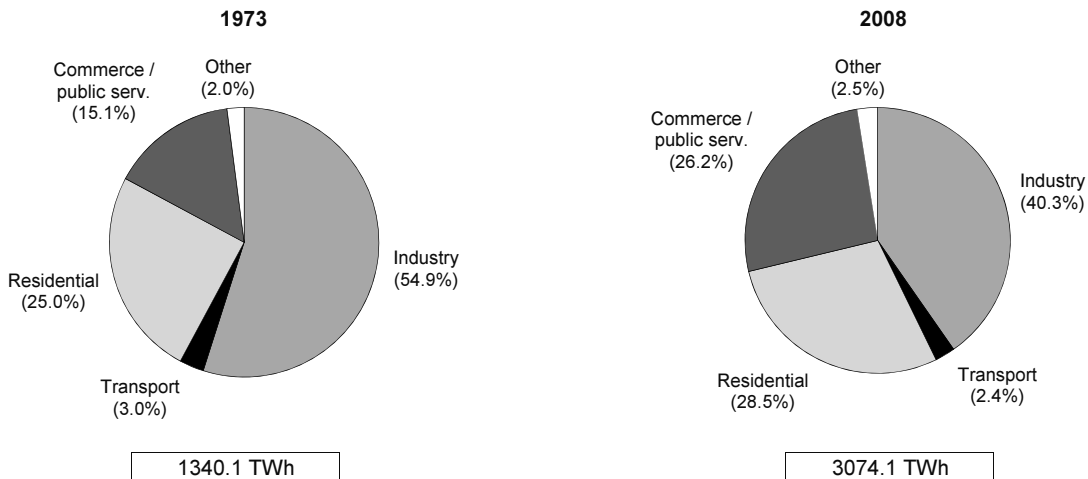


Figure 5. Total final electricity consumption by sector



IEA EUROPE

1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--------------------------------------|---------|---------|---------|---------|----------|----------|----------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 1374.36 | 1492.74 | 1600.74 | 1731.79 | 1821.68 | 1816.25 | 1715.38 | 0.9 | 0.4 |
| GDP (billion 2000 USD) | 4808.13 | 5676.43 | 7216.40 | 9056.75 | 10531.56 | 10610.04 | 10318.91 | 2.4 | 1.9 |
| TPES/GDP ⁽¹⁾ | 0.29 | 0.26 | 0.22 | 0.19 | 0.17 | 0.17 | 0.17 | -1.5 | -1.5 |
| Population (millions) | 454.82 | 473.56 | 496.22 | 518.05 | 539.55 | 542.96 | 545.10 | 0.5 | 0.5 |
| TPES/population ⁽²⁾ | 3.02 | 3.15 | 3.23 | 3.34 | 3.38 | 3.35 | 3.15 | 0.4 | -0.1 |
| TPES/GDP (2000 = 100) | 149 | 138 | 116 | 100 | 90 | 90 | 87 | -1.5 | -1.5 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 94 | 101 | 103 | 100 | 98 | 98 | .. | 0.6 | .. |
| Ele.TFC/population ⁽⁴⁾ | 2948 | 3604 | 4456 | 5191 | 5666 | 5664 | .. | 2.5 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 1615.87 | 2045.73 | 2627.52 | 3192.09 | 3570.44 | 3585.93 | 3403.79 | 2.9 | 1.4 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 1374.36 | 1492.74 | 1600.74 | 1731.79 | 1821.68 | 1816.25 | 1715.38 | 0.9 | 0.4 |
| Coal | 425.36 | 463.80 | 441.55 | 326.42 | 335.50 | 312.52 | 279.16 | 0.2 | -2.4 |
| Oil | 731.84 | 687.84 | 600.73 | 646.60 | 632.77 | 633.38 | 593.00 | -1.2 | -0.1 |
| Gas | 134.81 | 206.12 | 257.98 | 391.55 | 448.32 | 457.41 | 436.53 | 3.9 | 2.8 |
| Comb. renew & waste | 30.99 | 35.68 | 52.76 | 68.76 | 103.30 | 107.80 | 112.56 | 3.2 | 4.1 |
| Nuclear | 19.38 | 60.05 | 203.96 | 243.61 | 241.26 | 240.34 | 228.42 | 14.8 | 0.6 |
| Geothermal | 2.18 | 2.37 | 3.68 | 5.48 | 6.91 | 7.06 | 7.45 | 3.1 | 3.8 |
| Solar, wind, tide ⁽¹⁾ | 0.05 | 0.05 | 0.29 | 2.67 | 10.78 | 12.51 | 14.14 | 11.1 | 22.7 |
| Hydro | 29.25 | 35.49 | 37.77 | 45.99 | 42.05 | 43.70 | 42.32 | 1.5 | 0.6 |
| Net electricity imports ⁽²⁾ | 0.49 | 1.35 | 1.99 | 0.34 | 0.34 | 1.01 | 1.26 | 8.5 | -2.4 |
| Heat | - | - | 0.02 | 0.38 | 0.46 | 0.54 | 0.53 | - | 19.0 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 1623.7 | 2056.7 | 2647.4 | 3222.2 | 3515.0 | 3606.2 | 3619.6 | 3436.7 |
| Nuclear | 74.4 | 230.4 | 782.2 | 934.6 | 980.6 | 925.3 | 921.8 | 876.0 |
| Hydro | 347.9 | 423.6 | 459.1 | 564.8 | 517.7 | 524.8 | 541.8 | 525.0 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 7.8 | 11.0 | 19.9 | 30.1 | 37.9 | 35.8 | 33.7 | 32.9 |
| Geothermal | 2.5 | 2.7 | 3.3 | 4.9 | 5.5 | 5.9 | 5.9 | 6.0 |
| Solar | - | - | 0.0 | 0.1 | 1.5 | 3.8 | 7.5 | 13.8 |
| Tide, wave, ocean | 0.6 | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 |
| Wind | - | 0.0 | 0.8 | 22.3 | 70.9 | 105.3 | 120.1 | 131.1 |
| Combustible fuels | 1198.3 | 1399.5 | 1401.4 | 1693.7 | 1931.2 | 2038.2 | 2019.7 | 1882.1 |
| <i>Coal</i> | 663.1 | 887.2 | 1010.9 | 953.6 | 989.5 | 1012.0 | 934.1 | 849.7 |
| <i>Oil</i> | 408.9 | 363.7 | 203.2 | 179.0 | 135.2 | 107.5 | 103.8 | 97.6 |
| <i>Gas</i> | 120.4 | 137.9 | 166.6 | 512.0 | 720.4 | 811.9 | 868.8 | 804.9 |
| <i>Comb. renew. & waste</i> | 6.0 | 10.8 | 20.7 | 49.1 | 86.1 | 106.8 | 113.1 | 129.9 |
| Other (e.g. fuel cells) | - | - | 0.1 | 1.2 | 7.1 | 2.4 | 2.4 | 2.2 |
| - Own use by power plant | 89.8 | 113.2 | 149.8 | 159.2 | 168.2 | 170.4 | 168.0 | .. |
| Net production | 1533.9 | 1943.6 | 2497.6 | 3063.0 | 3346.8 | 3435.9 | 3451.6 | .. |
| Nuclear | .. | 211.2 | 737.7 | 885.1 | 930.6 | 877.2 | 874.2 | .. |
| Hydro | .. | 414.3 | 453.2 | 558.2 | 511.2 | 515.7 | 533.3 | .. |
| Geothermal | .. | 2.6 | 3.1 | 4.6 | 5.2 | 5.6 | 5.5 | .. |
| Solar | .. | - | 0.0 | 0.1 | 1.5 | 3.8 | 7.4 | .. |
| Tide, wave, ocean | .. | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | .. |
| Wind | .. | 0.0 | 0.8 | 22.3 | 70.8 | 105.0 | 119.7 | .. |
| Combustible fuels | .. | 1248.4 | 1302.1 | 1591.1 | 1820.6 | 1925.9 | 1908.7 | .. |
| Other (e.g. fuel cells) | .. | - | 0.1 | 1.1 | 6.5 | 2.3 | 2.2 | .. |
| - Used for heat pumps | - | - | 0.0 | 2.3 | 2.0 | 1.8 | 1.8 | 1.8 |
| - Used for electric boilers | - | - | 0.3 | 2.5 | 1.0 | 0.9 | 0.7 | 0.8 |
| - Used for pumped storage | 13.6 | 17.8 | 29.6 | 43.0 | 50.7 | 47.4 | 45.6 | 43.2 |
| + Imports | 68.3 | 106.5 | 214.5 | 277.7 | 347.8 | 337.5 | 318.4 | 301.6 |
| - Exports | 62.6 | 90.9 | 191.3 | 273.8 | 330.1 | 333.6 | 306.7 | 287.0 |
| Electrical energy supplied | 1526.1 | 1941.4 | 2490.9 | 3019.1 | 3310.9 | 3389.7 | 3415.1 | .. |
| - Transmission & distr. losses | 115.6 | 144.8 | 175.8 | 233.3 | 242.0 | 228.3 | 231.6 | .. |
| - Statistical difference | - | - | 1.7 | 0.3 | -0.6 | -1.1 | -0.9 | .. |
| Total consumption | 1410.5 | 1796.5 | 2313.4 | 2785.5 | 3069.5 | 3162.5 | 3184.4 | .. |
| - Energy industry consumption ⁽²⁾ | 70.4 | 90.6 | 103.2 | 97.2 | 108.0 | 106.6 | 110.3 | .. |
| Final consumption | 1340.1 | 1705.9 | 2210.3 | 2688.3 | 2961.5 | 3055.9 | 3074.1 | .. |
| Industry | 735.8 | 854.9 | 1003.1 | 1133.7 | 1218.0 | 1243.6 | 1239.0 | .. |
| Transport | 39.5 | 48.0 | 61.7 | 73.2 | 75.9 | 74.0 | 75.1 | .. |
| Commercial & publ. serv. | 202.4 | 289.4 | 460.3 | 663.0 | 759.0 | 815.7 | 806.8 | .. |
| Residential | 334.9 | 471.7 | 635.2 | 761.5 | 849.9 | 860.3 | 876.2 | .. |
| Agriculture & fishing | 23.1 | 35.8 | 47.5 | 52.1 | 54.6 | 56.1 | 60.5 | .. |
| Sector non specified | 4.4 | 6.1 | 2.5 | 4.7 | 4.1 | 6.3 | 16.5 | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 1665.02 | 2056.71 | 2647.43 | 3222.21 | 3558.06 | 3606.23 | 3619.59 | 2.9 | 1.8 |
| - Hydro pumped storage | 8.17 | 10.99 | 19.91 | 30.12 | 37.46 | 35.79 | 33.66 | 5.7 | 3.0 |
| Total generation⁽¹⁾ | 1656.86 | 2045.73 | 2627.52 | 3192.09 | 3520.60 | 3570.44 | 3585.93 | 2.9 | 1.7 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 1411.07 | 1806.81 | 2403.84 | 2983.79 | 3284.83 | 3325.28 | 3333.78 | 3.4 | 1.8 |
| - Hydro pumped storage | 8.17 | 10.99 | 19.88 | 30.02 | 37.40 | 35.74 | 33.60 | 5.7 | 3.0 |
| Total generation ⁽¹⁾ | 1402.91 | 1795.83 | 2383.96 | 2953.77 | 3247.43 | 3289.54 | 3300.19 | 3.4 | 1.8 |
| Nuclear | 82.20 | 225.74 | 776.64 | 934.63 | 978.37 | 925.32 | 921.78 | 15.1 | 1.0 |
| Hydro | 331.29 | 371.11 | 401.12 | 511.86 | 459.65 | 474.78 | 494.68 | 1.2 | 1.2 |
| Geothermal | 2.50 | 2.67 | 3.31 | 4.86 | 5.71 | 5.93 | 5.89 | 1.8 | 3.3 |
| Solar, wind, tide ⁽²⁾ | 0.60 | 0.51 | 1.39 | 22.78 | 81.67 | 103.94 | 120.10 | 5.4 | 28.1 |
| Coal | 525.47 | 774.19 | 908.57 | 900.47 | 956.57 | 959.13 | 887.43 | 3.5 | -0.1 |
| Oil | 334.29 | 307.58 | 167.28 | 144.94 | 92.25 | 75.77 | 73.05 | -4.2 | -4.5 |
| Gas | 124.86 | 110.39 | 122.00 | 419.56 | 621.19 | 685.91 | 732.01 | -0.1 | 10.5 |
| Comb. renew. & waste | 1.69 | 3.64 | 3.66 | 14.67 | 52.03 | 58.78 | 65.24 | 4.9 | 17.4 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 253.95 | 249.90 | 243.59 | 238.42 | 273.23 | 280.95 | 285.81 | -0.3 | 0.9 |
| - Hydro pumped storage | - | - | 0.04 | 0.10 | 0.07 | 0.05 | 0.06 | - | 3.2 |
| Total generation ⁽¹⁾ | 253.95 | 249.90 | 243.55 | 238.32 | 273.16 | 280.90 | 285.75 | -0.3 | 0.9 |
| Nuclear | 4.23 | 4.65 | 5.54 | - | - | - | - | 1.7 | - |
| Hydro | 32.36 | 41.52 | 38.03 | 22.85 | 13.55 | 14.22 | 13.44 | 1.0 | -5.6 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 0.11 | 1.39 | 6.67 | 8.08 | 10.31 | - | 29.0 |
| Coal | 125.28 | 113.00 | 102.35 | 53.17 | 51.67 | 52.90 | 46.63 | -1.3 | -4.3 |
| Oil | 60.82 | 56.07 | 35.96 | 34.02 | 34.89 | 31.70 | 30.77 | -3.2 | -0.9 |
| Gas | 26.60 | 27.50 | 44.58 | 92.48 | 122.30 | 126.01 | 136.79 | 3.3 | 6.4 |
| Comb. renew. & waste | 4.65 | 7.17 | 17.00 | 34.41 | 44.08 | 48.00 | 47.81 | 8.4 | 5.9 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---|
| Total | 216570 e | 203333 e | 227485 e | 227184 e | 259244 e | 266908 | 272068 | 1.0 |
| Total energy | 12901 | 11999 | 42801 e | 26831 | 57765 e | 60860 | 58295 e | 1.7 |
| Coal mines | - | - | - | 3101 e | 12898 | 14298 | 11610 | - |
| Oil and gas extraction | - | - | 26 | 247 | 458 | 518 | 423 | 16.8 |
| Patent fuel plants | - | - | - | - | 29 | 26 | 27 | - |
| Coke ovens | - | - | - | 481 e | 468 | 521 | 576 | - |
| Gas works | - | - | - | - | 1504 | 1716 | 1607 | - |
| BKB | - | - | 13 | 34 | 36 | 28 | 39 | 6.3 |
| Oil refineries | 30 | 27 | 3606 | 17906 e | 28507 e | 30070 | 28747 e | 12.2 |
| Energy non specified/other | 12871 | 11972 | 39156 e | 5062 | 13865 | 13683 | 15266 e | -5.1 |
| Total industry | 160436 e | 147492 e | 139881 e | 172087 e | 168845 e | 172027 e | 171722 e | 1.1 |
| Iron and steel | 24446 e | 19688 e | 18959 e | 18617 | 24602 | 24111 | 23489 e | 1.2 |
| Chemical and petrochemical | 53850 e | 47855 e | 52278 e | 47927 e | 45558 e | 44901 e | 46281 e | -0.7 |
| Non-ferrous metals | 5991 e | 6193 e | 4845 e | 13615 e | 9638 e | 10510 e | 10277 e | 4.3 |
| Non-metallic minerals | 843 e | 844 | 934 | 5361 e | 5756 e | 5337 e | 4871 e | 9.6 |
| Transport equipment | 690 e | 584 e | 812 | 1338 | 2056 | 2030 | 1936 e | 4.9 |
| Machinery | 441 e | 472 | 1488 | 1761 e | 2357 e | 2621 e | 1549 e | 0.2 |
| Mining and quarrying | 38631 e | 37352 e | 21933 | 16050 | 1301 | 1664 | 1661 e | -13.4 |
| Food and tobacco | 4074 e | 4690 e | 6204 e | 13214 e | 15077 e | 15658 e | 16183 e | 5.5 |
| Pulp and printing | 12334 | 15867 | 19666 e | 38109 e | 46801 e | 49087 e | 49576 e | 5.3 |
| Wood and wood products | 2119 e | 2158 e | 2468 | 3179 | 3342 | 3353 | 3330 e | 1.7 |
| Construction | - | - | - | 354 | 478 | 497 | 485 e | - |
| Textile and leather | 3604 e | 2110 e | 1985 | 6598 | 4746 | 4169 | 3525 | 3.2 |
| Non specified/other industries | 13413 e | 9679 e | 8309 e | 5964 e | 7133 e | 8089 e | 8559 e | 0.2 |
| Total transport | - | - | 2853 | 4400 | 3024 | 3244 | 3302 | 0.8 |
| Rail and pipeline | - | - | - | - | 2 | 5 | 4 | - |
| Transport non specified | - | - | 2853 | 4400 | 3022 | 3239 | 3298 | 0.8 |
| Other | 43233 e | 43842 | 41950 | 23866 e | 29610 e | 30777 e | 38749 e | -0.4 |
| Commerce and pub. services | 29 e | 36 e | 1370 | 11733 e | 16586 | 19606 | 20647 e | 16.3 |
| Residential | - | - | - | 82 | 637 | 804 | 923 | - |
| Agriculture and fishing | - | - | 108 | 2342 | 4594 | 5904 | 12361 | 30.1 |
| Sector non specified | 43204 | 43806 | 40472 | 9709 e | 7793 e | 4463 e | 4818 e | -11.2 |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---|
| Total | 1616909 | 1800263 | 1814764 | 2645058 | 2245272 | 2239744 | 2193120 | 1.2 |
| Nuclear | .. | .. | 1706 | 5098 | 4848 | 4818 | 5520 | .. |
| Geothermal | .. | .. | 707 | 1503 | 1822 | 2108 | 2198 | .. |
| Coal | .. | .. | 767024 | 750592 | 731421 | 713125 | 690198 | .. |
| Oil | .. | .. | 139545 | 177959 | 159185 | 143377 | 138233 | .. |
| Gas | .. | .. | 633592 | 1076870 | 928061 | 927830 | 906960 | .. |
| Comb. renew. & waste | .. | .. | 231334 | 337253 | 370697 | 397018 | 404035 | .. |
| Non-spec. comb. fuels | .. | .. | - | 254724 | 3591 | 4668 | - | .. |
| Chemical processes | .. | .. | 697 | 7181 | 6684 | 9627 | 9571 | .. |
| Heat pumps | .. | .. | 27406 | 22962 | 22252 | 22680 | 22041 | .. |
| Electric boilers | .. | .. | 8913 | 3491 | 3224 | 2574 | 2695 | .. |
| Other sources ⁽¹⁾ | .. | .. | 3840 | 7425 | 13487 | 11919 | 11669 | .. |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 1086814 | 1276644 | 1427506 | 1793465 | 1744804 | 1763625 | .. | 1.8 |
| Nuclear | .. | .. | 1706 | 5098 | 4848 | 4818 | .. | .. |
| Geothermal | .. | .. | 707 | 1443 | 1711 | 2039 | .. | .. |
| Coal | .. | .. | 679016 | 669924 | 666707 | 664548 | .. | .. |
| Oil | .. | .. | 85650 | 70882 | 67142 | 53935 | .. | .. |
| Gas | .. | .. | 471726 | 673856 | 698736 | 705777 | .. | .. |
| Comb. renew. & waste | .. | .. | 152556 | 240078 | 271803 | 297332 | .. | .. |
| Non-spec. comb. fuels | .. | .. | - | 105080 | 3591 | 4668 | .. | .. |
| Chemical processes | .. | .. | - | - | - | - | .. | .. |
| Heat pumps | .. | .. | 27255 | 22832 | 22088 | 22494 | .. | .. |
| Electric boilers | .. | .. | 8890 | 3486 | 3220 | 2571 | .. | .. |
| Other sources ⁽¹⁾ | .. | .. | - | 786 | 4958 | 5443 | .. | .. |
| <u>Autoproducers</u> | | | | | | | | |
| Total | 530095 | 523619 | 387258 | 851593 | 500468 | 476119 | .. | -0.5 |
| Nuclear | .. | .. | - | - | - | - | .. | .. |
| Geothermal | .. | .. | - | 60 | 111 | 69 | .. | .. |
| Coal | .. | .. | 88008 | 80668 | 64714 | 48577 | .. | .. |
| Oil | .. | .. | 53895 | 107077 | 92043 | 89442 | .. | .. |
| Gas | .. | .. | 161866 | 403014 | 229325 | 222053 | .. | .. |
| Comb. renew. & waste | .. | .. | 78778 | 97175 | 98894 | 99686 | .. | .. |
| Non-spec. comb. fuels | .. | .. | - | 149644 | - | - | .. | .. |
| Chemical processes | .. | .. | 697 | 7181 | 6684 | 9627 | .. | .. |
| Heat pumps | .. | .. | 151 | 130 | 164 | 186 | .. | .. |
| Electric boilers | .. | .. | 23 | 5 | 4 | 3 | .. | .. |
| Other sources ⁽¹⁾ | .. | .. | 3840 | 6639 | 8529 | 6476 | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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**7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)**

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 319.11 | 380.45 | 365.69 | 390.86 | 447.33 | 455.92 | 448.43 | 0.8 | 1.1 |
| Coal | 195.49 | 255.43 | 270.06 | 230.82 | 244.56 | 245.86 | 225.61 | 1.9 | -1.0 |
| Oil | 92.43 | 85.86 | 47.39 | 40.82 | 29.03 | 24.73 | 24.12 | -3.9 | -3.7 |
| Gas | 28.53 | 34.09 | 39.84 | 101.52 | 141.29 | 147.30 | 158.64 | 2.0 | 8.0 |
| Comb. renew. & waste | 2.66 | 5.08 | 8.39 | 17.71 | 32.44 | 38.03 | 40.06 | 7.0 | 9.1 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 315.94 | 307.71 | 342.31 | 383.31 | 394.46 | 386.25 | .. | 1.3 |
| Coal | .. | 213.96 | 235.04 | 217.19 | 230.72 | 231.72 | 212.47 | .. | -0.6 |
| Oil | .. | 72.45 | 39.00 | 34.23 | 19.88 | 16.07 | 15.58 | .. | -5.0 |
| Gas | .. | 27.73 | 30.78 | 83.32 | 113.26 | 122.37 | 131.89 | .. | 8.4 |
| Comb. renew. & waste | .. | 1.80 | 2.89 | 7.58 | 19.44 | 24.29 | 26.30 | .. | 13.1 |

Source: IEA/OECD Energy Balances of OECD Countries.

**7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)**

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 21.51 | 62.35 | 206.81 | 247.80 | 260.22 | 246.70 | 246.06 | 14.2 | 1.0 |
| Nuclear | 19.38 | 60.05 | 203.96 | 243.61 | 255.10 | 241.26 | 240.34 | 14.8 | 0.9 |
| Geothermal | 2.13 | 2.30 | 2.84 | 4.18 | 4.91 | 5.11 | 5.08 | 1.7 | 3.3 |
| Solar | - | - | 0.00 | 0.01 | 0.22 | 0.33 | 0.65 | - | 42.4 |
| Non-Thermal | | | | | | | | | |
| Total | 29.30 | 35.53 | 37.88 | 47.98 | 47.88 | 51.17 | 54.08 | 1.5 | 2.0 |
| Hydro | 29.25 | 35.49 | 37.77 | 45.99 | 40.70 | 42.05 | 43.70 | 1.5 | 0.8 |
| Tide, wave, ocean | 0.05 | 0.04 | 0.05 | 0.05 | 0.04 | 0.04 | 0.04 | 0.1 | -0.6 |
| Wind | - | 0.00 | 0.07 | 1.92 | 7.13 | 9.06 | 10.33 | - | 32.3 |
| Other (e.g. fuel cells) | - | - | - | 0.02 | 0.01 | 0.02 | 0.01 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

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8. Electricity production from combustible fuels In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|---------|-----------|-----------|-----------|-----------|-----------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 181321 | 188332 e | 165488 e | 174615 e | 175393 | 152522 | -1.2 |
| Fuel input (TJ) | 4355604 | 4563388 e | 4110463 e | 4442240 | 4408403 | 3830573 | -1.0 |
| Electricity production (GWh) | 439163 | 486925 e | 445655 e | 460437 e | 458283 e | 409637 e | -1.0 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 325376 | 357334 e | 322295 e | 303289 | 323573 | 306494 | -0.8 |
| Fuel input (TJ) | 2846300 | 2927236 e | 2712678 e | 2547062 | 2658250 | 2505083 | -0.9 |
| Electricity production (GWh) | 260880 | 278862 e | 277051 e | 265912 e | 280181 e | 257750 e | -0.4 |
| Peat | | | | | | | |
| Fuel input (1000 t) | 3534 | 3814 | 3532 | 5083 | 5315 | 4857 | 1.4 |
| Fuel input (TJ) | 29600 | 32308 | 30112 | 46795 | 48929 | 42214 | 1.5 |
| Electricity production (GWh) | 2236 | 3025 e | 2834 | 5155 | 5705 | 4757 | 2.5 |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 303405 | 239110 e | 250409 e | 249653 | 273391 | 250416 | 0.3 |
| Electricity production (GWh) | 26101 | 22625 e | 23981 e | 22675 e | 24418 e | 23055 | 0.1 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 71990 | 39295 e | 32297 e | 19879 e | 16308 | 15856 | -4.9 |
| Fuel input (TJ) | 2869980 | 1597934 e | 1299366 e | 795382 e | 635763 | 601709 | -5.3 |
| Electricity production (GWh) | 308360 | 170814 e | 132077 e | 80760 e | 64204 | 63875 e | -5.3 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 1094719 | 1039520 e | 2848715 e | 3516615 e | 3887441 | 4265738 e | 8.2 |
| Electricity production (GWh) | 107565 | 107055 e | 348786 e | 449649 e | 510507 | 565200 | 9.7 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 16003 | 40820 e | 131730 e | 243357 | 276906 | 17.2 |
| Electricity production (GWh) | - | 1487 e | 3463 e | 11530 e | 18852 | 21823 | 16.1 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 24560 | 24105 | 49775 e | 8590 e | 13656 | 11319 | -4.1 |
| Electricity production (GWh) | 2585 | 2654 | 4541 e | 796 | 867 | 766 | -6.7 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 35978 e | 47819 e | 129687 e | 139980 e | 229994 | 236033 | 9.3 |
| Electricity production (GWh) | 3105 e | 3762 e | 10115 e | 8826 e | 16398 | 16575 | 8.6 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 8830 e | 65287 e | 112453 e | 244023 | 251356 | 20.4 |
| Electricity production (GWh) | - | 445 | 5435 e | 9244 e | 17317 | 18276 | 22.9 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 1151945 | 1077654 e | 1253938 e | 1314984 e | 1396732 e | 1381714 | 1.4 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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9. Electricity and heat produced for sale from combustible fuels in combined heat and power plants (CHP plants)

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|----------|-----------|-----------|-----------|----------|-----------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 95159 | 90785 e | 64263 e | 76614 e | 74186 | 68920 | -1.5 |
| Fuel input (TJ) | 1933892 | 2006396 e | 1460363 e | 1763957 | 1686607 | 1570567 | -1.4 |
| Electricity production (GWh) | 125653 | 144013 e | 122136 e | 155656 | 148715 e | 137830 | -0.2 |
| CHP Heat production (TJ) | 566114 e | 588583 e | 382538 e | 442247 e | 419147 | 398569 | -2.1 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 55527 | 110827 e | 88445 e | 97593 e | 91765 | 98439 | -0.7 |
| Fuel input (TJ) | 452337 | 982818 e | 821915 e | 863936 | 829599 | 887809 | -0.6 |
| Electricity production (GWh) | 25901 | 65441 e | 70646 e | 83423 | 78960 | 85394 | 1.5 |
| CHP Heat production (TJ) | 155598 | 294246 e | 170060 e | 104017 e | 105616 | 108101 | -5.4 |
| Peat | | | | | | | |
| Fuel input (1000 t) | 3192 | 2375 | 3846 | 5509 | 5653 | 5324 | 4.6 |
| Fuel input (TJ) | 26726 | 25768 | 40354 | 57247 | 58027 | 55047 | 4.3 |
| Electricity production (GWh) | 4194 | 2050 e | 2968 | 4080 | 4221 | 3849 | 3.6 |
| CHP Heat production (TJ) | 6866 | 14414 e | 23226 | 32900 | 32984 | 32351 | 4.6 |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 60539 | 104516 e | 91429 e | 133747 | 136328 | 141016 | 1.7 |
| Electricity production (GWh) | 3060 | 7969 e | 8377 e | 10899 | 11542 e | 11790 | 2.2 |
| CHP Heat production (TJ) | 25865 e | 31709 e | 21670 e | 32042 | 24215 | 29417 | -0.4 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 16603 | 9585 e | 13411 e | 20645 e | 19360 | 18234 | 3.6 |
| Fuel input (TJ) | 668516 | 388717 e | 418127 e | 527665 e | 469361 | 429925 | 0.6 |
| Electricity production (GWh) | 55294 | 32426 e | 46881 e | 46375 e | 43256 | 39937 | 1.2 |
| CHP Heat production (TJ) | 209239 e | 103403 e | 88146 e | 177976 | 130440 | 119218 | 0.8 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 395959 | 699456 e | 1613127 e | 2891203 | 2772938 | 2803120 e | 8.0 |
| Electricity production (GWh) | 30326 | 59528 e | 163248 e | 293846 e | 301410 e | 303598 e | 9.5 |
| CHP Heat production (TJ) | 97176 | 169848 e | 473858 e | 874552 | 718832 | 710833 | 8.3 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 22492 | 74080 e | 179140 e | 423843 e | 353097 | 383417 | 9.6 |
| Electricity production (GWh) | 1690 e | 9651 e | 17259 e | 34954 e | 31602 | 33715 | 7.2 |
| CHP Heat production (TJ) | 7069 e | 13788 e | 66307 | 131906 e | 132123 | 144011 | 13.9 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 5289 | 8553 | 22453 | 23484 | 29299 | 22180 | 5.4 |
| Electricity production (GWh) | 161 | 301 | 1724 | 2438 e | 2784 | 2162 | 11.6 |
| CHP Heat production (TJ) | 3077 | 3693 | 6004 | 5301 e | 4499 | 4536 | 1.1 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 21105 | 67922 | 140963 e | 278046 e | 274825 | 281224 | 8.2 |
| Electricity production (GWh) | 1313 e | 1810 e | 5387 e | 18238 e | 13767 | 14422 | 12.2 |
| CHP Heat production (TJ) | 3895 e | 36430 e | 76114 e | 118036 e | 112521 | 122212 | 7.0 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 5647 | 11531 e | 107380 e | 52864 | 53434 | 13.3 |
| Electricity production (GWh) | - | 546 | 1155 | 10080 e | 5193 | 5318 | 13.5 |
| CHP Heat production (TJ) | - | 123 | 1701 | 7771 e | 6519 | 6357 | 24.5 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 247592 | 323735 e | 439781 e | 659989 e | 641450 e | 638015 | 3.8 |
| CHP Heat production (TJ) | 1109184 | 1256237 e | 1309624 e | 2034960 e | 1688378 | 1677904 | 1.6 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|----------|----------|----------|----------|----------|----------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 18524 | 19886 e | 8130 e | 6540 | 6951 | 6735 | -5.8 |
| Fuel input (TJ) | 417415 | 427560 e | 180359 e | 153050 | 163056 e | 157942 | -5.4 |
| Heat production (TJ) | 281233 | 306580 e | 146408 e | 119033 | 129108 | 125920 | -4.8 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 4739 | 2769 e | 727 e | 574 e | 965 | 681 | -7.5 |
| Fuel input (TJ) | 54336 | 30408 e | 10275 e | 8395 e | 11510 | 8633 | -6.8 |
| Heat production (TJ) | 39968 | 21674 e | 7748 e | 6362 e | 7824 | 7397 | -5.8 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | 1029 | 582 | 626 | 884 | 801 | -1.4 |
| Fuel input (TJ) | - | 11849 | 6587 | 6588 | 10627 | 9538 | -1.2 |
| Heat production (TJ) | - | 10121 e | 5730 | 5617 | 9115 | 7976 | -1.3 |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 7266 | 6615 e | 11867 e | 5770 | 5820 | 5658 | -0.9 |
| Heat production (TJ) | 5116 e | 4629 e | 9644 e | 3414 | 3412 | 3394 | -1.7 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 2193 | 1566 e | 1622 e | 960 e | 823 | 697 | -4.4 |
| Fuel input (TJ) | 90693 | 64430 e | 66849 e | 40816 e | 34390 e | 29129 | -4.3 |
| Heat production (TJ) | 69245 e | 50197 e | 51399 e | 33585 e | 28745 e | 24159 | -4.0 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 108298 | 104584 e | 212297 e | 228122 e | 341322 | 313088 e | 6.3 |
| Heat production (TJ) | 77745 e | 74669 e | 159734 e | 162303 e | 209229 | 216997 | 6.1 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 1073 | 28435 e | 51982 | 89632 e | 86675 | 91452 | 6.7 |
| Heat production (TJ) | 750 e | 22852 e | 44902 | 74585 e | 70205 | 74433 | 6.8 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 476 | 181 | 8926 e | 855 | 1200 | 1362 | 11.9 |
| Heat production (TJ) | 323 | 132 | 7945 e | 684 | 962 | 1174 | 12.9 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 26121 e | 69870 e | 39702 e | 39094 e | 56311 | 60974 | -0.8 |
| Heat production (TJ) | 14148 e | 43177 e | 27378 e | 27350 e | 38474 | 40260 | -0.4 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 44 | 1191 | 3486 e | 6608 | 5064 | 30.2 |
| Heat production (TJ) | - | 34 | 983 | 2940 e | 5394 | 4035 | 30.4 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | 507252 e | 536178 e | 461871 e | 568445 e | 504577 | 508114 | -0.3 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

IEA EUROPE

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 1021.04 | 1079.37 | 1111.96 | 1215.42 | 1298.12 | 1279.74 | 1277.68 | 0.5 | 0.8 |
| Geothermal | 0.05 | 0.07 | 0.84 | 1.27 | 1.66 | 1.72 | 1.89 | 18.0 | 4.6 |
| Solar thermal | - | 0.01 | 0.17 | 0.67 | 1.16 | 1.33 | 1.48 | - | 12.7 |
| Coal | 172.52 | 150.13 | 121.49 | 61.65 | 56.91 | 56.89 | 55.56 | -2.0 | -4.3 |
| Oil | 576.68 | 550.88 | 514.31 | 564.17 | 577.19 | 565.55 | 561.15 | -0.7 | 0.5 |
| Gas | 107.70 | 166.59 | 203.63 | 267.58 | 286.34 | 280.07 | 280.02 | 3.8 | 1.8 |
| Comb. renew. & waste | 28.25 | 30.49 | 44.19 | 50.79 | 59.81 | 65.05 | 67.41 | 2.7 | 2.4 |
| Electricity | 115.25 | 146.71 | 190.08 | 231.19 | 260.05 | 262.80 | 264.37 | 3.0 | 1.8 |
| Heat | 20.59 | 34.49 | 37.25 | 38.09 | 55.00 | 46.33 | 45.80 | 3.6 | 1.2 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 372.43 | 356.11 | 318.24 | 321.32 | 324.87 | 326.22 | 308.29 | -0.9 | -0.2 |
| Geothermal | - | - | - | 0.01 | 0.01 | 0.01 | 0.02 | - | - |
| Solar thermal | - | - | 0.01 | 0.10 | 0.12 | 0.13 | 0.13 | - | 16.7 |
| Coal | 88.77 | 77.52 | 69.96 | 46.35 | 41.05 | 41.64 | 35.62 | -1.4 | -3.7 |
| Oil | 150.20 | 116.80 | 56.82 | 52.47 | 48.79 | 46.40 | 42.63 | -5.6 | -1.6 |
| Gas | 54.50 | 67.97 | 77.70 | 98.24 | 90.26 | 92.67 | 86.12 | 2.1 | 0.6 |
| Comb. renew. & waste | 4.92 | 5.87 | 14.36 | 17.64 | 19.24 | 22.10 | 21.79 | 6.5 | 2.3 |
| Electricity | 63.28 | 73.52 | 86.26 | 97.50 | 104.71 | 106.95 | 106.56 | 1.8 | 1.2 |
| Heat | 10.77 | 14.43 | 13.14 | 9.01 | 20.67 | 16.32 | 15.43 | 1.2 | 0.9 |
| Transport | 173.81 | 208.40 | 263.95 | 315.75 | 341.59 | 347.70 | 341.45 | 2.5 | 1.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 6.85 | 2.54 | 0.21 | 0.01 | 0.01 | 0.00 | 0.01 | -18.6 | -18.6 |
| Oil | 163.39 | 201.16 | 258.12 | 308.01 | 327.93 | 331.67 | 322.88 | 2.7 | 1.3 |
| Gas | 0.16 | 0.57 | 0.30 | 0.73 | 1.72 | 1.90 | 2.21 | 4.0 | 11.6 |
| Comb. renew. & waste | 0.00 | 0.00 | 0.01 | 0.71 | 5.53 | 7.75 | 9.90 | 5.4 | 50.7 |
| Electricity | 3.40 | 4.13 | 5.31 | 6.30 | 6.40 | 6.36 | 6.46 | 2.7 | 1.1 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 95.48 | 104.76 | 110.31 | 123.32 | 144.31 | 142.32 | 150.76 | 0.9 | 1.8 |
| Geothermal | - | - | 0.09 | 0.10 | 0.13 | 0.13 | 0.15 | - | 2.9 |
| Solar thermal | - | - | 0.02 | 0.05 | 0.09 | 0.10 | 0.10 | - | 10.6 |
| Coal | 13.44 | 16.18 | 12.51 | 1.40 | 1.45 | 1.25 | 2.43 | -0.4 | -8.7 |
| Oil | 57.49 | 50.48 | 27.65 | 22.67 | 21.87 | 18.61 | 22.51 | -4.2 | -1.1 |
| Gas | 5.52 | 10.05 | 26.68 | 35.04 | 44.26 | 41.91 | 45.49 | 9.7 | 3.0 |
| Comb. renew. & waste | 0.81 | 1.05 | 0.31 | 1.23 | 1.85 | 2.01 | 2.00 | -5.5 | 10.9 |
| Electricity | 17.41 | 24.89 | 39.59 | 57.02 | 69.31 | 70.15 | 69.38 | 5.0 | 3.2 |
| Heat | 0.82 | 2.12 | 3.47 | 5.80 | 5.35 | 8.15 | 8.70 | 8.9 | 5.2 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

IEA EUROPE

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 241.71 | 256.23 | 277.59 | 299.26 | 314.21 | 299.65 | 313.42 | 0.8 | 0.7 |
| Geothermal | 0.05 | 0.07 | 0.48 | 0.94 | 1.27 | 1.32 | 1.47 | 14.2 | 6.4 |
| Solar thermal | - | 0.01 | 0.13 | 0.45 | 0.89 | 1.04 | 1.18 | - | 13.3 |
| Coal | 55.31 | 47.78 | 34.28 | 11.51 | 11.73 | 11.31 | 14.06 | -2.8 | -4.8 |
| Oil | 101.07 | 81.47 | 65.69 | 63.07 | 56.54 | 45.09 | 50.85 | -2.5 | -1.4 |
| Gas | 30.31 | 52.86 | 75.77 | 109.18 | 124.12 | 118.49 | 121.66 | 5.5 | 2.7 |
| Comb. renew. & waste | 18.42 | 19.91 | 27.88 | 29.85 | 31.62 | 31.63 | 32.15 | 2.5 | 0.8 |
| Electricity | 28.80 | 40.57 | 54.63 | 65.49 | 74.36 | 73.99 | 75.35 | 3.8 | 1.8 |
| Heat | 7.75 | 13.57 | 18.74 | 18.78 | 13.68 | 16.78 | 16.70 | 5.3 | -0.6 |
| Agriculture & fishing | 20.66 | 26.08 | 31.33 | 31.90 | 30.46 | 30.23 | 31.09 | 2.5 | -0.0 |
| Geothermal | 0.00 | 0.00 | 0.01 | 0.02 | 0.04 | 0.04 | 0.04 | 35.3 | 9.5 |
| Solar thermal | - | - | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | - | 28.0 |
| Coal | 1.61 | 1.77 | 1.67 | 1.07 | 1.21 | 1.05 | 1.14 | 0.2 | -2.1 |
| Oil | 16.49 | 20.26 | 20.29 | 20.56 | 18.77 | 18.68 | 19.62 | 1.2 | -0.2 |
| Gas | 0.13 | 0.34 | 3.81 | 3.97 | 3.74 | 3.77 | 3.21 | 22.3 | -1.0 |
| Comb. renew. & waste | 0.08 | 0.14 | 0.78 | 1.33 | 1.56 | 1.54 | 1.56 | 14.3 | 3.9 |
| Electricity | 1.98 | 3.08 | 4.08 | 4.48 | 4.80 | 4.82 | 5.20 | 4.3 | 1.4 |
| Heat | 0.37 | 0.49 | 0.70 | 0.47 | 0.32 | 0.30 | 0.31 | 3.8 | -4.5 |
| Other | 35.80 | 37.62 | 10.99 | 12.34 | 26.73 | 15.10 | 16.86 | -6.7 | 2.4 |
| Geothermal | - | - | 0.26 | 0.21 | 0.21 | 0.21 | 0.21 | - | -1.1 |
| Solar thermal | - | - | 0.02 | 0.06 | 0.04 | 0.05 | 0.06 | - | 5.3 |
| Coal | 3.45 | 2.19 | 1.16 | 0.31 | 0.11 | 0.09 | 0.75 | -6.2 | -2.4 |
| Oil | 14.84 | 5.16 | 1.92 | 0.74 | 1.17 | 1.01 | 0.89 | -11.3 | -4.2 |
| Gas | 12.25 | 22.36 | 5.35 | 6.53 | 9.74 | 8.41 | 8.85 | -4.8 | 2.8 |
| Comb. renew. & waste | 4.01 | 3.51 | 0.85 | 0.03 | 0.01 | 0.01 | 0.01 | -8.7 | -20.7 |
| Electricity | 0.38 | 0.52 | 0.21 | 0.40 | 0.47 | 0.54 | 1.42 | -3.4 | 11.2 |
| Heat | 0.88 | 3.88 | 1.21 | 4.04 | 14.98 | 4.78 | 4.67 | 1.9 | 7.8 |
| Non-energy use⁽¹⁾ | 81.15 | 90.17 | 99.54 | 111.53 | 115.96 | 118.53 | 115.81 | 1.21 | 0.84 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

IEA EUROPE

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| TFC (Mtoe) | 1021.04 | 1079.37 | 1111.96 | 1215.42 | 1293.73 | 1298.12 | 1279.74 | 1277.68 |
| Total industry (Mtoe) | 372.43 | 356.11 | 318.24 | 321.32 | 328.21 | 324.87 | 326.22 | 308.29 |
| Iron and steel | 74.36 | 63.11 | 52.77 | 44.48 | 41.64 | 42.01 | 42.14 | 40.96 |
| Chem. and petrochemical | 64.82 | 62.69 | 57.41 | 57.05 | 58.76 | 55.79 | 58.95 | 54.47 |
| Non-ferrous metals | 12.66 | 15.01 | 13.62 | 13.93 | 14.41 | 14.20 | 14.19 | 13.34 |
| Non-metallic minerals | 45.84 | 46.09 | 41.52 | 43.52 | 43.42 | 42.77 | 44.28 | 43.69 |
| Transport equipment | 8.37 | 8.56 | 7.97 | 9.32 | 9.02 | 8.79 | 9.15 | 8.81 |
| Machinery | 22.44 | 24.10 | 22.81 | 19.17 | 20.11 | 19.83 | 19.90 | 20.16 |
| Mining and quarrying | 8.13 | 7.85 | 6.42 | 3.64 | 3.35 | 3.21 | 3.31 | 3.10 |
| Food and tobacco | 26.26 | 29.04 | 27.96 | 31.17 | 30.38 | 29.64 | 30.59 | 29.58 |
| Paper, pulp and printing | 24.63 | 24.36 | 27.86 | 36.65 | 36.65 | 37.42 | 40.01 | 37.58 |
| Wood and wood products | 4.47 | 4.78 | 5.18 | 6.20 | 6.50 | 6.44 | 7.67 | 7.89 |
| Construction | 7.02 | 6.91 | 6.12 | 7.23 | 8.22 | 8.36 | 7.85 | 8.92 |
| Textile and leather | 14.97 | 14.12 | 11.82 | 11.58 | 9.10 | 8.68 | 8.09 | 7.03 |
| Non specified/other | 58.46 | 49.50 | 36.79 | 37.39 | 46.65 | 47.73 | 40.09 | 32.75 |
| Electricity consumption (Mtoe) | 115.25 | 146.71 | 190.08 | 231.19 | 254.69 | 260.05 | 262.80 | 264.37 |
| Total industry (Mtoe) | 63.28 | 73.52 | 86.26 | 97.50 | 104.75 | 104.71 | 106.95 | 106.56 |
| Iron and steel | 9.65 | 10.74 | 10.57 | 11.93 | 12.39 | 12.82 | 12.93 | 12.62 |
| Chem. and petrochemical | 15.40 | 16.76 | 17.67 | 17.69 | 18.26 | 17.70 | 17.80 | 17.72 |
| Non-ferrous metals | 6.18 | 8.09 | 8.09 | 8.15 | 9.05 | 8.75 | 8.92 | 8.88 |
| Non-metallic minerals | 3.98 | 4.78 | 5.84 | 7.22 | 7.49 | 7.55 | 7.78 | 8.03 |
| Transport equipment | 2.27 | 2.80 | 3.14 | 4.54 | 4.65 | 4.69 | 4.69 | 4.70 |
| Machinery | 5.11 | 6.09 | 8.57 | 8.29 | 8.79 | 9.06 | 9.12 | 9.77 |
| Mining and quarrying | 1.67 | 1.92 | 1.94 | 1.32 | 1.34 | 1.42 | 1.43 | 1.36 |
| Food and tobacco | 3.25 | 4.41 | 6.81 | 8.86 | 9.81 | 9.88 | 10.06 | 10.01 |
| Paper, pulp and printing | 5.69 | 6.41 | 9.35 | 12.17 | 13.09 | 13.26 | 12.97 | 12.74 |
| Wood and wood products | 1.03 | 1.38 | 1.78 | 1.95 | 2.31 | 2.33 | 2.36 | 2.38 |
| Construction | 0.58 | 0.86 | 0.98 | 1.14 | 1.37 | 1.47 | 1.57 | 1.59 |
| Textile and leather | 3.46 | 3.55 | 3.96 | 4.07 | 3.74 | 3.60 | 3.64 | 3.30 |
| Non specified/other | 5.02 | 5.75 | 7.56 | 10.18 | 12.46 | 12.17 | 13.69 | 13.45 |
| Total industry (TWh) | 735.82 | 854.93 | 1003.08 | 1133.74 | 1217.99 | 1217.54 | 1243.59 | 1239.04 |
| Iron and steel | 112.20 | 124.90 | 122.93 | 138.67 | 144.01 | 149.02 | 150.37 | 146.70 |
| Chem. and petrochemical | 179.09 | 194.87 | 205.47 | 205.72 | 212.34 | 205.84 | 206.92 | 206.10 |
| Non-ferrous metals | 71.84 | 94.03 | 94.11 | 94.73 | 105.22 | 101.72 | 103.77 | 103.23 |
| Non-metallic minerals | 46.23 | 55.54 | 67.90 | 83.93 | 87.05 | 87.80 | 90.41 | 93.37 |
| Transport equipment | 26.39 | 32.51 | 36.54 | 52.85 | 54.07 | 54.54 | 54.51 | 54.68 |
| Machinery | 59.36 | 70.78 | 99.65 | 96.36 | 102.18 | 105.34 | 105.99 | 113.55 |
| Mining and quarrying | 19.38 | 22.30 | 22.56 | 15.30 | 15.57 | 16.47 | 16.64 | 15.86 |
| Food and tobacco | 37.83 | 51.22 | 79.19 | 102.98 | 114.07 | 114.92 | 116.95 | 116.34 |
| Paper, pulp and printing | 66.19 | 74.49 | 108.67 | 141.49 | 152.24 | 154.22 | 150.82 | 148.13 |
| Wood and wood products | 11.98 | 16.10 | 20.74 | 22.68 | 26.88 | 27.12 | 27.46 | 27.73 |
| Construction | 6.70 | 10.00 | 11.37 | 13.28 | 15.92 | 17.08 | 18.27 | 18.53 |
| Textile and leather | 40.24 | 41.30 | 46.04 | 47.36 | 43.50 | 41.91 | 42.29 | 38.39 |
| Non specified/other | 58.39 | 66.90 | 87.91 | 118.39 | 144.94 | 141.56 | 159.20 | 156.44 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

IEA EUROPE

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Total imports⁽¹⁾ | 68330 | 106547 | 214484 | 203391 | 277719 | 347751 | 336625 | 337539 | 318448 |
| Imports from: | | | | | | | | | |
| Total OECD | 16611 | 40995 | 170643 | 192604 | 260550 | 312483 | 302478 | 309487 | 285836 |
| Austria | 498 | 991 | 6910 | 8597 | 12517 | 20636 | 16815 | 17310 | 16863 |
| Belgium | 89 | 7810 | 4488 | 3550 | 4502 | 8008 | 8684 | 9038 | 6537 |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | 2975 | 6116 | 18634 | 24404 | 23413 | 26350 | 19986 |
| Denmark | 289 | 1372 | 4940 | 5648 | 8177 | 11629 | 13617 | 11172 | 11006 |
| Finland | 260 | 1163 | 362 | 276 | 1004 | 1524 | 2542 | 2675 | 3147 |
| France | 2496 | 4338 | 55503 | 77740 | 77677 | 66651 | 69793 | 66323 | 56967 |
| Germany | 1238 | 5067 | 22160 | 27167 | 39913 | 59655 | 64068 | 61138 | 59783 |
| Greece | - | - | - | - | - | 713 | 945 | 174 | 209 |
| Hungary | - | - | 212 | 622 | 843 | 854 | 1063 | 243 | 722 |
| Ireland | - | - | - | 30 | 41 | 1 | 10 | 53 | 152 |
| Italy | 318 | 736 | 253 | 357 | 470 | 1146 | 1619 | 2416 | 3362 |
| Luxembourg | - | - | 965 | 778 | 738 | 2367 | 2479 | 2084 | 1629 |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | 215 | 3906 | 3499 | 3902 | 4031 | 5398 | 5990 | 5568 | 9272 |
| Norway | 5401 | 1503 | 16413 | 8573 | 20486 | 15692 | 7728 | 14370 | 15700 |
| Poland | - | 828 | 7878 | 7150 | 9658 | 16110 | 15669 | 13076 | 9632 |
| Portugal | 78 | 514 | 1697 | 1742 | 3767 | 2801 | 3175 | 2153 | 1314 |
| Slovak Republic | 303 | 549 | 778 | 2484 | 8825 | 8832 | 8635 | 9058 | 7487 |
| Spain | 2239 | 3631 | 3606 | 3031 | 5293 | 10378 | 10098 | 10748 | 12400 |
| Sweden | 20 | 1321 | 14605 | 8627 | 12955 | 21129 | 13032 | 15992 | 16480 |
| Switzerland | 3071 | 7247 | 23354 | 26168 | 29785 | 31718 | 30417 | 35651 | 31511 |
| Turkey | - | - | - | - | - | - | - | 89 | - |
| United Kingdom | 96 | 19 | 45 | 46 | 1234 | 2837 | 2686 | 3806 | 1677 |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | 5384 | 12150 | 19607 | 10787 | 16878 | 33922 | 32779 | 27024 | 30918 |
| Albania | - | 151 | 165 | 198 | 50 | 15 | 26 | - | - |
| Azerbaijan | - | - | - | - | - | - | - | 15 | 94 |
| Belarus | - | - | - | - | 163 | 874 | 1045 | - | - |
| Bulgaria | - | 750 | 320 | 652 | 4364 | 4543 | 4460 | 4293 | 4628 |
| Croatia | - | - | 1 | 1 | - | - | 54 | - | 5 |
| Estonia | - | - | - | - | - | - | 4 | 1921 | 2250 |
| F.Y.R. of Macedonia | - | - | - | - | - | 795 | 1201 | 901 | 1188 |
| Georgia | - | 649 | 176 | - | 204 | 101 | 40 | 216 | 215 |
| Romania | 1428 | 955 | - | 283 | - | 1187 | 1432 | 252 | 720 |
| Russian Federation | 46 | 49 | 4531 | 4839 | 4755 | 11528 | 11767 | 10362 | 11059 |
| Serbia | 115 | 545 | 891 | 496 | 612 | 18 | 1 | - | - |
| Slovenia | - | 725 | 1363 | 816 | 4554 | 8522 | 6443 | 3817 | 5599 |
| Turkmenistan | - | - | - | - | - | 535 | 533 | 633 | 450 |
| Ukraine | 3795 | 8326 | 12160 | 3502 | 2176 | 5804 | 5773 | 4614 | 4710 |
| Non-specified/others | 46335 | 53402 | 24234 | - | 291 | 1346 | 1368 | 1028 | 1694 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

IEA EUROPE

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Total exports⁽¹⁾ | 62585 | 90906 | 191323 | 197785 | 273760 | 330061 | 320618 | 333577 | 306718 |
| Exports to: | | | | | | | | | |
| Total OECD | 26328 | 37668 | 168575 | 192969 | 260198 | 312690 | 303724 | 309346 | 286344 |
| Austria | 614 | 1067 | 7789 | 9750 | 13922 | 22487 | 22229 | 23436 | 22333 |
| Belgium | 1320 | 1086 | 2322 | 6058 | 11557 | 14313 | 18851 | 15848 | 17177 |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | 47 | 4405 | 8699 | 12324 | 11461 | 10209 | 8523 |
| Denmark | 918 | 1841 | 12106 | 3825 | 8571 | 13035 | 6687 | 10225 | 12432 |
| Finland | 4136 | 678 | 6481 | 3873 | 8365 | 7357 | 2515 | 3290 | 2933 |
| France | 2686 | 9845 | 7019 | 3256 | 3676 | 7986 | 8560 | 10358 | 10563 |
| Germany | 3211 | 3930 | 24998 | 39439 | 45610 | 52657 | 45352 | 43379 | 38626 |
| Greece | - | - | - | - | - | 272 | 453 | 1218 | 1810 |
| Hungary | - | - | 233 | 1288 | 7826 | 9616 | 9056 | 10513 | 8304 |
| Ireland | - | - | - | - | 133 | 2074 | 1788 | 1382 | 373 |
| Italy | 761 | 1425 | 34226 | 37900 | 40408 | 42560 | 41303 | 45868 | 38867 |
| Luxembourg | 913 | 1073 | 4364 | 5651 | 6409 | 5302 | 5692 | 5725 | 5666 |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | 1288 | 10 | 12657 | 15497 | 21835 | 23691 | 27353 | 23149 | 25231 |
| Norway | 165 | 991 | 407 | 1911 | 1231 | 3434 | 8373 | 4144 | 1824 |
| Poland | - | 4 | 13 | 4088 | 2494 | 3081 | 2914 | 7100 | 7673 |
| Portugal | 132 | 2342 | 1734 | 2661 | 4698 | 9630 | 8633 | 9650 | 10753 |
| Slovak Republic | 552 | 3652 | 4602 | 2101 | 5967 | 7822 | 8568 | 13476 | 7830 |
| Spain | 322 | 2337 | 3209 | 7632 | 12271 | 10366 | 9393 | 9060 | 5890 |
| Sweden | 5256 | 1825 | 12749 | 8221 | 17688 | 13953 | 19275 | 17494 | 14686 |
| Switzerland | 3893 | 5540 | 21694 | 19083 | 24070 | 38255 | 33446 | 34410 | 31100 |
| Turkey | - | - | - | - | - | - | - | - | 30 |
| United Kingdom | 161 | 22 | 11925 | 16330 | 14768 | 12475 | 11822 | 9412 | 13720 |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | 87 | 265 | 3980 | 4359 | 10725 | 13147 | 11119 | 16967 | 12446 |
| Albania | - | - | 541 | 391 | 1111 | 1056 | 978 | 1773 | 1657 |
| Azerbaijan | - | - | - | 495 | 437 | 384 | 326 | 15 | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | 573 | 9 | 205 | - | - | - | - |
| Croatia | - | - | - | 117 | 4472 | 6690 | 5561 | 6537 | 5300 |
| Estonia | - | - | - | - | - | - | 7 | 21 | 10 |
| F.Y.R. of Macedonia | - | - | - | - | - | 70 | 15 | 111 | 95 |
| Georgia | - | - | 122 | 178 | - | 9 | 107 | 118 | 54 |
| Romania | 2 | 15 | 256 | 88 | - | 146 | 29 | 379 | 105 |
| Russian Federation | - | - | - | 1 | - | - | - | - | - |
| Serbia | 58 | 154 | 389 | 258 | 1189 | 1693 | 1519 | 3430 | 2653 |
| Slovenia | 27 | 72 | 2089 | 2805 | 3307 | 1349 | 846 | 1733 | 1309 |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | 24 | 10 | 17 | 4 | 1750 | 1731 | 2850 | 1263 |
| Non-specified/others | 36170 | 52973 | 18768 | 457 | 2837 | 4224 | 5775 | 7264 | 7928 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

IEA EUROPE

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|--------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total Capacity ⁽¹⁾ | 327.85 | 416.77 | 557.67 | 604.75 | 674.14 | 739.92 | 762.64 | 779.87 | 800.10 |
| Nuclear | 14.15 | 42.05 | 120.52 | 127.58 | 133.28 | 132.95 | 131.75 | 130.90 | 131.15 |
| Hydro | 99.11 | 118.53 | 150.32 | 162.99 | 175.59 | 178.85 | 180.89 | 183.54 | 185.04 |
| <i>of which: pumped storage</i> | <i>2.36</i> | <i>6.49</i> | <i>29.40</i> | <i>35.64</i> | <i>37.57</i> | <i>38.07</i> | <i>39.56</i> | <i>39.99</i> | <i>41.80</i> |
| Geothermal | 0.38 | 0.43 | 0.52 | 0.50 | 0.62 | 0.70 | 0.72 | 0.72 | 0.73 |
| Solar | - | - | 0.01 | 0.05 | 0.17 | 1.64 | 3.12 | 4.75 | 9.36 |
| Tide, wave, ocean | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| Wind | - | - | 0.41 | 1.08 | 12.27 | 38.92 | 45.58 | 53.28 | 60.75 |
| Other (e.g. fuel cells) | - | - | - | 0.03 | 0.17 | 0.27 | 0.22 | 0.42 | 0.42 |
| Combustible fuels | 213.97 | 255.53 | 285.66 | 312.29 | 351.80 | 386.36 | 400.11 | 406.02 | 412.39 |
| <i>of which ⁽²⁾:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid fuels | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Comb. renew. & waste | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / liquid / gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Internal combustion | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Gas turbine | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Combined cycle | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Other | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Capacity data are not available for Czech Republic before 1993 and for Slovak Republic before 1995.

(2) Breakdown of electrical capacity by type of fuel are shown in the individual country chapters.

Note: Please refer to notes in the introductory information for data coverage.

IEA EUROPE

15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total Capacity ⁽¹⁾ | 49.37 | 51.46 | 52.99 | 59.12 | 47.90 | 53.11 | 53.37 | 54.90 | 57.77 |
| Nuclear | 0.54 | 0.84 | 0.77 | 0.54 | - | - | - | - | - |
| Hydro | 6.62 | 7.06 | 9.13 | 9.00 | 3.83 | 3.38 | 3.45 | 3.48 | 3.58 |
| <i>of which: pumped storage</i> | - | - | 0.07 | 0.23 | 0.27 | 0.14 | 0.14 | 0.15 | 0.16 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.02 | 0.04 | 0.13 | 0.14 | 0.17 | 0.22 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.06 | 1.37 | 0.49 | 1.83 | 2.32 | 2.99 | 4.14 |
| Other (e.g. fuel cells) | - | - | - | 0.11 | 0.03 | 0.19 | 0.20 | 0.22 | 0.22 |
| Combustible fuels | 42.21 | 43.57 | 43.03 | 48.09 | 43.51 | 47.57 | 47.25 | 48.04 | 49.62 |
| <i>of which</i> ⁽²⁾ : | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid fuels | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Comb. renew. & waste | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Liquid / natural gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Solid / liquid / gas | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Internal combustion | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Gas turbine | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Combined cycle | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Other | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Capacity data are not available for Czech Republic before 1993 and for Slovak Republic before 2001.

(2) Breakdown of electrical capacity by type of fuel are shown in the individual country chapters.

Note: Please refer to notes in the introductory information for data coverage.

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Figure 1. Total final consumption by fuel

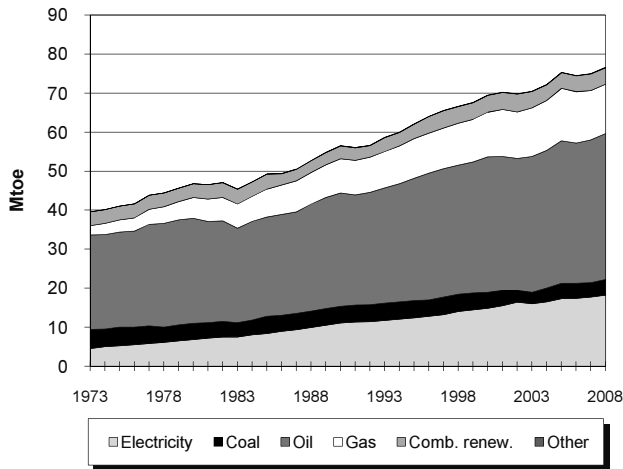


Figure 2. Electricity generation by fuel

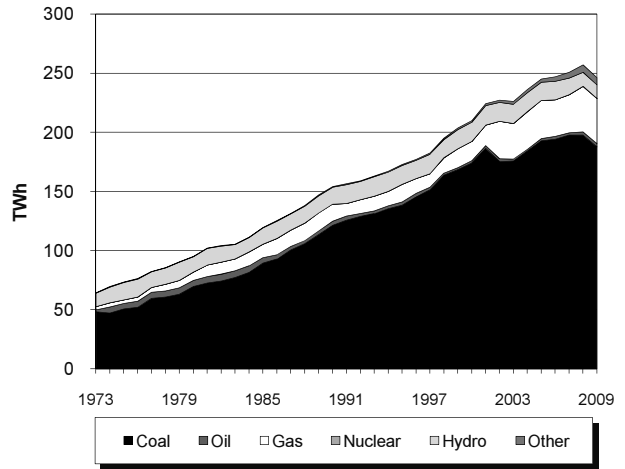


Figure 3. Electricity consumption by sector

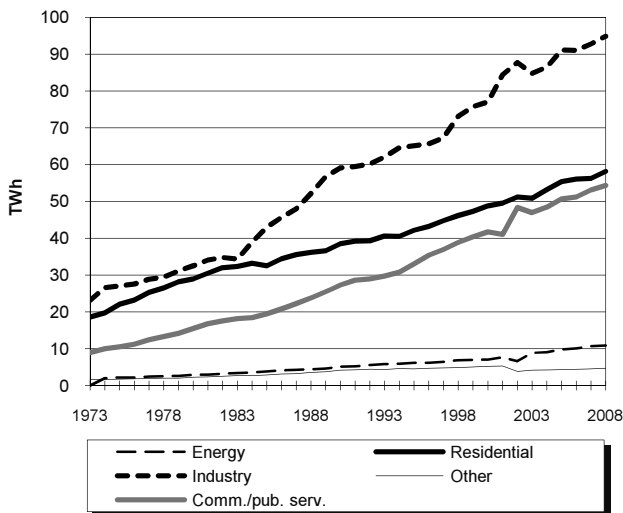


Figure 4. Electricity indicators

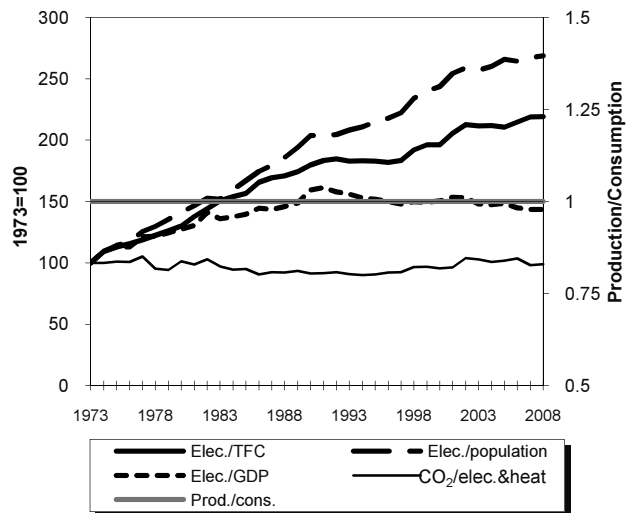
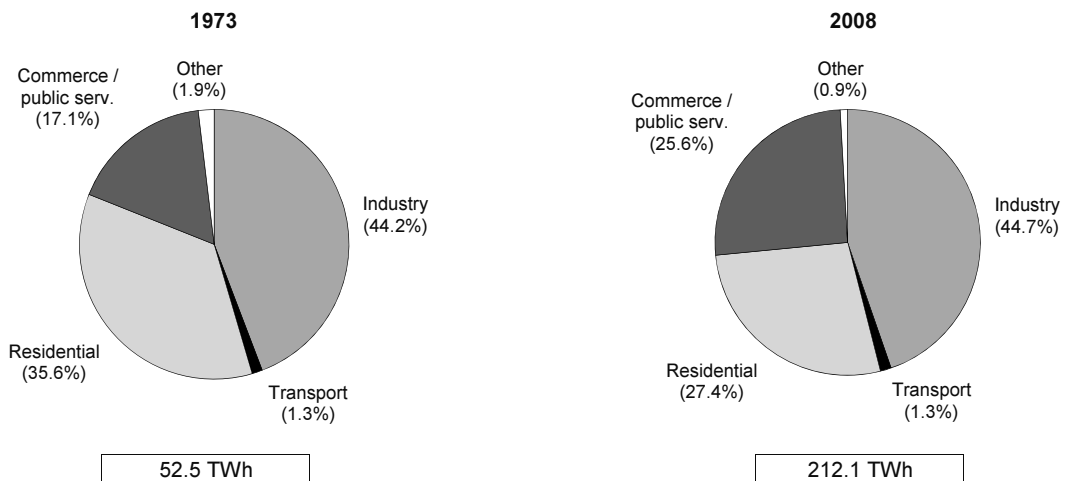


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 57.06 | 69.60 | 86.23 | 108.11 | 124.46 | 130.11 | 131.16 | 2.5 | 2.2 |
| GDP (billion 2000 USD) | 174.54 | 210.39 | 281.43 | 399.61 | 504.86 | 516.41 | 531.51 | 2.8 | 3.4 |
| TPES/GDP ⁽¹⁾ | 0.33 | 0.33 | 0.31 | 0.27 | 0.25 | 0.25 | 0.25 | -0.4 | -1.1 |
| Population (millions) | 13.61 | 14.81 | 17.17 | 19.27 | 21.15 | 21.51 | 21.63 | 1.4 | 1.2 |
| TPES/population ⁽²⁾ | 4.19 | 4.70 | 5.02 | 5.61 | 5.88 | 6.05 | 6.06 | 1.1 | 1.0 |
| TPES/GDP (2000 = 100) | 121 | 122 | 113 | 100 | 91 | 93 | 91 | -0.4 | -1.1 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 70 | 87 | 106 | 100 | 95 | 95 | .. | 2.5 | .. |
| Ele.TFC/population ⁽⁴⁾ | 3855 | 5353 | 7528 | 8968 | 9771 | 9864 | .. | 4.0 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 64.41 | 95.23 | 154.29 | 209.87 | 250.82 | 257.10 | 246.20 | 5.3 | 2.5 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|--------------|--------------|--------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 57.06 | 69.60 | 86.23 | 108.11 | 124.46 | 130.11 | 131.16 | 2.5 | 2.2 |
| Coal | 22.58 | 27.32 | 34.98 | 48.16 | 55.47 | 57.96 | 55.71 | 2.6 | 2.5 |
| Oil | 26.58 | 30.07 | 31.20 | 34.15 | 36.25 | 39.40 | 40.35 | 0.9 | 1.4 |
| Gas | 3.38 | 7.46 | 14.79 | 19.27 | 25.79 | 25.72 | 28.28 | 9.1 | 3.5 |
| Comb. renew & waste | 3.53 | 3.61 | 3.96 | 5.03 | 5.35 | 5.49 | 5.29 | 0.7 | 1.5 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽¹⁾ | - | 0.02 | 0.08 | 0.09 | 0.38 | 0.51 | 0.54 | - | 10.5 |
| Hydro | 0.98 | 1.11 | 1.22 | 1.41 | 1.23 | 1.02 | 0.99 | 1.3 | -1.1 |
| Net electricity imports ⁽²⁾ | - | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 64.8 | 96.1 | 155.0 | 210.2 | 245.6 | 251.1 | 257.2 | 246.3 |
| Nuclear | - | - | - | - | - | - | - | - |
| Hydro | 11.8 | 13.8 | 14.9 | 16.7 | 15.6 | 14.5 | 12.1 | 11.6 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 0.4 | 0.8 | 0.7 | 0.4 | 0.4 | 0.2 | 0.1 | 0.1 |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.1 | 0.9 | 2.6 | 3.9 | 3.8 |
| Combustible fuels | 53.0 | 82.3 | 140.1 | 193.4 | 229.0 | 233.8 | 241.1 | 230.7 |
| <i>Coal</i> | 48.2 | 69.8 | 121.5 | 174.2 e | 192.9 | 197.6 | 197.6 | 187.7 |
| <i>Oil</i> | 1.7 | 5.2 | 3.6 | 1.8 e | 1.9 | 2.1 | 2.8 | 2.8 |
| <i>Gas</i> | 2.8 | 7.0 | 14.4 | 16.2 e | 32.3 | 32.0 | 38.5 | 38.2 |
| <i>Comb. renew. & waste</i> | 0.3 | 0.4 | 0.8 | 1.1 e | 1.9 | 2.0 | 2.2 | 2.1 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - |
| - Own use by power plant | 3.6 | 3.6 | 10.1 | 14.8 | 14.9 | 17.2 | 17.1 | .. |
| Net production | 61.2 | 92.5 | 144.9 | 195.4 | 230.6 | 233.8 | 240.2 | .. |
| Nuclear | .. | - | - | - | - | - | - | .. |
| Hydro | .. | 13.6 | 14.9 | 16.7 | 15.6 | 14.5 | 12.1 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | - | 0.0 | 0.1 | 0.1 | 0.2 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | - | 0.1 | 0.9 | 2.6 | 3.9 | .. |
| Combustible fuels | .. | 78.8 | 130.0 | 178.6 | 214.0 | 216.6 | 224.0 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | - | - | - | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | 0.6 | 1.2 | 1.1 | 0.6 | 0.5 | 0.4 | 0.3 | 0.1 |
| + Imports | - | - | - | - | - | - | - | - |
| - Exports | - | - | - | - | - | - | - | - |
| Electrical energy supplied | 60.7 | 91.3 | 143.8 | 194.8 | 230.2 | 233.4 | 239.9 | .. |
| - Transmission & distr. losses | 8.2 | 9.2 | 9.5 | 15.0 | 18.8 | 16.1 | 16.8 | .. |
| - Statistical difference | - | - | - | - | - | - | - | .. |
| Total consumption | 52.5 | 82.1 | 134.3 | 179.9 | 211.4 | 217.3 | 223.1 | .. |
| - Energy industry consumption ⁽²⁾ | - | 2.9 | 5.1 | 7.1 | 9.8 | 10.7 | 10.9 | .. |
| Final consumption | 52.5 | 79.2 | 129.2 | 172.8 | 201.6 | 206.6 | 212.1 | .. |
| Industry | 23.2 | 32.5 | 59.2 | 77.0 | 91.1 | 92.8 | 94.9 | .. |
| Transport | 0.7 | 0.9 | 1.8 | 2.3 | 2.5 | 2.7 | 2.8 | .. |
| Commercial & publ. serv. | 8.9 | 15.5 | 27.3 | 41.7 | 50.8 | 53.1 | 54.4 | .. |
| Residential | 18.7 | 29.0 | 38.5 | 48.8 | 55.4 | 56.3 | 58.2 | .. |
| Agriculture & fishing | 1.0 | 1.4 | 2.4 | 2.9 | 1.8 | 1.9 | 1.9 | .. |
| Sector non specified | - | - | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 70.02 | 96.07 | 155.02 | 210.23 | 247.34 | 251.05 | 257.25 | 5.1 | 2.9 |
| - Hydro pumped storage | 0.41 | 0.84 | 0.73 | 0.36 | 0.33 | 0.24 | 0.15 | 3.6 | -8.5 |
| Total generation⁽¹⁾ | 69.60 | 95.23 | 154.29 | 209.87 | 247.01 | 250.82 | 257.10 | 5.1 | 2.9 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 63.13 | 88.14 | 148.55 | 200.72 | 234.64 | 238.12 | 242.58 | 5.5 | 2.8 |
| - Hydro pumped storage | 0.41 | 0.84 | 0.73 | 0.36 | 0.33 | 0.24 | 0.15 | 3.6 | -8.5 |
| Total generation ⁽¹⁾ | 62.71 | 87.30 | 147.82 | 200.36 | 234.31 | 237.88 | 242.43 | 5.5 | 2.8 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 13.16 | 12.88 | 14.15 | 16.36 | 15.70 | 14.28 | 11.91 | 0.5 | -1.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.06 | 1.71 | 2.62 | 3.95 | - | - |
| Coal | 44.53 | 66.47 | 119.27 | 172.56 e | 194.25 | 197.53 | 197.52 | 6.4 | 2.8 |
| Oil | 1.83 | 1.64 | 1.49 | 0.76 | 1.41 | 1.51 | 1.87 | -1.3 | 1.2 |
| Gas | 3.10 | 6.30 | 12.91 | 10.62 e | 20.30 | 20.97 | 26.01 | 9.3 | 4.0 |
| Comb. renew. & waste | 0.10 | - | - | - | 0.95 | 0.97 | 1.18 | - | - |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 6.89 | 7.94 | 6.47 | 9.51 | 12.70 | 12.94 | 14.67 | -0.4 | 4.7 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 6.89 | 7.94 | 6.47 | 9.51 | 12.70 | 12.94 | 14.67 | -0.4 | 4.7 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.04 | 0.06 | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.04 | 0.11 | 0.12 | 0.16 | - | - |
| Coal | 2.65 | 3.29 | 2.21 | 1.68 e | 0.09 | 0.10 | 0.11 | -1.1 | -15.5 |
| Oil | 3.33 | 3.53 | 2.06 | 1.02 | 0.98 | 0.60 | 0.89 | -3.0 | -4.6 |
| Gas | 0.53 | 0.67 | 1.45 | 5.63 e | 10.50 | 11.08 | 12.49 | 6.5 | 12.7 |
| Comb. renew. & waste | 0.33 | 0.39 | 0.75 | 1.13 e | 1.02 | 1.04 | 1.02 | 5.2 | 1.7 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|---|
| Total | 6655 | 7675 | 6003 | 8784 | 11863 | 11993 | 13641 | 4.7 |
| Total energy | - | - | 1134 | 1695 | 2026 | 1940 | 2156 | 3.6 |
| Coal mines | - | - | 1 | 1 | - | - | - | - |
| Oil and gas extraction | - | - | 831 | 1252 | 1339 | 1256 | 1314 | 2.6 |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | 302 | 442 | 687 | 684 | 842 | 5.9 |
| Energy non specified/other | - | - | - | - | - | - | - | - |
| Total industry | 6637 | 7650 | 4658 | 6782 | 9534 | 9687 | 11081 | 4.9 |
| Iron and steel | 970 | 774 | 24 | 197 | 256 | 290 | 343 | 15.9 |
| Chemical and petrochemical | 240 | 267 | 41 | 61 | 287 | 245 | 386 | 13.3 |
| Non-ferrous metals | 1953 | 3035 | 304 | 4325 | 6243 | 6313 | 7174 | 19.2 |
| Non-metallic minerals | 246 | 148 | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | 6 | 5 | - | - | - | - | - | - |
| Mining and quarrying | 2228 | 2219 | 36 | 1991 | 1622 | 1903 | 2204 | 25.7 |
| Food and tobacco | 287 | 296 | 80 | 123 | 686 | 566 | 587 | 11.7 |
| Pulp and printing | 473 | 626 | 56 | 85 | 440 | 370 | 387 | 11.3 |
| Wood and wood products | 25 | 21 | - | - | - | - | - | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | - | - | - | - | - | - | - | - |
| Non specified/other industries | 209 | 259 | 4117 | - | - | - | - | - |
| Total transport | - | - | 1 | 1 | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | 1 | 1 | - | - | - | - |
| Other | 18 | 25 | 210 | 306 | 303 | 366 | 404 | 3.7 |
| Commerce and pub. services | - | - | 210 | 306 | 303 | 366 | 404 | 3.7 |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | - | - | - | - | - | - | - | - |
| Sector non specified | 18 | 25 | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|-------------|-------------|------|------|------|------|-------|---|
| Total | 5443 | 2269 | - | - | - | - | - | - |
| Nuclear | - | - | - | - | .. | .. | .. | .. |
| Geothermal | - | - | - | - | .. | .. | .. | .. |
| Coal | 5443 | 2269 | - | - | .. | .. | .. | .. |
| Oil | - | - | - | - | .. | .. | .. | .. |
| Gas | - | - | - | - | .. | .. | .. | .. |
| Comb. renew. & waste | - | - | - | - | .. | .. | .. | .. |
| Non-spec. comb. fuels | - | - | - | - | .. | .. | .. | .. |
| Chemical processes | - | - | - | - | .. | .. | .. | .. |
| Heat pumps | - | - | - | - | .. | .. | .. | .. |
| Electric boilers | - | - | - | - | .. | .. | .. | .. |
| Other sources ⁽¹⁾ | - | - | - | - | .. | .. | .. | .. |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 5443 | 2269 | - | - | - | - | .. | - |
| Nuclear | - | - | - | - | .. | .. | .. | .. |
| Geothermal | - | - | - | - | .. | .. | .. | .. |
| Coal | 5443 | 2269 | - | - | .. | .. | .. | .. |
| Oil | - | - | - | - | .. | .. | .. | .. |
| Gas | - | - | - | - | .. | .. | .. | .. |
| Comb. renew. & waste | - | - | - | - | .. | .. | .. | .. |
| Non-spec. comb. fuels | - | - | - | - | .. | .. | .. | .. |
| Chemical processes | - | - | - | - | .. | .. | .. | .. |
| Heat pumps | - | - | - | - | .. | .. | .. | .. |
| Electric boilers | - | - | - | - | .. | .. | .. | .. |
| Other sources ⁽¹⁾ | - | - | - | - | .. | .. | .. | .. |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | - | - | - | - | - | .. | - |
| Nuclear | - | - | - | - | .. | .. | .. | .. |
| Geothermal | - | - | - | - | .. | .. | .. | .. |
| Coal | - | - | - | - | .. | .. | .. | .. |
| Oil | - | - | - | - | .. | .. | .. | .. |
| Gas | - | - | - | - | .. | .. | .. | .. |
| Comb. renew. & waste | - | - | - | - | .. | .. | .. | .. |
| Non-spec. comb. fuels | - | - | - | - | .. | .. | .. | .. |
| Chemical processes | - | - | - | - | .. | .. | .. | .. |
| Heat pumps | - | - | - | - | .. | .. | .. | .. |
| Electric boilers | - | - | - | - | .. | .. | .. | .. |
| Other sources ⁽¹⁾ | - | - | - | - | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 15.06 | 22.96 | 34.01 | 47.31 | 61.09 | 59.03 | 61.54 | 4.9 | 3.3 |
| Coal | 13.80 | 20.17 | 28.89 | 42.03 e | 51.82 | 49.55 | 50.32 | 4.4 | 3.1 |
| Oil | 0.43 | 1.15 | 0.95 | 0.53 | 0.59 | 0.52 | 0.68 | 4.7 | -1.8 |
| Gas | 0.79 | 1.53 | 3.47 | 4.06 | 7.55 | 7.83 | 9.28 | 9.1 | 5.6 |
| Comb. renew. & waste | 0.03 | 0.11 | 0.71 e | 0.69 | 1.13 | 1.14 | 1.26 | 19.4 | 3.2 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 21.70 | 31.73 | 44.19 | 57.33 | 55.24 | 57.32 | .. | 3.3 |
| Coal | .. | 19.67 | 28.26 | 41.55 e | 51.80 | 49.52 | 50.30 | .. | 3.3 |
| Oil | .. | 0.64 | 0.43 | 0.21 | 0.34 | 0.37 | 0.45 | .. | 0.2 |
| Gas | .. | 1.39 | 3.03 | 2.43 | 4.82 | 4.99 | 6.10 | .. | 4.0 |
| Comb. renew. & waste | .. | - | - | - | 0.36 | 0.36 | 0.47 | .. | - |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | - | - | - | 0.00 | 0.01 | 0.01 | 0.01 | - | - |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.00 | 0.01 | 0.01 | 0.01 | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 0.98 | 1.11 | 1.22 | 1.41 | 1.50 | 1.45 | 1.36 | 1.3 | 0.6 |
| Hydro | 0.98 | 1.11 | 1.22 | 1.41 | 1.35 | 1.23 | 1.02 | 1.3 | -1.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.00 | 0.15 | 0.22 | 0.34 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

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8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|--------|---------|-----------|---------|---------|---------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | 23866 | 38197 | 51100 e | 55402 | 57159 | 57562 | 2.3 |
| Fuel input (TJ) | 381346 | 794476 | 1115347 e | 1390587 | 1388680 | 1421496 | 3.3 |
| Electricity production (GWh) | 50728 | 87573 | 123833 e | 127089 | 134784 | 137696 | 2.5 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 29798 | 43037 | 66416 e | 65480 | 60421 | 60511 | 1.9 |
| Fuel input (TJ) | 285435 | 402188 | 643650 e | 699506 | 605500 | 606300 | 2.3 |
| Electricity production (GWh) | 19034 | 33317 | 50346 e | 59975 | 55600 | 52740 | 2.6 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | 524 | 596 e | 16477 | 16206 | 19077 | 22.1 |
| Electricity production (GWh) | - | 57 | 66 e | 1611 | 1591 | 1821 | 21.2 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 1117 | 930 e | 516 e | 583 | 512 | 666 | -1.8 |
| Fuel input (TJ) | 46055 | 38504 e | 19954 e | 26409 | 22879 | 29952 | -1.4 |
| Electricity production (GWh) | 5169 | 3552 e | 1784 e | 2385 | 2109 | 2756 | -1.4 |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 71247 | 161478 | 188882 e | 272519 | 292187 | 350035 | 4.4 |
| Electricity production (GWh) | 6976 | 14359 | 16245 e | 23642 | 25477 | 31036 | 4.4 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 5206 | 4668 | 7599 | - |
| Electricity production (GWh) | - | - | - | 160 | 150 | 243 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | 10068 | 10533 | 12071 | - |
| Electricity production (GWh) | - | - | - | 787 | 821 | 937 | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | 82292 | 138858 | 192274 | 215649 | 220532 | 227229 | 2.8 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|---------|---------|-------|-------|-------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | 2369 | 2444 | 2461 | - |
| Fuel input (TJ) | - | - | - | 44000 | 45214 | 45528 | - |
| Electricity production (GWh) | - | - | - | 3900 | 3917 | 4018 | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | 1236 | - | 1670 | 1298 | 1301 | 0.3 |
| Fuel input (TJ) | - | 12211 | - | 19093 | 18820 | 14588 | 1.0 |
| Electricity production (GWh) | - | 531 | - | 1766 | 1743 | 1347 | 5.3 |
| CHP Heat production (TJ) | 5443 | 2269 | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | - | - e | - | - | - | - |
| Fuel input (TJ) | - | - | - e | - | - | - | - |
| Electricity production (GWh) | - | - | - e | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - e | 78792 | 72000 | 81884 | - |
| Electricity production (GWh) | - | - | - e | 7157 | 6567 | 7471 | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 29683 e | 23310 e | 30852 | 31466 | 32272 | 0.5 |
| Electricity production (GWh) | - | 750 | 685 e | 935 | 950 | 960 | 1.4 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 5780 | 1032 | 1110 | 778 | - |
| Electricity production (GWh) | - | - | 449 | 85 | 90 | 64 | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | - | 1281 | 1134 | 13843 | 13267 | 13860 | 14.1 |
| CHP Heat production (TJ) | 5443 | 2269 | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 39.58 | 46.79 | 56.56 | 69.57 | 74.52 | 75.07 | 76.71 | 2.1 | 1.7 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | 0.02 | 0.08 | 0.08 | 0.06 | 0.14 | 0.16 | - | 3.7 |
| Coal | 4.94 | 4.20 | 4.30 | 4.12 | 3.87 | 3.68 | 4.04 | -0.8 | -0.3 |
| Oil | 24.26 | 26.92 | 29.00 | 34.72 | 35.94 | 36.62 | 37.39 | 1.1 | 1.4 |
| Gas | 2.37 | 5.34 | 8.82 | 11.46 | 13.15 | 12.64 | 12.65 | 8.0 | 2.0 |
| Comb. renew. & waste | 3.49 | 3.50 | 3.25 | 4.34 | 4.06 | 4.21 | 4.23 | -0.4 | 1.5 |
| Electricity | 4.51 | 6.81 | 11.11 | 14.86 | 17.44 | 17.77 | 18.24 | 5.4 | 2.8 |
| Heat | - | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 15.27 | 17.59 | 19.22 | 23.78 | 26.24 | 25.85 | 26.88 | 1.4 | 1.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 4.63 | 3.98 | 4.09 | 3.99 | 3.72 | 3.54 | 3.89 | -0.7 | -0.3 |
| Oil | 5.57 | 5.38 | 2.89 | 3.55 | 3.83 | 3.90 | 4.47 | -3.8 | 2.5 |
| Gas | 1.57 | 3.53 | 5.68 | 7.16 | 8.30 | 7.80 | 7.68 | 7.8 | 1.7 |
| Comb. renew. & waste | 1.49 | 1.90 | 1.48 | 2.46 | 2.57 | 2.63 | 2.68 | -0.0 | 3.3 |
| Electricity | 1.99 | 2.80 | 5.09 | 6.62 | 7.83 | 7.98 | 8.16 | 5.7 | 2.7 |
| Heat | - | - | - | - | - | - | - | - | - |
| Transport | 12.93 | 16.82 | 21.11 | 25.66 | 27.07 | 27.42 | 27.61 | 2.9 | 1.5 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.02 | 0.00 | 0.07 | 0.09 | 0.09 | 0.09 | 0.10 | 7.6 | 2.0 |
| Oil | 12.85 | 16.74 | 20.87 | 25.06 | 26.32 | 26.60 | 26.75 | 2.9 | 1.4 |
| Gas | - | 0.00 | 0.01 | 0.30 | 0.38 | 0.40 | 0.40 | - | 22.9 |
| Comb. renew. & waste | - | - | - | - | 0.06 | 0.10 | 0.12 | - | - |
| Electricity | 0.06 | 0.08 | 0.16 | 0.20 | 0.22 | 0.23 | 0.24 | 6.1 | 2.5 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 1.13 | 2.40 | 3.48 | 5.04 | 5.99 | 6.13 | 6.26 | 6.9 | 3.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Coal | 0.09 | 0.15 | 0.13 | 0.05 e | 0.06 | 0.05 | 0.04 | 1.8 | -6.0 |
| Oil | 0.11 | 0.51 | 0.26 | 0.31 | 0.57 | 0.59 | 0.61 | 5.0 | 4.9 |
| Gas | 0.15 | 0.39 | 0.75 | 1.08 e | 0.95 | 0.91 | 0.92 | 9.8 | 1.2 |
| Comb. renew. & waste | - | 0.02 | - | 0.01 | 0.01 | 0.01 | 0.01 | - | - |
| Electricity | 0.77 | 1.33 | 2.35 | 3.59 | 4.40 | 4.57 | 4.68 | 6.8 | 3.9 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

AUSTRALIA

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 5.05 | 6.04 | 7.49 | 9.06 | 9.47 | 9.62 | 9.83 | 2.3 | 1.5 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | 0.02 | 0.08 | 0.08 | 0.05 | 0.14 | 0.15 | - | 3.5 |
| Coal | 0.19 | 0.06 | 0.01 | 0.00 e | 0.00 | 0.00 | 0.00 | -14.6 | -8.8 |
| Oil | 0.79 | 0.78 | 0.38 | 0.35 | 0.26 | 0.27 | 0.29 | -4.2 | -1.5 |
| Gas | 0.47 | 1.10 | 1.93 | 2.56 e | 2.91 | 2.91 | 2.95 | 8.7 | 2.4 |
| Comb. renew. & waste | 2.00 | 1.58 | 1.77 | 1.87 | 1.42 | 1.46 | 1.43 | -0.7 | -1.2 |
| Electricity | 1.61 | 2.49 | 3.31 | 4.19 | 4.82 | 4.84 | 5.00 | 4.4 | 2.3 |
| Heat | - | - | - | - | - | - | - | - | - |
| Agriculture & fishing | 1.14 | 1.06 | 1.30 | 1.61 | 2.11 | 2.08 | 2.11 | 0.8 | 2.7 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 1.05 | 0.94 | 1.10 | 1.36 | 1.95 | 1.92 | 1.95 | 0.2 | 3.2 |
| Gas | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 4.1 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.09 | 0.12 | 0.20 | 0.25 | 0.16 | 0.16 | 0.16 | 5.2 | -1.3 |
| Heat | - | - | - | - | - | - | - | - | - |
| Other | 1.52 | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 1.52 | - | - | - | - | - | - | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 2.54 | 2.88 | 3.95 | 4.43 | 3.63 | 3.97 | 4.02 | 2.63 | 0.09 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

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12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 39.58 | 46.79 | 56.56 | 69.57 | 75.33 | 74.52 | 75.07 | 76.71 |
| Total industry (Mtoe) | 15.27 | 17.59 | 19.22 | 23.78 | 26.27 | 26.24 | 25.85 | 26.88 |
| Iron and steel | 3.27 | 3.07 | 2.27 | 2.30 | 1.86 | 1.64 | 1.72 | 1.82 |
| Chem. and petrochemical | 0.68 | 1.55 | 1.66 | 1.99 | 2.40 | 2.56 | 2.34 | 2.39 |
| Non-ferrous metals | 0.75 | 4.02 | 6.10 | 8.07 | 9.41 | 9.42 | 9.12 | 9.62 |
| Non-metallic minerals | 0.63 | 2.05 | 2.14 | 2.03 | 2.60 | 2.46 | 2.65 | 2.64 |
| Transport equipment | - | 0.23 | 0.27 | 0.29 | - | - | - | - |
| Machinery | - | 0.39 | 0.42 | 0.39 | 0.37 | 0.35 | 0.36 | 0.36 |
| Mining and quarrying | - | 1.02 | 1.26 | 2.13 | 3.37 | 3.44 | 3.44 | 3.72 |
| Food and tobacco | 0.13 | 2.69 | 2.31 | 3.33 | 3.83 | 3.90 | 3.76 | 3.86 |
| Paper, pulp and printing | 0.24 | 1.03 | 1.43 | 1.51 | 1.29 | 1.38 | 1.37 | 1.38 |
| Wood and wood products | 0.01 | 0.34 | 0.10 | 0.26 | 0.24 | 0.24 | 0.24 | 0.24 |
| Construction | - | 0.85 | 0.91 | 1.13 | 0.62 | 0.59 | 0.59 | 0.59 |
| Textile and leather | - | 0.35 | 0.36 | 0.35 | 0.24 | 0.24 | 0.24 | 0.22 |
| Non specified/other | 9.56 | - | - | 0.01 | 0.03 | 0.03 | 0.03 | 0.03 |
| Electricity consumption (Mtoe) | 4.51 | 6.81 | 11.11 | 14.86 | 17.33 | 17.44 | 17.77 | 18.24 |
| Total industry (Mtoe) | 1.99 | 2.80 | 5.09 | 6.62 | 7.84 | 7.83 | 7.98 | 8.16 |
| Iron and steel | - | 0.39 | 0.42 | 0.45 | 0.67 | 0.64 | 0.65 | 0.71 |
| Chem. and petrochemical | - | 0.23 | 0.33 | 0.40 | 0.36 | 0.37 | 0.39 | 0.38 |
| Non-ferrous metals | - | 0.82 | 2.26 | 3.08 | 4.08 | 4.09 | 4.19 | 4.24 |
| Non-metallic minerals | - | 0.18 | 0.25 | 0.30 | 0.34 | 0.32 | 0.35 | 0.37 |
| Transport equipment | - | 0.09 | 0.12 | 0.27 | .. | .. | .. | .. |
| Machinery | - | 0.17 | 0.22 | 0.16 | 0.22 | 0.22 | 0.22 | 0.22 |
| Mining and quarrying | - | 0.26 | 0.51 | 0.78 | 0.99 | 0.99 | 0.95 | 0.98 |
| Food and tobacco | - | 0.27 | 0.39 | 0.48 | 0.61 | 0.62 | 0.62 | 0.64 |
| Paper, pulp and printing | - | 0.22 | 0.43 | 0.52 | 0.47 | 0.48 | 0.50 | 0.52 |
| Wood and wood products | - | 0.06 | - | - | - | - | - | - |
| Construction | - | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Textile and leather | - | 0.12 | 0.16 | 0.18 | 0.07 | 0.07 | 0.07 | 0.07 |
| Non specified/other | 1.99 | - | - | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 |
| Total industry (TWh) | 23.19 | 32.51 | 59.18 | 77.03 | 91.15 | 91.05 | 92.75 | 94.87 |
| Iron and steel | - | 4.56 | 4.87 | 5.25 | 7.76 | 7.41 | 7.60 | 8.27 |
| Chem. and petrochemical | - | 2.68 | 3.83 | 4.69 | 4.22 | 4.34 | 4.50 | 4.36 |
| Non-ferrous metals | - | 9.51 | 26.27 | 35.76 | 47.45 | 47.54 | 48.67 | 49.25 |
| Non-metallic minerals | - | 2.05 | 2.92 | 3.49 | 3.92 | 3.73 | 4.04 | 4.31 |
| Transport equipment | - | 0.99 | 1.38 | 3.09 | .. | .. | .. | .. |
| Machinery | - | 1.97 | 2.60 | 1.84 | 2.61 | 2.53 | 2.57 | 2.52 |
| Mining and quarrying | - | 3.03 | 5.97 | 9.08 | 11.49 | 11.53 | 11.05 | 11.40 |
| Food and tobacco | - | 3.12 | 4.49 | 5.59 | 7.06 | 7.24 | 7.26 | 7.49 |
| Paper, pulp and printing | - | 2.55 | 4.95 | 6.02 | 5.45 | 5.55 | 5.87 | 6.10 |
| Wood and wood products | - | 0.69 | - | - | - | - | - | - |
| Construction | - | 0.02 | 0.03 | 0.06 | 0.08 | 0.08 | 0.08 | 0.08 |
| Textile and leather | - | 1.34 | 1.87 | 2.07 | 0.86 | 0.84 | 0.84 | 0.80 |
| Non specified/other | 23.19 | - | - | 0.08 | 0.25 | 0.24 | 0.27 | 0.28 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 19.25 | 24.14 | 35.50 | 39.23 | 42.86 | 47.44 | 47.52 | 50.25 | 51.94 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 5.32 | 6.10 | 8.32 | 8.56 | 9.20 | 9.29 | 9.29 | 9.32 | 9.30 |
| <i>of which: pumped storage</i> | - | - | 0.94 | 0.94 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.01 | 0.03 | 0.06 | 0.07 | 0.08 | 0.11 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 0.03 | 0.74 | 0.82 | 1.25 | 1.89 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 13.93 | 18.04 | 27.17 | 30.65 | 33.60 | 37.36 | 37.35 | 39.60 | 40.65 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 11.50 | 13.90 | 22.14 | 24.66 | 25.36 | 28.66 | 28.42 | 28.45 | 29.20 |
| Liquid fuels | 1.43 | 1.65 | 1.07 | 1.32 | 1.67 | 0.65 | 0.73 | 0.74 | 0.74 |
| Natural gas | 0.10 | 0.16 | 2.93 | 3.86 | 4.14 | 6.58 | 6.74 | 8.95 | 9.24 |
| Comb. renew. & waste | 0.02 | - | - | - | - | - | - | - | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 0.15 | 0.56 | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | 1.92 | 0.88 | 0.88 | 0.88 | 0.88 |
| Liquid / natural gas | 0.72 | 1.79 | 0.16 | 0.16 | 0.51 | 0.59 | 0.59 | 0.59 | 0.59 |
| Solid / liquid / gas | - | - | 0.88 | 0.64 | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | 13.34 | 16.79 | 25.11 | 28.01 | 29.50 | 31.46 | 31.46 | 31.76 | 32.51 |
| Internal combustion | 0.28 | 0.29 | 0.25 | 0.33 | 0.29 | 0.11 | 0.11 | 0.12 | 0.13 |
| Gas turbine | 0.31 | 0.96 | 1.62 | 2.21 | 3.13 | 3.75 | 3.74 | 5.56 | 5.86 |
| Combined cycle | - | - | 0.19 | 0.10 | 0.68 | 2.03 | 2.03 | 2.15 | 2.15 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | 12.46 | 15.31 | 25.01 | 30.18 | 33.63 | 37.50 | 38.68 | 39.30 | 39.50 |
| Available capacity | 19.25 | 24.14 | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|------|------|-------------------|------|------|------|------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | - | - | 2.96 | 2.97 | 3.35 | 3.11 | 3.69 | 2.94 | 3.57 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | - | - | 2.96 | 2.97 | 3.35 | 3.11 | 3.69 | 2.94 | 3.57 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | 1.90 | 1.81 | 1.37 | 0.06 | 0.07 | 0.09 | 0.09 |
| Liquid fuels | - | - | 0.52 | 0.54 | 0.26 | 0.30 | 0.30 | 0.22 | 0.23 |
| Natural gas | - | - | 0.30 | 0.39 | 1.36 ^e | 2.43 | 3.00 | 2.29 | 2.92 |
| Comb. renew. & waste | - | - | 0.24 | 0.23 | 0.36 | 0.31 | 0.32 | 0.33 | 0.32 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | .. | - | - | - | - | - | - |
| Solid / natural gas | - | - | .. | - | - | - | - | - | - |
| Liquid / natural gas | - | - | .. | - | - | - | - | - | - |
| Solid / liquid / gas | - | - | .. | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 2.30 | 2.31 | 2.48 | 1.06 | 1.24 | 1.22 | 0.84 |
| Internal combustion | - | - | 0.32 | 0.32 | 0.14 | 0.38 | 0.48 | 0.56 | 0.91 |
| Gas turbine | - | - | 0.33 | 0.33 | 0.73 | 1.36 | 1.54 | 1.04 | 1.67 |
| Combined cycle | - | - | .. | .. | - | 0.31 | 0.43 | 0.12 | 0.15 |
| Other | - | - | .. | .. | - | - | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---------------------------------|--------|--------|--------|------|------|------|------|------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Australian Dollars/ unit | | | | | | | | |
| Steam coal (t) | 8.91 | 11.97 | 35.11 | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil (t) | 80 | 174 | .. | .. | .. | .. | .. | .. | .. |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Australian Dollars/ toe | | | | | | | | |
| Steam coal | 13.50 | 18.14 | 53.20 | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil | 83.56 | 181.50 | .. | .. | .. | .. | .. | .. | .. |
| Natural gas ⁽²⁾ | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| End-user prices of electricity | | | | | | | | | |
| | Australian Dollars/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0234 | 0.0270 | 0.0589 | 0.0780 | .. | .. | .. | .. | .. |
| <i>of which: tax</i> | - | - | - | - | .. | .. | .. | .. | .. |
| Household | | | | | | | | | |
| Price | 0.0338 | 0.0380 | 0.0919 | 0.1091 | .. | .. | .. | .. | .. |
| <i>of which: tax</i> | - | - | - | - | .. | .. | .. | .. | .. |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

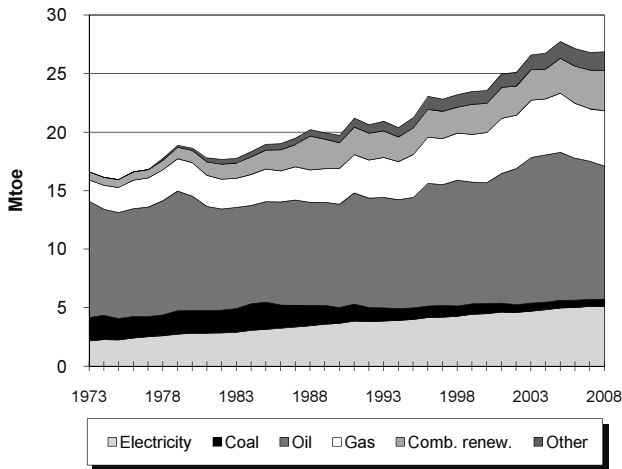


Figure 2. Electricity generation by fuel

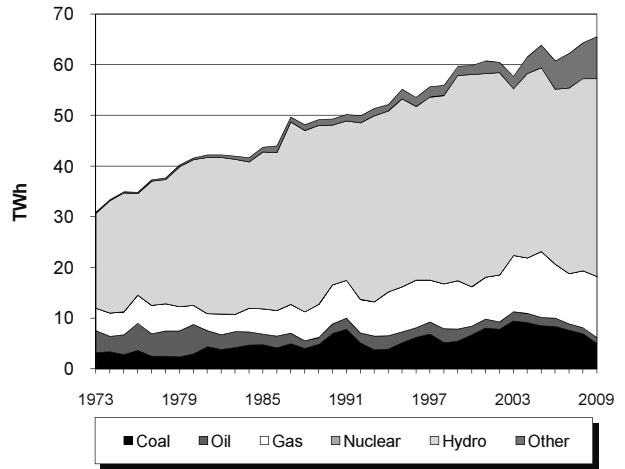


Figure 3. Electricity consumption by sector

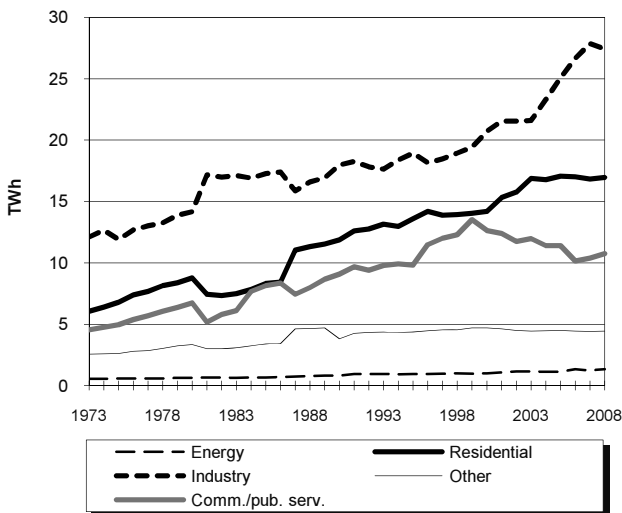


Figure 4. Electricity indicators

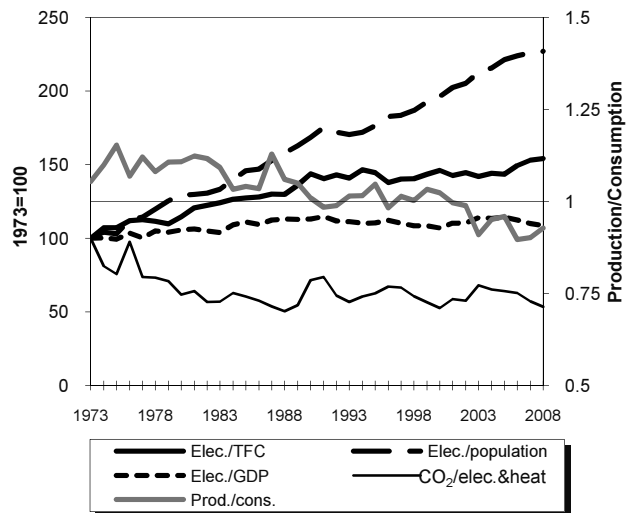
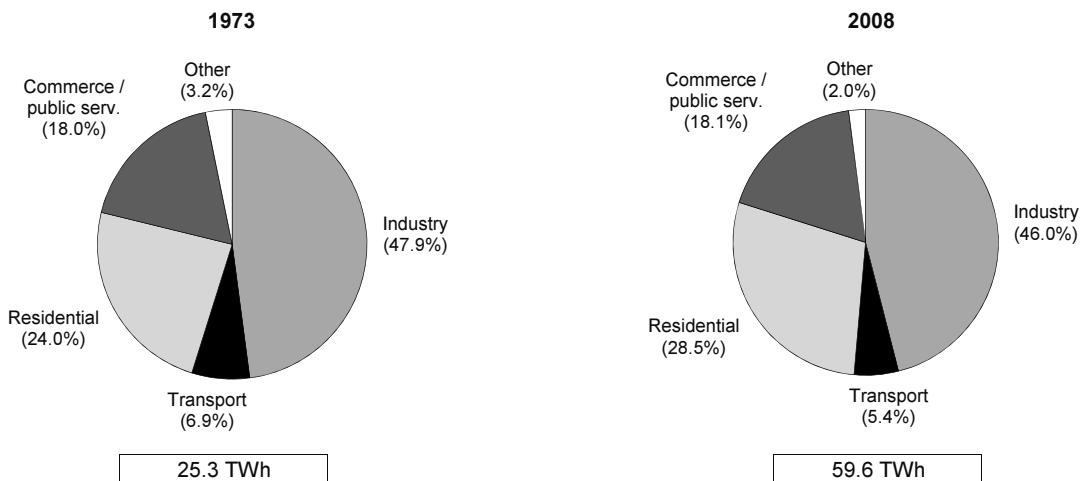


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|-------|--------|--------|--------|--------|--------|--------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 21.48 | 23.15 | 24.78 | 28.52 | 33.25 | 33.25 | 32.42 | 0.8 | 1.4 |
| GDP (billion 2000 USD) | 98.69 | 120.30 | 149.00 | 191.20 | 221.66 | 226.20 | 223.47 | 2.5 | 2.2 |
| TPES/GDP ⁽¹⁾ | 0.22 | 0.19 | 0.17 | 0.15 | 0.15 | 0.15 | 0.15 | -1.6 | -0.7 |
| Population (millions) | 7.59 | 7.55 | 7.68 | 8.01 | 8.30 | 8.34 | 8.33 | 0.1 | 0.4 |
| TPES/population ⁽²⁾ | 2.83 | 3.07 | 3.23 | 3.56 | 4.01 | 3.99 | 3.89 | 0.8 | 1.0 |
| TPES/GDP (2000 = 100) | 146 | 129 | 112 | 100 | 101 | 99 | 97 | -1.6 | -0.7 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 94 | 100 | 105 | 100 | 98 | 96 | .. | 0.7 | .. |
| Ele.TFC/population ⁽⁴⁾ | 3336 | 4375 | 5572 | 6520 | 7171 | 7148 | .. | 3.1 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 30.92 | 41.60 | 49.30 | 59.86 | 62.28 | 64.37 | 65.54 | 2.8 | 1.5 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 21.48 | 23.15 | 24.78 | 28.52 | 33.25 | 33.25 | 32.42 | 0.8 | 1.4 |
| Coal | 3.87 | 3.65 | 4.10 | 3.59 | 3.83 | 3.64 | 3.02 | 0.3 | -1.6 |
| Oil | 12.11 | 12.08 | 10.34 | 11.69 | 13.31 | 12.71 | 12.63 | -0.9 | 1.1 |
| Gas | 3.30 | 4.16 | 5.18 | 6.52 | 6.98 | 7.47 | 7.59 | 2.7 | 2.0 |
| Comb. renew & waste | 0.72 | 1.14 | 2.48 | 3.15 | 5.10 | 5.41 | 5.38 | 7.6 | 4.2 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | 0.00 | 0.02 | 0.03 | 0.04 | 0.04 | - | 13.5 |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.01 | 0.07 | 0.28 | 0.29 | 0.34 | - | 17.9 |
| Hydro | 1.61 | 2.47 | 2.71 | 3.60 | 3.15 | 3.26 | 3.36 | 3.1 | 1.1 |
| Net electricity imports ⁽²⁾ | -0.13 | -0.34 | -0.04 | -0.12 | 0.57 | 0.42 | 0.07 | -6.9 | - |
| Heat | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

(TWh)

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Gross production | 31.3 | 42.0 | 50.3 | 61.5 | 66.7 | 64.8 | 67.1 | 68.9 |
| Nuclear | - | - | - | - | - | - | - | - |
| Hydro | 19.2 | 29.1 | 32.5 | 43.5 | 39.0 | 39.2 | 40.7 | 42.3 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 0.4 | 0.4 | 1.0 | 1.7 | 2.7 | 2.5 | 2.7 | 3.3 |
| Geothermal | - | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 |
| Solar | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.1 | 1.3 | 2.0 | 2.0 | 2.5 |
| Combustible fuels | 12.2 | 12.9 | 17.8 | 17.9 | 26.3 | 23.5 | 24.4 | 24.0 |
| <i>Coal</i> | 3.2 | 2.9 | 7.0 | 6.7 | 8.5 | 7.6 | 6.9 | 5.0 |
| <i>Oil</i> | 4.3 | 5.8 | 1.9 | 1.7 | 1.6 | 1.3 | 1.2 | 1.1 |
| <i>Gas</i> | 4.4 | 3.8 | 7.7 | 7.8 | 13.0 | 9.9 | 11.2 | 12.0 |
| <i>Comb. renew. & waste</i> | 0.2 | 0.3 | 1.2 | 1.7 | 3.1 | 4.7 | 5.0 | 5.8 |
| Other (e.g. fuel cells) | - | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 |
| - Own use by power plant | 1.0 | 1.2 | 1.9 | 1.8 | 3.4 | 4.2 | 4.3 | .. |
| Net production | 30.3 | 40.8 | 48.4 | 59.7 | 63.2 | 60.6 | 62.8 | .. |
| Nuclear | .. | - | - | - | - | - | - | .. |
| Hydro | .. | 28.9 | 31.7 | 42.4 | 36.8 | 36.0 | 37.4 | .. |
| Geothermal | .. | - | - | - | 0.0 | 0.0 | 0.0 | .. |
| Solar | .. | - | - | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | - | 0.1 | 1.3 | 2.0 | 2.0 | .. |
| Combustible fuels | .. | 11.9 | 16.8 | 17.2 | 25.1 | 22.5 | 23.3 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | 0.0 | 0.0 | 0.0 | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | 0.0 | 0.0 | - | - | - | - |
| - Used for pumped storage | 0.6 | 0.5 | 1.4 | 1.9 | 3.3 | 3.0 | 3.3 | 4.0 |
| + Imports | 3.3 | 3.2 | 6.8 | 13.8 | 20.4 | 22.1 | 19.8 | 19.5 |
| - Exports | 4.8 | 7.1 | 7.3 | 15.2 | 17.7 | 15.5 | 14.9 | 18.8 |
| Electrical energy supplied | 28.2 | 36.3 | 46.5 | 56.4 | 62.6 | 64.2 | 64.4 | .. |
| - Transmission & distr. losses | 2.3 | 2.6 | 3.0 | 3.2 | 3.4 | 3.5 | 3.4 | .. |
| - Statistical difference | - | - | - | 0.0 | - | - | - | .. |
| Total consumption | 25.9 | 33.7 | 43.6 | 53.2 | 59.2 | 60.8 | 60.9 | .. |
| - Energy industry consumption ⁽²⁾ | 0.6 | 0.6 | 0.8 | 1.0 | 1.1 | 1.2 | 1.3 | .. |
| Final consumption | 25.3 | 33.0 | 42.8 | 52.2 | 58.0 | 59.5 | 59.6 | .. |
| Industry | 12.1 | 14.2 | 18.0 | 20.7 | 25.1 | 27.9 | 27.4 | .. |
| Transport | 1.8 | 2.3 | 2.8 | 3.5 | 3.3 | 3.2 | 3.2 | .. |
| Commercial & publ. serv. | 4.5 | 6.7 | 9.1 | 12.6 | 11.4 | 10.4 | 10.8 | .. |
| Residential | 6.1 | 8.8 | 11.9 | 14.2 | 17.1 | 16.8 | 17.0 | .. |
| Agriculture & fishing | 0.8 | 1.1 | 1.1 | 1.2 | 1.2 | 1.2 | 1.2 | .. |
| Sector non specified | - | - | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 33.88 | 41.97 | 50.29 | 61.52 | 63.54 | 64.77 | 67.10 | 2.5 | 1.6 |
| - Hydro pumped storage | 0.48 | 0.37 | 1.00 | 1.66 | 2.79 | 2.49 | 2.73 | 4.7 | 5.8 |
| Total generation⁽¹⁾ | 33.41 | 41.60 | 49.30 | 59.86 | 60.75 | 62.28 | 64.37 | 2.5 | 1.5 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 28.48 | 36.36 | 43.40 | 53.09 | 55.01 | 56.02 | 58.28 | 2.7 | 1.7 |
| - Hydro pumped storage | 0.48 | 0.37 | 1.00 | 1.66 | 2.79 | 2.49 | 2.73 | 4.7 | 5.8 |
| Total generation ⁽¹⁾ | 28.01 | 35.99 | 42.41 | 51.43 | 52.22 | 53.53 | 55.55 | 2.6 | 1.5 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 20.12 | 26.65 | 29.11 | 39.75 | 33.29 | 35.55 | 36.77 | 2.3 | 1.3 |
| Geothermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.07 | 1.77 | 2.06 | 2.04 | - | - |
| Coal | 2.85 | 2.50 | 5.97 | 5.43 | 6.76 | 6.06 | 5.37 | 4.7 | -0.6 |
| Oil | 1.83 | 4.27 | 1.30 | 0.92 | 0.88 | 0.52 | 0.52 | -2.1 | -5.0 |
| Gas | 3.20 | 2.58 | 5.99 | 5.17 | 7.97 | 6.99 | 8.20 | 4.0 | 1.8 |
| Comb. renew. & waste | - | - | 0.03 | 0.09 | 1.55 | 2.35 | 2.65 | - | 29.3 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 5.40 | 5.61 | 6.89 | 8.43 | 8.53 | 8.75 | 8.82 | 1.5 | 1.4 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 5.40 | 5.61 | 6.89 | 8.43 | 8.53 | 8.75 | 8.82 | 1.5 | 1.4 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 2.06 | 2.08 | 2.40 | 2.09 | 1.21 | 1.12 | 1.18 | 0.9 | -3.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | 0.02 | 0.02 | 0.02 | - | - |
| Coal | 0.51 | 0.42 | 1.03 | 1.31 | 1.59 | 1.53 | 1.53 | 4.5 | 2.2 |
| Oil | 1.24 | 1.54 | 0.58 | 0.78 | 0.77 | 0.76 | 0.72 | -4.6 | 1.3 |
| Gas | 1.38 | 1.24 | 1.73 | 2.61 | 2.70 | 2.92 | 3.00 | 1.4 | 3.1 |
| Comb. renew. & waste | 0.21 | 0.32 | 1.15 | 1.64 | 2.25 | 2.40 | 2.37 | 11.1 | 4.1 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---|
| Total | 3090 | 3272 | 6061 | 8357 | 8475 | 8692 | 8767 | 2.1 |
| Total energy | - | - | 563 | 694 | 842 | 841 | 912 | 2.7 |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | 26 | 42 | 48 | 50 | 45 | 3.1 |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | 537 | 652 | 794 | 791 | 867 | 2.7 |
| Energy non specified/other | - | - | - | - | - | - | - | - |
| Total industry | 3048 | 3246 | 3581 | 6114 | 6476 | 6793 | 6720 | 3.6 |
| Iron and steel | 865 | 850 | 1038 | 1419 | 1803 | 1729 | 1782 | 3.0 |
| Chemical and petrochemical | 643 | 667 | 371 | 328 | 700 | 736 | 708 | 3.7 |
| Non-ferrous metals | - | - | - | 252 | - | - | - | - |
| Non-metallic minerals | 144 | 72 | - | 106 | 95 | 62 | 31 | - |
| Transport equipment | 6 | 8 | 33 | 10 | 14 | 7 | 14 | -4.7 |
| Machinery | 7 | 9 | 2 | 94 | 63 | 108 | 56 | 20.3 |
| Mining and quarrying | 47 | 24 | 23 | 11 | - | - | - | - |
| Food and tobacco | 116 | 121 | 140 | 283 | 153 | 151 | 153 | 0.5 |
| Pulp and printing | 1080 | 1382 | 1874 | 3293 | 3393 | 3611 | 3660 | 3.8 |
| Wood and wood products | 28 | 27 | 30 | 150 | 225 | 369 | 295 | 13.5 |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | 109 | 76 | 65 | 122 | 22 | 17 | 21 | -6.1 |
| Non specified/other industries | 3 | 10 | 5 | 46 | 8 | 3 | - | - |
| Total transport | - | - | 861 | 1034 | 604 | 562 | 590 | -2.1 |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | 861 | 1034 | 604 | 562 | 590 | -2.1 |
| Other | 42 | 26 | 1056 | 515 | 553 | 496 | 545 | -3.6 |
| Commerce and pub. services | - | - | 1029 | 483 | 516 | 462 | 522 | -3.7 |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | - | - | 27 | 32 | 37 | 34 | 23 | -0.9 |
| Sector non specified | 42 | 26 | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---|
| Total | 7817 | 28446 | 48048 | 60040 | 63888 | 67731 | 69379 | 4.9 |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | - | 378 | 562 | 517 | 668 | 684 | - |
| Coal | - | 5146 | 2986 | 3405 | 3035 | 3368 | 3451 | -2.3 |
| Oil | - | 8471 | 10220 | 9131 | 7489 | 5906 | 6050 | -2.0 |
| Gas | - | 10882 | 24340 | 29482 | 26350 | 28046 | 28730 | 5.4 |
| Comb. renew. & waste | - | 3939 | 10085 | 17302 | 26344 | 29590 | 30311 | 11.9 |
| Non-spec. comb. fuels | 7817 | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | 158 | 153 | 153 | 153 | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | 8 | 39 | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 7817 | 24426 | 42654 | 55098 | 56969 | 59972 | .. | 5.1 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | 378 | 562 | 517 | 668 | .. | - |
| Coal | - | 4765 | 2682 | 3060 | 2724 | 2973 | .. | -2.6 |
| Oil | - | 5981 | 7329 | 7185 | 4970 | 4333 | .. | -1.8 |
| Gas | - | 10482 | 22896 | 28095 | 24459 | 24912 | .. | 4.9 |
| Comb. renew. & waste | - | 3190 | 9330 | 16196 | 24299 | 27086 | .. | 12.6 |
| Non-spec. comb. fuels | 7817 | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | 8 | 39 | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | 4020 | 5394 | 4942 | 6919 | 7759 | .. | 3.7 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | 381 | 304 | 345 | 311 | 395 | .. | 0.2 |
| Oil | - | 2490 | 2891 | 1946 | 2519 | 1573 | .. | -2.5 |
| Gas | - | 400 | 1444 | 1387 | 1891 | 3134 | .. | 12.1 |
| Comb. renew. & waste | - | 749 | 755 | 1106 | 2045 | 2504 | .. | 6.9 |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | 158 | 153 | 153 | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 3.25 | 2.97 | 4.43 | 4.59 | 6.29 | 6.05 | 6.24 | 1.8 | 1.9 |
| Coal | 0.87 | 0.84 | 1.70 | 1.42 | 1.81 | 1.68 | 1.50 | 4.0 | -0.7 |
| Oil | 1.21 | 1.16 | 0.67 | 0.55 | 0.57 | 0.44 | 0.40 | -3.4 | -2.8 |
| Gas | 1.15 | 0.89 | 1.77 | 1.96 | 2.37 | 2.16 | 2.37 | 2.5 | 1.7 |
| Comb. renew. & waste | 0.03 | 0.08 | 0.30 | 0.66 | 1.55 | 1.77 | 1.97 | 15.2 | 11.1 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 2.31 | 3.34 | 3.28 | 4.76 | 4.46 | 4.58 | .. | 1.8 |
| Coal | .. | 0.70 | 1.46 | 1.15 | 1.45 | 1.30 | 1.13 | .. | -1.4 |
| Oil | .. | 0.88 | 0.36 | 0.34 | 0.36 | 0.23 | 0.20 | .. | -3.2 |
| Gas | .. | 0.74 | 1.41 | 1.47 | 1.94 | 1.69 | 1.90 | .. | 1.7 |
| Comb. renew. & waste | .. | - | 0.11 | 0.31 | 1.02 | 1.23 | 1.34 | .. | 15.1 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Solar | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 1.61 | 2.47 | 2.71 | 3.60 | 3.12 | 3.33 | 3.44 | 3.1 | 1.3 |
| Hydro | 1.61 | 2.47 | 2.71 | 3.60 | 2.97 | 3.15 | 3.26 | 3.1 | 1.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.01 | 0.15 | 0.18 | 0.17 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

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8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|-------|-------|-------|-------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 14 | 964 | 1213 | 1774 | 1781 | 1514 | 2.5 |
| Fuel input (TJ) | 343 | 26997 | 32394 | 49730 | 50013 | 42367 | 2.5 |
| Electricity production (GWh) | 26 | 2773 | 3989 | 5879 | 5871 | 5115 | 3.5 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 2104 | 1189 | 1168 | 620 | - | - | - |
| Fuel input (TJ) | 25422 | 13013 | 11340 | 5873 | - | - | - |
| Electricity production (GWh) | 2570 | 1528 | 1213 | 638 | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 8267 | 12389 | 13973 | 13043 | - |
| Electricity production (GWh) | 325 | - | 880 | 1212 | 1254 | 1277 | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 916 | 28 | 173 | 113 | 88 | 110 | 7.9 |
| Fuel input (TJ) | 37170 | 1146 | 7056 | 4572 | 3535 | 4433 | 7.8 |
| Electricity production (GWh) | 5806 | 137 | 902 | 565 | 423 | 512 | 7.6 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 24706 | 41466 | 41108 | 26610 | 23225 | 33551 | -1.2 |
| Electricity production (GWh) | 3824 | 4166 | 4653 | 3263 | 2573 | 4263 | 0.1 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 2618 | 3516 | 13283 | 14728 | 16375 | 10.7 |
| Electricity production (GWh) | - | 533 | 441 | 960 | 1285 | 1326 | 5.2 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | 571 | 842 | 1106 | 2309 | - |
| Electricity production (GWh) | - | - | 44 | 31 | 64 | 148 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | 585 | 5739 | 5285 | 3721 | - |
| Electricity production (GWh) | - | - | 24 | 464 | 462 | 325 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 676 | 6528 | 8268 | 9468 | - |
| Electricity production (GWh) | - | - | 68 | 467 | 837 | 948 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 12551 | 9137 | 12214 | 13479 | 12769 | 13914 | 2.4 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|-------|-------|-------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | 457 | 209 | 227 | 196 | 222 | -3.9 |
| Fuel input (TJ) | - | 12782 | 5694 | 6326 | 5543 | 6191 | -3.9 |
| Electricity production (GWh) | - | 1037 | 446 | 502 | 393 | 409 | -5.0 |
| CHP Heat production (TJ) | - | 2590 | 2416 | 2715 | 2724 | 2975 | 0.8 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | 935 | 61 | 38 | - | - | - |
| Fuel input (TJ) | - | 10185 | 792 | 356 | - | - | - |
| Electricity production (GWh) | - | 853 | 79 | 13 | - | - | - |
| CHP Heat production (TJ) | - | 1926 | 270 | 221 | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 8207 | 1289 | 1120 | 1068 | 1348 | -9.5 |
| Electricity production (GWh) | - | 815 | 132 | 106 | 74 | 97 | -11.2 |
| CHP Heat production (TJ) | - | 381 | 261 | 161 | 311 | 393 | 0.2 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | 563 | 298 | 396 | 302 | 252 | -4.4 |
| Fuel input (TJ) | - | 23400 | 11772 | 15874 | 11938 | 9857 | -4.7 |
| Electricity production (GWh) | - | 1744 | 801 | 1076 | 857 | 731 | -4.7 |
| CHP Heat production (TJ) | - | 4778 | 7145 | 7851 | 5284 | 4235 | -0.7 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 32408 | 39907 | 75034 | 70453 | 65753 | 4.0 |
| Electricity production (GWh) | - | 3554 | 3124 | 7407 | 7336 | 6941 | 3.8 |
| CHP Heat production (TJ) | - | 5458 | 16350 | 21912 | 21957 | 21550 | 7.9 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 3257 | 2866 | 8930 | 17475 | 22537 | 28580 | 13.6 |
| Electricity production (GWh) | 324 | 583 | 1076 | 1582 | 1777 | 1933 | 6.9 |
| CHP Heat production (TJ) | - | - | 129 | 6945 | 9962 | 13811 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | 2542 | 1018 | 1924 | 2036 | 2378 | -0.4 |
| Electricity production (GWh) | - | 38 | 28 | 204 | 209 | 242 | 10.8 |
| CHP Heat production (TJ) | - | 749 | 642 | 587 | 718 | 618 | -1.1 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 1724 | 2233 | 3447 | 3190 | 2889 | 2.9 |
| Electricity production (GWh) | - | 26 | 46 | 49 | 43 | 38 | 2.1 |
| CHP Heat production (TJ) | - | 1345 | 1595 | 2275 | 2126 | 1892 | 1.9 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 95 | 1120 | 1308 | 896 | - |
| Electricity production (GWh) | - | - | 3 | 50 | 69 | 57 | - |
| CHP Heat production (TJ) | - | - | - | 643 | 734 | 468 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 324 | 8650 | 5735 | 10989 | 10758 | 10448 | 1.1 |
| CHP Heat production (TJ) | 7817 | 17227 | 28808 | 43310 | 43816 | 45942 | 5.6 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|-------|-------|-------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | .. | - | - | - | - | - | - |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Heat production (TJ) | .. | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | .. | 21 | - | - | - | - | - |
| Fuel input (TJ) | .. | 273 | - | - | - | - | - |
| Heat production (TJ) | .. | 249 | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | .. | - | - | - | - | - | - |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Heat production (TJ) | .. | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | .. | - | 50 | - | - | - | - |
| Heat production (TJ) | .. | - | 39 | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | .. | 101 | 89 | 81 | 63 | 49 | -3.9 |
| Fuel input (TJ) | .. | 4178 | 3592 | 3353 | 2436 | 1900 | -4.3 |
| Heat production (TJ) | .. | 3693 | 3075 | 2637 | 2205 | 1671 | -4.3 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | .. | 8307 | 10205 | 8608 | 6806 | 11108 | 1.6 |
| Heat production (TJ) | .. | 5424 | 7990 | 6368 | 4393 | 6496 | 1.0 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | .. | 2045 | 8148 | 12080 | 13100 | 13223 | 10.9 |
| Heat production (TJ) | .. | 1404 | 6535 | 9432 | 11036 | 11032 | 12.1 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | .. | - | - | 2 | 2 | 2 | - |
| Heat production (TJ) | .. | - | - | 2 | 2 | 1 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | .. | 690 | 1692 | 1885 | 1945 | 2053 | 6.2 |
| Heat production (TJ) | .. | 441 | 1184 | 1339 | 1557 | 1590 | 7.4 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | .. | - | - | 218 | 290 | 247 | - |
| Heat production (TJ) | .. | - | - | 195 | 209 | 178 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | .. | 11211 | 18823 | 19973 | 19402 | 20968 | 3.5 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 16.61 | 18.64 | 19.72 | 23.55 | 27.15 | 26.83 | 26.88 | 1.0 | 1.7 |
| Geothermal | - | - | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | - | 2.6 |
| Solar thermal | - | - | 0.01 | 0.06 | 0.10 | 0.11 | 0.12 | - | 12.1 |
| Coal | 1.99 | 1.94 | 1.33 | 0.88 | 0.64 | 0.60 | 0.59 | -2.3 | -4.4 |
| Oil | 9.95 | 9.76 | 8.85 | 10.32 | 12.12 | 11.81 | 11.39 | -0.7 | 1.4 |
| Gas | 1.81 | 2.86 | 3.05 | 4.28 | 4.68 | 4.47 | 4.73 | 3.1 | 2.5 |
| Comb. renew. & waste | 0.69 | 1.06 | 2.18 | 2.49 | 3.18 | 3.32 | 3.44 | 7.0 | 2.6 |
| Electricity | 2.18 | 2.84 | 3.68 | 4.49 | 5.01 | 5.12 | 5.12 | 3.1 | 1.9 |
| Heat | - | 0.19 | 0.61 | 1.03 | 1.40 | 1.40 | 1.48 | - | 5.0 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 5.22 | 4.93 | 5.17 | 6.03 | 7.21 | 7.39 | 7.40 | -0.1 | 2.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.74 | 0.91 | 0.64 | 0.62 | 0.51 | 0.49 | 0.47 | -0.9 | -1.6 |
| Oil | 2.23 | 0.99 | 0.67 | 0.57 | 0.78 | 0.76 | 0.78 | -6.8 | 0.8 |
| Gas | 1.17 | 1.59 | 1.63 | 2.10 | 2.35 | 2.39 | 2.45 | 2.0 | 2.3 |
| Comb. renew. & waste | 0.03 | 0.21 | 0.61 | 0.84 | 1.08 | 1.16 | 1.14 | 18.4 | 3.6 |
| Electricity | 1.04 | 1.22 | 1.55 | 1.78 | 2.29 | 2.40 | 2.36 | 2.3 | 2.4 |
| Heat | - | - | 0.08 | 0.12 | 0.20 | 0.20 | 0.20 | - | 5.3 |
| Transport | 3.87 | 4.09 | 4.86 | 6.58 | 8.31 | 8.47 | 8.05 | 1.4 | 2.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.11 | 0.01 | 0.00 | 0.00 | - | - | - | -21.1 | - |
| Oil | 3.58 | 3.84 | 4.52 | 6.03 | 7.56 | 7.66 | 7.11 | 1.4 | 2.5 |
| Gas | 0.02 | 0.03 | 0.10 | 0.23 | 0.20 | 0.19 | 0.25 | 9.9 | 5.4 |
| Comb. renew. & waste | 0.00 | 0.00 | 0.01 | 0.02 | 0.27 | 0.34 | 0.42 | 5.4 | 26.4 |
| Electricity | 0.15 | 0.20 | 0.24 | 0.30 | 0.28 | 0.28 | 0.28 | 2.7 | 0.8 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 0.50 | 1.83 | 1.75 | 2.31 | 2.55 | 2.32 | 2.65 | 7.7 | 2.3 |
| Geothermal | - | - | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | - | 2.6 |
| Solar thermal | - | - | 0.01 | 0.03 | 0.04 | 0.04 | 0.04 | - | 10.7 |
| Coal | 0.04 | 0.11 | 0.02 | 0.03 | 0.02 | 0.02 | 0.02 | -4.1 | -1.1 |
| Oil | 0.01 | 0.84 | 0.39 | 0.37 | 0.37 | 0.27 | 0.42 | 22.0 | 0.4 |
| Gas | 0.05 | 0.30 | 0.19 | 0.33 | 0.65 | 0.48 | 0.58 | 8.3 | 6.5 |
| Comb. renew. & waste | - | - | 0.08 | 0.08 | 0.06 | 0.06 | 0.06 | - | -1.7 |
| Electricity | 0.39 | 0.58 | 0.78 | 1.09 | 0.87 | 0.89 | 0.93 | 4.2 | 0.9 |
| Heat | - | - | 0.28 | 0.39 | 0.53 | 0.55 | 0.61 | - | 4.3 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 5.72 | 5.10 | 5.80 | 6.49 | 6.69 | 6.33 | 6.49 | 0.1 | 0.6 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | 0.01 | 0.04 | 0.06 | 0.07 | 0.07 | - | 13.0 |
| Coal | 1.08 | 0.90 | 0.65 | 0.21 | 0.10 | 0.08 | 0.08 | -3.0 | -10.8 |
| Oil | 3.03 | 2.18 | 1.70 | 1.72 | 1.61 | 1.36 | 1.40 | -3.3 | -1.1 |
| Gas | 0.43 | 0.41 | 0.78 | 1.36 | 1.20 | 1.15 | 1.17 | 3.5 | 2.3 |
| Comb. renew. & waste | 0.65 | 0.85 | 1.39 | 1.43 | 1.59 | 1.58 | 1.63 | 4.5 | 0.9 |
| Electricity | 0.52 | 0.75 | 1.02 | 1.22 | 1.46 | 1.45 | 1.46 | 4.0 | 2.0 |
| Heat | - | - | 0.25 | 0.51 | 0.66 | 0.64 | 0.67 | - | 5.7 |
| Agriculture & fishing | 0.08 | 0.91 | 0.59 | 0.57 | 0.58 | 0.59 | 0.60 | 12.6 | 0.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 11.7 |
| Coal | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 3.1 | -12.8 |
| Oil | - | 0.81 | 0.37 | 0.31 | 0.27 | 0.27 | 0.27 | - | -1.8 |
| Gas | - | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | - | 2.4 |
| Comb. renew. & waste | 0.00 | 0.00 | 0.10 | 0.13 | 0.18 | 0.19 | 0.20 | 38.3 | 3.9 |
| Electricity | 0.07 | 0.09 | 0.09 | 0.10 | 0.10 | 0.10 | 0.10 | 1.6 | 0.8 |
| Heat | - | - | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | - | 5.7 |
| Other | - | 0.19 | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | - | - | - | - | - | - | - | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | - | - | - | - | - | - | - | - |
| Heat | - | 0.19 | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 1.23 | 1.61 | 1.55 | 1.58 | 1.80 | 1.74 | 1.69 | 1.39 | 0.45 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

AUSTRIA

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 16.61 | 18.64 | 19.72 | 23.55 | 27.75 | 27.15 | 26.83 | 26.88 |
| Total industry (Mtoe) | 5.22 | 4.93 | 5.17 | 6.03 | 6.98 | 7.21 | 7.39 | 7.40 |
| Iron and steel | 1.40 | 1.36 | 0.78 | 0.93 | 1.00 | 0.98 | 0.96 | 0.97 |
| Chem. and petrochemical | 0.48 | 0.42 | 0.52 | 0.82 | 0.97 | 0.93 | 0.89 | 0.92 |
| Non-ferrous metals | 0.17 | 0.19 | 0.17 | 0.13 | 0.16 | 0.16 | 0.20 | 0.21 |
| Non-metallic minerals | 1.07 | 0.66 | 0.69 | 0.74 | 0.87 | 0.89 | 0.98 | 1.03 |
| Transport equipment | 0.06 | 0.10 | 0.09 | 0.11 | 0.17 | 0.17 | 0.15 | 0.13 |
| Machinery | 0.22 | 0.19 | 0.29 | 0.38 | 0.47 | 0.52 | 0.56 | 0.60 |
| Mining and quarrying | 0.23 | 0.17 | 0.11 | 0.12 | 0.11 | 0.15 | 0.15 | 0.15 |
| Food and tobacco | 0.36 | 0.33 | 0.44 | 0.45 | 0.49 | 0.53 | 0.52 | 0.51 |
| Paper, pulp and printing | 0.57 | 0.79 | 1.21 | 1.44 | 1.51 | 1.49 | 1.51 | 1.42 |
| Wood and wood products | 0.11 | 0.09 | 0.18 | 0.31 | 0.48 | 0.50 | 0.55 | 0.53 |
| Construction | 0.01 | 0.09 | 0.19 | 0.29 | 0.42 | 0.53 | 0.54 | 0.58 |
| Textile and leather | 0.26 | 0.16 | 0.17 | 0.14 | 0.12 | 0.11 | 0.11 | 0.10 |
| Non specified/other | 0.30 | 0.39 | 0.33 | 0.17 | 0.20 | 0.24 | 0.26 | 0.25 |
| Electricity consumption (Mtoe) | 2.18 | 2.84 | 3.68 | 4.49 | 4.99 | 5.01 | 5.12 | 5.12 |
| Total industry (Mtoe) | 1.04 | 1.22 | 1.55 | 1.78 | 2.16 | 2.29 | 2.40 | 2.36 |
| Iron and steel | 0.16 | 0.18 | 0.10 | 0.23 | 0.30 | 0.30 | 0.32 | 0.30 |
| Chem. and petrochemical | 0.18 | 0.22 | 0.18 | 0.27 | 0.30 | 0.32 | 0.33 | 0.33 |
| Non-ferrous metals | 0.16 | 0.18 | 0.12 | 0.06 | 0.07 | 0.07 | 0.08 | 0.09 |
| Non-metallic minerals | 0.10 | 0.11 | 0.12 | 0.15 | 0.17 | 0.17 | 0.18 | 0.18 |
| Transport equipment | 0.02 | 0.02 | 0.04 | 0.06 | 0.09 | 0.09 | 0.07 | 0.06 |
| Machinery | 0.08 | 0.10 | 0.14 | 0.19 | 0.25 | 0.27 | 0.32 | 0.35 |
| Mining and quarrying | 0.04 | 0.04 | 0.04 | 0.05 | 0.06 | 0.06 | 0.07 | 0.06 |
| Food and tobacco | 0.05 | 0.07 | 0.13 | 0.10 | 0.14 | 0.16 | 0.16 | 0.15 |
| Paper, pulp and printing | 0.15 | 0.19 | 0.31 | 0.40 | 0.43 | 0.43 | 0.43 | 0.42 |
| Wood and wood products | 0.03 | 0.05 | 0.06 | 0.08 | 0.13 | 0.16 | 0.17 | 0.15 |
| Construction | 0.01 | 0.01 | 0.04 | 0.03 | 0.05 | 0.06 | 0.06 | 0.05 |
| Textile and leather | 0.06 | 0.05 | 0.06 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
| Non specified/other | 0.01 | 0.01 | 0.22 | 0.10 | 0.12 | 0.14 | 0.16 | 0.15 |
| Total industry (TWh) | 12.12 | 14.17 | 17.98 | 20.71 | 25.06 | 26.67 | 27.87 | 27.42 |
| Iron and steel | 1.85 | 2.05 | 1.18 | 2.67 | 3.44 | 3.50 | 3.77 | 3.52 |
| Chem. and petrochemical | 2.07 | 2.51 | 2.14 | 3.08 | 3.53 | 3.68 | 3.85 | 3.90 |
| Non-ferrous metals | 1.85 | 2.04 | 1.39 | 0.66 | 0.79 | 0.83 | 0.97 | 1.03 |
| Non-metallic minerals | 1.17 | 1.24 | 1.38 | 1.79 | 1.93 | 2.01 | 2.05 | 2.12 |
| Transport equipment | 0.21 | 0.28 | 0.42 | 0.71 | 1.00 | 1.02 | 0.84 | 0.75 |
| Machinery | 0.96 | 1.22 | 1.57 | 2.26 | 2.87 | 3.19 | 3.67 | 4.02 |
| Mining and quarrying | 0.44 | 0.49 | 0.43 | 0.57 | 0.66 | 0.75 | 0.76 | 0.75 |
| Food and tobacco | 0.59 | 0.78 | 1.50 | 1.21 | 1.64 | 1.90 | 1.87 | 1.79 |
| Paper, pulp and printing | 1.80 | 2.25 | 3.63 | 4.69 | 4.97 | 4.98 | 5.05 | 4.85 |
| Wood and wood products | 0.40 | 0.55 | 0.65 | 0.95 | 1.56 | 1.82 | 1.93 | 1.79 |
| Construction | 0.08 | 0.09 | 0.46 | 0.39 | 0.61 | 0.75 | 0.71 | 0.62 |
| Textile and leather | 0.64 | 0.64 | 0.72 | 0.59 | 0.61 | 0.59 | 0.57 | 0.53 |
| Non specified/other | 0.07 | 0.06 | 2.52 | 1.14 | 1.44 | 1.68 | 1.83 | 1.77 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

AUSTRIA

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Total imports⁽¹⁾ | 3261 | 3164 | 6838 | 7287 | 13824 | 20397 | 21257 | 22130 | 19796 |
| Imports from: | | | | | | | | | |
| Total OECD | - | - | 6821 | 7222 | 13803 | 19865 | 20197 | 21550 | 18923 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | 2975 | 2081 | 5385 | 6114 | 6138 | 6989 | 5336 |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | 3558 | 4580 | 7363 | 12832 | 12909 | 14282 | 12757 |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | 212 | 270 | 843 | 854 | 1063 | 243 | 722 |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | 1 | - | - | 4 | - | 2 |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | 76 | 290 | 212 | 65 | 83 | 36 | 106 |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | 17 | 65 | 21 | 532 | 1060 | 580 | 873 |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | 17 | 65 | 21 | 532 | 1060 | 580 | 873 |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 3261 | 3164 | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

AUSTRIA

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Total exports⁽¹⁾ | 4808 | 7136 | 7298 | 9757 | 15192 | 17732 | 14407 | 15511 | 14933 |
| Exports to: | | | | | | | | | |
| Total OECD | - | - | 5928 | 7896 | 11957 | 16255 | 13445 | 14075 | 13515 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | 47 | 9 | 2 | 12 | 22 | 39 | 56 |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | 3179 | 4010 | 5410 | 4816 | 4237 | 2964 | 3804 |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | 233 | 580 | 426 | 809 | 465 | 1455 | 848 |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | 1703 | 1323 | 1945 | 1499 | 1419 | 1396 | 1360 |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | 766 | 1974 | 4174 | 9119 | 7302 | 8221 | 7447 |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | 1370 | 1861 | 3235 | 1349 | 833 | 1436 | 1214 |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | 1370 | 1861 | 3235 | 1349 | 833 | 1436 | 1214 |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 4808 | 7136 | - | - | - | 128 | 129 | - | 204 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

AUSTRIA

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 7.70 | 11.36 | 15.09 | 15.65 | 16.23 | 17.39 | 17.61 | 17.62 | 18.88 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 5.50 | 7.72 | 10.35 | 10.62 | 11.11 | 11.30 | 11.33 | 11.60 | 11.96 |
| <i>of which: pumped storage</i> | - | - | 3.56 | 3.57 | 3.57 | 3.93 | 3.93 | 3.93 | 4.29 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | 0.01 | 0.02 | 0.04 | 0.04 | 0.05 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 0.05 | 0.83 | 0.97 | 0.98 | 1.00 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 2.20 | 3.64 | 4.74 | 5.03 | 5.06 | 5.24 | 5.28 | 5.01 | 5.87 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 0.80 | 0.68 | 0.49 | 0.58 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 |
| Liquid fuels | 0.51 | 0.10 | 0.10 | 0.21 | 0.16 | 0.25 | 0.25 | 0.25 | 0.25 |
| Natural gas | 0.90 | 0.50 | 0.34 | 0.27 | 0.45 | 0.70 | 0.70 | 0.70 | 0.70 |
| Comb. renew. & waste | - | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | 0.24 | 0.22 | 0.21 | 0.17 | 0.24 | 0.31 | 0.31 |
| Solid / natural gas | - | - | 0.97 | 1.00 | 0.96 | 1.20 | 1.17 | 0.83 | 1.69 |
| Liquid / natural gas | - | - | 2.42 | 2.51 | 2.61 | 2.23 | 2.23 | 2.23 | 2.23 |
| Solid / liquid / gas | - | 2.36 | 0.20 | 0.23 | 0.11 | 0.12 | 0.12 | 0.12 | 0.12 |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | 2.20 e | 3.64 e | 4.25 | 4.16 | 4.22 | 3.37 | 3.35 | 3.02 | 2.64 |
| Internal combustion | - | - | 0.03 | 0.08 | 0.06 | 0.17 | 0.17 | 0.26 | 0.25 |
| Gas turbine | - | - | 0.47 | 0.28 | 0.25 | 0.47 | 0.47 | 0.49 | 0.49 |
| Combined cycle | - | - | - | 0.51 | 0.54 | 1.24 | 1.29 | 1.24 | 2.50 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | .. | 6.91 | .. | 9.19 | 9.48 | 9.44 | 9.41 |
| Available capacity | .. | .. | .. | 9.00 | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 1.29 | 1.57 | 1.60 | 1.79 | 1.63 | 1.75 | 1.77 | 1.82 | 1.92 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.48 | 0.48 | 0.60 | 0.68 | 0.56 | 0.54 | 0.54 | 0.54 | 0.54 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 0.81 | 1.09 | 1.00 | 1.11 | 1.07 | 1.21 | 1.23 | 1.27 | 1.37 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | .. | 0.01 | - | - | - | - | - |
| Liquid fuels | - | - | .. | 0.04 | 0.02 | - | - | - | - |
| Natural gas | - | - | .. | 0.28 | 0.31 | 0.22 | 0.22 | 0.22 | 0.22 |
| Comb. renew. & waste | - | - | .. | 0.20 | 0.32 | 0.42 | 0.43 | 0.48 | 0.58 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | .. | 0.08 | 0.07 | 0.05 | 0.05 | 0.05 | 0.05 |
| Solid / natural gas | - | - | .. | 0.27 | 0.25 | 0.27 | 0.27 | 0.27 | 0.27 |
| Liquid / natural gas | - | - | .. | 0.22 | 0.10 | 0.19 | 0.19 | 0.19 | 0.19 |
| Solid / liquid / gas | 0.81 | 1.09 | .. | 0.01 | 0.01 | 0.07 | 0.07 | 0.07 | 0.07 |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | 0.81 e | 1.09 e | .. | 0.60 | 0.57 | 0.69 | 0.70 | 0.75 | 0.86 |
| Internal combustion | - | - | .. | 0.05 | 0.06 | 0.04 | 0.04 | 0.05 | 0.04 |
| Gas turbine | - | - | .. | 0.01 | 0.01 | 0.04 | 0.04 | 0.03 | 0.03 |
| Combined cycle | - | - | .. | 0.45 | 0.43 | 0.44 | 0.45 | 0.45 | 0.44 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Euro/ unit | | | | | | | | |
| Steam coal (t) | 172.67 | 157.05 | 63.15 | 58.33 | 70.45 | 73.92 | 70.25 | 83.53 | 86.65 |
| Heavy fuel oil (t) | 100.14 | 154.79 | 104.94 | 76.31 | 146.66 | 180.19 | 160.84 | 234.14 | 190.41 |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | 100.80 | 199.20 | 122.74 | .. | .. | .. | .. | .. | .. |
| | Euro/ toe | | | | | | | | |
| Steam coal | 261 | 238 | 96 | 88 | 107 | 112 | 106 | 126 | 131 |
| Heavy fuel oil | 104 | 161 | 109 | 79 | 153 | 188 | 168 | 244 | 198 |
| Natural gas ⁽²⁾ | 112 | 221 | 136 | .. | .. | .. | .. | .. | .. |
| End-user prices of electricity | | | | | | | | | |
| | Euro/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0417 | 0.0476 | 0.0540 | 0.0415 | 0.0819 | 0.0870 | 0.0980 | 0.1054 | .. |
| <i>of which: tax</i> | - | - | - | - | 0.0199 | 0.0200 | 0.0180 | 0.0181 | .. |
| Household | | | | | | | | | |
| Price | 0.0843 | 0.0952 | 0.1286 | 0.1275 | 0.1402 | 0.1390 | 0.1560 | 0.1758 | 0.1888 |
| <i>of which: tax</i> | 0.0062 | 0.0070 | 0.0214 | 0.0368 | 0.0444 | 0.0450 | 0.0500 | 0.0495 | 0.0564 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

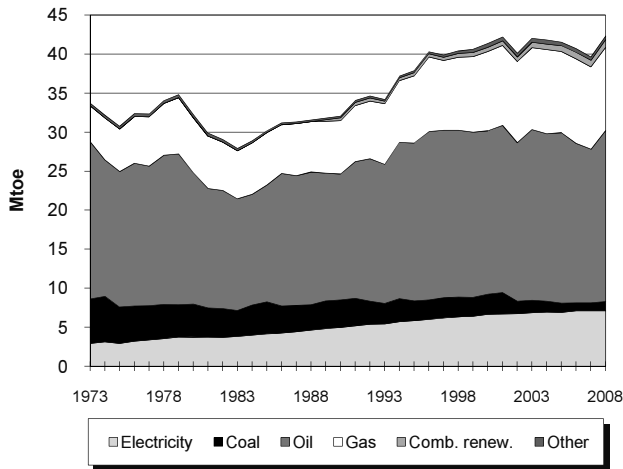


Figure 2. Electricity generation by fuel

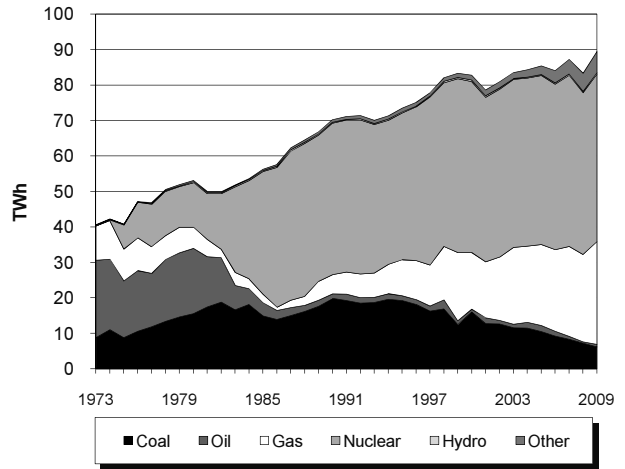


Figure 3. Electricity consumption by sector

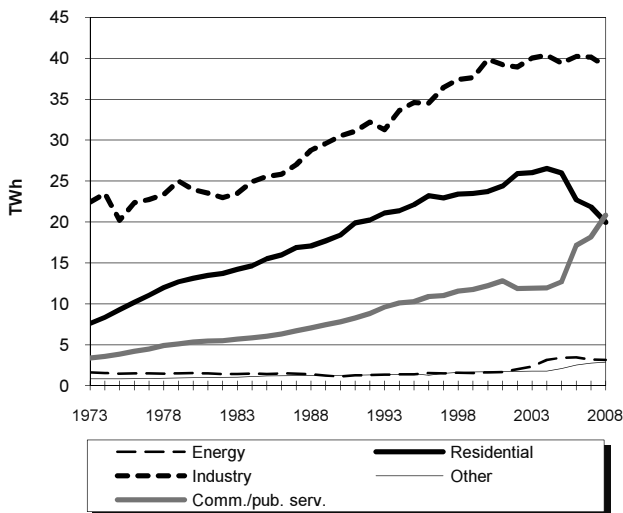


Figure 4. Electricity indicators

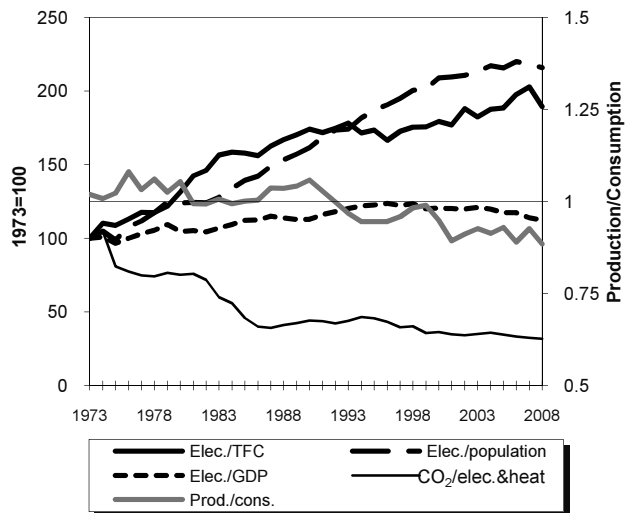
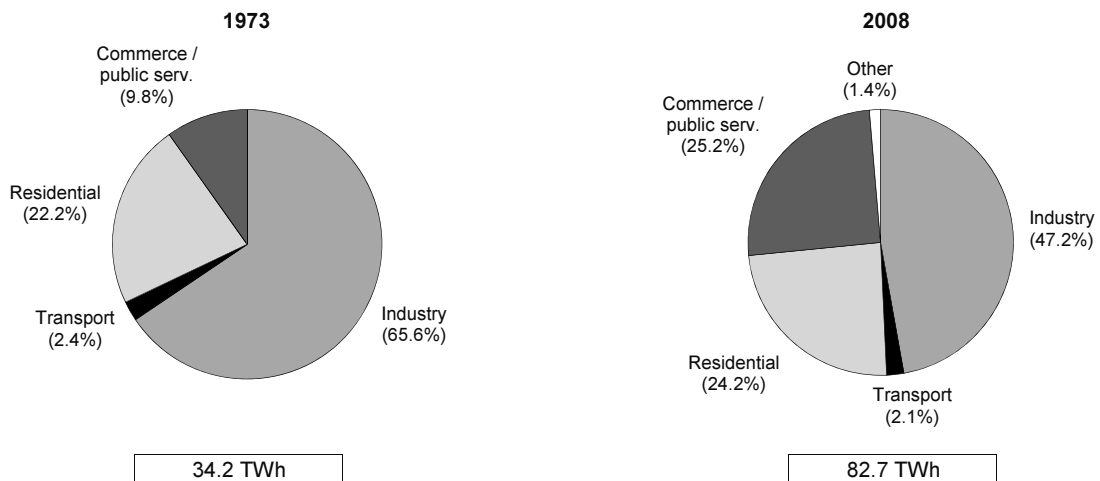


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 45.99 | 46.77 | 48.28 | 58.51 | 57.03 | 58.58 | 55.76 | 0.3 | 0.8 |
| GDP (billion 2000 USD) | 127.17 | 152.86 | 186.52 | 232.37 | 265.93 | 268.69 | 263.36 | 2.3 | 1.8 |
| TPES/GDP ⁽¹⁾ | 0.36 | 0.31 | 0.26 | 0.25 | 0.21 | 0.22 | 0.21 | -1.9 | -1.1 |
| Population (millions) | 9.73 | 9.86 | 9.97 | 10.25 | 10.62 | 10.71 | 10.78 | 0.1 | 0.4 |
| TPES/population ⁽²⁾ | 4.73 | 4.74 | 4.84 | 5.71 | 5.37 | 5.47 | 5.17 | 0.1 | 0.3 |
| TPES/GDP (2000 = 100) | 144 | 122 | 103 | 100 | 85 | 87 | 84 | -1.9 | -1.1 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 81 | 85 | 93 | 100 | 93 | 92 | .. | 0.9 | .. |
| Ele.TFC/population ⁽⁴⁾ | 3518 | 4398 | 5819 | 7571 | 7807 | 7725 | .. | 3.0 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 40.62 | 53.09 | 70.29 | 82.77 | 87.53 | 83.58 | 89.68 | 3.3 | 1.3 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 45.99 | 46.77 | 48.28 | 58.51 | 57.03 | 58.58 | 55.76 | 0.3 | 0.8 |
| Coal | 11.18 | 11.40 | 10.57 | 7.88 | 4.24 | 4.35 | 3.20 | -0.3 | -6.1 |
| Oil | 27.69 | 23.34 | 17.96 | 23.26 | 22.50 | 24.08 | 22.98 | -2.5 | 1.3 |
| Gas | 7.14 | 8.91 | 8.17 | 13.36 | 14.92 | 14.83 | 14.67 | 0.8 | 3.1 |
| Comb. renew & waste | 0.01 | 0.06 | 0.75 | 1.04 | 2.06 | 2.37 | 2.54 | 30.1 | 6.6 |
| Nuclear | 0.02 | 3.27 | 11.13 | 12.55 | 12.57 | 11.88 | 12.31 | 45.1 | 0.5 |
| Geothermal | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 2.6 |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.00 | 0.00 | 0.05 | 0.06 | 0.10 | - | 25.3 |
| Hydro | 0.01 | 0.02 | 0.02 | 0.04 | 0.03 | 0.04 | 0.04 | 2.6 | 2.3 |
| Net electricity imports ⁽²⁾ | -0.06 | -0.23 | -0.32 | 0.37 | 0.58 | 0.91 | -0.16 | 9.8 | -3.7 |
| Heat | - | - | - | - | 0.06 | 0.06 | 0.06 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 41.1 | 53.6 | 70.9 | 84.0 | 87.0 | 88.8 | 84.9 | 91.0 |
| Nuclear | 0.1 | 12.5 | 42.7 | 48.2 | 47.6 | 48.2 | 45.6 | 47.3 |
| Hydro | 0.6 | 0.8 | 0.9 | 1.7 | 1.6 | 1.7 | 1.8 | 1.8 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 0.5 | 0.6 | 0.6 | 1.2 | 1.3 | 1.3 | 1.3 | 1.4 |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | 0.0 | 0.0 | 0.0 | 0.2 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.0 | 0.0 | 0.2 | 0.5 | 0.6 | 1.0 |
| Combustible fuels | 40.4 | 40.3 | 27.3 | 34.1 | 37.3 e | 38.2 e | 36.7 | 40.6 |
| <i>Coal</i> | 8.8 | 15.6 | 19.9 | 16.0 | 10.5 | 8.3 | 7.2 | 6.1 |
| <i>Oil</i> | 21.8 | 18.4 | 1.3 | 0.8 | 1.7 | 0.8 | 0.4 | 0.7 |
| <i>Gas</i> | 9.6 | 6.0 | 5.4 | 16.0 | 22.8 | 25.4 | 24.6 | 29.0 |
| <i>Comb. renew. & waste</i> | 0.1 | 0.3 | 0.7 | 1.3 | 2.3 | 3.6 | 4.4 | 4.7 |
| Other (e.g. fuel cells) | - | - | - | - | 0.3 | 0.2 | 0.2 | 0.2 |
| - Own use by power plant | 1.9 | 2.6 | 3.7 | 3.7 | 3.6 | 3.7 | 3.5 | .. |
| Net production | 39.1 | 51.0 | 67.3 | 80.3 | 83.4 | 85.1 | 81.4 | .. |
| Nuclear | .. | 11.9 | 40.5 | 45.7 | 45.3 | 45.9 | 43.4 | .. |
| Hydro | .. | 0.8 | 0.9 | 1.7 | 1.6 | 1.7 | 1.7 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | - | - | 0.0 | 0.0 | 0.0 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | 0.0 | 0.0 | 0.2 | 0.5 | 0.6 | .. |
| Combustible fuels | .. | 38.3 | 25.8 | 32.8 | 36.0 | 36.9 e | 35.4 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | 0.2 | 0.2 | 0.2 | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | 0.6 | 0.7 | 0.8 | 1.6 | 1.8 | 1.7 | 1.8 | 1.8 |
| + Imports | 1.7 | 6.3 | 4.8 | 11.6 | 14.3 | 15.8 | 17.2 | 9.5 |
| - Exports | 2.4 | 8.9 | 8.5 | 7.3 | 8.0 | 9.0 | 6.6 | 11.3 |
| Electrical energy supplied | 37.7 | 47.6 | 62.7 | 83.0 | 87.9 | 90.2 | 90.2 | .. |
| - Transmission & distr. losses | 1.9 | 2.8 | 3.6 | 3.8 | 4.2 | 4.1 | 4.3 | .. |
| - Statistical difference | - | - | - | - | 0.1 | 0.0 | 0.1 | .. |
| Total consumption | 35.8 | 44.9 | 59.1 | 79.2 | 83.6 | 86.1 | 85.8 | .. |
| - Energy industry consumption ⁽²⁾ | 1.6 | 1.5 | 1.1 | 1.6 | 3.4 | 3.2 | 3.1 | .. |
| Final consumption | 34.2 | 43.3 | 58.0 | 77.5 | 80.2 | 82.9 | 82.7 | .. |
| Industry | 22.4 | 23.9 | 30.5 | 39.9 | 39.4 | 40.1 | 39.0 | .. |
| Transport | 0.8 | 1.0 | 1.2 | 1.4 | 1.7 | 1.7 | 1.7 | .. |
| Commercial & publ. serv. | 3.4 | 5.3 | 7.8 | 12.2 | 12.7 | 18.1 | 20.8 | .. |
| Residential | 7.6 | 13.1 | 18.4 | 23.7 | 26.0 | 21.9 | 20.0 | .. |
| Agriculture & fishing | - | - | - | 0.3 | 0.4 | 1.1 | 1.1 | .. |
| Sector non specified | - | - | - | - | - | - | 0.1 | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

BELGIUM

4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 42.76 | 53.64 | 70.92 | 84.01 | 85.62 | 88.82 | 84.93 | 3.2 | 1.0 |
| - Hydro pumped storage | 0.45 | 0.55 | 0.63 | 1.24 | 1.27 | 1.29 | 1.35 | 2.2 | 4.3 |
| Total generation⁽¹⁾ | 42.31 | 53.09 | 70.29 | 82.77 | 84.35 | 87.53 | 83.58 | 3.2 | 1.0 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 31.02 | 49.88 | 68.18 | 82.30 | 83.99 | 86.87 | 82.05 | 5.0 | 1.0 |
| - Hydro pumped storage | 0.45 | 0.55 | 0.63 | 1.24 | 1.27 | 1.29 | 1.35 | 2.2 | 4.3 |
| Total generation ⁽¹⁾ | 30.58 | 49.33 | 67.55 | 81.07 | 82.72 | 85.58 | 80.71 | 5.1 | 1.0 |
| Nuclear | 0.14 | 12.55 | 42.72 | 48.16 | 46.65 | 48.23 | 45.57 | 43.2 | 0.4 |
| Hydro | 0.24 | 0.28 | 0.27 | 0.46 | 0.36 | 0.39 | 0.41 | 0.7 | 2.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 0.01 | 0.01 | 0.36 e | 0.49 | 0.64 | - | 28.5 |
| Coal | 6.18 e | 13.95 | 18.61 | 15.66 | 8.79 | 7.87 e | 6.66 | 7.1 | -5.6 |
| Oil | 16.47 | 17.68 | 0.82 | 0.42 | 1.28 | 0.69 | 0.30 | -17.1 | -5.4 |
| Gas | 7.51 | 4.83 | 4.77 | 15.48 | 22.57 | 24.72 | 23.44 | -2.8 | 9.3 |
| Comb. renew. & waste | 0.05 | 0.04 | 0.36 | 0.87 | 2.71 e | 3.20 | 3.69 | 13.6 | 13.8 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 11.74 | 3.76 | 2.75 | 1.71 | 1.62 | 1.95 | 2.88 | -8.7 | 0.3 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 11.74 | 3.76 | 2.75 | 1.71 | 1.62 | 1.95 | 2.88 | -8.7 | 0.3 |
| Nuclear | 0.01 | - | - | - | - | - | - | - | - |
| Hydro | 0.00 | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.00 | 0.26 e | 0.26 | 0.28 | - | - |
| Coal | 4.88 | 1.64 | 1.25 | 0.37 | 0.43 | 0.46 e | 0.58 | -8.2 | -4.2 |
| Oil | 3.41 | 0.73 | 0.50 | 0.38 | 0.09 | 0.12 | 0.11 | -11.4 | -8.2 |
| Gas | 3.37 | 1.14 | 0.64 | 0.49 | 0.45 | 0.67 | 1.20 | -9.9 | 3.6 |
| Comb. renew. & waste | 0.06 | 0.26 | 0.36 | 0.46 | 0.39 e | 0.44 | 0.70 | 11.8 | 3.8 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

BELGIUM

5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|---|
| Total | 11103 | 3527 | 2565 | 1548 | 1468 | 1816 | 2701 | 0.3 |
| Total energy | 1914 | 597 | 569 | 88 | - | - | 11 | -19.7 |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | 142 | 88 | - | - | 11 | -13.2 |
| Energy non specified/other | 1914 | 597 | 427 | - | - | - | - | - |
| Total industry | 9187 | 2928 | 1995 | 1150 | 1322 | 1584 | 2140 | 0.4 |
| Iron and steel | 1693 | 1140 | 761 | 244 | 309 | 379 | 511 | -2.2 |
| Chemical and petrochemical | 873 | 755 | 602 | 371 | 274 | 331 | 390 | -2.4 |
| Non-ferrous metals | 453 | 248 | 147 | 95 | 100 | 97 | 100 | -2.1 |
| Non-metallic minerals | - | - | - | 4 | 4 | 5 | 3 | - |
| Transport equipment | - | - | - | - | - | 5 | 6 | - |
| Machinery | 18 | 29 | 4 | 1 | - | - | 22 | 9.9 |
| Mining and quarrying | - | - | - | - | - | - | - | - |
| Food and tobacco | 168 | 205 | 298 | 235 | 327 | 435 | 437 | 2.1 |
| Pulp and printing | 335 | 219 | 178 | 191 | 303 | 326 | 422 | 4.9 |
| Wood and wood products | - | - | - | - | 5 | 6 | 5 | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | 118 | 106 | 5 | - | - | - | - | - |
| Non specified/other industries | 5529 | 226 | - | 9 | - | - | 244 | - |
| Total transport | - | - | - | 1 | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | 1 | - | - | - | - |
| Other | 2 | 2 | 1 | 309 | 146 | 232 | 550 | 42.0 |
| Commerce and pub. services | - | - | - | 37 | 2 | 2 | 18 | - |
| Residential | - | - | - | - | 89 | 208 | 284 | - |
| Agriculture and fishing | - | - | - | 12 | 3 | 22 | 248 | - |
| Sector non specified | 2 | 2 | 1 | 260 | 52 | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|--------------|-------------|--------------|----------------|----------------|--------------|--------------|---|
| Total | 17128 | 9742 | 23171 | 22366 e | 29211 e | 31297 | 31297 | 6.7 |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | 43 | 53 | 51 | 61 | 68 | 68 | 2.6 |
| Coal | 1679 | 1579 | - | - | - | - | - | - |
| Oil | 6301 | 2762 | 85 | 64 | 6 | 1 | 1 | -35.6 |
| Gas | 8729 | 4990 | 22201 | 15793 | 26251 | 27559 | 27559 | 10.0 |
| Comb. renew. & waste | 419 | 368 | 832 | 3556 | 236 | 1007 | 1007 | 5.8 |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | 2902 e | 2657 e | 2662 | 2662 | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 17128 | 9742 | 23171 | 19464 | 26554 | 28635 | .. | 6.2 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | 43 | 53 | 51 | 61 | 68 | .. | 2.6 |
| Coal | 1679 | 1579 | - | - | - | - | .. | - |
| Oil | 6301 | 2762 | 85 | 64 | 6 | 1 | .. | -35.6 |
| Gas | 8729 | 4990 | 22201 | 15793 | 26251 | 27559 | .. | 10.0 |
| Comb. renew. & waste | 419 | 368 | 832 | 3556 | 236 | 1007 | .. | 5.8 |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | - | - | 2902 e | 2657 e | 2662 | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | - | - | - | - | - | .. | - |
| Gas | - | - | - | - | - | - | .. | - |
| Comb. renew. & waste | - | - | - | - | - | - | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | 2902 e | 2657 e | 2662 | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

BELGIUM

7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 9.93 | 9.34 | 6.49 | 7.11 | 7.63 | 7.85 | 7.56 | -2.5 | 0.9 |
| Coal | 2.76 | 3.83 | 4.54 | 3.27 | 2.21 | 2.15 | 1.86 | 3.0 | -4.8 |
| Oil | 4.90 | 3.85 | 0.26 | 0.17 | 0.32 | 0.18 | 0.07 | -16.0 | -6.7 |
| Gas | 2.26 | 1.60 | 1.32 | 3.17 | 4.03 | 4.30 | 4.23 | -3.1 | 6.7 |
| Comb. renew. & waste | 0.01 | 0.06 | 0.38 e | 0.50 e | 1.07 e | 1.22 | 1.39 | 24.9 | 7.5 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 8.29 | 5.80 | 6.67 | 7.24 | 7.37 | 6.78 | .. | 0.9 |
| Coal | .. | 3.34 | 4.18 | 3.15 | 2.01 | 1.94 | 1.53 | .. | -5.4 |
| Oil | .. | 3.69 | 0.18 | 0.10 | 0.30 | 0.16 | 0.06 | .. | -6.3 |
| Gas | .. | 1.23 | 1.16 | 3.04 | 3.91 | 4.15 | 3.90 | .. | 7.0 |
| Comb. renew. & waste | .. | 0.02 | 0.29 e | 0.38 e | 1.02 e | 1.13 | 1.30 | .. | 8.7 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 0.02 | 3.27 | 11.13 | 12.55 | 12.16 | 12.57 | 11.88 | 45.1 | 0.4 |
| Nuclear | 0.02 | 3.27 | 11.13 | 12.55 | 12.16 | 12.57 | 11.88 | 45.1 | 0.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 0.01 | 0.02 | 0.02 | 0.04 | 0.06 | 0.08 | 0.09 | 2.8 | 7.8 |
| Hydro | 0.01 | 0.02 | 0.02 | 0.04 | 0.03 | 0.03 | 0.04 | 2.6 | 2.4 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.00 | 0.00 | 0.03 e | 0.04 | 0.05 | - | 28.5 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

BELGIUM

8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|--------|--------|----------|---------|---------|--------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | 3771 | 4459 | 4309 | 2539 | 2192 | 1866 | -4.7 |
| Fuel input (TJ) | 86493 | 108892 | 108004 | 63617 | 60958 | 51798 | -4.0 |
| Electricity production (GWh) | 9337 | 11585 | 12827 | 6722 | 6360 | 5432 | -4.1 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 26747 | 18233 | 27480 | 18690 | 15886 | 12126 | -2.2 |
| Electricity production (GWh) | 2397 | 1674 | 3114 | 1949 | 1443 e | 1224 | -1.7 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 3749 | 157 | 77 | 307 | 156 | 58 | -5.4 |
| Fuel input (TJ) | 151204 | 6349 | 3120 | 12470 | 6314 | 2406 | -5.2 |
| Electricity production (GWh) | 15987 | 839 | 369 | 1265 | 685 | 300 | -5.6 |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 61950 | 53411 | 103829 e | 109703 | 124880 | 109765 | 4.1 |
| Electricity production (GWh) | 5968 | 5160 | 11310 | 13877 | 15788 | 14611 | 6.0 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 608 | 114 | 10922 e | 14625 | 17829 | 20.6 |
| Electricity production (GWh) | - | 135 | 11 | 1079 e | 1420 | 1783 | 15.4 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | 3226 | 965 | 1400 | 8325 | 5530 | 3.0 |
| Electricity production (GWh) | - | 231 | 72 | 86 | 441 | 322 | 1.9 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 11434 | 12466 | 14120 e | 14780 | 22446 | 3.8 |
| Electricity production (GWh) | - | 350 | 657 | 752 e | 787 | 1003 | 6.0 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 146 e | 831 | 3863 e | 3028 | 2792 | 17.8 |
| Electricity production (GWh) | - | 7 | 78 | 383 e | 317 | 264 | 22.3 |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | 33989 | 19981 | 28438 | 26113 e | 27241 e | 24939 | 1.2 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

BELGIUM

**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|-------|-------|---------|---------|---------|-------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | 1806 | 2178 | 65 | 70 | 53 | 87 | -16.4 |
| Fuel input (TJ) | 37926 | 53348 | 1659 | 1734 | 1559 | 2560 | -15.5 |
| Electricity production (GWh) | 3477 | 5510 | 89 | 126 | 113 | 115 | -19.3 |
| CHP Heat production (TJ) | 1650 | 1508 | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 3657 | 10487 | - | 8845 | 9076 | 10723 | 0.1 |
| Electricity production (GWh) | 378 | 1086 | - | 419 | 411 e | 464 | -4.6 |
| CHP Heat production (TJ) | 29 | 71 | - | 1172 | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 505 | 171 | 77 | 46 | 25 | 19 | -11.5 |
| Fuel input (TJ) | 20200 | 6836 | 3029 | 1908 | 1012 | 828 | -11.1 |
| Electricity production (GWh) | 2420 | 475 | 428 | 112 | 128 | 106 | -8.0 |
| CHP Heat production (TJ) | 6301 | 2762 | 69 | 68 | 6 | 1 | -35.6 |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 12722 | 7938 | 42407 e | 77726 | 74921 | 87006 | 14.2 |
| Electricity production (GWh) | - | 245 | 4667 | 9145 | 9598 | 10035 | 22.9 |
| CHP Heat production (TJ) | 8729 | 4990 | 21133 | 27554 | 26167 | 27508 | 9.9 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | 652 | 1513 e | 3729 | 5101 | - |
| Electricity production (GWh) | - | - | 153 | 327 e | 398 | 702 | - |
| CHP Heat production (TJ) | - | - | - | 4 e | 56 | 271 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | 4719 | 1415 | 4208 | 1993 | - |
| Electricity production (GWh) | - | - | 313 | 23 e | 92 | 83 | - |
| CHP Heat production (TJ) | - | - | 78 | 208 e | - | 216 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | 592 | 9460 e | 638 | 1081 | - |
| Electricity production (GWh) | - | - | 32 | 338 e | 18 | 26 | - |
| CHP Heat production (TJ) | - | - | 270 | 2121 e | 78 | 271 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 249 | 1016 e | 1798 | 1614 | - |
| Electricity production (GWh) | - | - | 20 | 117 e | 168 | 210 | - |
| CHP Heat production (TJ) | - | - | 41 | 152 e | 102 | 249 | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | 6275 | 7316 | 5702 | 10607 e | 10926 e | 11741 | 2.7 |
| CHP Heat production (TJ) | 17128 | 9331 | 21591 | 31279 e | 26409 | 28516 | 6.4 |

Source: IEA/OECD Electricity Statistics.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

BELGIUM

10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|-------|------|--------|------|------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | - | 1 | - | - | - | - |
| Fuel input (TJ) | - | - | 23 | - | - | - | - |
| Heat production (TJ) | - | - | 16 | - | - | - | - |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 1382 | 121 | 94 | 57 e | - |
| Heat production (TJ) | - | - | 1068 | 103 | 84 | 51 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | 88 | 21 | - | - | - | - |
| Heat production (TJ) | - | 68 | 19 | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 330 e | 471 | 1078 e | - | - | - |
| Heat production (TJ) | - | 300 | 424 | 93 e | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | 20 e | - | - | - |
| Heat production (TJ) | - | - | - | 8 | - | - | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Heat production (TJ) | - | 368 | 1527 | 204 e | 84 | 51 | -10.4 |

Source: IEA/OECD Electricity Statistics.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

BELGIUM

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 33.73 | 32.29 | 32.07 | 41.38 | 40.73 | 39.65 | 42.36 | -0.3 | 1.6 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | - | 11.4 |
| Coal | 5.71 | 4.23 | 3.54 | 2.58 | 1.04 | 1.01 | 1.21 | -2.8 | -5.8 |
| Oil | 20.16 | 16.85 | 16.13 | 20.95 | 20.42 | 19.68 | 21.92 | -1.3 | 1.7 |
| Gas | 4.60 | 7.08 | 6.82 | 10.16 | 10.85 | 10.58 | 10.66 | 2.3 | 2.5 |
| Comb. renew. & waste | - | - | 0.38 | 0.53 | 0.83 | 0.84 | 0.97 | - | 5.4 |
| Electricity | 2.94 | 3.73 | 4.99 | 6.67 | 7.10 | 7.13 | 7.11 | 3.2 | 2.0 |
| Heat | 0.32 | 0.39 | 0.22 | 0.49 | 0.47 | 0.41 | 0.47 | -2.1 | 4.3 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 13.59 | 11.20 | 10.51 | 12.82 | 11.09 | 11.05 | 10.71 | -1.5 | 0.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 3.54 | 3.20 | 3.01 | 2.38 | 0.91 | 0.88 | 1.03 | -1.0 | -5.8 |
| Oil | 5.22 | 2.56 | 1.61 | 1.60 | 1.01 | 1.00 | 0.71 | -6.7 | -4.4 |
| Gas | 2.57 | 3.03 | 2.88 | 4.61 | 4.71 | 4.86 | 4.61 | 0.7 | 2.6 |
| Comb. renew. & waste | - | - | 0.19 | 0.38 | 0.61 | 0.53 | 0.62 | - | 6.8 |
| Electricity | 1.93 | 2.06 | 2.62 | 3.43 | 3.46 | 3.45 | 3.36 | 1.8 | 1.4 |
| Heat | 0.32 | 0.36 | 0.19 | 0.43 | 0.40 | 0.33 | 0.37 | -3.1 | 3.9 |
| Transport | 4.42 | 5.40 | 6.78 | 8.18 | 8.44 | 8.48 | 9.17 | 2.6 | 1.7 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.01 | 0.00 | - | - | - | - | - | - | - |
| Oil | 4.34 | 5.32 | 6.67 | 8.06 | 8.30 | 8.24 | 8.92 | 2.6 | 1.6 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | 0.09 | 0.10 | - | - |
| Electricity | 0.07 | 0.08 | 0.11 | 0.12 | 0.14 | 0.14 | 0.15 | 2.5 | 1.8 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 1.06 | 2.98 | 2.88 | 3.44 | 4.31 | 3.91 | 4.72 | 6.0 | 2.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.42 | 1.56 | 1.16 | 0.83 | 1.09 | 0.93 | 1.16 | 6.2 | 0.0 |
| Gas | 0.36 | 0.94 | 1.03 | 1.54 | 1.69 | 1.37 | 1.70 | 6.4 | 2.8 |
| Comb. renew. & waste | - | - | - | 0.00 | 0.01 | 0.01 | 0.01 | - | - |
| Electricity | 0.29 | 0.46 | 0.67 | 1.05 | 1.47 | 1.56 | 1.79 | 5.1 | 5.6 |
| Heat | - | 0.02 | 0.01 | 0.01 | 0.05 | 0.05 | 0.07 | - | 9.2 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

BELGIUM

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 11.05 | 9.59 | 8.28 | 9.47 | 8.91 | 8.11 | 8.78 | -1.7 | 0.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | 0.00 | 0.00 | 0.00 | 0.01 | - | - |
| Coal | 2.15 | 1.03 | 0.52 | 0.20 | 0.13 | 0.11 | 0.15 | -8.0 | -6.6 |
| Oil | 7.15 | 4.90 | 3.48 | 3.77 | 3.15 | 2.62 | 3.36 | -4.1 | -0.2 |
| Gas | 1.09 | 2.51 | 2.48 | 3.29 | 3.46 | 3.28 | 3.30 | 5.0 | 1.6 |
| Comb. renew. & waste | - | - | 0.19 | 0.15 | 0.21 | 0.20 | 0.22 | - | 1.1 |
| Electricity | 0.65 | 1.13 | 1.58 | 2.04 | 1.95 | 1.88 | 1.72 | 5.3 | 0.5 |
| Heat | - | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | - | -1.3 |
| Agriculture & fishing | 0.45 | 0.51 | 0.49 | 0.69 | 0.86 | 0.91 | 0.83 | 0.5 | 3.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.45 | 0.51 | 0.49 | 0.67 | 0.62 | 0.63 | 0.53 | 0.5 | 0.5 |
| Gas | - | - | - | - | 0.15 | 0.17 | 0.17 | - | - |
| Comb. renew. & waste | - | - | - | - | 0.00 | 0.02 | 0.02 | - | - |
| Electricity | - | - | - | 0.02 | 0.08 | 0.09 | 0.09 | - | - |
| Heat | - | - | - | - | 0.01 | 0.01 | 0.02 | - | - |
| Other | - | - | 0.00 | 0.03 | 0.00 | 0.00 | 0.01 | - | 6.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | 0.00 | - | - | - | - | - | - |
| Coal | - | - | - | - | 0.00 | - | 0.00 | - | - |
| Oil | - | - | - | - | - | - | - | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | - | - | - | - | - | 0.00 | - | - |
| Heat | - | - | 0.00 | 0.03 | 0.00 | 0.00 | - | - | - |
| Non-energy use⁽¹⁾ | 3.16 | 2.61 | 3.13 | 6.74 | 7.10 | 7.19 | 8.14 | -0.06 | 5.45 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

BELGIUM

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 33.73 | 32.29 | 32.07 | 41.38 | 41.54 | 40.73 | 39.65 | 42.36 |
| Total industry (Mtoe) | 13.59 | 11.20 | 10.51 | 12.82 | 10.44 | 11.09 | 11.05 | 10.71 |
| Iron and steel | 4.55 | 3.45 | 3.25 | 3.57 | 2.12 | 1.97 | 1.88 | 1.98 |
| Chem. and petrochemical | 2.03 | 2.13 | 2.29 | 3.27 | 3.36 | 3.39 | 3.56 | 3.45 |
| Non-ferrous metals | 0.35 | 0.38 | 0.35 | 0.33 | 0.30 | 0.39 | 0.38 | 0.30 |
| Non-metallic minerals | 2.17 | 2.37 | 1.50 | 1.42 | 1.19 | 1.32 | 1.16 | 1.38 |
| Transport equipment | 0.10 | 0.12 | 0.19 | 0.21 | 0.19 | 0.23 | 0.23 | 0.20 |
| Machinery | 0.46 | 0.44 | 0.33 | 0.26 | 0.24 | 0.31 | 0.33 | 0.29 |
| Mining and quarrying | 0.05 | 0.04 | 0.04 | 0.03 | 0.05 | 0.09 | 0.07 | 0.08 |
| Food and tobacco | 0.51 | 0.54 | 0.75 | 0.73 | 0.94 | 1.08 | 1.05 | 0.95 |
| Paper, pulp and printing | 0.24 | 0.24 | 0.37 | 0.53 | 0.62 | 0.71 | 0.84 | 0.73 |
| Wood and wood products | 0.03 | 0.03 | 0.05 | 0.10 | 0.27 | 0.28 | 0.25 | 0.23 |
| Construction | 0.14 | 0.15 | 0.09 | 0.16 | 0.18 | 0.20 | 0.21 | 0.26 |
| Textile and leather | 0.14 | 0.21 | 0.27 | 0.25 | 0.21 | 0.31 | 0.40 | 0.26 |
| Non specified/other | 2.84 | 1.10 | 1.02 | 1.96 | 0.77 | 0.81 | 0.70 | 0.60 |
| Electricity consumption (Mtoe) | 2.94 | 3.73 | 4.99 | 6.67 | 6.90 | 7.10 | 7.13 | 7.11 |
| Total industry (Mtoe) | 1.93 | 2.06 | 2.62 | 3.43 | 3.39 | 3.46 | 3.45 | 3.36 |
| Iron and steel | 0.44 | 0.42 | 0.44 | 0.59 | 0.52 | 0.53 | 0.56 | 0.55 |
| Chem. and petrochemical | 0.63 | 0.67 | 0.85 | 1.16 | 1.18 | 1.01 | 1.13 | 1.05 |
| Non-ferrous metals | 0.13 | 0.14 | 0.18 | 0.18 | 0.15 | 0.21 | 0.20 | 0.19 |
| Non-metallic minerals | 0.15 | 0.16 | 0.18 | 0.22 | 0.20 | 0.21 | 0.20 | 0.21 |
| Transport equipment | 0.05 | 0.05 | 0.08 | 0.10 | 0.09 | 0.10 | 0.10 | 0.09 |
| Machinery | 0.12 | 0.15 | 0.17 | 0.18 | 0.19 | 0.19 | 0.18 | 0.19 |
| Mining and quarrying | 0.02 | 0.02 | 0.03 | 0.03 | 0.05 | 0.08 | 0.06 | 0.07 |
| Food and tobacco | 0.11 | 0.15 | 0.24 | 0.34 | 0.34 | 0.38 | 0.39 | 0.38 |
| Paper, pulp and printing | 0.11 | 0.11 | 0.18 | 0.22 | 0.23 | 0.24 | 0.24 | 0.23 |
| Wood and wood products | 0.02 | 0.03 | 0.05 | 0.06 | 0.16 | 0.16 | 0.13 | 0.12 |
| Construction | 0.01 | 0.01 | 0.01 | 0.03 | 0.03 | 0.07 | 0.07 | 0.07 |
| Textile and leather | 0.11 | 0.10 | 0.15 | 0.17 | 0.11 | 0.15 | 0.14 | 0.13 |
| Non specified/other | 0.02 | 0.04 | 0.06 | 0.16 | 0.15 | 0.13 | 0.02 | 0.07 |
| Total industry (TWh) | 22.42 | 23.94 | 30.52 | 39.87 | 39.42 | 40.21 | 40.13 | 39.02 |
| Iron and steel | 5.09 | 4.87 | 5.14 | 6.88 | 6.00 | 6.19 | 6.49 | 6.35 |
| Chem. and petrochemical | 7.35 | 7.80 | 9.88 | 13.48 | 13.77 | 11.77 | 13.18 | 12.22 |
| Non-ferrous metals | 1.51 | 1.67 | 2.11 | 2.05 | 1.73 | 2.47 | 2.30 | 2.21 |
| Non-metallic minerals | 1.76 | 1.86 | 2.09 | 2.52 | 2.33 | 2.41 | 2.37 | 2.45 |
| Transport equipment | 0.63 | 0.62 | 0.97 | 1.14 | 0.99 | 1.18 | 1.20 | 1.10 |
| Machinery | 1.44 | 1.72 | 2.00 | 2.09 | 2.17 | 2.18 | 2.15 | 2.19 |
| Mining and quarrying | 0.25 | 0.28 | 0.33 | 0.38 | 0.53 | 0.88 | 0.72 | 0.76 |
| Food and tobacco | 1.28 | 1.78 | 2.79 | 3.95 | 3.99 | 4.43 | 4.57 | 4.45 |
| Paper, pulp and printing | 1.24 | 1.28 | 2.12 | 2.53 | 2.71 | 2.74 | 2.85 | 2.67 |
| Wood and wood products | 0.26 | 0.34 | 0.62 | 0.64 | 1.86 | 1.89 | 1.55 | 1.38 |
| Construction | 0.08 | 0.12 | 0.08 | 0.29 | 0.32 | 0.83 | 0.79 | 0.87 |
| Textile and leather | 1.31 | 1.17 | 1.69 | 2.01 | 1.23 | 1.71 | 1.69 | 1.54 |
| Non specified/other | 0.23 | 0.44 | 0.72 | 1.92 | 1.80 | 1.54 | 0.29 | 0.84 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

BELGIUM

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Total imports⁽¹⁾ | 1650 | 6285 | 4785 | 9398 | 11645 | 14328 | 18853 | 15816 | 17158 |
| Imports from: | | | | | | | | | |
| Total OECD | 1650 | 6285 | 4785 | 9398 | 11645 | 14328 | 18853 | 15816 | 17158 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | 1322 | 1098 | 2311 | 5707 | 8512 | 6888 | 10771 | 8466 | 7411 |
| Germany | 113 | 1281 | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | 2366 | 2479 | 2084 | 1629 |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | 215 | 3906 | 2474 | 3691 | 3133 | 5074 | 5603 | 5266 | 8118 |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

BELGIUM

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Total exports ⁽¹⁾ | 2405 | 8920 | 8509 | 5326 | 7319 | 8024 | 8696 | 9037 | 6561 |
| Exports to: | | | | | | | | | |
| Total OECD | 2405 | 8920 | 8509 | 5326 | 7319 | 8024 | 8696 | 9037 | 6561 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | 89 | 7823 | 3544 | 1244 | 201 | 2221 | 1981 | 2322 | 2039 |
| Germany | 115 | 16 | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | 913 | 1071 | 832 | 1371 | 1967 | 1373 | 1697 | 1631 | 1518 |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | 1288 | 10 | 4133 | 2711 | 5151 | 4430 | 5018 | 5084 | 3004 |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

BELGIUM

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 7.03 | 10.14 | 13.40 | 14.25 | 15.24 | 15.60 | 15.76 | 15.81 | 15.79 |
| Nuclear | 0.01 | 1.67 | 5.50 | 5.63 | 5.71 | 5.80 | 5.83 | 5.83 | 5.83 |
| Hydro | 0.44 | 1.13 | 1.40 | 1.40 | 1.41 | 1.41 | 1.41 | 1.42 | 1.42 |
| <i>of which: pumped storage</i> | <i>0.40</i> | <i>1.06</i> | <i>1.31</i> | <i>1.31</i> | <i>1.31</i> | <i>1.31</i> | <i>1.31</i> | <i>1.31</i> | <i>1.31</i> |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | 0.01 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.01 | 0.01 | 0.01 | 0.17 | 0.21 | 0.27 | 0.32 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 6.57 | 7.34 | 6.49 | 7.21 | 8.11 | 8.22 | 8.31 | 8.29 | 8.21 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | - | - | - | - | - | - | - |
| Liquid fuels | 1.12 | 0.39 | 0.37 | 0.37 | 0.38 | 0.42 | 0.34 | .. | .. |
| Natural gas | - | 0.08 | 0.08 | 0.07 | 0.99 | 1.99 | 2.24 | .. | .. |
| Comb. renew. & waste | - | 0.01 | 0.07 | 0.07 | 0.12 | 0.21 | 0.26 | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 0.49 | 1.07 | 1.49 | 1.04 | 0.38 | 0.36 | 0.25 | .. | .. |
| Solid / natural gas | - | 0.06 | 0.06 | 0.11 | 0.17 | 3.57 | 0.17 | .. | .. |
| Liquid / natural gas | 1.73 | 1.52 | 1.62 | 2.03 | 4.35 | 1.68 | 3.39 | .. | .. |
| Solid / liquid / gas | 3.23 | 4.23 | 2.81 | 3.52 | 1.71 | - | 1.68 | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 5.64 | 5.33 | 3.95 | 3.48 | 3.45 | 3.43 | 3.28 |
| Internal combustion | - | - | 0.17 | 0.19 | 0.20 | 0.38 | 0.37 | 0.35 | 0.31 |
| Gas turbine | - | - | 0.28 | 0.28 | 1.28 | 1.31 | 1.32 | 1.25 | 1.37 |
| Combined cycle | - | - | 0.12 | 1.14 | 2.67 | 3.04 | 3.17 | 3.26 | 3.26 |
| Other | - | - | 0.28 | 0.28 | - | - | - | - | - |
| Peak load | .. | 7.92 | 10.43 | 11.76 | 12.65 | 12.77 | 13.85 | 14.20 | 13.65 |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

BELGIUM

15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 1.08 | 0.88 | 0.75 | 0.67 | 0.44 | 0.49 | 0.50 | 0.57 | 0.97 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | 0.02 | 0.05 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 1.08 | 0.88 | 0.75 | 0.67 | 0.44 | 0.49 | 0.49 | 0.55 | 0.92 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 0.08 | - | - | - | - | - | - | - | - |
| Liquid fuels | 0.13 | 0.17 | 0.10 | 0.15 | 0.15 | 0.06 | .. | .. | .. |
| Natural gas | 0.02 | 0.02 | 0.01 | - | 0.02 | 0.12 | .. | .. | .. |
| Comb. renew. & waste | - | - | 0.01 | 0.09 | 0.06 | 0.17 | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 0.12 | 0.11 | 0.04 | 0.02 | 0.02 | 0.05 | .. | .. | .. |
| Solid / natural gas | 0.11 | 0.08 | 0.06 | - | - | - | - | - | - |
| Liquid / natural gas | 0.09 | 0.07 | 0.08 | 0.07 | 0.02 | - | - | - | - |
| Solid / liquid / gas | 0.54 | 0.43 | 0.45 | 0.34 | 0.19 | 0.11 | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 0.68 | 0.60 | 0.32 | - | 0.03 | 0.03 | 0.12 |
| Internal combustion | - | - | - | - | - | 0.05 | 0.06 | 0.06 | 0.18 |
| Gas turbine | - | - | - | - | - | - | 0.13 | 0.18 | 0.30 |
| Combined cycle | - | - | 0.06 | 0.06 | 0.12 | 0.32 | 0.16 | 0.16 | 0.20 |
| Other | - | - | - | - | - | 0.12 | 0.12 | 0.12 | 0.12 |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

BELGIUM

16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-------------------|--------|--------|--------|-------|-------|-------|--------|-------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Euro/ unit | | | | | | | | |
| Steam coal (t) | 31.61 | 34.56 | 37.68 | 35.54 | 64.68 | 50.40 | 55.15 | 89.29 | 55.31 |
| Heavy fuel oil (t) | 72.53 | 130.02 | 105.23 | 196.15 | x | x | x | x | x |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | 65.69 | 114.77 | 102.43 | c | c | c | c | c | c |
| | Euro/ toe | | | | | | | | |
| Steam coal | 59 | 65 | 71 | 67 | 121 | 94 | 103 | 167 | 104 |
| Heavy fuel oil | 74 | 133 | 108 | 201 | x | x | x | x | x |
| Natural gas ⁽²⁾ | 73 | 128 | 114 | c | c | c | c | c | c |
| End-user prices of electricity | | | | | | | | | |
| | Euro/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0348 | 0.0420 | 0.0581 | 0.0518 | .. | .. | .. | 0.0959 | .. |
| <i>of which: tax</i> | - | - | - | - | .. | .. | .. | - | .. |
| Household | | | | | | | | | |
| Price | 0.0897 | 0.1022 | 0.1381 | 0.1435 | .. | .. | .. | 0.1818 | .. |
| <i>of which: tax</i> | 0.0124 | 0.0141 | 0.0201 | 0.0263 | .. | .. | .. | 0.0452 | .. |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

CANADA

Figure 1. Total final consumption by fuel

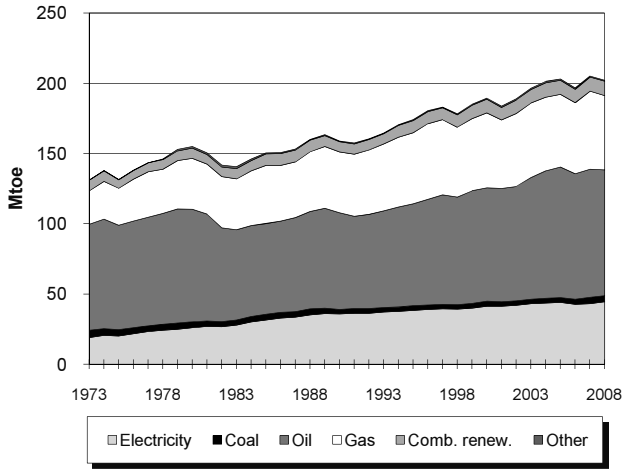


Figure 2. Electricity generation by fuel

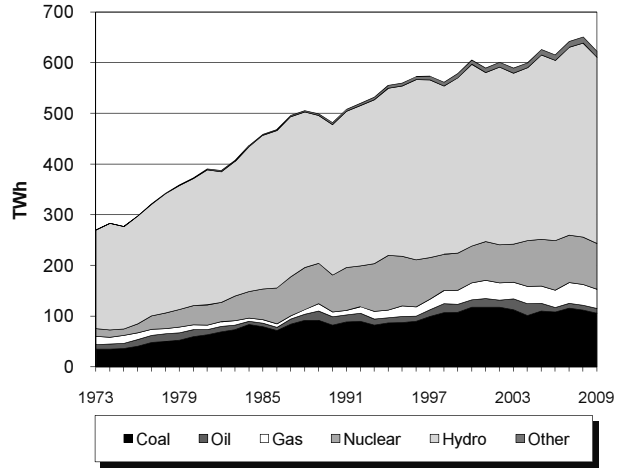


Figure 3. Electricity consumption by sector

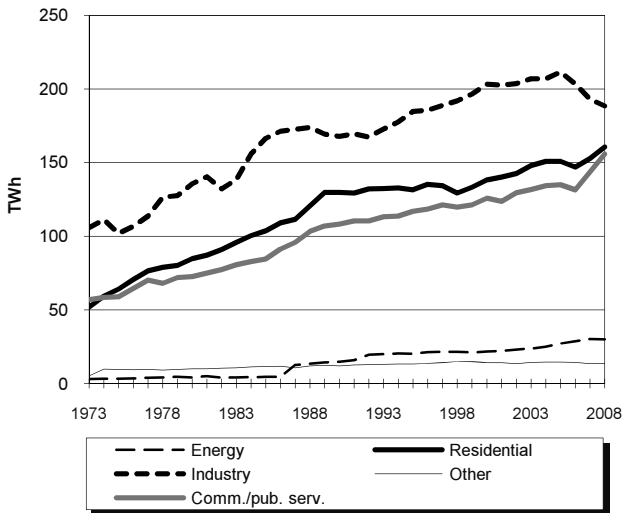


Figure 4. Electricity indicators

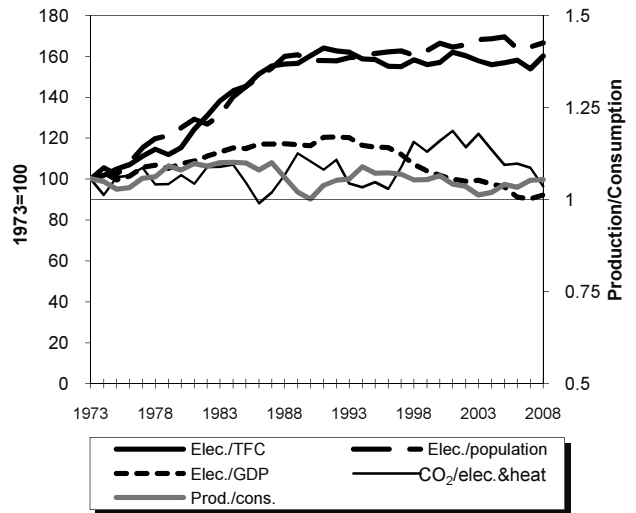
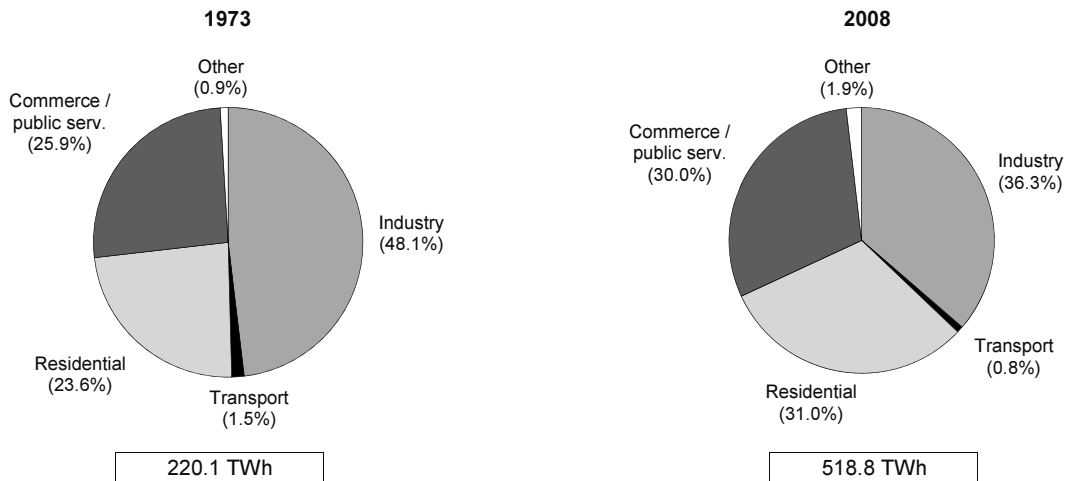


Figure 5. Total final electricity consumption by sector



CANADA

1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 159.34 | 192.60 | 208.68 | 251.44 | 272.10 | 266.77 | 250.05 | 1.6 | 1.0 |
| GDP (billion 2000 USD) | 325.20 | 411.96 | 543.64 | 724.91 | 866.79 | 870.39 | 858.07 | 3.1 | 2.4 |
| TPES/GDP ⁽¹⁾ | 0.49 | 0.47 | 0.38 | 0.35 | 0.31 | 0.31 | 0.29 | -1.4 | -1.4 |
| Population (millions) | 22.49 | 24.52 | 27.69 | 30.69 | 32.93 | 33.33 | 33.53 | 1.2 | 1.0 |
| TPES/population ⁽²⁾ | 7.08 | 7.86 | 7.54 | 8.19 | 8.26 | 8.00 | 7.46 | 0.4 | -0.1 |
| TPES/GDP (2000 = 100) | 141 | 135 | 111 | 100 | 91 | 88 | 84 | -1.4 | -1.4 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 102 | 111 | 116 | 100 | 87 | 90 | .. | 0.8 | .. |
| Ele.TFC/population ⁽⁴⁾ | 9788 | 12372 | 15105 | 15701 | 15279 | 15572 | .. | 2.6 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 270.08 | 373.28 | 482.04 | 605.60 | 641.99 | 651.21 | 622.52 | 3.5 | 1.4 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 159.34 | 192.60 | 208.68 | 251.44 | 272.10 | 266.77 | 250.05 | 1.6 | 1.0 |
| Coal | 15.26 | 21.22 | 24.28 | 31.66 | 26.41 | 26.27 | 21.11 | 2.8 | -0.7 |
| Oil | 79.39 | 88.52 | 76.51 | 87.10 | 99.17 | 96.42 | 88.27 | -0.2 | 0.8 |
| Gas | 37.27 | 45.55 | 54.73 | 74.24 | 80.59 | 77.05 | 77.71 | 2.3 | 1.9 |
| Comb. renew & waste | 7.81 | 7.65 | 8.27 | 11.68 | 12.08 | 12.12 | 10.56 | 0.3 | 1.3 |
| Nuclear | 4.07 | 10.40 | 19.40 | 18.97 | 24.36 | 24.48 | 23.57 | 9.6 | 1.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.00 | 0.03 e | 0.26 | 0.33 | 0.33 | - | 30.1 |
| Hydro | 16.74 | 21.60 | 25.52 | 30.83 | 31.88 | 32.89 | 31.55 | 2.5 | 1.1 |
| Net electricity imports ⁽²⁾ | -1.21 | -2.34 | -0.03 | -3.07 | -2.66 | -2.79 | -3.06 | -19.5 | 27.6 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

CANADA

3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|--------------|--------------|----------------|----------------|----------------|----------------|----------------|--------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 270.2 | 373.4 | 482.2 e | 605.7 e | 626.1 e | 642.1 e | 651.3 e | 622.6 |
| Nuclear | 15.3 | 38.0 | 73.0 | 72.8 | 92.0 | 93.5 | 94.0 | 90.4 |
| Hydro | 194.8 | 251.2 | 296.8 | 358.6 | 363.7 | 370.8 | 382.6 | 367.0 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tide, wave, ocean | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Wind | - | - | - | 0.3 | 1.5 | 3.0 | 3.8 | 3.8 |
| Combustible fuels | 60.2 | 84.1 | 112.3 e | 174.0 e | 168.8 e | 174.7 e | 170.9 e | 161.3 |
| <i>Coal</i> | 34.9 | 59.8 e | 82.2 e | 117.6 e | 110.0 | 115.7 | 112.0 | 105.7 |
| <i>Oil</i> | 9.1 | 13.8 | 16.5 e | 14.7 | 15.3 e | 9.8 | 9.8 | 9.3 |
| <i>Gas</i> | 16.2 | 9.2 | 9.7 | 33.5 | 34.4 | 40.7 | 40.6 | 38.4 |
| <i>Comb. renew. & waste</i> | - | 1.3 | 4.0 e | 8.2 e | 9.2 e | 8.5 e | 8.5 e | 8.0 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - |
| - Own use by power plant | 6.9 | 6.2 | 14.4 e | 19.1 e | 20.1 e | 21.3 e | 20.3 e | .. |
| Net production | 263.3 | 367.2 | 467.7 e | 586.7 e | 606.1 e | 620.8 e | 631.1 e | .. |
| Nuclear | .. | 35.9 | 68.8 | 68.7 | 86.8 | 88.2 | 88.6 | .. |
| Hydro | .. | 251.0 | 293.9 | 355.1 | 360.0 | 367.1 | 378.8 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | - | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Tide, wave, ocean | .. | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Wind | .. | - | - | 0.3 | 1.5 | 3.0 | 3.8 | .. |
| Combustible fuels | .. | 80.3 | 105.0 e | 162.6 e | 157.7 e | 162.5 e | 159.8 e | .. |
| Other (e.g. fuel cells) | .. | - | - | - | - | - | - | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| + Imports | 2.2 | 2.9 | 17.8 | 15.3 | 19.7 | 19.4 | 25.2 | 18.2 |
| - Exports | 16.3 | 30.2 | 18.1 | 51.0 | 43.5 | 50.3 | 57.7 | 53.7 |
| Electrical energy supplied | 249.0 | 339.7 | 467.2 e | 550.8 e | 582.0 e | 589.7 e | 598.4 | .. |
| - Transmission & distr. losses | 25.8 | 32.2 | 34.1 | 47.3 | 42.7 | 56.4 | 50.5 | .. |
| - Statistical difference | - | - | -0.0 | -0.0 | -0.0 | -0.1 | -0.9 | .. |
| Total consumption | 223.2 | 307.5 | 433.1 e | 503.5 e | 539.4 e | 533.3 e | 548.8 | .. |
| - Energy industry consumption ⁽²⁾ | 3.2 | 4.3 | 14.9 | 21.9 | 27.2 | 30.3 | 30.0 | .. |
| Final consumption | 220.1 | 303.2 | 418.1 e | 481.6 e | 512.2 e | 503.0 e | 518.8 | .. |
| Industry | 105.9 | 135.7 | 167.9 | 203.3 | 211.6 | 193.1 | 188.4 | .. |
| Transport | 3.2 | 2.3 | 3.3 | 4.5 | 4.3 | 4.0 | 4.2 | .. |
| Commercial & publ. serv. | 57.0 | 72.6 | 108.4 | 125.8 | 135.0 | 143.6 | 155.8 | .. |
| Residential | 51.9 | 84.8 | 129.8 | 138.2 | 151.0 | 152.9 | 160.7 | .. |
| Agriculture & fishing | 2.1 | 7.8 | 8.6 | 9.6 | 10.2 | 9.2 | 9.6 | .. |
| Sector non specified | - | - | 0.1 e | 0.1 e | 0.1 e | 0.2 e | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

CANADA

4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 283.62 | 373.38 | 482.15 | 605.71 | 615.97 | 642.10 | 651.32 | 3.4 | 1.7 |
| - Hydro pumped storage | 0.11 | 0.10 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.2 | - |
| Total generation⁽¹⁾ | 283.52 | 373.28 | 482.04 | 605.60 | 615.86 | 641.99 | 651.21 | 3.4 | 1.7 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 244.55 | 334.71 | 440.17 | 556.91 | 562.68 | 592.20 | 597.53 | 3.7 | 1.7 |
| - Hydro pumped storage | 0.11 | 0.10 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.2 | - |
| Total generation ⁽¹⁾ | 244.45 | 334.61 | 440.06 | 556.80 | 562.57 | 592.08 | 597.42 | 3.7 | 1.7 |
| Nuclear | 14.70 | 38.03 | 72.97 | 72.80 | 97.96 | 93.49 | 93.95 | 10.5 | 1.4 |
| Hydro | 177.94 | 220.47 | 265.46 | 327.30 | 321.93 | 341.09 | 348.90 | 2.5 | 1.5 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 0.03 | 0.31 e | 2.55 | 3.08 | 3.89 | - | 32.1 |
| Coal | 34.61 | 59.74 | 82.12 | 117.26 | 107.89 | 115.63 | 111.90 | 5.5 | 1.7 |
| Oil | 6.77 | 11.37 | 14.62 | 12.48 | 7.10 | 7.57 | 7.57 | 4.9 | -3.6 |
| Gas | 10.43 | 5.01 | 4.86 | 26.65 | 25.14 | 31.18 | 31.18 | -4.7 | 10.9 |
| Comb. renew. & waste | - | - | - | - | - | 0.04 e | 0.04 e | - | - |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 39.07 | 38.67 | 41.99 | 48.80 | 53.29 | 49.91 | 53.79 | 0.5 | 1.4 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 39.07 | 38.67 | 41.99 | 48.80 | 53.29 | 49.91 | 53.79 | 0.5 | 1.4 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 32.73 | 30.68 | 31.27 | 31.21 | 33.42 | 29.60 | 33.57 | -0.3 | 0.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | - | - | - | - | - |
| Coal | 0.18 e | 0.07 e | 0.10 | 0.33 | 0.26 | 0.10 | 0.07 | -3.8 | -1.9 |
| Oil | 3.52 | 2.43 | 1.85 | 2.21 | 2.15 | 2.28 | 2.28 | -3.9 | 1.2 |
| Gas | 2.64 | 4.19 | 4.79 e | 6.82 e | 8.74 | 9.52 | 9.46 | 3.8 | 3.9 |
| Comb. renew. & waste | - | 1.30 | 3.97 e | 8.23 e | 8.72 e | 8.41 e | 8.41 e | - | 4.3 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

CANADA

5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|-------------|-------------|----------------|----------------|----------------|----------------|----------------|---|
| Total | 5924 | 7991 | 40974 e | 47050 e | 50691 e | 47489 e | 52194 e | 1.4 |
| Total energy | - | - | - | - | 7081 | 6633 | 7184 | - |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | - | - | - | - | - |
| Energy non specified/other | - | - | - | - | 7081 | 6633 | 7184 | - |
| Total industry | 5924 | 7991 | 40842 | 46197 | 1518 | 1422 | 1539 | -16.7 |
| Iron and steel | - | - | - | - | - | - | - | - |
| Chemical and petrochemical | - | - | - | - | - | - | - | - |
| Non-ferrous metals | - | - | - | - | - | - | - | - |
| Non-metallic minerals | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | - | - | - | - | - | - | - | - |
| Mining and quarrying | - | - | - | - | 1518 | 1422 | 1539 | - |
| Food and tobacco | - | - | - | - | - | - | - | - |
| Pulp and printing | - | - | - | - | - | - | - | - |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | - | - | - | - | - | - | - | - |
| Non specified/other industries | 5924 | 7991 | 40842 | 46197 | - | - | - | - |
| Total transport | - | - | - | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | - | - | - | - |
| Other | - | - | 132 e | 853 e | 42092 e | 39434 e | 43471 e | 38.0 |
| Commerce and pub. services | - | - | 23 | 708 | - | - | - | - |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | - | - | - | - | - | - | - | - |
| Sector non specified | - | - | 109 e | 145 e | 42092 e | 39434 e | 43471 e | 39.5 |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

CANADA

6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|----------------|----------------|----------------|--------------|----------------|----------------|--------------|---|
| Total | 43140 e | 28587 e | 35983 e | 41046 | 35475 e | 33701 e | 31812 | 0.9 |
| Nuclear | 20486 | 16029 | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - |
| Oil | 8618 e | 2943 | 2434 | 2914 | 2017 | 996 | 940 | -5.8 |
| Gas | - | 7601 | 31535 | 36118 | 31603 | 30850 | 29121 | 8.1 |
| Comb. renew. & waste | - | 2014 e | 2014 e | 2014 | 1855 e | 1855 e | 1751 | -0.5 |
| Non-spec. comb. fuels | 14036 | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 43140 e | 26573 e | 33969 e | 39032 | 33670 e | 31896 e | .. | 1.0 |
| Nuclear | 20486 | 16029 | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | 8618 e | 2943 | 2434 | 2914 | 2017 | 996 | .. | -5.8 |
| Gas | - | 7601 | 31535 | 36118 | 31603 | 30850 | .. | 8.1 |
| Comb. renew. & waste | - | - e | - e | - | 50 e | 50 e | .. | - |
| Non-spec. comb. fuels | 14036 | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | 2014 e | 2014 e | 2014 | 1805 e | 1805 e | .. | -0.6 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | - | - | - | - | - | .. | - |
| Gas | - | - | - | - | - | - | .. | - |
| Comb. renew. & waste | - | 2014 e | 2014 e | 2014 | 1805 e | 1805 e | .. | -0.6 |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

CANADA

7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 15.29 | 20.21 | 27.66 | 40.05 | 37.25 | 38.33 | 35.43 | 3.5 | 1.4 |
| Coal | 8.30 | 15.03 | 21.02 | 27.78 | 25.21 e | 24.89 | 23.28 | 5.6 | 0.6 |
| Oil | 2.53 | 3.18 | 3.80 | 2.92 | 2.73 | 2.79 | 2.53 | 2.4 | -2.2 |
| Gas | 4.27 | 1.77 | 1.87 | 7.35 | 7.20 | 8.66 | 7.62 | -4.7 | 8.1 |
| Comb. renew. & waste | 0.20 | 0.23 e | 0.98 e | 1.99 e | 2.10 e | 1.99 e | 1.99 e | 9.9 | 4.0 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 19.21 | 25.58 | 36.10 | 32.83 | 33.98 | 31.05 | .. | 1.1 |
| Coal | .. | 15.01 | 21.00 | 27.70 | 25.18 e | 24.86 | 23.26 | .. | 0.6 |
| Oil | .. | 2.91 | 3.32 | 2.40 | 2.22 | 2.30 | 2.07 | .. | -2.6 |
| Gas | .. | 1.29 | 1.26 | 5.99 | 5.44 | 6.81 | 5.72 | .. | 8.8 |
| Comb. renew. & waste | .. | - | - | - | - | 0.01 e | 0.01 e | .. | - |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 4.07 | 10.40 | 19.40 | 18.97 | 25.53 | 24.37 | 24.49 | 9.6 | 1.3 |
| Nuclear | 4.07 | 10.40 | 19.40 | 18.97 | 25.53 | 24.36 | 24.48 | 9.6 | 1.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.00 e | 0.00 | 0.00 | 0.00 | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 16.74 | 21.60 | 25.52 | 30.86 | 30.78 | 32.14 | 33.22 | 2.5 | 1.5 |
| Hydro | 16.74 | 21.60 | 25.52 | 30.83 | 30.56 | 31.88 | 32.89 | 2.5 | 1.4 |
| Tide, wave, ocean | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 1.3 |
| Wind | - | - | - | 0.02 | 0.22 | 0.26 | 0.33 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

CANADA

8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|--------|----------|----------|----------|----------|----------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 12659 | 12208 | 15746 e | 14978 | 8720 | 6032 | -3.8 |
| Fuel input (TJ) | 359671 | 361605 | 462237 e | 442696 | 255514 | 175260 | -3.9 |
| Electricity production (GWh) | 36393 | 34897 | 56987 e | 40835 | 26850 | 24889 | -1.9 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 15242 | 29946 | 40083 | 35259 | 44693 | 45418 | 2.3 |
| Fuel input (TJ) | 262981 | 518035 | 697691 | 611603 | 785513 | 798682 | 2.4 |
| Electricity production (GWh) | 23382 | 47272 | 60290 | 67062 | 88791 | 87020 | 3.4 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 356 | 577 e | 3494 e | 1429 | 1076 | 774 | 1.6 |
| Electricity production (GWh) | 33 e | 51 e | 311 e | 250 | 84 | 60 | 0.9 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 3007 | 3842 | 3166 | 2903 | 3001 | 2820 | -1.7 |
| Fuel input (TJ) | 124234 | 166963 | 133903 | 111915 | 117115 | 107071 | -2.4 |
| Electricity production (GWh) | 13798 | 16458 e | 14680 | 9240 | 9835 | 9835 | -2.8 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 83966 | 75992 | 227749 | 227307 | 278449 | 238147 | 6.6 |
| Electricity production (GWh) | 9192 | 9423 e | 23418 e | 25836 | 30992 | 33984 | 7.4 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 9630 | 36758 e | 70704 e | 75167 | 72265 | 72265 | 3.8 |
| Electricity production (GWh) | 1300 | 3829 | 7365 | 7830 | 7528 | 7528 | 3.8 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | 1088 e | 1206 | 1206 e | 1206 e | - |
| Electricity production (GWh) | - | - | 36 e | 42 | 42 e | 42 e | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 276 e | 7787 e | 8038 e | 6042 e | 6042 e | 18.7 |
| Electricity production (GWh) | - | 23 e | 708 e | 731 e | 726 e | 726 e | 21.1 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 84098 | 111953 e | 163795 e | 151826 e | 164848 e | 164084 e | 2.1 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

CANADA

**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|---------|---------|---------|--------|---------|---------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 283 | 77 | 94 | 122 | 86 | 48 | -2.6 |
| Fuel input (TJ) | 12311 e | 3358 | 4109 | 5355 | 3775 | 2115 | -2.5 |
| Electricity production (GWh) | - | 10 | 10 | 10 | 10 | 10 | - |
| CHP Heat production (TJ) | 8618 e | 2943 | 2434 | 3083 | 2017 | 996 | -5.8 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 10919 | 114464 | 107786 | 124555 | 116447 | 14.1 |
| Electricity production (GWh) | - | 231 | 10054 | 8045 | 9708 | 6655 | 20.5 |
| CHP Heat production (TJ) | - | 7601 | 31535 | 33086 | 31603 | 30850 | 8.1 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 1254 e | 1254 e | 1259 | 1259 e | 1259 e | 0.0 |
| Electricity production (GWh) | - | 117 e | 117 e | 115 | 115 e | 115 e | -0.1 |
| CHP Heat production (TJ) | - | 633 e | 633 e | 655 | 655 e | 655 e | 0.2 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | - | 462 e | 462 e | - |
| Electricity production (GWh) | - | - | - | - | 44 e | 44 e | - |
| CHP Heat production (TJ) | - | - | - | - | 50 e | 50 e | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | - | 358 e | 10181 e | 8170 | 9877 e | 6824 e | 17.8 |
| CHP Heat production (TJ) | 22654 | 11177 e | 34602 e | 36824 | 34325 e | 32551 e | 6.1 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

CANADA

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|-------------------|---------------|-------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 131.24 | 155.06 | 159.07 | 189.62 | 196.80 | 205.33 | 202.26 | 1.1 | 1.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 5.22 | 4.33 | 3.09 | 3.51 | 3.63 | 4.42 | 4.24 | -3.0 | 1.8 |
| Oil | 75.65 | 79.99 | 68.79 | 80.78 | 89.44 | 91.14 | 89.60 | -0.6 | 1.5 |
| Gas | 23.72 | 36.22 | 43.30 | 53.41 | 50.54 | 55.63 | 52.93 | 3.6 | 1.1 |
| Comb. renew. & waste | 7.62 | 7.42 | 7.30 | 9.69 | 9.63 | 10.08 | 10.12 | -0.3 | 1.8 |
| Electricity | 18.93 | 26.08 | 35.96 | 41.42 | 42.70 | 43.26 | 44.62 | 3.8 | 1.2 |
| Heat | 0.10 | 1.03 | 0.63 | 0.81 | 0.86 | 0.80 | 0.76 | 11.8 | 1.0 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 45.51 | 50.07 | 47.11 | 54.99 | 54.53 | 57.26 | 54.45 | 0.2 | 0.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 4.70 | 4.10 | 2.71 | 3.21 | 3.25 | 3.33 | 3.29 | -3.2 | 1.1 |
| Oil | 14.04 | 11.59 | 6.79 | 6.46 | 6.02 | 6.36 | 5.94 | -4.2 | -0.7 |
| Gas | 11.87 | 16.20 | 16.85 | 19.31 | 19.32 | 22.69 | 20.77 | 2.1 | 1.2 |
| Comb. renew. & waste | 5.71 | 5.51 | 5.69 | 7.72 | 7.64 | 7.56 | 7.57 | -0.0 | 1.6 |
| Electricity | 9.10 | 11.67 | 14.44 | 17.48 | 17.49 | 16.60 | 16.20 | 2.8 | 0.6 |
| Heat | 0.10 | 1.00 | 0.63 | 0.80 | 0.80 | 0.71 | 0.67 | 11.7 | 0.3 |
| Transport | 33.60 | 44.32 | 43.12 | 52.14 | 55.37 | 57.67 | 56.75 | 1.5 | 1.5 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.12 | - | - | - | - | - | - | - | - |
| Oil | 33.19 | 42.49 | 39.94 | 46.86 | 50.76 | 52.52 | 52.50 | 1.1 | 1.5 |
| Gas | - | 1.63 | 2.90 | 4.76 | 4.09 | 4.14 | 3.20 | - | 0.6 |
| Comb. renew. & waste | - | - | - | 0.13 | 0.14 | 0.66 | 0.69 | - | - |
| Electricity | 0.28 | 0.20 | 0.28 | 0.39 | 0.39 | 0.35 | 0.36 | 0.1 | 1.4 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 16.89 | 18.29 | 21.72 | 27.42 | 29.59 | 30.96 | 32.25 | 1.5 | 2.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.00 | 0.03 | 0.00 | 0.00 | - | - | 0.02 | 6.4 | 8.8 |
| Oil | 6.25 | 4.96 | 4.08 | 5.78 | 8.15 | 8.20 | 8.18 | -2.5 | 3.9 |
| Gas | 5.74 | 7.04 | 8.32 | 10.81 | 10.05 | 10.31 | 10.55 | 2.2 | 1.3 |
| Comb. renew. & waste | - | - | - | - | - | 0.00 ^e | 0.00 | - | - |
| Electricity | 4.90 | 6.24 | 9.32 | 10.82 | 11.32 | 12.35 | 13.40 | 3.9 | 2.0 |
| Heat | - | 0.03 | 0.00 | 0.01 | 0.06 | 0.09 | 0.09 | - | 17.7 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

CANADA

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 25.44 | 28.30 | 28.83 | 30.86 | 29.96 | 32.01 | 32.57 | 0.7 | 0.7 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.40 | 0.08 | 0.05 | 0.04 | 0.04 e | 0.03 | 0.03 | -11.9 | -2.1 |
| Oil | 12.55 | 10.27 | 4.66 | 3.25 | 2.15 | 2.31 | 2.06 | -5.7 | -4.4 |
| Gas | 6.11 | 8.74 | 11.36 | 13.86 | 13.27 | 14.66 | 14.81 | 3.7 | 1.5 |
| Comb. renew. & waste | 1.91 | 1.91 e | 1.61 | 1.83 | 1.85 | 1.85 | 1.85 | -1.0 | 0.8 |
| Electricity | 4.47 | 7.30 | 11.17 | 11.89 | 12.64 | 13.15 | 13.82 | 5.5 | 1.2 |
| Heat | - | - | 0.00 | - | 0.00 | 0.00 | - | - | - |
| Agriculture & fishing | 1.14 | 2.43 | 3.25 | 4.20 | 3.61 | 3.81 | 3.84 | 6.3 | 0.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.96 | 1.49 | 2.01 | 2.79 | 2.32 | 2.53 | 2.52 | 4.4 | 1.3 |
| Gas | - | 0.27 | 0.50 | 0.59 | 0.44 | 0.48 | 0.49 | - | -0.1 |
| Comb. renew. & waste | - | - | - | - | - | 0.00 e | 0.00 | - | - |
| Electricity | 0.18 | 0.67 | 0.74 | 0.83 | 0.85 | 0.80 | 0.83 | 8.8 | 0.6 |
| Heat | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 7.7 |
| Other | 1.35 | - | 0.01 | 0.01 | 0.01 | 0.01 | - | -25.8 | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 1.35 | - | - | - | - | - | - | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | - | 0.01 e | 0.01 e | 0.01 e | 0.01 e | - | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 7.31 | 11.66 | 15.02 | 19.99 | 23.74 | 23.61 | 22.40 | 4.33 | 2.25 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

CANADA

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| TFC (Mtoe) | 131.24 | 155.06 | 159.07 | 189.62 | 203.20 | 196.80 | 205.33 | 202.26 |
| Total industry (Mtoe) | 45.51 | 50.07 | 47.11 | 54.99 | 57.58 | 54.53 | 57.26 | 54.45 |
| Iron and steel | 3.58 | 5.96 | 3.80 | 4.71 | 4.54 | 4.05 | 4.21 | 4.02 |
| Chem. and petrochemical | 2.41 | 5.15 | 4.99 | 5.11 | 4.59 | 4.62 | 4.77 | 4.29 |
| Non-ferrous metals | 3.17 | 3.81 | 4.25 | 5.48 | 6.26 | 6.06 | 5.75 | 5.88 |
| Non-metallic minerals | 2.08 | 1.66 | 1.25 | 1.43 | 1.11 | 1.10 | 0.37 | 0.35 |
| Transport equipment | 0.56 | 0.43 | - | - | - | - | - | - |
| Machinery | 0.33 | 0.44 | - | - | - | - | - | - |
| Mining and quarrying | 2.47 | 6.89 | 5.45 | 8.06 | 10.95 | 11.03 | 13.53 | 13.59 |
| Food and tobacco | 1.09 | 1.06 | - | - | - | - | - | - |
| Paper, pulp and printing | 12.20 | 13.88 | 14.87 | 17.47 | 17.30 | 15.13 | 14.52 | 13.67 |
| Wood and wood products | 0.43 | 1.01 | 0.17 | 0.37 | 0.49 | 0.49 | 0.44 | 0.41 |
| Construction | - | 1.14 | 1.49 | 1.11 | 1.35 | 1.35 | 1.39 | 1.35 |
| Textile and leather | 0.18 | 0.48 | - | - | - | - | - | - |
| Non specified/other | 17.00 | 8.14 | 10.85 | 11.25 | 11.00 | 10.71 | 12.27 | 10.89 |
| Electricity consumption (Mtoe) | 18.93 | 26.08 | 35.96 | 41.42 | 44.05 | 42.70 | 43.26 | 44.62 |
| Total industry (Mtoe) | 9.10 | 11.67 | 14.44 | 17.48 | 18.20 | 17.49 | 16.60 | 16.20 |
| Iron and steel | 0.52 | 0.82 | 0.72 | 0.88 | 0.92 | 0.83 | 0.79 | 0.92 |
| Chem. and petrochemical | 0.95 | 1.21 | 1.57 | 1.65 | 1.68 | 1.60 | 1.58 | 1.48 |
| Non-ferrous metals | 2.08 | 2.23 | 3.18 | 4.38 | 5.14 | 5.23 | 4.87 | 4.99 |
| Non-metallic minerals | 0.35 | 0.40 | 0.16 | 0.17 | 0.17 | 0.18 | 0.18 | 0.18 |
| Transport equipment | 0.24 | 0.26 | - | - | - | - | - | - |
| Machinery | 0.26 | 0.39 | - | - | - | - | - | - |
| Mining and quarrying | 1.02 | 1.47 | 2.47 | 2.88 | 3.22 | 3.21 | 2.89 | 2.87 |
| Food and tobacco | 0.29 | 0.42 | - | - | - | - | - | - |
| Paper, pulp and printing | 2.47 | 3.11 | 4.20 | 5.30 | 5.31 | 4.94 | 4.57 | 4.16 |
| Wood and wood products | 0.20 | 0.35 | - | - | - | - | - | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | 0.18 | 0.22 | - | - | - | - | - | - |
| Non specified/other | 0.56 | 0.78 | 2.15 | 2.22 | 1.76 | 1.51 | 1.74 | 1.61 |
| Total industry (TWh) | 105.86 | 135.67 | 167.94 | 203.31 | 211.59 | 203.42 | 193.08 | 188.42 |
| Iron and steel | 6.02 | 9.53 | 8.33 | 10.26 | 10.73 | 9.61 | 9.21 | 10.66 |
| Chem. and petrochemical | 11.01 | 14.04 | 18.21 | 19.19 | 19.50 | 18.55 | 18.32 | 17.24 |
| Non-ferrous metals | 24.15 | 25.99 | 36.97 | 50.93 | 59.71 | 60.86 | 56.57 | 58.01 |
| Non-metallic minerals | 4.08 | 4.63 | 1.90 | 2.03 | 2.03 | 2.04 | 2.08 | 2.13 |
| Transport equipment | 2.77 | 3.04 | - | - | - | - | - | - |
| Machinery | 3.06 | 4.55 | - | - | - | - | - | - |
| Mining and quarrying | 11.81 | 17.14 | 28.75 | 33.48 | 37.46 | 37.29 | 33.57 | 33.35 |
| Food and tobacco | 3.36 | 4.88 | - | - | - | - | - | - |
| Paper, pulp and printing | 28.71 | 36.19 | 48.84 | 61.58 | 61.72 | 57.49 | 53.12 | 48.32 |
| Wood and wood products | 2.28 | 4.12 | - | - | - | - | - | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | 2.14 | 2.51 | - | - | - | - | - | - |
| Non specified/other | 6.48 | 9.06 | 24.96 | 25.84 | 20.44 | 17.59 | 20.22 | 18.71 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

Note: Please refer to notes in the introductory information for data coverage.

CANADA

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|-------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Total imports⁽¹⁾ | 2249 | 2940 | 17781 | 7422 | 15342 | 19677 | 23624 | 19380 | 25189 |
| Imports from: | | | | | | | | | |
| Total OECD | 2249 | 2940 | 17781 | 7422 | 15342 | 19677 | 23624 | 19380 | 25189 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | 2249 | 2940 | 17781 | 7422 | 15342 | 19677 | 23624 | 19380 | 25189 |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

CANADA

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total exports⁽¹⁾ | 16286 | 30184 | 18130 | 43444 | 50983 | 43528 | 42736 | 50331 | 57675 |
| Exports to: | | | | | | | | | |
| Total OECD | 16286 | 30184 | 18130 | 43444 | 50983 | 43528 | 42736 | 50331 | 57675 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | 16286 | 30184 | 18130 | 43444 | 50983 | 43528 | 42736 | 50331 | 57675 |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

CANADA

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|--------------|--------------|--------------|---------------|-------------------|---------------|---------------|---------------|---------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 51.66 | 73.78 | 98.01 | 108.91 | 103.48 | 114.86 | 115.99 | 117.92 | 119.14 |
| Nuclear | 2.67 | 5.87 | 13.54 | 16.39 | 10.62 | 13.35 | 13.35 | 13.35 | 13.35 |
| Hydro | 32.38 | 41.92 | 55.09 | 60.30 | 63.14 | 67.37 | 68.17 | 68.39 | 69.46 |
| <i>of which: pumped storage</i> | - | - | 0.19 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | 0.01 | 0.02 | 0.02 | 0.03 | 0.03 |
| Tide, wave, ocean | - | - | 0.02 | 0.02 | 0.02 ^e | 0.02 | 0.02 | 0.02 | 0.02 |
| Wind | - | - | - | 0.02 | 0.09 | 0.68 | 1.46 | 1.77 | 2.37 |
| Other (e.g. fuel cells) | - | - | - | 0.05 | - | - | - | - | - |
| Combustible fuels | 16.62 | 25.99 | 29.36 | 32.12 | 29.60 | 33.42 | 32.98 | 34.36 | 33.91 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 9.06 | 12.43 | 17.71 | 21.12 | .. | .. | .. | .. | .. |
| Liquid fuels | 3.90 | 7.53 | 6.87 | 7.89 | .. | .. | .. | .. | .. |
| Natural gas | 0.96 | 3.11 | 2.56 | 1.68 | .. | .. | .. | .. | .. |
| Comb. renew. & waste | - | 0.05 | 0.28 | 0.03 | - | - | - | 2.10 | 1.99 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | 1.63 | 1.63 | 1.53 | 0.99 | .. | .. | .. | .. | .. |
| Liquid / natural gas | 0.93 | 1.09 | 0.43 | 0.43 | .. | .. | .. | .. | .. |
| Solid / liquid / gas | 0.14 | 0.14 | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 27.21 | 28.53 | 25.52 | 24.89 | 25.30 | 24.17 | 23.95 |
| Internal combustion | - | - | 0.52 | 0.56 | 0.50 | 0.52 | 0.52 | 0.50 | 0.50 |
| Gas turbine | - | - | 1.64 | 3.04 | 3.58 | 6.69 | 7.16 | 7.59 | 7.48 |
| Combined cycle | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | 1.32 | - | 2.10 | 1.99 |
| Peak load | .. | .. | 80.13 | 80.62 | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | 97.21 | 99.04 | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 5.87 | 7.86 | 6.13 | 6.60 | 7.85 | 7.98 | 7.96 | 8.46 | 8.50 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 4.40 | 6.00 | 4.29 | 4.45 | 4.27 | 4.61 | 4.67 | 5.07 | 5.15 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 1.47 | 1.86 | 1.84 | 2.15 | 3.58 | 3.37 | 3.29 | 3.40 | 3.35 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 0.07 | 0.36 | - | - | - | - | - | - | - |
| Liquid fuels | 0.76 | 0.77 | 0.29 | 0.18 | .. | 0.06 | 0.06 | 0.06 | 0.07 |
| Natural gas | 0.63 | 0.38 | 0.91 | 1.00 | .. | 2.05 | 2.06 | 2.17 | 2.18 |
| Comb. renew. & waste | - | 0.36 | 0.64 | 0.96 | .. | 1.26 | 1.17 | 1.16 | 1.10 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | - | - | - |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 1.38 | 1.65 | 2.20 | 1.98 | 1.86 | 1.90 | 1.84 |
| Internal combustion | - | - | 0.06 | 0.04 | 0.15 | 0.08 | 0.08 | 0.08 | 0.09 |
| Gas turbine | - | - | 0.40 | 0.45 | 1.23 | 1.31 | 1.34 | 1.42 | 1.42 |
| Combined cycle | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | 3.96 | 6.60 | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | 3.95 | 6.60 | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

CANADA

16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-------------------------------|--------|--------|--------|--------|--------|--------|------|------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Canadian Dollars/ unit | | | | | | | | |
| Steam coal (t) | 37.62 | 49.49 | 62.00 | 26.55 | 29.70 | 29.81 | 29.90 | .. | .. |
| Heavy fuel oil (t) | 79.95 | 93.37 | .. | 178.28 | 240.46 | 252.23 | 280.73 | .. | .. |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | 50.49 | 49.45 | 73.37 | 200.12 | 272.97 | 248.12 | 285.55 | .. | .. |
| | Canadian Dollars/ toe | | | | | | | | |
| Steam coal | 61.73 | 81.21 | 101.74 | 43.57 | 48.74 | 48.92 | 49.06 | .. | .. |
| Heavy fuel oil | 83.28 | 97.26 | .. | 185.71 | 250.48 | 262.74 | 292.43 | .. | .. |
| Natural gas ⁽²⁾ | 56.10 | 54.94 | 81.52 | 222.36 | 303.30 | 275.69 | 317.28 | .. | .. |
| End-user prices of electricity | | | | | | | | | |
| | Canadian Dollars/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0174 | 0.0229 | 0.0437 | 0.0570 | 0.0670 | 0.0665 | 0.0683 | .. | .. |
| <i>of which: tax</i> | .. | .. | 0.0018 | 0.0061 | 0.0071 | 0.0072 | 0.0067 | .. | .. |
| Household | | | | | | | | | |
| Price | 0.0275 | 0.0332 | 0.0620 | 0.0786 | 0.0917 | 0.0935 | 0.0954 | .. | .. |
| <i>of which: tax</i> | .. | .. | 0.0017 | 0.0080 | 0.0091 | 0.0093 | 0.0086 | .. | .. |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

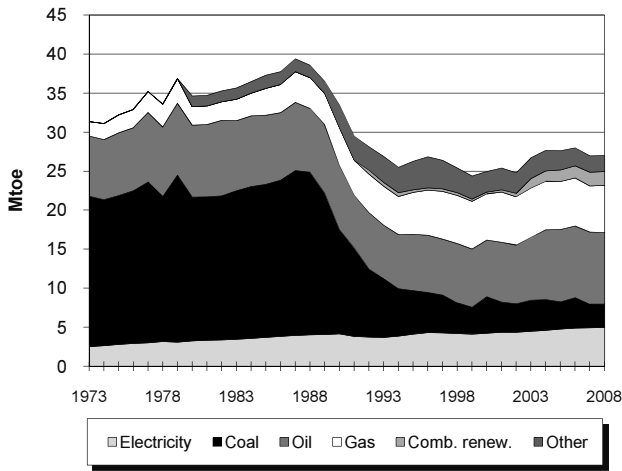


Figure 2. Electricity generation by fuel

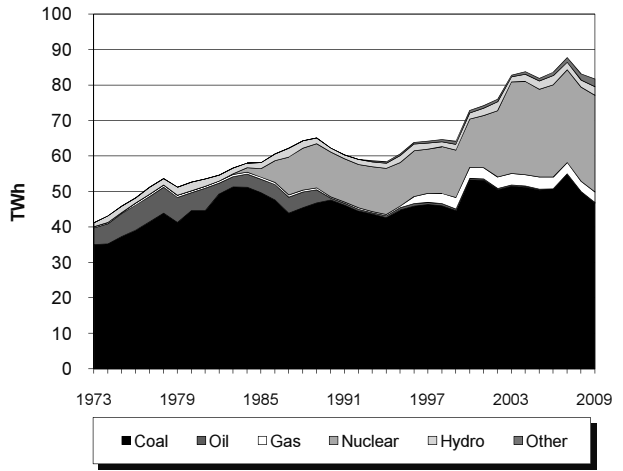


Figure 3. Electricity consumption by sector

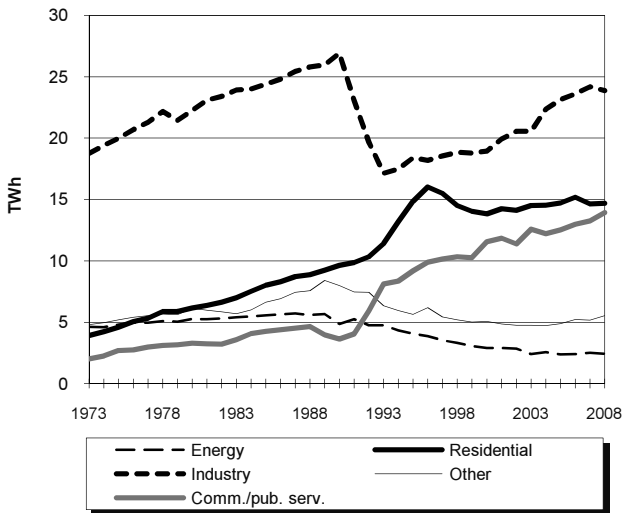


Figure 4. Electricity indicators

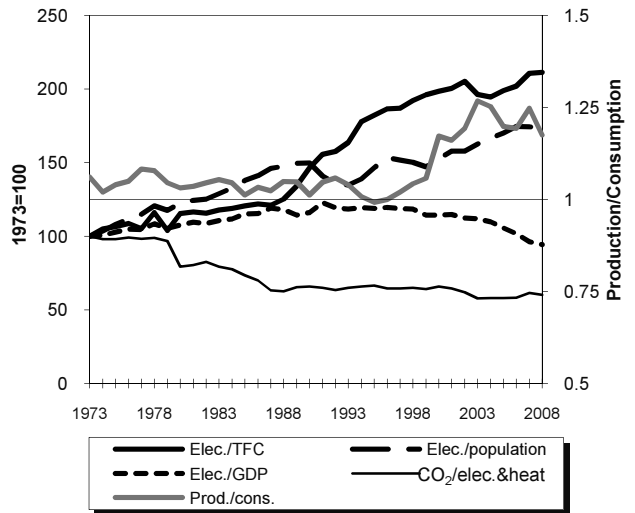
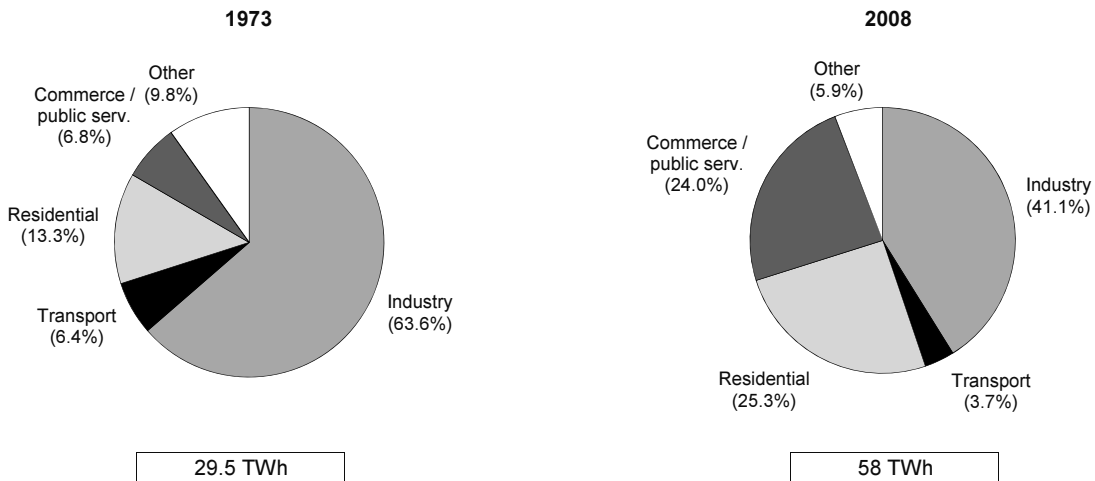


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 45.16 | 46.95 | 48.75 | 40.25 | 45.78 | 44.63 | 43.43 | 0.5 | -0.6 |
| GDP (billion 2000 USD) | 41.03 | 48.67 | 55.30 | 56.72 | 77.25 | 79.15 | 76.44 | 1.8 | 1.7 |
| TPES/GDP ⁽¹⁾ | 1.10 | 0.96 | 0.88 | 0.71 | 0.59 | 0.56 | 0.57 | -1.3 | -2.3 |
| Population (millions) | 9.92 | 10.33 | 10.36 | 10.27 | 10.32 | 10.43 | 10.42 | 0.3 | 0.0 |
| TPES/population ⁽²⁾ | 4.55 | 4.55 | 4.70 | 3.92 | 4.43 | 4.28 | 4.17 | 0.2 | -0.6 |
| TPES/GDP (2000 = 100) | 155 | 136 | 124 | 100 | 84 | 79 | 80 | -1.3 | -2.3 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 83 | 89 | 100 | 100 | 85 | 84 | .. | 1.1 | .. |
| Ele.TFC/population ⁽⁴⁾ | 2974 | 3668 | 4651 | 4809 | 5547 | 5567 | .. | 2.7 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 41.17 | 52.66 | 62.27 | 72.91 | 87.76 | 83.17 | 81.70 | 2.5 | 1.4 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 45.16 | 46.95 | 48.75 | 40.25 | 45.78 | 44.63 | 43.43 | 0.5 | -0.6 |
| Coal | 35.59 | 33.43 | 31.46 | 21.58 | 21.26 | 19.66 | 18.79 | -0.7 | -2.7 |
| Oil | 8.66 | 10.84 | 8.72 | 7.71 | 9.56 | 9.48 | 9.19 | 0.0 | 0.3 |
| Gas | 1.01 | 2.60 | 5.26 | 7.50 | 7.18 | 7.12 | 6.72 | 10.2 | 1.3 |
| Comb. renew & waste | - | - | - | 0.64 | 2.11 | 2.20 | 2.52 | - | - |
| Nuclear | - | - | 3.28 | 3.54 | 6.84 | 6.94 | 7.11 | - | 4.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽¹⁾ | - | - | - | - | 0.01 | 0.03 | 0.04 | - | - |
| Hydro | 0.09 | 0.21 | 0.10 | 0.15 | 0.18 | 0.17 | 0.21 | 0.4 | 4.0 |
| Net electricity imports ⁽²⁾ | -0.19 | -0.13 | -0.06 | -0.86 | -1.39 | -0.99 | -1.17 | -6.6 | 17.0 |
| Heat | - | - | - | -0.00 | 0.01 | 0.02 | 0.02 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 41.2 | 52.7 | 62.6 | 73.5 | 82.6 | 88.2 | 83.5 | 82.3 |
| Nuclear | - | - | 12.6 | 13.6 | 24.7 | 26.2 | 26.6 | 27.2 |
| Hydro | 1.1 | 2.4 | 1.4 | 2.3 | 3.0 | 2.5 | 2.4 | 3.0 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | - | - | 0.3 | 0.6 | 0.6 | 0.4 | 0.4 | 0.6 |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | 0.0 | 0.0 | 0.1 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 0.0 | 0.1 | 0.2 | 0.3 |
| Combustible fuels | 40.1 | 50.3 | 48.5 | 57.6 | 54.8 | 59.4 | 54.3 | 51.7 |
| <i>Coal</i> | 35.1 | 44.6 | 47.6 | 53.3 | 50.4 | 54.9 | 49.8 | 46.7 |
| <i>Oil</i> | 4.7 | 5.0 | 0.5 | 0.4 | 0.3 | 0.1 | 0.1 | 0.2 |
| <i>Gas</i> | 0.4 | 0.6 | 0.4 | 3.1 | 3.4 | 3.2 | 2.9 | 3.0 |
| <i>Comb. renew. & waste</i> | - | - | - | 0.7 | 0.7 | 1.2 | 1.5 | 1.8 |
| Other (e.g. fuel cells) | - | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 |
| - Own use by power plant | 2.8 | 3.6 | 4.4 | 5.5 | 6.4 | 6.8 | 6.4 | .. |
| Net production | 38.4 | 49.1 | 58.1 | 68.0 | 76.2 | 81.4 | 77.1 | .. |
| Nuclear | .. | - | 11.8 | 12.7 | 23.3 | 24.6 | 25.0 | .. |
| Hydro | .. | - | 1.4 | 2.3 | 3.0 | 2.5 | 2.4 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | - | - | - | 0.0 | 0.0 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | - | - | 0.0 | 0.1 | 0.2 | .. |
| Combustible fuels | .. | - | 44.9 | 53.0 | 49.9 | 54.1 | 49.4 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | 0.0 | 0.0 | 0.0 | .. |
| - Used for heat pumps | - | - | .. | .. | .. | .. | .. | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | 0.1 | 0.5 | 0.4 | 0.7 | 0.9 | 0.6 | 0.5 | 0.7 |
| + Imports | 2.9 | 3.7 | 8.2 | 8.7 | 12.4 | 10.2 | 8.5 | 8.6 |
| - Exports | 5.1 | 5.2 | 8.9 | 18.7 | 25.0 | 26.4 | 20.0 | 22.2 |
| Electrical energy supplied | 36.1 | 47.0 | 57.0 | 57.2 | 62.7 | 64.7 | 65.1 | .. |
| - Transmission & distr. losses | 2.0 | 3.9 | 4.0 | 5.0 | 5.0 | 4.9 | 4.7 | .. |
| - Statistical difference | - | - | - | - | - | - | - | .. |
| Total consumption | 34.1 | 43.1 | 53.0 | 52.3 | 57.7 | 59.8 | 60.5 | .. |
| - Energy industry consumption ⁽²⁾ | 4.6 | 5.3 | 4.9 | 2.9 | 2.4 | 2.5 | 2.4 | .. |
| Final consumption | 29.5 | 37.9 | 48.2 | 49.4 | 55.3 | 57.2 | 58.0 | .. |
| Industry | 18.8 | 22.3 | 26.9 | 18.9 | 23.1 | 24.2 | 23.9 | .. |
| Transport | 1.9 | 2.3 | 3.2 | 2.3 | 2.2 | 2.3 | 2.1 | .. |
| Commercial & publ. serv. | 2.0 | 3.3 | 3.6 | 11.6 | 12.5 | 13.3 | 13.9 | .. |
| Residential | 3.9 | 6.2 | 9.6 | 13.8 | 14.7 | 14.6 | 14.7 | .. |
| Agriculture & fishing | 1.5 | 2.1 | 2.9 | 1.2 | 1.0 | 1.0 | 1.0 | .. |
| Sector non specified | 1.4 | 1.8 | 1.9 | 1.6 | 1.7 | 1.9 | 2.4 | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 43.14 | 52.66 | 62.56 | 73.47 | 84.36 | 88.20 | 83.52 | 2.4 | 1.6 |
| - Hydro pumped storage | - | - | 0.29 | 0.56 | 0.71 | 0.43 | 0.35 | - | 1.1 |
| Total generation⁽¹⁾ | 43.14 | 52.66 | 62.27 | 72.91 | 83.65 | 87.76 | 83.17 | 2.3 | 1.6 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 43.09 | 52.54 | 55.23 | 62.99 | 74.15 | 78.93 | 73.96 | 1.6 | 1.6 |
| - Hydro pumped storage | - | - | 0.29 | 0.56 | 0.71 | 0.43 | 0.35 | - | 1.1 |
| Total generation ⁽¹⁾ | 43.09 | 52.54 | 54.95 | 62.44 | 73.44 | 78.50 | 73.61 | 1.5 | 1.6 |
| Nuclear | - | - | 12.59 | 13.59 | 26.05 | 26.17 | 26.55 | - | 4.2 |
| Hydro | 1.77 | 2.28 | 1.11 | 1.37 | 2.09 | 1.52 | 1.47 | -2.9 | 1.5 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | 0.05 | 0.13 | 0.26 | - | - |
| Coal | 35.23 | 44.63 | 40.61 | 46.35 | 43.71 | 49.27 | 43.97 | 0.9 | 0.4 |
| Oil | 5.69 | 5.03 | 0.41 | 0.13 | 0.10 | 0.09 | 0.10 | -15.2 | -7.7 |
| Gas | 0.40 | 0.60 | 0.24 | 0.83 | 1.10 | 0.86 | 0.62 | -3.3 | 5.5 |
| Comb. renew. & waste | - | - | - | 0.18 | 0.35 | 0.46 | 0.65 | - | - |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 0.05 | 0.12 | 7.33 | 10.48 | 10.21 | 9.27 | 9.56 | 36.6 | 1.5 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 0.05 | 0.12 | 7.33 | 10.48 | 10.21 | 9.27 | 9.56 | 36.6 | 1.5 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.05 | 0.12 | 0.05 | 0.39 | 0.46 | 0.57 | 0.56 | -0.3 | 14.6 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Coal | - | - | 6.99 | 6.97 | 6.82 | 5.62 | 5.86 | - | -1.0 |
| Oil | - | - | 0.13 | 0.24 | 0.16 | 0.03 | 0.04 | - | -7.1 |
| Gas | - | - | 0.16 | 2.32 | 2.19 | 2.32 | 2.30 | - | 16.1 |
| Comb. renew. & waste | - | - | - | 0.55 | 0.58 | 0.74 | 0.81 | - | - |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|------|------|------|------|------|------|------|---|
| Total | - | - | 6875 | 9937 | 9438 | 8627 | 8686 | 1.3 |
| Total energy | - | - | 6875 | 2980 | 3289 | 3343 | 3588 | -3.5 |
| Coal mines | - | - | - | 2980 | 3273 | 3327 | 3567 | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | 6 | - |
| Oil refineries | - | - | - | - | 16 | 16 | 15 | - |
| Energy non specified/other | - | - | 6875 | - | - | - | - | - |
| Total industry | - | - | - | 4021 | 4657 | 4622 | 4495 | - |
| Iron and steel | - | - | - | 1393 | 1443 | 1406 | 1313 | - |
| Chemical and petrochemical | - | - | - | 1595 | 2145 | 1925 | 1963 | - |
| Non-ferrous metals | - | - | - | - | - | - | - | - |
| Non-metallic minerals | - | - | - | 7 | 2 | 1 | 1 | - |
| Transport equipment | - | - | - | - | 1 | - | - | - |
| Machinery | - | - | - | 40 | 49 | 49 | 47 | - |
| Mining and quarrying | - | - | - | - | - | - | - | - |
| Food and tobacco | - | - | - | 64 | 61 | 51 | 59 | - |
| Pulp and printing | - | - | - | 624 | 614 | 795 | 750 | - |
| Wood and wood products | - | - | - | 1 | - | - | - | - |
| Construction | - | - | - | - | 7 | 9 | 11 | - |
| Textile and leather | - | - | - | 31 | 15 | 11 | 7 | - |
| Non specified/other industries | - | - | - | 266 | 320 | 375 | 344 | - |
| Total transport | - | - | - | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | - | - | - | - |
| Other | - | - | - | 2936 | 1492 | 662 | 603 | - |
| Commerce and pub. services | - | - | - | - | 58 | 65 | 33 | - |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | - | - | - | - | 4 | 1 | 6 | - |
| Sector non specified | - | - | - | 2936 | 1430 | 596 | 564 | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---|
| Total | 71602 | 154981 | 139216 | 139236 | 121376 | 122283 | 121588 | -1.3 |
| Nuclear | - | - | - | 1096 | 1003 | 970 | 985 | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | 25061 | 120486 | 88826 | 89430 | 85621 | 89017 | 88457 | -1.7 |
| Oil | 7160 | 11846 | 7217 | 5668 | 2993 | 3196 | 3170 | -7.0 |
| Gas | 39381 | 22649 | 35433 | 37450 | 26453 | 22887 | 22563 | 0.1 |
| Comb. renew. & waste | - | - | 7740 | 5280 | 4510 | 5013 | 5220 | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | 20 | 559 | 908 | 910 | - |
| Heat pumps | - | - | - | - | 85 | 94 | 100 | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | 292 | 152 | 198 | 183 | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 71602 | 110127 | 113415 | 115672 | 104413 | 106160 | .. | -0.2 |
| Nuclear | - | - | - | 1096 | 1003 | 970 | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | 25061 | 86227 | 78855 | 77273 | 76743 | 80469 | .. | -0.4 |
| Oil | 7160 | 8436 | 4409 | 4147 | 2647 | 2804 | .. | -5.9 |
| Gas | 39381 | 15464 | 28449 | 31236 | 22000 | 19339 | .. | 1.3 |
| Comb. renew. & waste | - | - | 1702 | 1628 | 1783 | 2286 | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | 85 | 94 | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | 292 | 152 | 198 | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | 44854 | 25801 | 23564 | 16963 | 16123 | .. | -5.5 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | 34259 | 9971 | 12157 | 8878 | 8548 | .. | -7.4 |
| Oil | - | 3410 | 2808 | 1521 | 346 | 392 | .. | -11.3 |
| Gas | - | 7185 | 6984 | 6214 | 4453 | 3548 | .. | -3.8 |
| Comb. renew. & waste | - | - | 6038 | 3652 | 2727 | 2727 | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | 20 | 559 | 908 | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 9.60 | 13.49 | 15.53 | 16.83 | 16.10 | 17.11 | 16.15 | 2.9 | 0.2 |
| Coal | 8.32 e | 10.82 e | 14.33 e | 14.61 | 14.10 | 15.38 | 14.41 | 3.3 | 0.0 |
| Oil | 1.15 | 1.45 | 0.51 | 0.30 | 0.17 | 0.12 | 0.14 | -4.6 | -7.1 |
| Gas | 0.13 | 1.22 | 0.68 e | 1.51 | 1.52 | 1.24 | 1.16 | 10.0 | 3.1 |
| Comb. renew. & waste | - | - | - | 0.41 | 0.30 | 0.36 | 0.44 | - | - |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 13.49 | 12.99 | 14.35 | 13.94 | 15.09 | 13.82 | .. | 0.3 |
| Coal | .. | 10.82 e | 12.16 e | 13.23 | 12.75 | 14.11 | 12.87 | .. | 0.3 |
| Oil | .. | 1.45 | 0.38 | 0.14 | 0.11 | 0.10 | 0.11 | .. | -6.8 |
| Gas | .. | 1.22 | 0.45 e | 0.88 | 0.95 | 0.73 | 0.62 | .. | 1.8 |
| Comb. renew. & waste | .. | - | - | 0.10 | 0.13 | 0.16 | 0.22 | .. | - |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | - | - | 3.28 | 3.54 | 6.81 | 6.84 | 6.94 | - | 4.3 |
| Nuclear | - | - | 3.28 | 3.54 | 6.81 | 6.84 | 6.94 | - | 4.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 0.09 | 0.21 | 0.10 | 0.15 | 0.22 | 0.19 | 0.20 | 0.4 | 3.8 |
| Hydro | 0.09 | 0.21 | 0.10 | 0.15 | 0.22 | 0.18 | 0.17 | 0.4 | 3.1 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 0.00 | 0.01 | 0.02 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

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8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|--------|--------|--------|--------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | 1964 | 1378 | 1160 | 1748 | 1042 | -3.5 |
| Fuel input (TJ) | - | 41243 | 28467 | 27260 | 39541 | 23452 | -3.1 |
| Electricity production (GWh) | - | 3991 | 2814 | 2650 | 3522 | 2278 | -3.1 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 37564 | 29675 | 29340 | 26978 | 30365 | 26410 | -0.6 |
| Fuel input (TJ) | 450773 | 326932 | 349630 | 322867 | 370334 | 328718 | 0.0 |
| Electricity production (GWh) | 44100 | 33021 | 34452 | 31482 | 35945 | 30785 | -0.4 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 9470 | 148 | - | - | - | - | - |
| Electricity production (GWh) | 526 | 15 | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 1299 | 61 | 57 | 23 | 7 | 8 | -10.7 |
| Fuel input (TJ) | 53269 | 2442 | 2293 | 909 | 309 | 330 | -10.5 |
| Electricity production (GWh) | 5031 | 210 | 180 | 123 | 27 | 28 | -10.6 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 7714 | 312 | 2106 | 1848 | 453 | 565 | 3.4 |
| Electricity production (GWh) | 600 | 41 | 217 | 205 | 50 | 54 | 1.5 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | 1513 | 2885 | 3762 | 5135 | - |
| Electricity production (GWh) | - | - | 135 | 288 | 372 | 514 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | 68 | - | - | - | - |
| Electricity production (GWh) | - | - | 13 | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 238 | 724 | 752 | 815 | - |
| Electricity production (GWh) | - | - | 27 | 64 | 70 | 63 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 50257 | 37278 | 37838 | 34812 | 39986 | 33722 | -0.6 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|--------|----------|--------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | .. | 2562 | 2366 | 2274 | 2590 | 2462 | -0.2 |
| Fuel input (TJ) | .. | 53804 | 57946 | 53180 | 59650 | 58206 | 0.4 |
| Electricity production (GWh) | .. | 1743 | 2701 | 3349 | 3684 | 3510 | 4.0 |
| CHP Heat production (TJ) | .. | 31707 | 24030 | 25585 | 27062 | 26595 | -1.0 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | .. | 12972 | 11223 | 13094 | 12023 | 13583 | 0.3 |
| Fuel input (TJ) | .. | 145140 | 151140 | 164337 | 155605 | 173704 | 1.0 |
| Electricity production (GWh) | .. | 8265 | 12594 | 12168 | 10644 | 12205 | 2.2 |
| CHP Heat production (TJ) | .. | 67623 | 51761 | 51936 | 50600 | 54845 | -1.2 |
| Peat | | | | | | | |
| Fuel input (1000 t) | .. | - | - | - | - | - | - |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Electricity production (GWh) | .. | - | - | - | - | - | - |
| CHP Heat production (TJ) | .. | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | .. | 11333 | 11969 | 14828 | 15173 | 15392 | 1.7 |
| Electricity production (GWh) | .. | 559 | 762 | 885 | 1088 | 1045 | 3.5 |
| CHP Heat production (TJ) | .. | 5335 | 3573 | 4577 | 4747 | 4378 | -1.1 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | .. | 278 | 155 | 83 | 60 | 73 | -7.2 |
| Fuel input (TJ) | .. | 10978 | 6383 | 3253 | 2442 | 2964 | -7.0 |
| Electricity production (GWh) | .. | 330 | 192 | 135 | 88 | 103 | -6.3 |
| CHP Heat production (TJ) | .. | 6856 | 3705 | 1656 | 1110 | 1175 | -9.3 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | .. | 9310 | 42566 | 42335 | 33623 | 30020 | 6.7 |
| Electricity production (GWh) | .. | 350 | 2928 | 3083 | 3125 | 2865 | 12.4 |
| CHP Heat production (TJ) | .. | 6201 | 13472 | 12737 | 8098 | 4930 | -1.3 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | .. | - | 6111 | 4107 | 4903 | 5770 | - |
| Electricity production (GWh) | .. | - | 247 | 443 | 596 | 657 | - |
| CHP Heat production (TJ) | .. | - | 2934 | 1067 | 960 | 1097 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | .. | - | 4824 | 37 | 36 | 125 | - |
| Electricity production (GWh) | .. | - | 188 | - | - | 2 | - |
| CHP Heat production (TJ) | .. | - | 2292 | 26 | 28 | 52 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | .. | - | 2700 | 1788 | 1793 | 1576 | - |
| Electricity production (GWh) | .. | - | 5 | 19 | 19 | 19 | - |
| CHP Heat production (TJ) | .. | - | 1664 | 1335 | 1360 | 1272 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | .. | - | 1094 | 896 | 1356 | 1706 | - |
| Electricity production (GWh) | .. | - | 108 | 113 | 145 | 204 | - |
| CHP Heat production (TJ) | .. | - | 310 | 80 | 129 | 161 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | .. | 11247 | 19725 | 20195 | 19389 | 20610 | 3.4 |
| CHP Heat production (TJ) | .. | 117722 | 103741 e | 98999 | 94094 | 94505 | -1.2 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|-------|-------|-------|-------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | 413 | 158 | 156 | 11 | 36 | -12.7 |
| Fuel input (TJ) | - | 8750 | 3672 | 3626 | 262 | 858 | -12.1 |
| Heat production (TJ) | - | 6043 | 2446 | 2264 | 182 | 477 | -13.2 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 2611 | 1063 | 587 | 339 | 261 | 227 | -8.2 |
| Fuel input (TJ) | 31326 | 12662 | 8365 | 5025 | 3976 | 3396 | -7.1 |
| Heat production (TJ) | 25061 | 9280 | 6194 | 3730 | 3030 | 2722 | -6.6 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 627 | 1082 | 7 | - | - | - |
| Heat production (TJ) | - | 498 | 822 | 6 | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 218 | 198 | 102 | 73 | 61 | 63 | -6.2 |
| Fuel input (TJ) | 8950 | 8017 | 4178 | 2876 | 2529 | 2580 | -6.1 |
| Heat production (TJ) | 7160 | 4990 | 3512 | 2250 | 1883 | 2021 | -4.9 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 49226 | 21895 | 25590 | 26508 | 23789 | 23589 | 0.4 |
| Heat production (TJ) | 39381 | 16448 | 21961 | 20395 | 18355 | 17957 | 0.5 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | 350 | 644 | 933 | 1117 | - |
| Heat production (TJ) | - | - | 285 | 514 | 718 | 805 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | 213 | 231 | 220 | 415 | - |
| Heat production (TJ) | - | - | 181 | 87 | 80 | 325 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 1346 | 1305 | 1763 | - |
| Heat production (TJ) | - | - | - | 1294 | 1235 | 1301 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 95 | 16 | - | - | - |
| Heat production (TJ) | - | - | 74 | 14 | - | - | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | 71602 | 37259 | 35475 | 30554 | 25483 | 25608 | -2.1 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

CZECH REPUBLIC

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 31.35 | 34.66 | 33.49 | 24.96 | 28.02 | 26.98 | 27.00 | 0.4 | -1.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Coal | 19.25 | 18.43 | 13.39 | 4.66 | 3.87 | 3.03 | 2.98 | -2.1 | -8.0 |
| Oil | 7.75 | 9.23 | 8.20 | 7.29 | 9.22 | 9.26 | 9.14 | 0.3 | 0.6 |
| Gas | 1.81 | 2.38 | 4.80 | 5.91 | 6.15 | 5.92 | 6.08 | 5.9 | 1.3 |
| Comb. renew. & waste | - | - | - | 0.23 | 1.56 | 1.75 | 1.76 | - | - |
| Electricity | 2.54 | 3.26 | 4.14 | 4.25 | 4.90 | 4.92 | 4.99 | 2.9 | 1.0 |
| Heat | - | 1.37 | 2.96 | 2.62 | 2.31 | 2.09 | 2.05 | - | -2.0 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 17.63 | 18.76 | 15.91 | 9.12 | 8.66 | 8.43 | 8.10 | -0.6 | -3.7 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 11.43 | 11.69 | 6.97 | 3.32 | 2.51 | 2.15 | 2.09 | -2.9 | -6.5 |
| Oil | 4.12 | 4.87 | 2.89 | 0.65 | 0.45 | 0.47 | 0.42 | -2.1 | -10.2 |
| Gas | 0.46 | 0.28 | 2.65 | 2.60 | 2.46 | 2.52 | 2.38 | 10.9 | -0.6 |
| Comb. renew. & waste | - | - | - | 0.14 | 0.50 | 0.52 | 0.52 | - | - |
| Electricity | 1.61 | 1.91 | 2.32 | 1.63 | 2.03 | 2.08 | 2.05 | 2.1 | -0.7 |
| Heat | - | - | 1.08 | 0.78 | 0.70 | 0.71 | 0.64 | - | -2.8 |
| Transport | 2.17 | 2.30 | 2.59 | 4.24 | 6.00 | 6.34 | 6.20 | 1.1 | 5.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.12 | 0.10 | - | - | 0.01 | 0.00 | 0.01 | - | - |
| Oil | 1.89 | 2.00 | 2.32 | 3.94 | 5.74 | 6.05 | 5.83 | 1.2 | 5.3 |
| Gas | - | - | - | 0.03 | 0.04 | 0.06 | 0.07 | - | - |
| Comb. renew. & waste | - | - | - | 0.06 | 0.02 | 0.03 | 0.11 | - | - |
| Electricity | 0.16 | 0.20 | 0.27 | 0.20 | 0.19 | 0.20 | 0.18 | 3.1 | -2.2 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 0.62 | 1.58 | 3.03 | 2.98 | 3.06 | 2.94 | 3.13 | 9.8 | 0.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Coal | 0.28 e | 0.23 e | 1.30 e | 0.24 | 0.16 | 0.05 | 0.07 | 9.5 | -14.7 |
| Oil | - | 0.09 | 0.05 | 0.01 | 0.01 | 0.01 | 0.02 | - | -6.2 |
| Gas | 0.17 | 0.44 | 0.89 | 1.10 | 1.22 | 1.21 | 1.33 | 10.1 | 2.2 |
| Comb. renew. & waste | - | - | - | 0.02 | 0.06 | 0.07 | 0.05 | - | - |
| Electricity | 0.17 | 0.28 | 0.31 | 0.99 | 1.12 | 1.14 | 1.20 | 3.6 | 7.7 |
| Heat | - | 0.54 | 0.47 | 0.61 | 0.48 | 0.45 | 0.45 | - | -0.2 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 7.04 | 7.45 | 7.94 | 5.31 | 6.49 | 5.85 | 5.80 | 0.7 | -1.7 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Coal | 6.50 e | 5.63 e | 4.70 e | 0.78 | 0.80 | 0.49 | 0.46 | -1.9 | -12.1 |
| Oil | 0.05 | 0.09 | 0.09 | 0.08 | 0.03 | 0.03 | 0.02 | 3.6 | -8.2 |
| Gas | 0.15 | 0.38 | 1.07 | 2.05 | 2.27 | 2.04 | 2.05 | 12.2 | 3.7 |
| Comb. renew. & waste | - | - | - | - | 0.96 | 1.11 | 1.05 | - | - |
| Electricity | 0.34 | 0.53 | 0.83 | 1.19 | 1.31 | 1.26 | 1.26 | 5.4 | 2.4 |
| Heat | - | 0.83 | 1.25 | 1.21 | 1.11 | 0.92 | 0.95 | - | -1.5 |
| Agriculture & fishing | 1.11 | 1.48 | 1.54 | 0.66 | 0.56 | 0.52 | 0.51 | 1.9 | -5.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.50 e | 0.41 e | 0.42 e | 0.05 | 0.02 | 0.01 | 0.01 | -1.0 | -17.4 |
| Oil | 0.45 | 0.81 | 0.52 | 0.42 | 0.33 | 0.32 | 0.34 | 0.8 | -2.4 |
| Gas | 0.03 | 0.08 | 0.18 | 0.07 | 0.06 | 0.07 | 0.05 | 11.1 | -6.6 |
| Comb. renew. & waste | - | - | - | 0.00 | 0.02 | 0.02 | 0.02 | - | - |
| Electricity | 0.13 | 0.18 | 0.25 | 0.10 | 0.11 | 0.09 | 0.08 | 3.9 | -5.9 |
| Heat | - | - | 0.16 | 0.02 | 0.01 | 0.01 | 0.01 | - | -14.9 |
| Other | 1.63 | 1.84 | 0.76 | 0.52 | 0.27 | 0.22 | 0.34 | -4.4 | -4.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.42 e | 0.36 e | - | 0.26 | - | - | - | - | - |
| Oil | 0.09 | 0.13 | 0.60 | 0.06 | 0.03 | 0.02 | 0.03 | 11.6 | -15.9 |
| Gas | 1.00 e | 1.20 e | - | 0.06 | 0.08 | 0.03 | 0.10 | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.12 | 0.15 | 0.16 | 0.13 | 0.15 | 0.16 | 0.21 | 1.9 | 1.3 |
| Heat | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Non-energy use⁽¹⁾ | 1.15 | 1.25 | 1.73 | 2.14 | 2.98 | 2.69 | 2.93 | 2.45 | 2.97 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

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12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 31.35 | 34.66 | 33.49 | 24.96 | 27.65 | 28.02 | 26.98 | 27.00 |
| Total industry (Mtoe) | 17.63 | 18.76 | 15.91 | 9.12 | 8.69 | 8.66 | 8.43 | 8.10 |
| Iron and steel | 2.38 | 2.71 | 3.95 | 2.15 | 2.00 | 1.91 | 1.81 | 1.75 |
| Chem. and petrochemical | 0.79 | 0.66 | 0.66 | 1.58 | 1.86 | 1.75 | 1.42 | 1.32 |
| Non-ferrous metals | 0.00 | 0.00 | 0.06 | 0.08 | 0.09 | 0.09 | 0.09 | 0.07 |
| Non-metallic minerals | 0.38 | 0.47 | 0.58 | 1.15 | 1.17 | 1.18 | 1.26 | 1.25 |
| Transport equipment | 0.42 | 0.35 | 0.26 | 0.30 | 0.33 | 0.37 | 0.38 | 0.41 |
| Machinery | 0.82 | 0.68 | 0.57 | 0.66 | 0.76 | 0.78 | 0.81 | 0.76 |
| Mining and quarrying | 0.04 | 0.03 | 0.03 | 0.06 | 0.05 | 0.05 | 0.05 | 0.06 |
| Food and tobacco | 0.40 | 0.35 | 0.38 | 0.78 | 0.72 | 0.71 | 0.69 | 0.60 |
| Paper, pulp and printing | 0.92 | 0.77 | 0.37 | 0.48 | 0.63 | 0.63 | 0.66 | 0.61 |
| Wood and wood products | 0.15 | 0.13 | 0.08 | 0.09 | 0.21 | 0.21 | 0.20 | 0.22 |
| Construction | 0.21 | 0.18 | 0.09 | 0.31 | 0.22 | 0.19 | 0.20 | 0.21 |
| Textile and leather | 1.16 | 0.97 | 0.37 | 0.30 | 0.26 | 0.23 | 0.21 | 0.18 |
| Non specified/other | 9.95 | 11.47 | 8.50 | 1.17 | 0.39 | 0.55 | 0.65 | 0.67 |
| Electricity consumption (Mtoe) | 2.54 | 3.26 | 4.14 | 4.25 | 4.76 | 4.90 | 4.92 | 4.99 |
| Total industry (Mtoe) | 1.61 | 1.91 | 2.32 | 1.63 | 1.99 | 2.03 | 2.08 | 2.05 |
| Iron and steel | - | - | 0.44 | 0.26 | 0.30 | 0.29 | 0.27 | 0.26 |
| Chem. and petrochemical | - | - | 0.30 | 0.27 | 0.33 | 0.33 | 0.33 | 0.30 |
| Non-ferrous metals | - | - | 0.06 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 |
| Non-metallic minerals | - | - | 0.22 | 0.18 | 0.22 | 0.21 | 0.23 | 0.23 |
| Transport equipment | - | - | 0.11 | 0.09 | 0.14 | 0.16 | 0.17 | 0.20 |
| Machinery | - | - | 0.35 | 0.20 | 0.29 | 0.30 | 0.33 | 0.32 |
| Mining and quarrying | - | - | 0.02 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 |
| Food and tobacco | - | - | 0.12 | 0.12 | 0.14 | 0.14 | 0.14 | 0.14 |
| Paper, pulp and printing | - | - | 0.13 | 0.14 | 0.16 | 0.16 | 0.16 | 0.15 |
| Wood and wood products | - | - | 0.04 | 0.03 | 0.05 | 0.04 | 0.05 | 0.05 |
| Construction | - | - | 0.05 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 |
| Textile and leather | - | - | 0.15 | 0.10 | 0.10 | 0.09 | 0.08 | 0.07 |
| Non specified/other | 1.61 | 1.91 | 0.32 | 0.19 | 0.19 | 0.21 | 0.23 | 0.25 |
| Total industry (TWh) | 18.77 | 22.25 | 26.92 | 18.94 | 23.15 | 23.61 | 24.17 | 23.87 |
| Iron and steel | - | - | 5.13 | 3.00 | 3.44 | 3.39 | 3.14 | 3.07 |
| Chem. and petrochemical | - | - | 3.52 | 3.20 | 3.88 | 3.88 | 3.88 | 3.45 |
| Non-ferrous metals | - | - | 0.65 | 0.28 | 0.33 | 0.34 | 0.31 | 0.33 |
| Non-metallic minerals | - | - | 2.56 | 2.04 | 2.54 | 2.49 | 2.70 | 2.65 |
| Transport equipment | - | - | 1.22 | 1.02 | 1.58 | 1.83 | 1.93 | 2.29 |
| Machinery | - | - | 4.12 | 2.33 | 3.40 | 3.52 | 3.88 | 3.67 |
| Mining and quarrying | - | - | 0.22 | 0.17 | 0.20 | 0.21 | 0.22 | 0.23 |
| Food and tobacco | - | - | 1.43 | 1.38 | 1.59 | 1.60 | 1.57 | 1.64 |
| Paper, pulp and printing | - | - | 1.55 | 1.60 | 1.89 | 1.90 | 1.92 | 1.77 |
| Wood and wood products | - | - | 0.50 | 0.34 | 0.54 | 0.52 | 0.55 | 0.53 |
| Construction | - | - | 0.58 | 0.32 | 0.40 | 0.48 | 0.45 | 0.45 |
| Textile and leather | - | - | 1.77 | 1.12 | 1.16 | 1.01 | 0.97 | 0.87 |
| Non specified/other | 18.77 | 22.25 | 3.67 | 2.16 | 2.21 | 2.45 | 2.66 | 2.95 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

CZECH REPUBLIC

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|-------------|
| Total imports⁽¹⁾ | 2926 | 3708 | 8179 | 6722 | 8725 | 12351 | 11466 | 10204 | 8520 |
| Imports from: | | | | | | | | | |
| Total OECD | - | 901 | 8179 | 6722 | 8725 | 11115 | 10126 | 9198 | 6841 |
| Austria | - | 28 | 34 | 9 | 2 | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | 45 | 267 | 281 | 231 | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | 828 | 7878 | 4800 | 7220 | 11090 | 10086 | 9198 | 6841 |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | 1632 | 1272 | 25 | 40 | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 2926 | 2807 | - | - | - | 1236 | 1340 | 1006 | 1679 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

CZECH REPUBLIC

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Total exports⁽¹⁾ | 5135 | 5216 | 8871 | 6304 | 18742 | 24985 | 24097 | 26357 | 19989 |
| Exports to: | | | | | | | | | |
| Total OECD | - | 2315 | 8730 | 6304 | 18742 | 23749 | 22817 | 25361 | 18342 |
| Austria | - | 681 | 2980 | 2082 | 5481 | 6105 | 6116 | 6950 | 6449 |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | 255 | 2641 | 2263 | 8932 | 12614 | 11405 | 8533 | 6613 |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | 4 | 13 | 203 | 64 | - | 101 | 1 | 1 |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | 1375 | 3096 | 1756 | 4265 | 5030 | 5195 | 9877 | 5279 |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 5135 | 2901 | 141 | - | - | 1236 | 1280 | 996 | 1647 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

CZECH REPUBLIC

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | - | - | 13.35 | 12.27 | 12.95 | 15.12 | 15.16 | 15.22 | 15.78 |
| Nuclear | - | - | 1.76 | 1.76 | 1.76 | 3.76 | 3.76 | 3.76 | 3.76 |
| Hydro | - | - | 1.36 | 1.37 | 2.00 | 2.01 | 2.02 | 2.02 | 2.03 |
| <i>of which: pumped storage</i> | - | - | - | 0.49 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | 0.05 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | 0.03 | 0.04 | 0.11 | 0.15 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | - | - | 10.23 | 9.14 | 9.19 | 9.32 | 9.33 | 9.32 | 9.78 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | - | - | - | - | - | - | - |
| Liquid fuels | - | - | - | - | - | - | - | - | - |
| Natural gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | - | - | - |
| Solid / liquid / gas | - | - | 10.23 | 9.14 | 9.19 | 9.32 | 9.33 | 9.32 | 9.78 |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 10.23 | 9.14 | 8.98 | 8.94 | 8.96 | 8.93 | 9.40 |
| Internal combustion | - | - | - | - | - | 0.01 | - | - | 0.04 |
| Gas turbine | - | - | - | - | - | - | - | - | - |
| Combined cycle | - | - | - | - | 0.21 | 0.37 | 0.37 | 0.39 | 0.34 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | 9.60 | 8.83 | 10.13 | 10.88 | 11.40 | 11.06 | 10.88 |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)

(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|------|------|------|------|------|------|------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | - | - | 1.93 | 1.53 | 2.37 | 2.29 | 2.35 | 2.35 | 1.96 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | 0.05 | 0.03 | 0.09 | 0.16 | 0.16 | 0.16 | 0.16 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | - | - | 1.88 | 1.50 | 2.28 | 2.14 | 2.20 | 2.19 | 1.80 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | - | - | - | - | - | - | - |
| Liquid fuels | - | - | - | - | - | - | - | - | - |
| Natural gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | - | - | - |
| Solid / liquid / gas | - | - | 1.88 | 1.50 | 2.28 | 2.14 | 2.20 | 2.19 | 1.80 |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 1.88 | 1.46 | 1.88 | 1.76 | 1.77 | 1.77 | 1.29 |
| Internal combustion | - | - | - | 0.05 | 0.03 | 0.02 | 0.06 | 0.06 | 0.01 |
| Gas turbine | - | - | - | - | - | - | - | - | - |
| Combined cycle | - | - | - | - | 0.36 | 0.36 | 0.37 | 0.37 | 0.50 |
| Other | - | - | - | - | 0.01 | - | - | - | - |
| Peak load | .. | .. | .. | 1.11 | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---------------------------|------|------|------|------|------|------|------|------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Czech Crowns/ unit | | | | | | | | |
| Steam coal (t) | 54 | 60 | 134 | 308 | c | c | c | c | c |
| Heavy fuel oil (t) | 1020 | 1020 | 2718 | 4307 | 4964 | 6531 | 5792 | 7487 | c |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | .. | .. | 2171 | 5650 | .. | .. | .. | .. | .. |
| | Czech Crowns/ toe | | | | | | | | |
| Steam coal | 212 | 235 | 525 | 1208 | c | c | c | c | c |
| Heavy fuel oil | 1070 | 1070 | 2851 | 4518 | 5208 | 6852 | 6076 | 7855 | c |
| Natural gas ⁽²⁾ | .. | .. | 2412 | 6278 | .. | .. | .. | .. | .. |
| End-user prices of electricity | | | | | | | | | |
| | Czech Crowns/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | .. | .. | 0.53 | 1.66 | 1.93 | 2.12 | 2.34 | 2.58 | 2.81 |
| <i>of which: tax</i> | .. | .. | - | - | - | - | - | 0.03 | 0.03 |
| Household | | | | | | | | | |
| Price | 0.50 | 0.55 | 0.48 | 2.10 | 2.53 | 2.76 | 2.96 | 3.27 | 3.66 |
| <i>of which: tax</i> | - | - | - | 0.38 | 0.40 | 0.44 | 0.47 | 0.55 | 0.61 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

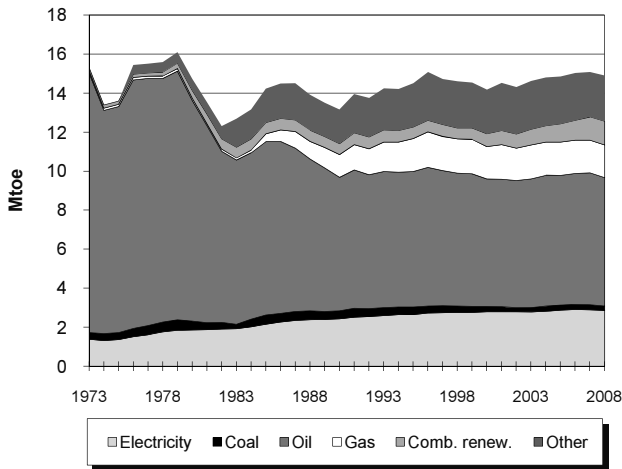


Figure 2. Electricity generation by fuel

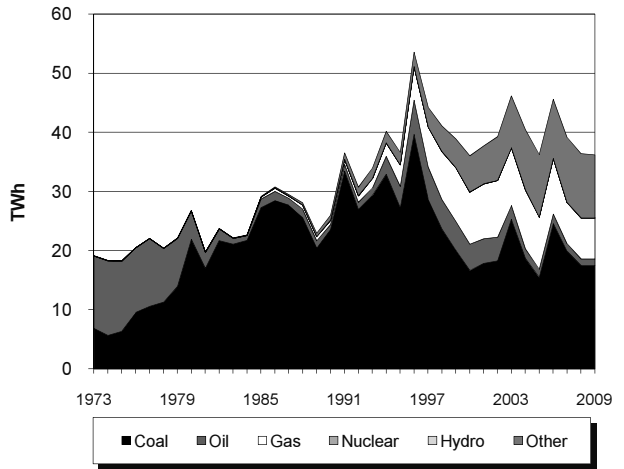


Figure 3. Electricity consumption by sector

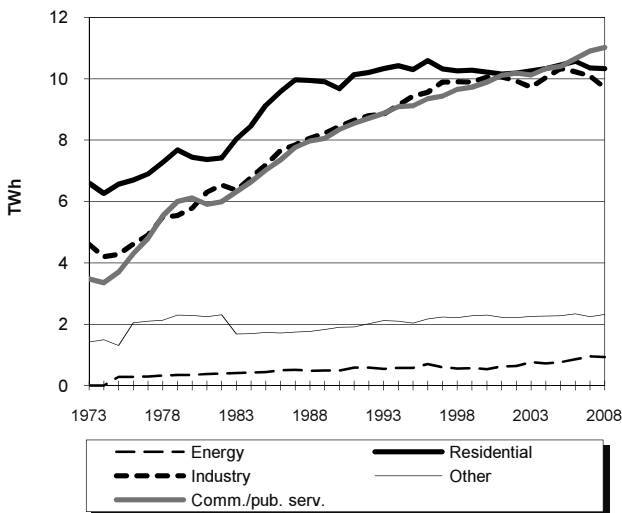


Figure 4. Electricity indicators

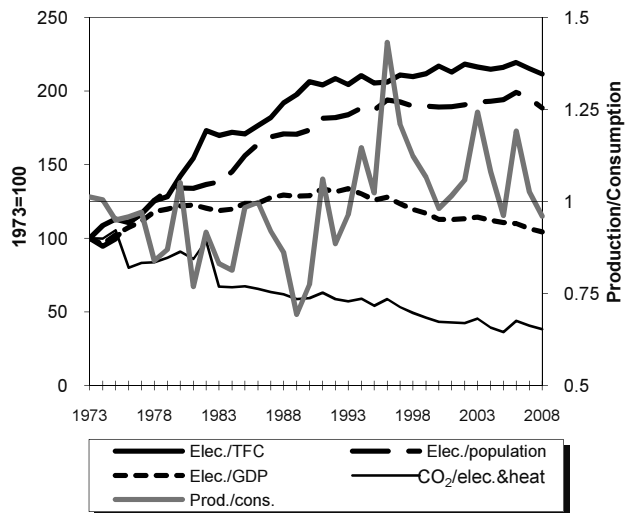
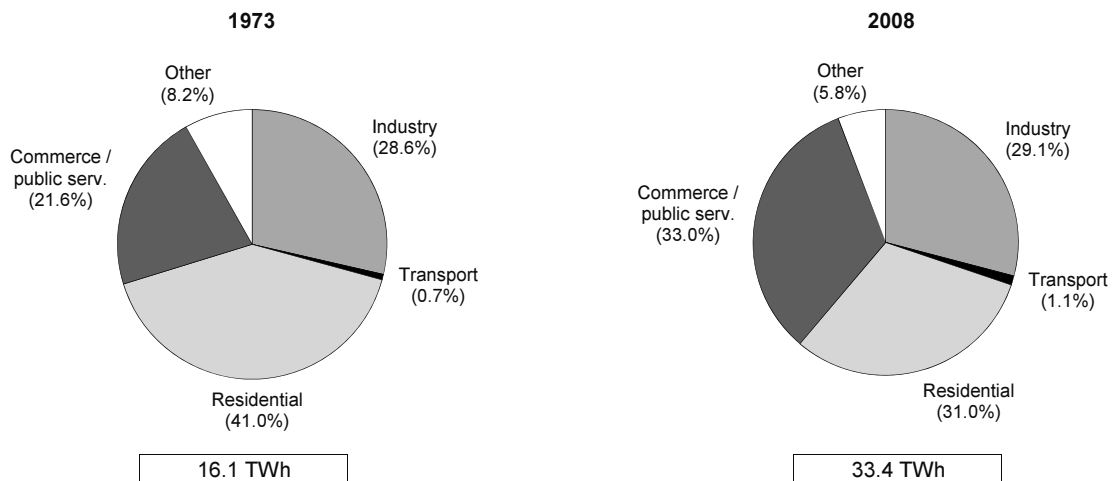


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|-------|--------|--------|--------|--------|--------|--------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 18.99 | 19.14 | 17.34 | 18.58 | 19.66 | 19.01 | 17.84 | -0.5 | 0.1 |
| GDP (billion 2000 USD) | 89.96 | 101.00 | 123.89 | 160.08 | 179.15 | 177.59 | 172.67 | 1.9 | 1.8 |
| TPES/GDP ⁽¹⁾ | 0.21 | 0.19 | 0.14 | 0.12 | 0.11 | 0.11 | 0.10 | -2.4 | -1.6 |
| Population (millions) | 5.02 | 5.12 | 5.14 | 5.34 | 5.46 | 5.49 | 5.50 | 0.1 | 0.4 |
| TPES/population ⁽²⁾ | 3.78 | 3.73 | 3.37 | 3.48 | 3.60 | 3.46 | 3.24 | -0.7 | -0.2 |
| TPES/GDP (2000 = 100) | 182 | 163 | 121 | 100 | 95 | 92 | 89 | -2.4 | -1.6 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 88 | 106 | 113 | 100 | 92 | 93 | .. | 1.5 | .. |
| Ele.TFC/population ⁽⁴⁾ | 3207 | 4222 | 5520 | 6082 | 6154 | 6079 | .. | 3.2 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 19.12 | 26.77 | 25.98 | 36.05 | 39.16 | 36.39 | 36.21 | 1.8 | 1.8 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 18.99 | 19.14 | 17.34 | 18.58 | 19.66 | 19.01 | 17.84 | -0.5 | 0.1 |
| Coal | 1.93 | 5.88 | 6.09 | 3.99 | 4.65 | 4.01 | 3.97 | 7.0 | -2.2 |
| Oil | 16.72 | 12.72 | 7.63 | 7.96 | 7.45 | 7.20 | 6.34 | -4.5 | -1.0 |
| Gas | 0.00 | 0.00 | 1.82 | 4.45 | 4.06 | 4.08 | 3.90 | 65.0 | 4.1 |
| Comb. renew & waste | 0.35 | 0.64 | 1.14 | 1.75 | 2.92 | 2.97 | 2.98 | 7.1 | 5.2 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | 0.00 | 0.00 | 0.01 | 0.02 | 0.02 | - | 12.2 |
| Solar, wind, tide ⁽¹⁾ | - | 0.00 | 0.05 | 0.37 | 0.63 | 0.61 | 0.59 | - | 13.3 |
| Hydro | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.9 | -2.0 |
| Net electricity imports ⁽²⁾ | -0.02 | -0.11 | 0.61 | 0.06 | -0.08 | 0.13 | 0.03 | - | -14.8 |
| Heat | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 1.5 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 19.1 | 26.8 | 26.0 | 36.1 | 36.2 | 39.2 | 36.4 | 36.2 |
| Nuclear | - | - | - | - | - | - | - | - |
| Hydro | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | 0.0 | 0.6 | 4.2 | 6.6 | 7.2 | 6.9 | 6.7 |
| Combustible fuels | 19.1 | 26.7 | 25.3 | 31.7 | 29.6 | 32.0 | 29.4 | 29.5 |
| <i>Coal</i> | 6.8 | 21.9 | 23.6 | 16.7 | 15.5 | 19.9 | 17.5 | 17.5 |
| <i>Oil</i> | 12.3 | 4.8 | 0.9 | 4.4 | 1.4 | 1.3 | 1.1 | 1.1 |
| <i>Gas</i> | - | - | 0.7 | 8.8 | 8.8 | 6.9 | 6.9 | 6.9 |
| <i>Comb. renew. & waste</i> | - | - | 0.2 | 1.9 | 4.0 | 3.9 | 3.9 | 4.0 |
| Other (e.g. fuel cells) | - | - | - | 0.0 | - | - | - | - |
| - Own use by power plant | 1.1 | 1.6 | 1.7 | 1.6 | 1.8 | 2.0 | 1.2 | .. |
| Net production | 18.0 | 25.2 | 24.3 | 34.4 | 34.4 | 37.2 | 35.2 | .. |
| Nuclear | .. | - | - | - | - | - | - | .. |
| Hydro | .. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | - | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | 0.0 | 0.6 | 4.2 | 6.6 | 7.2 | 6.9 | .. |
| Combustible fuels | .. | 25.1 | 23.6 | 30.1 | 27.8 | 30.0 | 28.3 | .. |
| Other (e.g. fuel cells) | .. | - | - | 0.0 | - | - | - | .. |
| - Used for heat pumps | - | - | - | 0.0 | 0.0 e | 0.0 | 0.0 | 0.0 |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | - | - | - | - | - | - | - | - |
| + Imports | 1.0 | 2.0 | 12.0 | 8.4 | 12.9 | 10.4 | 12.8 | 11.2 |
| - Exports | 1.2 | 3.2 | 4.9 | 7.8 | 11.6 | 11.4 | 11.4 | 10.9 |
| Electrical energy supplied | 17.8 | 23.9 | 31.3 | 35.1 | 35.8 | 36.2 | 36.7 | .. |
| - Transmission & distr. losses | 1.7 | 2.0 | 2.5 | 2.1 | 1.5 | 1.7 | 2.4 | .. |
| - Statistical difference | - | - | - | -0.0 | 0.0 | -0.0 | 0.0 | .. |
| Total consumption | 16.1 | 22.0 | 28.9 | 33.0 | 34.2 | 34.5 | 34.3 | .. |
| - Energy industry consumption ⁽²⁾ | .. | 0.3 | 0.5 | 0.5 | 0.8 | 1.0 | 0.9 | .. |
| Final consumption | 16.1 | 21.6 | 28.4 | 32.5 | 33.5 | 33.6 | 33.4 | .. |
| Industry | 4.6 | 5.8 | 8.4 | 10.0 | 10.3 | 10.1 | 9.7 | .. |
| Transport | 0.1 | 0.1 | 0.2 | 0.3 | 0.4 | 0.4 | 0.4 | .. |
| Commercial & publ. serv. | 3.5 | 6.1 | 8.3 | 9.9 | 10.4 | 10.9 | 11.0 | .. |
| Residential | 6.6 | 7.4 | 9.7 | 10.2 | 10.4 | 10.3 | 10.3 | .. |
| Agriculture & fishing | 0.9 | 1.9 | 1.7 | 1.9 | 1.9 | 1.9 | 1.9 | .. |
| Sector non specified | 0.4 | 0.3 | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

DENMARK

4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 18.30 | 26.77 | 25.98 | 36.05 | 45.61 | 39.16 | 36.39 | 2.2 | 1.9 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation⁽¹⁾ | 18.30 | 26.77 | 25.98 | 36.05 | 45.61 | 39.16 | 36.39 | 2.2 | 1.9 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 17.89 | 26.40 | 25.39 | 33.22 | 43.02 | 36.82 | 34.15 | 2.2 | 1.7 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 17.89 | 26.40 | 25.39 | 33.22 | 43.02 | 36.82 | 34.15 | 2.2 | 1.7 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.02 | 0.03 | 0.03 | 0.03 | 0.02 | 0.03 | 0.03 | 1.0 | -0.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | 0.01 | 0.61 | 4.24 | 6.11 | 7.17 | 6.93 | - | 14.5 |
| Coal | 5.50 | 21.76 | 23.39 | 16.62 | 24.56 | 19.89 | 17.45 | 9.5 | -1.6 |
| Oil | 12.36 | 4.60 | 0.71 | 4.14 | 1.41 | 1.05 | 0.93 | -16.3 | 1.5 |
| Gas | - | - | 0.61 | 7.24 | 8.32 | 6.04 | 6.24 | - | 13.8 |
| Comb. renew. & waste | - | - | 0.05 | 0.94 | 2.60 | 2.65 | 2.58 | - | 25.1 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 0.42 | 0.37 | 0.58 | 2.83 | 2.58 | 2.34 | 2.24 | 2.1 | 7.8 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 0.42 | 0.37 | 0.58 | 2.83 | 2.58 | 2.34 | 2.24 | 2.1 | 7.8 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.04 | 0.00 | 0.00 | 0.00 | - | - |
| Coal | 0.14 | 0.14 | 0.17 | 0.05 | - | 0.01 | 0.01 | 1.0 | -15.5 |
| Oil | 0.27 | 0.22 | 0.16 | 0.29 | 0.22 | 0.23 | 0.21 | -3.2 | 1.2 |
| Gas | - | - | 0.09 | 1.53 | 1.08 | 0.88 | 0.69 | - | 12.1 |
| Comb. renew. & waste | - | - | 0.16 | 0.91 | 1.29 | 1.21 | 1.34 | - | 12.4 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|------------|------------|------------|-------------|-------------|-------------|-------------|---|
| Total | 417 | 365 | 583 | 2826 | 2584 | 2335 | 2242 | 7.8 |
| Total energy | - | - | 48 | 214 | 199 | 200 | 167 | 7.2 |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | 25 | 34 | 25 | 30 | - |
| Oil refineries | - | - | 48 | 189 | 165 | 175 | 137 | 6.0 |
| Energy non specified/other | - | - | - | - | - | - | - | - |
| Total industry | 417 | 365 | 452 | 1357 | 803 | 709 | 590 | 1.5 |
| Iron and steel | - | - | - | - | - | - | - | - |
| Chemical and petrochemical | 40 | 40 | 58 | 243 | 130 | 119 | 121 | 4.2 |
| Non-ferrous metals | - | - | - | - | - | - | - | - |
| Non-metallic minerals | 50 | 50 | 41 | 6 | 5 | 4 | 3 | -13.5 |
| Transport equipment | - | - | - | 23 | 22 | 20 | 19 | - |
| Machinery | - | - | - | 28 | 17 | 21 | 15 | - |
| Mining and quarrying | - | - | 20 | 221 | 121 | 135 | 3 | -10.0 |
| Food and tobacco | 252 | 200 | 192 | 479 | 375 | 272 | 297 | 2.5 |
| Pulp and printing | 75 | 75 | 62 | 132 | 113 | 119 | 111 | 3.3 |
| Wood and wood products | - | - | 79 | 175 | 16 | 14 | 17 | -8.2 |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | - | - | - | 27 | 4 | 5 | 4 | - |
| Non specified/other industries | - | - | - | 23 | - | - | - | - |
| Total transport | - | - | - | 1 | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | 1 | - | - | - | - |
| Other | - | - | 83 | 1254 | 1582 | 1426 | 1485 | 17.4 |
| Commerce and pub. services | - | - | 83 | 811 | 1279 | 1195 | 1304 | 16.5 |
| Residential | - | - | - | 50 | 40 | 31 | 24 | - |
| Agriculture and fishing | - | - | - | 393 | 263 | 200 | 157 | - |
| Sector non specified | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|----------------|--------------|---------------|---------------|---------------|---------------|---------------|---|
| Total | 30806 e | 92405 | 119144 | 128297 | 121880 | 123648 | 123648 | 1.6 |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | 48 | 58 | 66 | 287 | 438 | 431 | 13.1 |
| Coal | 26981 e | 52906 | 38874 | 34187 | 32938 | 33067 | 33060 | -2.6 |
| Oil | 3825 e | 5912 | 3874 | 6105 | 4664 | 4325 | 4325 | -1.7 |
| Gas | - | 14075 | 41620 | 39377 | 34608 | 35989 | 36708 | 5.4 |
| Comb. renew. & waste | - | 19464 | 31018 | 45380 | 46061 | 47060 | 46347 | 5.0 |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | 78 | 72 | 89 | 64 | 72 | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | 3622 | 3110 | 3233 | 2705 | 2705 | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 30806 e | 81405 | 101249 | 107511 | 99401 | 100805 | .. | 1.2 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | 48 | 58 | 66 | 287 | 438 | .. | 13.1 |
| Coal | 26981 e | 52859 | 38874 | 34187 | 32938 | 33067 | .. | -2.6 |
| Oil | 3825 e | 5773 | 3410 | 5723 | 4174 | 3999 | .. | -2.0 |
| Gas | - | 14059 | 41055 | 38600 | 33855 | 35140 | .. | 5.2 |
| Comb. renew. & waste | - | 8666 | 17852 | 28724 | 28147 | 28161 | .. | 6.8 |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | 211 | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | 11000 | 17895 | 20786 | 22479 | 22843 | .. | 4.1 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | 47 | - | - | - | - | .. | - |
| Oil | - | 139 | 464 | 382 | 490 | 326 | .. | 4.8 |
| Gas | - | 16 | 565 | 777 | 753 | 849 | .. | 24.7 |
| Comb. renew. & waste | - | 10798 | 13166 | 16656 | 17914 | 18899 | .. | 3.2 |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | 78 | 72 | 89 | 64 | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | 3622 | 2899 | 3233 | 2705 | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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**7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)**

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 4.58 | 7.06 | 7.03 | 7.99 | 9.59 | 8.21 | 7.68 | 2.5 | 0.5 |
| Coal | 1.59 | 5.57 | 5.69 | 3.67 | 5.30 | 4.40 | 3.88 | 7.8 | -2.1 |
| Oil | 2.80 | 1.23 | 0.33 | 1.05 | 0.42 | 0.34 | 0.30 | -11.8 | -0.6 |
| Gas | - | - | 0.44 | 2.17 | 2.17 | 1.73 | 1.75 | - | 8.0 |
| Comb. renew. & waste | 0.19 | 0.26 | 0.58 | 1.09 | 1.70 | 1.74 | 1.75 | 6.6 | 6.4 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 6.76 | 6.60 | 7.06 | 8.70 | 7.32 | 6.79 | .. | 0.2 |
| Coal | .. | 5.54 | 5.65 | 3.66 | 5.30 | 4.40 | 3.88 | .. | -2.1 |
| Oil | .. | 1.18 | 0.29 | 0.98 | 0.36 | 0.28 | 0.25 | .. | -0.9 |
| Gas | .. | - | 0.42 | 1.87 | 1.95 | 1.54 | 1.60 | .. | 7.7 |
| Comb. renew. & waste | .. | 0.04 | 0.24 | 0.56 | 1.09 | 1.10 | 1.07 | .. | 8.7 |

Source: IEA/OECD Energy Balances of OECD Countries.

**7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)**

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 0.00 | 0.00 | 0.05 | 0.37 | 0.53 | 0.62 | 0.60 | 21.3 | 14.2 |
| Hydro | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.9 | -0.4 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | 0.00 | 0.05 | 0.36 | 0.53 | 0.62 | 0.60 | - | 14.5 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

DENMARK

8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|-------|-------|------|------|------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | .. | 730 | 819 | - | - | - | - |
| Fuel input (TJ) | .. | 18469 | 20311 | - | - | - | - |
| Electricity production (GWh) | .. | 1919 | 2423 | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | .. | - | - | - | - | - | - |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Electricity production (GWh) | .. | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | .. | - | - | - | - | - | - |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Electricity production (GWh) | .. | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Electricity production (GWh) | .. | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | .. | 45 | 23 | 10 | 9 | 16 | -5.6 |
| Fuel input (TJ) | .. | 1833 | 940 | 400 | 384 | 674 | -5.4 |
| Electricity production (GWh) | .. | 163 | 41 | 36 | 29 | 43 | -7.1 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Electricity production (GWh) | .. | - | - | - | - | - | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Electricity production (GWh) | .. | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Electricity production (GWh) | .. | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Electricity production (GWh) | .. | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | .. | - | 27 | 17 | 18 | 12 | - |
| Electricity production (GWh) | .. | - | 3 | 2 | 2 | 1 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | .. | 2082 | 2467 | 38 | 31 | 44 | -19.3 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

DENMARK

**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|---------|--------|--------|--------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 9218 | 8440 | 5372 | 8934 | 7541 | 6678 | -1.3 |
| Fuel input (TJ) | 228042 | 213588 | 133320 | 221608 | 184047 | 162306 | -1.5 |
| Electricity production (GWh) | 21905 | 21638 | 14250 | 24561 | 19899 | 17457 | -1.2 |
| CHP Heat production (TJ) | 26981 e | 47632 | 38837 | 34343 | 32840 | 32982 | -2.0 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 1140 | 200 | 1390 | 393 | 310 | 259 | 1.4 |
| Fuel input (TJ) | 46243 | 8192 | 40825 | 16403 | 13096 | 10852 | 1.6 |
| Electricity production (GWh) | 4819 | 715 | 4394 | 1585 | 1252 | 1088 | 2.4 |
| CHP Heat production (TJ) | 3825 e | 2549 | 2172 | 5295 | 3620 | 3353 | 1.5 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 8089 | 98243 | 96003 | 73888 | 74988 | 13.2 |
| Electricity production (GWh) | - | 694 | 8775 | 9401 | 6910 | 6927 | 13.6 |
| CHP Heat production (TJ) | - | 3287 | 39102 | 34169 | 28738 | 30158 | 13.1 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 1224 | 6150 | 20360 | 21576 | 20512 | 17.0 |
| Electricity production (GWh) | - | 108 | 411 | 1778 | 1828 | 1804 | 16.9 |
| CHP Heat production (TJ) | - | 319 | 3189 | 8590 | 9388 | 9335 | 20.6 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 990 | 20908 | 32794 | 33332 | 33541 | 21.6 |
| Electricity production (GWh) | - | 62 | 1236 | 1830 | 1767 | 1866 | 20.8 |
| CHP Heat production (TJ) | - | 460 | 13118 | 21418 | 22058 | 22092 | 24.0 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 509 | 2178 | 2752 | 2550 | 2334 | 8.8 |
| Electricity production (GWh) | - | 40 | 206 | 282 | 269 | 248 | 10.7 |
| CHP Heat production (TJ) | - | 103 | 691 | 854 | 795 | 709 | 11.3 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 26724 | 23257 | 29272 | 39437 | 31925 | 29390 | 1.3 |
| CHP Heat production (TJ) | 30806 | 54350 | 97109 | 104669 | 97439 | 98629 | 3.4 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

DENMARK

10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|-------|-------|-------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | .. | 231 | 2 | 4 | 4 | 4 | -20.2 |
| Fuel input (TJ) | .. | 6017 | 40 | 116 | 117 | 95 | -20.6 |
| Heat production (TJ) | .. | 5274 | 37 | 103 | 98 | 85 | -20.5 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | .. | - | - | - | - | - | - |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Heat production (TJ) | .. | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | .. | - | - | - | - | - | - |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Heat production (TJ) | .. | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Heat production (TJ) | .. | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | .. | 94 | 54 | 26 | 27 | 25 | -7.1 |
| Fuel input (TJ) | .. | 3956 | 2325 | 1092 | 1129 | 1063 | -7.0 |
| Heat production (TJ) | .. | 3363 | 1702 | 971 | 1044 | 972 | -6.7 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | .. | 12259 | 2942 | 5115 | 6560 | 6536 | -3.4 |
| Heat production (TJ) | .. | 10788 | 2518 | 4497 | 5870 | 5831 | -3.4 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | .. | 7809 | 8434 | 12005 | 11395 | 12274 | 2.5 |
| Heat production (TJ) | .. | 7054 | 7700 | 11399 | 10790 | 11504 | 2.8 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Heat production (TJ) | .. | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | .. | 13567 | 7910 | 3244 | 3781 | 4403 | -6.1 |
| Heat production (TJ) | .. | 11504 | 6108 | 2488 | 2828 | 3233 | -6.8 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | .. | 30 | 237 | 143 | 229 | 214 | 11.5 |
| Heat production (TJ) | .. | 24 | 212 | 120 | 202 | 187 | 12.1 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | .. | 38007 | 18277 | 19578 | 20832 | 21812 | -3.0 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 15.31 | 14.74 | 13.18 | 14.18 | 15.04 | 15.09 | 14.92 | -0.9 | 0.7 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | - | 9.0 |
| Coal | 0.34 | 0.46 | 0.40 | 0.29 | 0.27 | 0.26 | 0.22 | 1.0 | -3.2 |
| Oil | 13.31 | 11.32 | 6.86 | 6.52 | 6.71 | 6.77 | 6.58 | -3.8 | -0.2 |
| Gas | 0.12 | 0.12 | 1.16 | 1.67 | 1.71 | 1.68 | 1.68 | 14.4 | 2.1 |
| Comb. renew. & waste | 0.16 | 0.39 | 0.56 | 0.65 | 1.03 | 1.18 | 1.21 | 7.7 | 4.4 |
| Electricity | 1.38 | 1.86 | 2.44 | 2.79 | 2.91 | 2.89 | 2.87 | 3.4 | 0.9 |
| Heat | - | 0.59 | 1.76 | 2.25 | 2.41 | 2.30 | 2.34 | - | 1.6 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 3.35 | 3.15 | 2.69 | 2.94 | 2.92 | 2.87 | 2.76 | -1.3 | 0.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.21 | 0.38 | 0.32 | 0.27 | 0.22 | 0.22 | 0.18 | 2.5 | -3.2 |
| Oil | 2.67 | 2.11 | 0.92 | 0.75 | 0.82 | 0.75 | 0.68 | -6.1 | -1.7 |
| Gas | 0.02 | 0.01 | 0.54 | 0.78 | 0.72 | 0.75 | 0.76 | 22.9 | 2.0 |
| Comb. renew. & waste | 0.06 | 0.08 | 0.11 | 0.11 | 0.13 | 0.14 | 0.17 | 4.0 | 2.1 |
| Electricity | 0.40 | 0.50 | 0.73 | 0.86 | 0.88 | 0.87 | 0.83 | 3.6 | 0.8 |
| Heat | - | 0.07 | 0.07 | 0.16 | 0.15 | 0.13 | 0.14 | - | 3.7 |
| Transport | 2.70 | 3.03 | 3.45 | 3.98 | 4.46 | 4.66 | 4.60 | 1.4 | 1.6 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.00 | - | - | - | - | - | - | - | - |
| Oil | 2.69 | 3.02 | 3.43 | 3.95 | 4.42 | 4.62 | 4.56 | 1.4 | 1.6 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | 0.00 | 0.01 | 0.01 | - | - |
| Electricity | 0.01 | 0.01 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 3.9 | 3.5 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 0.32 | 1.23 | 1.72 | 1.83 | 2.02 | 1.97 | 2.00 | 10.4 | 0.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 9.0 |
| Coal | - | - | 0.00 | - | - | - | - | - | - |
| Oil | - | 0.50 | 0.32 | 0.13 | 0.09 | 0.08 | 0.09 | - | -7.0 |
| Gas | 0.01 | 0.01 | 0.14 | 0.16 | 0.24 | 0.23 | 0.23 | 18.4 | 2.6 |
| Comb. renew. & waste | 0.01 | 0.02 | 0.03 | 0.06 | 0.07 | 0.06 | 0.05 | 5.0 | 3.0 |
| Electricity | 0.30 | 0.53 | 0.72 | 0.85 | 0.92 | 0.94 | 0.95 | 5.3 | 1.6 |
| Heat | - | 0.17 | 0.50 | 0.63 | 0.70 | 0.67 | 0.68 | - | 1.7 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|--------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 6.93 | 5.58 | 4.00 | 4.16 | 4.44 | 4.42 | 4.40 | -3.2 | 0.5 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | - | 9.0 |
| Coal | 0.12 | 0.07 | 0.02 | 0.00 | - | - | - | -11.6 | - |
| Oil | 6.06 | 4.17 | 1.27 | 0.77 | 0.56 | 0.52 | 0.47 | -8.8 | -5.3 |
| Gas | 0.09 | 0.10 | 0.41 | 0.66 | 0.68 | 0.64 | 0.64 | 9.1 | 2.4 |
| Comb. renew. & waste | 0.08 | 0.25 | 0.34 | 0.42 | 0.77 | 0.92 | 0.93 | 8.6 | 5.8 |
| Electricity | 0.57 | 0.64 | 0.83 | 0.88 | 0.91 | 0.89 | 0.89 | 2.3 | 0.4 |
| Heat | - | 0.34 | 1.13 | 1.42 | 1.51 | 1.45 | 1.47 | - | 1.5 |
| Agriculture & fishing | 1.23 | 1.25 | 1.00 | 0.97 | 0.89 | 0.86 | 0.88 | -1.2 | -0.7 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | 0.01 | 0.06 | 0.02 | 0.05 | 0.05 | 0.04 | - | -2.2 |
| Oil | 1.14 | 1.04 | 0.61 | 0.62 | 0.52 | 0.49 | 0.51 | -3.6 | -1.0 |
| Gas | - | - | 0.05 | 0.06 | 0.05 | 0.05 | 0.05 | - | -0.5 |
| Comb. renew. & waste | 0.01 | 0.04 | 0.08 | 0.06 | 0.06 | 0.06 | 0.07 | 15.7 | -1.3 |
| Electricity | 0.08 | 0.16 | 0.15 | 0.17 | 0.17 | 0.16 | 0.17 | 3.8 | 0.8 |
| Heat | - | - | 0.04 | 0.05 | 0.05 | 0.05 | 0.05 | - | 0.3 |
| Other | 0.07 | 0.09 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -10.6 | 1.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.03 | 0.07 | - | - | - | - | - | - | - |
| Gas | - | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | - | 1.2 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.04 | 0.02 | - | - | - | - | - | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 0.71 | 0.41 | 0.30 | 0.30 | 0.29 | 0.31 | 0.27 | -4.88 | -0.72 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

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12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 15.31 | 14.74 | 13.18 | 14.18 | 14.85 | 15.04 | 15.09 | 14.92 |
| Total industry (Mtoe) | 3.35 | 3.15 | 2.69 | 2.94 | 2.87 | 2.92 | 2.87 | 2.76 |
| Iron and steel | 0.20 | 0.20 | 0.10 | 0.13 | 0.08 | 0.07 | 0.07 | 0.07 |
| Chem. and petrochemical | 0.35 | 0.29 | 0.20 | 0.26 | 0.24 | 0.25 | 0.23 | 0.23 |
| Non-ferrous metals | - | 0.00 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Non-metallic minerals | 0.84 | 0.71 | 0.49 | 0.63 | 0.63 | 0.64 | 0.65 | 0.57 |
| Transport equipment | 0.10 | 0.08 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| Machinery | 0.37 | 0.29 | 0.28 | 0.31 | 0.31 | 0.30 | 0.30 | 0.29 |
| Mining and quarrying | 0.04 | 0.03 | 0.09 | 0.08 | 0.08 | 0.10 | 0.09 | 0.09 |
| Food and tobacco | 0.82 | 0.85 | 0.75 | 0.74 | 0.73 | 0.77 | 0.73 | 0.71 |
| Paper, pulp and printing | 0.20 | 0.15 | 0.19 | 0.14 | 0.15 | 0.15 | 0.15 | 0.14 |
| Wood and wood products | 0.14 | 0.14 | 0.12 | 0.13 | 0.10 | 0.10 | 0.11 | 0.11 |
| Construction | 0.02 | 0.14 | 0.15 | 0.18 | 0.19 | 0.20 | 0.20 | 0.21 |
| Textile and leather | 0.13 | 0.10 | 0.07 | 0.05 | 0.04 | 0.03 | 0.03 | 0.03 |
| Non specified/other | 0.14 | 0.17 | 0.20 | 0.24 | 0.26 | 0.25 | 0.25 | 0.25 |
| Electricity consumption (Mtoe) | 1.38 | 1.86 | 2.44 | 2.79 | 2.88 | 2.91 | 2.89 | 2.87 |
| Total industry (Mtoe) | 0.40 | 0.50 | 0.73 | 0.86 | 0.89 | 0.88 | 0.87 | 0.83 |
| Iron and steel | 0.02 | 0.05 | 0.05 | 0.07 | 0.03 | 0.03 | 0.03 | 0.03 |
| Chem. and petrochemical | 0.08 | 0.08 | 0.07 | 0.11 | 0.12 | 0.11 | 0.11 | 0.11 |
| Non-ferrous metals | - | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Non-metallic minerals | 0.05 | 0.04 | 0.06 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| Transport equipment | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| Machinery | 0.05 | 0.06 | 0.13 | 0.13 | 0.14 | 0.14 | 0.14 | 0.13 |
| Mining and quarrying | - | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Food and tobacco | 0.07 | 0.10 | 0.17 | 0.20 | 0.21 | 0.21 | 0.21 | 0.20 |
| Paper, pulp and printing | 0.05 | 0.03 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 |
| Wood and wood products | 0.02 | 0.03 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| Construction | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.04 |
| Textile and leather | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 |
| Non specified/other | 0.02 | 0.04 | 0.09 | 0.11 | 0.13 | 0.13 | 0.13 | 0.12 |
| Total industry (TWh) | 4.60 | 5.78 | 8.45 | 10.05 | 10.34 | 10.23 | 10.09 | 9.71 |
| Iron and steel | 0.21 | 0.60 | 0.53 | 0.76 | 0.38 | 0.38 | 0.37 | 0.36 |
| Chem. and petrochemical | 0.88 | 0.98 | 0.85 | 1.29 | 1.35 | 1.33 | 1.31 | 1.25 |
| Non-ferrous metals | - | - | 0.08 | 0.07 | 0.09 | 0.08 | 0.08 | 0.08 |
| Non-metallic minerals | 0.56 | 0.45 | 0.68 | 0.89 | 0.94 | 0.93 | 0.92 | 0.88 |
| Transport equipment | 0.18 | 0.25 | 0.24 | 0.22 | 0.22 | 0.22 | 0.21 | 0.20 |
| Machinery | 0.53 | 0.75 | 1.47 | 1.54 | 1.66 | 1.64 | 1.61 | 1.54 |
| Mining and quarrying | - | - | 0.10 | 0.09 | 0.08 | 0.08 | 0.08 | 0.08 |
| Food and tobacco | 0.85 | 1.20 | 2.00 | 2.27 | 2.49 | 2.45 | 2.41 | 2.31 |
| Paper, pulp and printing | 0.59 | 0.40 | 0.68 | 0.74 | 0.75 | 0.74 | 0.72 | 0.69 |
| Wood and wood products | 0.18 | 0.30 | 0.24 | 0.33 | 0.32 | 0.32 | 0.31 | 0.30 |
| Construction | 0.18 | 0.18 | 0.29 | 0.34 | 0.35 | 0.38 | 0.41 | 0.44 |
| Textile and leather | 0.19 | 0.20 | 0.23 | 0.21 | 0.18 | 0.18 | 0.17 | 0.17 |
| Non specified/other | 0.25 | 0.48 | 1.04 | 1.31 | 1.53 | 1.51 | 1.49 | 1.42 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

DENMARK

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|-------------|--------------|-------------|-------------|--------------|-------------|--------------|--------------|
| Total imports⁽¹⁾ | 1002 | 1980 | 11973 | 4013 | 8417 | 12943 | 6767 | 10427 | 12815 |
| Imports from: | | | | | | | | | |
| Total OECD | - | - | 11973 | 4013 | 8417 | 12943 | 6767 | 10427 | 12815 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | 93 | 198 | 396 | 592 | 3955 | 1464 | 1365 |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | 3958 | 1676 | 4631 | 4710 | 1127 | 3970 | 4813 |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | 7922 | 2139 | 3390 | 7641 | 1685 | 4993 | 6637 |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 1002 | 1980 | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

DENMARK

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
| Total exports⁽¹⁾ | 1226 | 3212 | 4925 | 4807 | 7752 | 11574 | 13702 | 11377 | 11360 |
| Exports to: | | | | | | | | | |
| Total OECD | - | - | 4925 | 4807 | 7752 | 11574 | 13702 | 11377 | 11360 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | 4699 | 3391 | 5993 | 10394 | 5839 | 7807 | 9145 |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | 7 | 688 | 143 | 468 | 2324 | 1154 | 423 |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | 219 | 728 | 1616 | 712 | 5539 | 2416 | 1792 |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 1226 | 3212 | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

DENMARK

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 5.81 | 6.92 | 8.98 | 10.44 | 12.05 | 12.71 | 12.39 | 12.05 | 11.87 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.34 | 0.62 | 2.39 | 3.13 | 3.14 | 3.12 | 3.17 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 5.80 | 6.91 | 8.62 | 9.81 | 9.65 | 9.57 | 9.25 | 8.92 | 8.69 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 0.73 | 1.05 | 0.20 | 0.24 | - | - | - | - | - |
| Liquid fuels | 3.01 | 2.17 | 0.85 | 1.11 | 1.89 | 1.67 | 1.38 | 0.96 | 1.01 |
| Natural gas | - | - | 0.05 | 0.72 | 1.29 | 1.23 | 1.29 | 1.22 | 1.20 |
| Comb. renew. & waste | - | - | 0.10 | 0.10 | 0.05 | 0.05 | 0.05 | 0.07 | 0.07 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 2.06 | 3.70 | 6.81 | 6.69 | 4.85 | 4.66 | 4.66 | 5.19 | 4.92 |
| Solid / natural gas | - | - | 0.01 | 0.11 | 0.22 | 0.19 | 0.19 | 0.20 | 0.20 |
| Liquid / natural gas | - | - | 0.26 | 0.33 | 0.72 | 0.82 | 0.76 | 0.62 | 0.64 |
| Solid / liquid / gas | - | - | 0.36 | 0.53 | 0.63 | 0.95 | 0.92 | 0.65 | 0.66 |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 8.29 | 8.63 | 7.94 | 7.21 | 6.94 | 6.73 | 6.20 |
| Internal combustion | - | - | 0.07 | 0.60 | 0.83 | 0.88 | 0.86 | 0.74 | 1.02 |
| Gas turbine | - | - | 0.27 | 0.36 | 0.45 | 0.48 | 0.44 | 0.44 | 0.48 |
| Combined cycle | - | - | - | 0.22 | 0.44 | 1.00 | 1.00 | 1.01 | 1.00 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | 5.79 | 6.22 | 6.27 | 6.32 | 6.37 | 6.41 | 6.31 |
| Available capacity | .. | .. | 8.55 | 8.61 | 8.64 | 8.06 | 7.54 | 7.43 | 7.30 |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)

(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|------|------|------|------|------|------|------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 0.15 | 0.15 | 0.16 | 0.34 | 0.58 | 0.64 | 0.62 | 0.56 | 0.63 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 0.15 | 0.15 | 0.16 | 0.34 | 0.58 | 0.64 | 0.62 | 0.56 | 0.63 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | - | 0.01 | - | - | - | - | 0.01 |
| Liquid fuels | - | - | - | 0.07 | 0.08 | 0.08 | 0.06 | 0.03 | 0.07 |
| Natural gas | - | - | - | 0.12 | 0.29 | 0.28 | 0.29 | 0.26 | 0.26 |
| Comb. renew. & waste | - | - | - | 0.05 | 0.08 | 0.14 | 0.14 | 0.11 | 0.12 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 0.15 | 0.15 | 0.16 | 0.06 | 0.07 | 0.06 | 0.06 | 0.09 | 0.09 |
| Solid / natural gas | - | - | - | 0.01 | 0.03 | 0.04 | 0.04 | 0.04 | 0.05 |
| Liquid / natural gas | - | - | - | - | 0.02 | 0.03 | 0.03 | 0.03 | 0.04 |
| Solid / liquid / gas | - | - | - | 0.02 | - | - | - | 0.01 | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 0.16 | 0.16 | 0.20 | 0.27 | 0.26 | 0.23 | 0.23 |
| Internal combustion | - | - | - | 0.08 | 0.19 | 0.20 | 0.20 | 0.16 | 0.24 |
| Gas turbine | - | - | - | 0.06 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| Combined cycle | - | - | - | 0.04 | 0.08 | 0.07 | 0.07 | 0.07 | 0.06 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Danish Crowns/ unit | | | | | | | | |
| Steam coal (t) | .. | 262 | .. | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil (t) | .. | 918 | .. | .. | .. | .. | .. | .. | .. |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | c | c | c | c | c | c | c | c | c |
| | Danish Crowns/ toe | | | | | | | | |
| Steam coal | .. | 450 | .. | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil | .. | 952 | .. | .. | .. | .. | .. | .. | .. |
| Natural gas ⁽²⁾ | c | c | c | c | c | c | c | c | c |
| End-user prices of electricity | | | | | | | | | |
| | Danish Crowns/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.2699 | 0.2815 | 0.3850 | 0.4666 | 0.5560 | 0.5750 | 0.5490 | 0.6620 | 0.5930 |
| <i>of which: tax</i> | .. | - | - | 0.0790 | 0.0770 | 0.0770 | 0.0770 | 0.0760 | 0.0770 |
| Household | | | | | | | | | |
| Price | 0.3742 | 0.5725 | 1.0175 | 1.5969 | 1.7661 | 1.9140 | 1.8731 | 2.0195 | 1.9586 |
| <i>of which: tax</i> | .. | 0.2025 | 0.5092 | 0.9568 | 1.0192 | 1.0490 | 1.0426 | 1.0790 | 1.0768 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

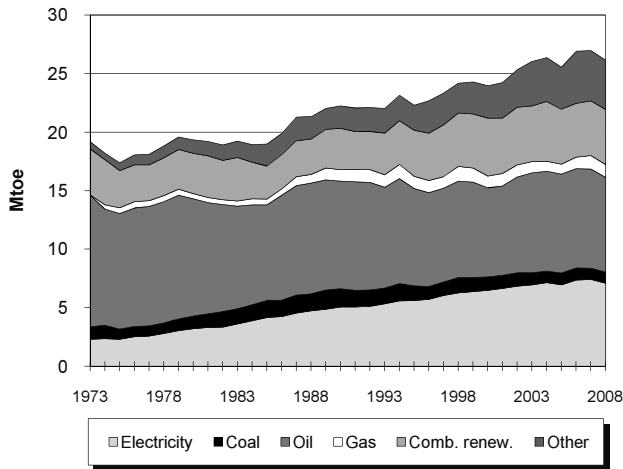


Figure 2. Electricity generation by fuel

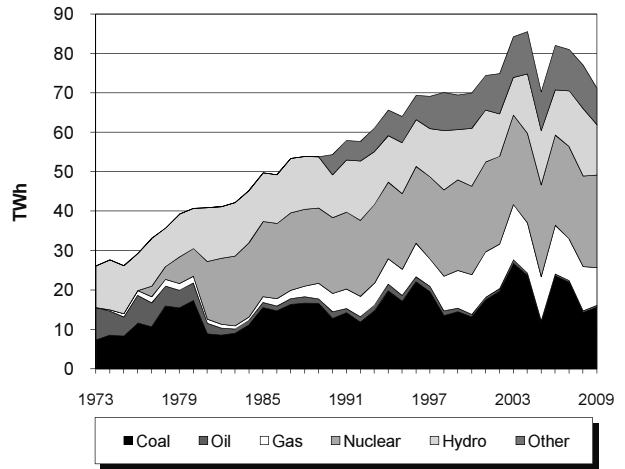


Figure 3. Electricity consumption by sector

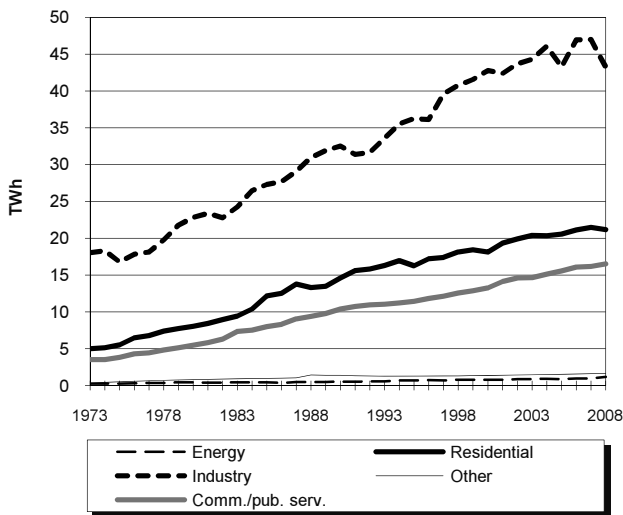


Figure 4. Electricity indicators

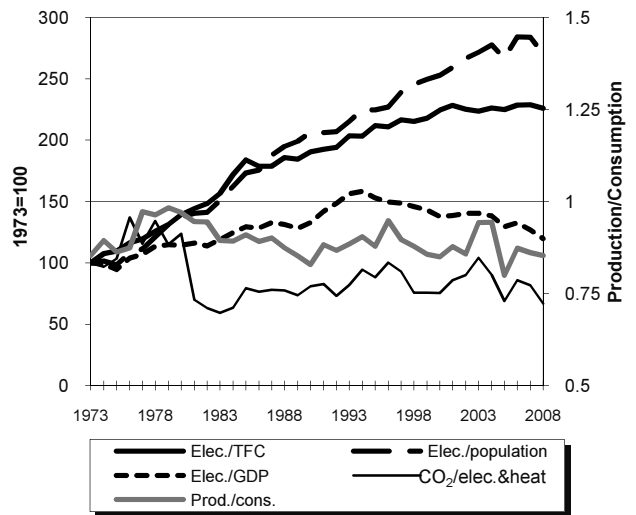
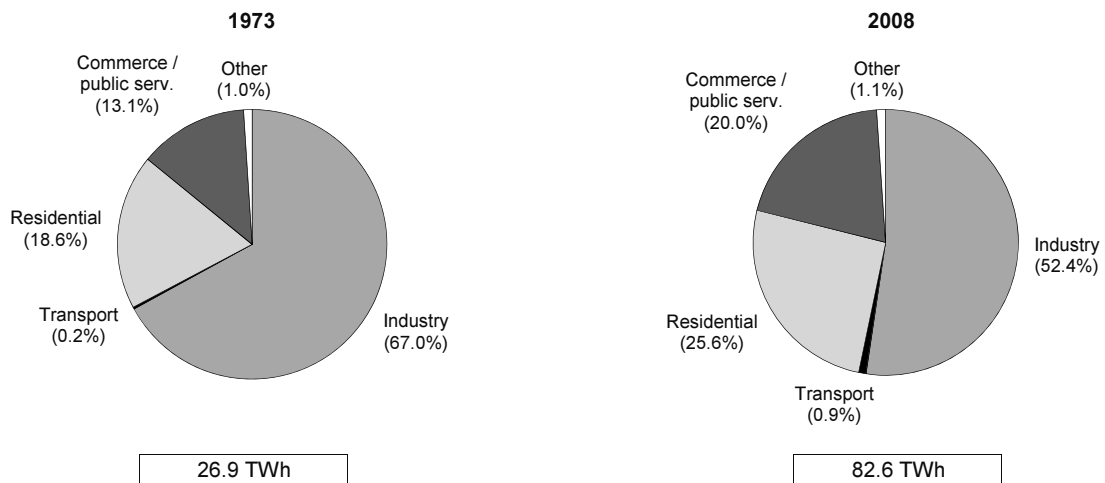


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--------------------------------------|-------|-------|-------|--------|--------|--------|--------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 21.03 | 24.60 | 28.38 | 32.11 | 36.63 | 35.26 | 33.00 | 1.8 | 0.8 |
| GDP (billion 2000 USD) | 59.82 | 73.46 | 99.30 | 121.72 | 151.81 | 153.64 | 142.98 | 3.0 | 1.9 |
| TPES/GDP ⁽¹⁾ | 0.35 | 0.33 | 0.29 | 0.26 | 0.24 | 0.23 | 0.23 | -1.2 | -1.1 |
| Population (millions) | 4.67 | 4.78 | 4.99 | 5.18 | 5.29 | 5.31 | 5.33 | 0.4 | 0.4 |
| TPES/population ⁽²⁾ | 4.51 | 5.15 | 5.69 | 6.20 | 6.93 | 6.64 | 6.19 | 1.4 | 0.4 |
| TPES/GDP (2000 = 100) | 133 | 127 | 108 | 100 | 91 | 87 | 87 | -1.2 | -1.1 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 73 | 82 | 96 | 100 | 92 | 87 | .. | 1.6 | .. |
| Ele.TFC/population ⁽⁴⁾ | 5777 | 7782 | 11826 | 14607 | 16327 | 15555 | .. | 4.3 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 26.10 | 40.75 | 54.38 | 69.99 | 81.25 | 77.44 | 71.57 | 4.4 | 1.5 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 21.03 | 24.60 | 28.38 | 32.11 | 36.63 | 35.26 | 33.00 | 1.8 | 0.8 |
| Coal | 2.55 | 4.95 | 5.32 | 5.09 | 7.20 | 5.40 | 5.40 | 4.4 | 0.1 |
| Oil | 13.26 | 12.60 | 9.46 | 8.77 | 9.74 | 9.61 | 8.75 | -2.0 | -0.4 |
| Gas | - | 0.77 | 2.18 | 3.42 | 3.72 | 3.85 | 3.48 | - | 2.5 |
| Comb. renew & waste | 3.94 | 3.47 | 4.56 | 6.68 | 7.50 | 7.70 | 6.96 | 0.9 | 2.2 |
| Nuclear | - | 1.83 | 5.01 | 5.86 | 6.10 | 5.98 | 6.13 | - | 1.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.00 | 0.01 | 0.02 | 0.02 | 0.03 | - | 24.6 |
| Hydro | 0.90 | 0.88 | 0.93 | 1.26 | 1.22 | 1.47 | 1.09 | 0.2 | 0.8 |
| Net electricity imports ⁽²⁾ | 0.37 | 0.10 | 0.92 | 1.02 | 1.08 | 1.10 | 1.04 | 5.4 | 0.7 |
| Heat | - | - | - | 0.00 | 0.05 | 0.12 | 0.12 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

(TWh)

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Gross production | 26.1 | 40.7 | 54.4 | 70.0 | 70.6 | 81.2 | 77.4 | 71.6 |
| Nuclear | - | 7.0 | 19.2 | 22.5 | 23.3 | 23.4 | 23.0 | 23.5 |
| Hydro | 10.5 | 10.2 | 10.9 | 14.7 | 13.8 | 14.2 | 17.1 | 12.7 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.1 | 0.2 | 0.2 | 0.3 | 0.3 |
| Combustible fuels | 15.6 | 23.5 | 24.3 | 32.8 | 33.1 | 43.1 | 36.6 | 34.6 |
| <i>Coal</i> | 7.3 | 17.4 | 12.8 | 13.2 | 11.7 | 21.9 | 14.3 | 15.6 |
| <i>Oil</i> | 8.3 | 4.4 | 1.7 | 0.6 | 0.5 | 0.5 | 0.4 | 0.5 |
| <i>Gas</i> | - | 1.7 | 4.7 | 10.1 | 11.3 | 10.6 | 11.2 | 9.6 |
| <i>Comb. renew. & waste</i> | - | - | 5.2 e | 8.9 | 9.7 | 10.1 | 10.6 | 8.9 |
| Other (e.g. fuel cells) | - | - | - | - | 0.2 | 0.4 | 0.5 | 0.5 |
| - Own use by power plant | 1.0 | 2.0 | 2.8 | 2.7 | 2.7 | 3.4 | 3.0 | .. |
| Net production | 25.1 | 38.7 | 51.6 | 67.3 | 67.8 | 77.8 | 74.5 | .. |
| Nuclear | .. | 6.6 | 18.1 | 21.6 | 22.4 | 22.5 | 22.1 | .. |
| Hydro | .. | 10.1 | 10.8 | 14.5 | 13.6 | 14.0 | 16.9 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | - | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | - | 0.1 | 0.2 | 0.2 | 0.3 | .. |
| Combustible fuels | .. | 22.0 | 22.7 | 31.2 | 31.5 | 40.8 | 34.8 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | 0.2 | 0.4 | 0.5 | .. |
| - Used for heat pumps | - | - | - | 0.0 e | 0.0 | 0.0 | 0.1 | 0.1 |
| - Used for electric boilers | - | - | - | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| - Used for pumped storage | - | - | - | - | - | - | - | - |
| + Imports | 4.6 | 2.4 | 11.0 | 12.2 | 17.9 | 15.4 | 16.1 | 15.5 |
| - Exports | 0.2 | 1.2 | 0.4 | 0.3 | 0.9 | 2.9 | 3.3 | 3.4 |
| Electrical energy supplied | 29.4 | 39.9 | 62.2 | 79.1 | 84.8 | 90.3 | 87.1 | .. |
| - Transmission & distr. losses | 2.2 | 2.3 | 2.8 | 2.7 | 3.0 | 3.0 | 3.3 | .. |
| - Statistical difference | - | - | - | - | - | - | - | .. |
| Total consumption | 27.2 | 37.6 | 59.5 | 76.4 | 81.8 | 87.3 | 83.8 | .. |
| - Energy industry consumption ⁽²⁾ | 0.3 | 0.4 | 0.5 | 0.8 | 0.9 | 1.0 | 1.2 | .. |
| Final consumption | 26.9 | 37.2 | 58.9 | 75.6 | 80.9 | 86.3 | 82.6 | .. |
| Industry | 18.1 | 22.8 | 32.5 | 42.8 | 43.3 | 47.0 | 43.3 | .. |
| Transport | 0.1 | 0.2 | 0.4 | 0.5 | 0.6 | 0.7 | 0.7 | .. |
| Commercial & publ. serv. | 3.5 | 5.5 | 10.4 | 13.3 | 15.6 | 16.2 | 16.5 | .. |
| Residential | 5.0 | 8.1 | 14.6 | 18.1 | 20.6 | 21.5 | 21.2 | .. |
| Agriculture & fishing | 0.3 | 0.6 | 1.0 | 0.8 | 0.9 | 0.9 | 0.9 | .. |
| Sector non specified | - | - | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

FINLAND

4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 27.63 | 40.75 | 54.38 | 69.99 | 82.30 | 81.25 | 77.44 | 4.3 | 2.0 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation⁽¹⁾ | 27.63 | 40.75 | 54.38 | 69.99 | 82.30 | 81.25 | 77.44 | 4.3 | 2.0 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 21.02 | 33.45 | 45.69 | 58.40 | 71.70 | 70.02 | 66.65 | 5.0 | 2.1 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 21.02 | 33.45 | 45.69 | 58.40 | 71.70 | 70.02 | 66.65 | 5.0 | 2.1 |
| Nuclear | - | 7.02 | 19.22 | 22.48 | 22.91 | 23.42 | 22.96 | - | 1.0 |
| Hydro | 12.63 | 10.22 | 10.86 | 14.66 | 11.49 | 14.18 | 17.11 | -0.9 | 2.6 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.08 | 0.24 | 0.27 | 0.44 | - | - |
| Coal | 5.43 | 12.81 | 11.55 e | 11.63 | 22.34 | 20.70 | 13.12 | 4.8 | 0.7 |
| Oil | 2.96 | 2.27 | 0.56 | 0.26 | 0.23 | 0.28 | 0.29 | -9.9 | -3.6 |
| Gas | - | 1.14 | 3.36 | 8.01 | 9.97 | 7.96 | 8.59 | - | 5.4 |
| Comb. renew. & waste | - | - | 0.15 e | 1.29 | 4.54 | 3.21 | 4.14 | - | 20.4 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 6.61 | 7.30 | 8.69 | 11.59 | 10.60 | 11.23 | 10.79 | 1.7 | 1.2 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 6.61 | 7.30 | 8.69 | 11.59 | 10.60 | 11.23 | 10.79 | 1.7 | 1.2 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | 0.35 | 0.31 | 0.34 | - | - |
| Coal | 3.13 | 4.57 | 1.26 e | 1.57 | 1.27 | 1.25 | 1.19 | -5.5 | -0.3 |
| Oil | 3.16 | 2.15 | 1.12 | 0.36 | 0.26 | 0.19 | 0.14 | -6.3 | -11.0 |
| Gas | 0.33 | 0.58 | 1.30 | 2.07 | 2.35 | 2.59 | 2.66 | 9.0 | 4.1 |
| Comb. renew. & waste | - | - | 5.01 e | 7.60 | 6.37 | 6.89 | 6.47 | - | 1.4 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

FINLAND

5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|---|
| Total | 6178 | 6890 | 8118 | 11078 | 10095 | 10705 | 10285 | 1.3 |
| Total energy | - | - | - | 822 | 987 | 810 | 867 | - |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | 822 | 987 | 810 | 867 | - |
| Energy non specified/other | - | - | - | - | - | - | - | - |
| Total industry | - | - | - | 10226 | 9108 | 9895 | 9418 | - |
| Iron and steel | - | - | - | 685 | 741 | 689 | 671 | - |
| Chemical and petrochemical | - | - | - | 334 | 270 | 252 | 280 | - |
| Non-ferrous metals | - | - | - | - | - | - | - | - |
| Non-metallic minerals | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | - | - | - | - | 13 | 6 | 4 | - |
| Mining and quarrying | - | - | - | - | - | - | - | - |
| Food and tobacco | - | - | - | 16 | - | - | - | - |
| Pulp and printing | - | - | - | 9159 | 7882 | 8863 | 8401 | - |
| Wood and wood products | - | - | - | 32 | 21 | 39 | 36 | - |
| Construction | - | - | - | - | - | - | 2 | - |
| Textile and leather | - | - | - | - | - | - | - | - |
| Non specified/other industries | - | - | - | - | 181 | 46 | 24 | - |
| Total transport | - | - | - | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | - | - | - | - |
| Other | 6178 | 6890 | 8118 | 30 | - | - | - | - |
| Commerce and pub. services | - | - | - | 30 | - | - | - | - |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | - | - | - | - | - | - | - | - |
| Sector non specified | 6178 | 6890 | 8118 | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|--------------|----------------|---------------|---------------|---------------|---------------|---------------|---|
| Total | 52704 | 86832 e | 125196 | 163087 | 192128 | 189037 | 187338 | 4.4 |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | 24451 | 52254 e | 51501 | 58434 | 69202 | 61146 | 59809 | 0.9 |
| Oil | 7226 | 12388 | 10589 | 12425 | 14073 | 10993 | 12101 | -0.7 |
| Gas | 2303 | 17165 | 40332 | 49492 | 43687 | 45416 | 45037 | 5.6 |
| Comb. renew. & waste | - | 5025 e | 22554 | 36179 | 53649 | 57846 | 56991 | 14.5 |
| Non-spec. comb. fuels | 18724 | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | 3053 | 1973 | 4508 | 4450 | - |
| Heat pumps | - | - | 5 | 10 | 179 | 712 | 850 | - |
| Electric boilers | - | - | 215 | 64 | 104 | 95 | 100 | - |
| Other sources ⁽¹⁾ | - | - | - | 3430 | 9261 | 8321 | 8000 | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 52704 | 86832 e | 116608 | 144192 | 163817 | 161762 | .. | 3.5 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | 24451 | 52254 e | 50171 | 57366 | 68186 | 60185 | .. | 0.8 |
| Oil | 7226 | 12388 | 10184 | 11178 | 12699 | 10342 | .. | -1.0 |
| Gas | 2303 | 17165 | 39611 | 46469 | 40285 | 43433 | .. | 5.3 |
| Comb. renew. & waste | - | 5025 e | 16437 | 28822 | 37558 | 41750 | .. | 12.5 |
| Non-spec. comb. fuels | 18724 | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | 5 | 10 | 179 | 712 | .. | - |
| Electric boilers | - | - | 200 | 64 | 104 | 95 | .. | - |
| Other sources ⁽¹⁾ | - | - | - | 283 | 4806 | 5245 | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | - | 8588 | 18895 | 28311 | 27275 | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | 1330 | 1068 | 1016 | 961 | .. | - |
| Oil | - | - | 405 | 1247 | 1374 | 651 | .. | - |
| Gas | - | - | 721 | 3023 | 3402 | 1983 | .. | - |
| Comb. renew. & waste | - | - | 6117 | 7357 | 16091 | 16096 | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | 3053 | 1973 | 4508 | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | 15 | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | 3147 | 4455 | 3076 | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

FINLAND

7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 2.54 | 5.09 | 5.86 | 7.73 | 12.23 | 11.09 | 9.68 | 5.0 | 2.8 |
| Coal | 1.21 | 3.44 | 3.30 | 3.46 | 5.96 | 5.55 | 3.96 | 6.1 | 1.0 |
| Oil | 1.33 | 1.33 | 0.55 | 0.36 | 0.46 | 0.46 | 0.36 | -5.1 | -2.2 |
| Gas | - | 0.30 | 0.97 | 2.17 | 2.63 | 2.27 | 2.37 | - | 5.1 |
| Comb. renew. & waste | - | 0.02 | 1.04 | 1.73 | 3.18 | 2.81 | 2.98 | - | 6.0 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 4.42 | 4.52 | 5.99 | 10.42 | 9.07 | 7.84 | .. | 3.1 |
| Coal | .. | 3.12 | 3.10 | 3.15 | 5.64 | 5.27 | 3.70 | .. | 1.0 |
| Oil | .. | 1.04 | 0.40 | 0.30 | 0.37 | 0.38 | 0.32 | .. | -1.2 |
| Gas | .. | 0.24 | 0.83 | 1.90 | 2.28 | 1.91 | 2.04 | .. | 5.1 |
| Comb. renew. & waste | .. | 0.02 | 0.20 | 0.64 | 2.12 | 1.51 | 1.79 | .. | 13.0 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | - | 1.83 | 5.01 | 5.86 | 5.97 | 6.10 | 5.98 | - | 1.0 |
| Nuclear | - | 1.83 | 5.01 | 5.86 | 5.97 | 6.10 | 5.98 | - | 1.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 0.90 | 0.88 | 0.93 | 1.27 | 1.00 | 1.24 | 1.49 | 0.2 | 2.6 |
| Hydro | 0.90 | 0.88 | 0.93 | 1.26 | 0.99 | 1.22 | 1.47 | 0.2 | 2.6 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.01 | 0.01 | 0.02 | 0.02 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

FINLAND

8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|-------|-------|-------|-------|-------|-------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | 3556 | 1540 | 1521 | 3915 | 3150 | 1541 | 0.0 |
| Fuel input (TJ) | 90820 | 39332 | 38793 | 98461 | 79262 | 38002 | -0.2 |
| Electricity production (GWh) | 8946 | 4419 | 4536 | 11494 | 9377 | 4485 | 0.1 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | 1 | 3 | 3 | - |
| Fuel input (TJ) | - | - | - | 51 | 107 | 99 | - |
| Electricity production (GWh) | - | - | - | 4 | 8 | 8 | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | 921 | 700 | 961 | 2736 | 2999 | 1855 | 5.6 |
| Fuel input (TJ) | 7716 | 7526 | 10094 | 27930 | 30281 | 18437 | 5.1 |
| Electricity production (GWh) | 611 | 840 e | 1092 | 3047 | 3561 | 1996 | 4.9 |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 4928 | 4392 | 6835 | 7578 | 7218 | 7078 | 2.7 |
| Electricity production (GWh) | 322 | 376 | 651 | 611 | 556 | 554 | 2.2 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 290 | 106 | 28 | 42 | 40 | 37 | -5.7 |
| Fuel input (TJ) | 11776 | 4305 | 1131 | 1711 | 1632 | 1472 | -5.8 |
| Electricity production (GWh) | 1103 | 331 | 115 | 156 | 163 | 163 | -3.9 |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 6092 | 9461 | 3474 | 17766 | 5089 | 3863 | -4.9 |
| Electricity production (GWh) | 600 | 963 | 403 | 1897 | 547 | 390 | -4.9 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 7007 | 3907 | 15635 | 10399 | 15141 | 4.4 |
| Electricity production (GWh) | - | 489 e | 413 | 1532 | 1037 | 1588 | 6.8 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | 492 | 1 | - | - | - |
| Electricity production (GWh) | - | - | 50 | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | 23 | 742 | 1101 | 1317 | - |
| Electricity production (GWh) | - | - | 2 | 82 | 126 | 150 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | 11 | 8 | 4 | - |
| Electricity production (GWh) | - | - | - | 1 | 1 | - | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | 11582 | 7418 | 7262 | 18824 | 15376 | 9334 | 1.3 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

FINLAND

9. Electricity and heat produced for sale from combustible fuels in combined heat and power plants (CHP plants)

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|-------|---------|-------|--------|--------|--------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | 1089 | 2192 | 1907 | 2326 | 2258 | 2055 | -0.4 |
| Fuel input (TJ) | 28010 | 55984 | 48620 | 59225 | 56749 | 50045 | -0.6 |
| Electricity production (GWh) | 3334 | 5243 | 3999 | 4822 | 4570 | 4018 | -1.5 |
| CHP Heat production (TJ) | 17585 | 32493 | 27576 | 34502 | 32478 | 28782 | -0.7 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | 3 | 6 | 5 | - |
| Electricity production (GWh) | - | - | - | - | 1 | 1 | - |
| CHP Heat production (TJ) | - | - | - | 1 | 3 | 3 | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | 3138 | 2128 | 3348 | 4816 | 5084 | 4377 | 4.1 |
| Fuel input (TJ) | 26276 | 22880 | 35152 | 49166 | 51643 | 44072 | 3.7 |
| Electricity production (GWh) | 4159 | 1934 e | 2870 | 3596 | 3838 | 3204 | 2.8 |
| CHP Heat production (TJ) | 6866 | 12492 e | 19384 | 28275 | 29321 | 25577 | 4.1 |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 510 | 316 | 363 | 518 | - |
| Electricity production (GWh) | - | - | 53 | 36 | 34 | 44 | - |
| CHP Heat production (TJ) | - | - | 192 | 116 | 155 | 259 | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 595 | 197 | 109 | 126 | 132 | 97 | -3.9 |
| Fuel input (TJ) | 24184 | 8000 | 4495 | 5145 | 5461 | 3968 | -3.8 |
| Electricity production (GWh) | 3315 | 1348 | 495 | 327 | 305 | 262 | -8.7 |
| CHP Heat production (TJ) | 7226 | 1896 | 1815 | 2650 | 3045 | 2390 | 1.3 |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 8880 | 32948 | 86393 | 92673 | 87013 | 92694 | 5.9 |
| Electricity production (GWh) | 1119 | 3692 | 9677 | 10420 | 10009 | 10857 | 6.2 |
| CHP Heat production (TJ) | 2303 | 13404 | 31234 | 35482 | 32486 | 34190 | 5.3 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 31344 | 55402 | 100747 | 89839 | 88451 | 5.9 |
| Electricity production (GWh) | - | 4667 e | 8063 | 9007 | 8581 | 8469 | 3.4 |
| CHP Heat production (TJ) | - | 1275 e | 12628 | 47984 | 41540 | 42656 | 21.5 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | 2921 | 1306 | 1184 | 1297 | - |
| Electricity production (GWh) | - | - | 274 | 46 | 47 | 39 | - |
| CHP Heat production (TJ) | - | - | 1423 | 482 | 523 | 861 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | 654 | 3322 | 4152 | 4908 | - |
| Electricity production (GWh) | - | - | 57 | 213 | 282 | 280 | - |
| CHP Heat production (TJ) | - | - | 319 | 1965 | 2289 | 2823 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 136 | 287 | 181 | 929 | - |
| Electricity production (GWh) | - | - | 22 | 26 | 28 | 87 | - |
| CHP Heat production (TJ) | - | - | 20 | 124 | 36 | 464 | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | 11927 | 16884 | 25510 | 28493 | 27695 | 27261 | 2.7 |
| CHP Heat production (TJ) | 33980 | 61560 | 94591 | 151581 | 141876 | 138005 | 4.6 |

Source: IEA/OECD Electricity Statistics.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

FINLAND

10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|-------|--------|-------|-------|-------|-------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | 152 | 76 | 93 | 81 | 65 | -4.6 |
| Fuel input (TJ) | - | 3882 | 1943 | 2505 | 2120 | 1576 | -4.9 |
| Heat production (TJ) | - | 3610 | 1710 | 2232 | 1914 | 1424 | -5.0 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | 1 | 2 | - |
| Heat production (TJ) | - | - | - | - | 1 | 2 | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | 400 | 248 | 419 | 555 | 540 | 1.7 |
| Fuel input (TJ) | - | 4301 | 2604 | 4279 | 6020 | 5817 | 1.7 |
| Heat production (TJ) | - | 3659 e | 2245 | 3656 | 5246 | 4988 | 1.7 |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 472 | 47 | 105 | 136 | - |
| Heat production (TJ) | - | - | 394 | 38 | 84 | 111 | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | 266 | 236 | 313 | 301 | 245 | -0.5 |
| Fuel input (TJ) | - | 10802 | 9745 | 12906 | 12372 | 10147 | -0.3 |
| Heat production (TJ) | - | 10492 | 8774 | 11308 | 11028 | 8603 | -1.1 |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | 4500 | 11129 | 11901 | 13748 | 13788 | 6.4 |
| Heat production (TJ) | - | 3761 | 9098 | 9669 | 11201 | 11226 | 6.3 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 4492 | 3829 | 9792 | 9293 | 12007 | 5.6 |
| Heat production (TJ) | - | 3045 e | 3103 | 8356 | 7955 | 10342 | 7.0 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | 4455 | 30 | 133 | 96 | - |
| Heat production (TJ) | - | - | 4332 | 21 | 117 | 83 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 784 | 663 | 589 | 546 | 538 | -2.1 |
| Heat production (TJ) | - | 705 e | 584 | 433 | 411 | 412 | -2.9 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 157 | 695 | 855 | 229 | - |
| Heat production (TJ) | - | - | 145 | 631 | 778 | 205 | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Heat production (TJ) | 18724 | 25272 | 30385 | 36344 | 38735 | 37396 | 2.2 |

Source: IEA/OECD Electricity Statistics.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

FINLAND

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 19.19 | 19.34 | 22.24 | 23.99 | 26.92 | 26.98 | 26.16 | 0.9 | 0.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 3.9 |
| Coal | 1.06 | 1.11 | 1.56 | 1.15 | 1.03 | 0.97 | 0.95 | 2.3 | -2.7 |
| Oil | 11.26 | 10.01 | 9.19 | 7.61 | 8.49 | 8.48 | 8.10 | -1.2 | -0.7 |
| Gas | 0.01 | 0.44 | 0.98 | 1.00 | 0.98 | 1.13 | 1.10 | 31.1 | 0.6 |
| Comb. renew. & waste | 3.94 | 3.45 | 3.52 | 4.94 | 4.59 | 4.69 | 4.72 | -0.7 | 1.6 |
| Electricity | 2.32 | 3.20 | 5.07 | 6.50 | 7.38 | 7.42 | 7.10 | 4.7 | 1.9 |
| Heat | 0.60 | 1.14 | 1.91 | 2.78 | 4.45 | 4.29 | 4.19 | 7.0 | 4.5 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 6.52 | 5.99 | 9.02 | 11.20 | 12.63 | 12.33 | 11.84 | 1.9 | 1.5 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.94 | 1.01 | 1.54 | 1.12 | 1.00 | 0.94 | 0.91 | 3.0 | -2.8 |
| Oil | 3.94 | 2.50 | 1.14 | 0.92 | 1.44 | 1.24 | 1.23 | -7.0 | 0.4 |
| Gas | 0.01 | 0.40 | 0.92 | 0.89 | 0.81 | 0.84 | 0.75 | 35.4 | -1.1 |
| Comb. renew. & waste | - | - | 2.45 | 3.86 | 3.26 | 3.35 | 3.33 | - | 1.7 |
| Electricity | 1.55 | 1.96 | 2.80 | 3.68 | 4.04 | 4.04 | 3.72 | 3.5 | 1.6 |
| Heat | 0.08 | 0.12 | 0.17 | 0.73 | 2.08 | 1.92 | 1.89 | 4.8 | 14.1 |
| Transport | 2.41 | 2.80 | 3.95 | 4.08 | 4.50 | 4.62 | 4.39 | 2.9 | 0.6 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.01 | - | - | - | - | - | - | - | - |
| Oil | 2.39 | 2.78 | 3.91 | 4.02 | 4.42 | 4.54 | 4.23 | 2.9 | 0.4 |
| Gas | - | - | - | 0.01 | 0.02 | 0.02 | 0.01 | - | - |
| Comb. renew. & waste | - | - | - | - | 0.00 | 0.00 | 0.08 | - | - |
| Electricity | 0.01 | 0.02 | 0.04 | 0.05 | 0.06 | 0.06 | 0.06 | 12.3 | 3.1 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 0.30 | 0.47 | 0.89 | 1.55 | 1.79 | 1.79 | 1.76 | 6.6 | 3.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Oil | - | - | - | 0.33 | 0.31 | 0.30 | 0.25 | - | - |
| Gas | - | - | - | 0.03 | 0.03 | 0.03 | 0.03 | - | - |
| Comb. renew. & waste | - | - | - | 0.05 | 0.07 | 0.07 | 0.07 | - | - |
| Electricity | 0.30 | 0.47 | 0.89 | 1.14 | 1.39 | 1.39 | 1.42 | 6.6 | 2.6 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

FINLAND

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 4.29 | 4.47 | 5.33 | 4.54 | 5.13 | 5.15 | 4.99 | 1.3 | -0.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 3.9 |
| Coal | 0.11 | 0.10 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | -8.7 | -3.9 |
| Oil | 3.36 | 2.96 | 2.04 | 0.73 | 0.65 | 0.62 | 0.57 | -2.9 | -6.8 |
| Gas | 0.00 | 0.04 | 0.03 | 0.02 | 0.03 | 0.04 | 0.04 | 11.5 | 1.5 |
| Comb. renew. & waste | - | - | 0.91 | 0.94 | 1.14 | 1.15 | 1.13 | - | 1.2 |
| Electricity | 0.43 | 0.69 | 1.26 | 1.56 | 1.82 | 1.85 | 1.82 | 6.5 | 2.1 |
| Heat | 0.38 | 0.67 | 1.08 | 1.28 | 1.47 | 1.48 | 1.43 | 6.3 | 1.6 |
| Agriculture & fishing | 0.52 | 0.58 | 0.92 | 0.83 | 0.79 | 0.80 | 0.83 | 3.4 | -0.6 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | 0.01 | 0.02 | 0.02 | 0.02 | - | - |
| Oil | 0.50 | 0.53 | 0.67 | 0.64 | 0.56 | 0.57 | 0.61 | 1.8 | -0.5 |
| Gas | - | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | - | -2.4 |
| Comb. renew. & waste | - | - | 0.16 | 0.09 | 0.12 | 0.12 | 0.12 | - | -1.6 |
| Electricity | 0.02 | 0.05 | 0.09 | 0.07 | 0.08 | 0.08 | 0.08 | 7.8 | -0.6 |
| Heat | - | - | - | - | - | - | - | - | - |
| Other | 4.09 | 3.80 | 0.66 | 0.78 | 0.90 | 0.89 | 0.88 | -10.1 | 1.6 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.00 | - | - | - | - | - | - | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | 3.94 | 3.45 | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Electricity | - | - | - | - | - | - | - | - | - |
| Heat | 0.14 | 0.35 | 0.66 | 0.77 | 0.90 | 0.89 | 0.88 | 9.4 | 1.6 |
| Non-energy use⁽¹⁾ | 1.06 | 1.23 | 1.46 | 1.00 | 1.17 | 1.41 | 1.46 | 1.90 | 0.01 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

FINLAND

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 19.19 | 19.34 | 22.24 | 23.99 | 25.56 | 26.92 | 26.98 | 26.16 |
| Total industry (Mtoe) | 6.52 | 5.99 | 9.02 | 11.20 | 11.48 | 12.63 | 12.33 | 11.84 |
| Iron and steel | 0.59 | 0.91 | 0.92 | 0.99 | 1.00 | 1.05 | 1.02 | 1.00 |
| Chem. and petrochemical | 0.56 | 0.62 | 0.99 | 0.62 | 0.73 | 0.78 | 0.99 | 1.01 |
| Non-ferrous metals | 0.08 | 0.13 | 0.16 | 0.18 | 0.20 | 0.20 | 0.28 | 0.27 |
| Non-metallic minerals | 0.26 | 0.61 | 0.78 | 0.33 | 0.38 | 0.41 | 0.41 | 0.41 |
| Transport equipment | 0.06 | 0.06 | 0.04 | 0.04 | 0.05 | 0.05 | 0.08 | 0.07 |
| Machinery | 0.21 | 0.25 | 0.26 | 0.19 | 0.23 | 0.22 | 0.32 | 0.32 |
| Mining and quarrying | 0.13 | 0.13 | 0.11 | 0.07 | 0.07 | 0.07 | 0.08 | 0.09 |
| Food and tobacco | 0.47 | 0.49 | 0.45 | 0.25 | 0.23 | 0.21 | 0.37 | 0.34 |
| Paper, pulp and printing | 2.23 | 2.01 | 3.91 | 6.72 | 6.26 | 6.50 | 7.52 | 7.02 |
| Wood and wood products | 0.43 | 0.26 | 0.48 | 0.34 | 0.30 | 0.27 | 0.60 | 0.55 |
| Construction | 0.19 | 0.14 | 0.11 | 0.33 | 0.34 | 0.34 | 0.35 | 0.36 |
| Textile and leather | 0.11 | 0.09 | 0.06 | 0.04 | 0.05 | 0.05 | 0.05 | 0.05 |
| Non specified/other | 1.21 | 0.27 | 0.77 | 1.13 | 1.66 | 2.48 | 0.27 | 0.36 |
| Electricity consumption (Mtoe) | 2.32 | 3.20 | 5.07 | 6.50 | 6.96 | 7.38 | 7.42 | 7.10 |
| Total industry (Mtoe) | 1.55 | 1.96 | 2.80 | 3.68 | 3.72 | 4.04 | 4.04 | 3.72 |
| Iron and steel | 0.10 | 0.12 | 0.16 | 0.24 | 0.28 | 0.30 | 0.30 | 0.28 |
| Chem. and petrochemical | 0.17 | 0.24 | 0.31 | 0.37 | 0.40 | 0.42 | 0.44 | 0.41 |
| Non-ferrous metals | 0.04 | 0.08 | 0.13 | 0.15 | 0.18 | 0.18 | 0.17 | 0.16 |
| Non-metallic minerals | 0.04 | 0.05 | 0.07 | 0.08 | 0.09 | 0.09 | 0.09 | 0.09 |
| Transport equipment | - | - | - | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| Machinery | 0.08 | 0.12 | 0.15 | 0.17 | 0.19 | 0.18 | 0.19 | 0.20 |
| Mining and quarrying | 0.04 | 0.06 | 0.05 | 0.05 | 0.05 | 0.06 | 0.07 | 0.07 |
| Food and tobacco | 0.05 | 0.08 | 0.11 | 0.13 | 0.14 | 0.13 | 0.13 | 0.13 |
| Paper, pulp and printing | 0.90 | 1.04 | 1.58 | 2.17 | 2.03 | 2.30 | 2.28 | 2.03 |
| Wood and wood products | 0.06 | 0.10 | 0.10 | 0.13 | 0.14 | 0.14 | 0.16 | 0.14 |
| Construction | 0.02 | 0.03 | 0.04 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 |
| Textile and leather | 0.03 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 |
| Non specified/other | 0.02 | 0.02 | 0.06 | 0.13 | 0.16 | 0.17 | 0.15 | 0.14 |
| Total industry (TWh) | 18.06 | 22.82 | 32.52 | 42.80 | 43.26 | 46.94 | 47.02 | 43.28 |
| Iron and steel | 1.14 | 1.40 | 1.86 | 2.79 | 3.27 | 3.47 | 3.48 | 3.28 |
| Chem. and petrochemical | 2.01 | 2.79 | 3.66 | 4.34 | 4.67 | 4.87 | 5.06 | 4.82 |
| Non-ferrous metals | 0.45 | 0.90 | 1.47 | 1.80 | 2.06 | 2.12 | 2.00 | 1.91 |
| Non-metallic minerals | 0.50 | 0.59 | 0.86 | 0.87 | 1.00 | 1.03 | 1.02 | 0.99 |
| Transport equipment | - | - | - | 0.33 | 0.30 | 0.33 | 0.40 | 0.40 |
| Machinery | 0.90 | 1.41 | 1.79 | 1.95 | 2.22 | 2.13 | 2.25 | 2.33 |
| Mining and quarrying | 0.51 | 0.66 | 0.59 | 0.56 | 0.62 | 0.66 | 0.76 | 0.78 |
| Food and tobacco | 0.63 | 0.92 | 1.30 | 1.53 | 1.57 | 1.47 | 1.47 | 1.46 |
| Paper, pulp and printing | 10.44 | 12.15 | 18.43 | 25.18 | 23.58 | 26.79 | 26.51 | 23.59 |
| Wood and wood products | 0.74 | 1.11 | 1.13 | 1.51 | 1.63 | 1.64 | 1.84 | 1.62 |
| Construction | 0.19 | 0.30 | 0.49 | 0.21 | 0.27 | 0.27 | 0.35 | 0.32 |
| Textile and leather | 0.37 | 0.39 | 0.29 | 0.25 | 0.22 | 0.21 | 0.18 | 0.17 |
| Non specified/other | 0.19 | 0.22 | 0.67 | 1.47 | 1.87 | 1.95 | 1.72 | 1.61 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

FINLAND

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|-------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Total imports⁽¹⁾ | 4556 | 2374 | 11007 | 8501 | 12206 | 17948 | 14118 | 15419 | 16107 |
| Imports from: | | | | | | | | | |
| Total OECD | - | - | 6476 | 3742 | 7687 | 6635 | 2562 | 3326 | 2974 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | 125 | 37 | 132 | 165 | 149 | 201 | 159 |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | 6351 | 3705 | 7555 | 6470 | 2413 | 3125 | 2815 |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | 4531 | 4759 | 4519 | 11313 | 11556 | 12093 | 13133 |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | 4 | 1921 | 2250 |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | 4531 | 4759 e | 4519 | 11313 | 11552 | 10172 | 10883 |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 4556 | 2374 | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

FINLAND

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|------------|-------------|------------|-----------|------------|------------|-------------|-------------|-------------|
| Total exports ⁽¹⁾ | 237 | 1163 | 364 | 96 | 326 | 933 | 2717 | 2862 | 3335 |
| Exports to: | | | | | | | | | |
| Total OECD | - | - | 364 | 95 | 326 | 933 | 2710 | 2841 | 3325 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | 2 e | 173 | 131 | 84 | 110 | 58 |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | 364 | 93 e | 153 | 802 | 2626 | 2731 | 3267 |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | 1 | - | - | 7 | 21 | 10 |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | 7 | 21 | 10 |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | 1 | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 237 | 1163 | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

FINLAND

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 5.21 | 9.54 | 11.44 | 12.47 | 13.99 | 14.20 | 14.29 | 14.45 | 14.46 |
| Nuclear | - | 2.20 | 2.36 | 2.31 | 2.64 | 2.67 | 2.67 | 2.67 | 2.67 |
| Hydro | 2.27 | 2.42 | 2.62 | 2.78 | 2.88 | 3.04 | 3.06 | 3.10 | 3.10 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | 0.01 | 0.01 | 0.01 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.01 | 0.04 | 0.08 | 0.09 | 0.11 | 0.14 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 2.94 | 4.92 | 6.46 | 7.38 | 8.43 | 8.41 | 8.47 | 8.57 | 8.54 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 0.05 | 0.06 | 0.04 | 0.05 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 |
| Liquid fuels | 1.02 | 1.04 | 0.90 | 0.88 | 0.92 | 0.84 | 0.84 | 0.90 | 0.91 |
| Natural gas | - | 0.24 | 0.44 | 0.32 | 0.41 | 0.41 | 0.41 | 0.41 | 0.37 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 1.75 | 3.43 | 3.54 | 3.91 | 4.26 | 4.32 | 4.38 | 4.38 | 4.40 |
| Solid / natural gas | - | - | 0.08 | 0.10 | 0.14 | 0.14 | 0.14 | 0.18 | 0.18 |
| Liquid / natural gas | 0.03 | 0.05 | 0.74 | 0.97 | 1.22 | 1.22 | 1.22 | 1.22 | 1.22 |
| Solid / liquid / gas | 0.09 | 0.09 | 0.73 | 1.14 | 1.42 | 1.42 | 1.42 | 1.42 | 1.42 |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | 2.16 | 3.94 | 5.10 | 5.92 | 5.22 | 5.19 | 5.26 | 5.29 | 5.26 |
| Internal combustion | - | - | - | - | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
| Gas turbine | 0.78 | 0.98 | 1.36 | 1.45 | 1.73 | 1.73 | 1.73 | 1.79 | 1.79 |
| Combined cycle | - | - | - | - | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | 10.24 | 11.20 | 12.40 | 13.48 | 14.85 | 14.92 | 13.82 |
| Available capacity | .. | .. | 13.97 | 13.11 | 12.90 | 11.56 | 11.03 | 11.22 | 11.10 |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|------|------|------|------|------|------|------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 1.29 | 1.42 | 1.78 | 1.97 | 2.27 | 2.27 | 2.27 | 2.25 | 2.19 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 1.29 | 1.42 | 1.78 | 1.97 | 2.27 | 2.27 | 2.27 | 2.25 | 2.19 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 0.02 | 0.02 | - | - | - | - | - | - | - |
| Liquid fuels | 0.14 | 0.16 | 0.07 | 0.06 | 0.07 | 0.07 | 0.07 | 0.07 | 0.06 |
| Natural gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 0.80 | 0.88 | 0.83 | 0.87 | 0.97 | 0.97 | 0.97 | 0.98 | 0.92 |
| Solid / natural gas | - | - | 0.05 | 0.09 | 0.11 | 0.11 | 0.11 | 0.11 | 0.05 |
| Liquid / natural gas | 0.19 | 0.19 | 0.30 | 0.31 | 0.37 | 0.37 | 0.37 | 0.38 | 0.38 |
| Solid / liquid / gas | 0.15 | 0.17 | 0.51 | 0.62 | 0.75 | 0.75 | 0.75 | 0.72 | 0.78 |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | 1.29 | 1.42 | 1.78 | 1.97 | 2.00 | 2.00 | 2.00 | 1.98 | 1.93 |
| Internal combustion | - | - | - | - | - | - | - | - | - |
| Gas turbine | - | - | - | - | 0.12 | 0.12 | 0.12 | 0.12 | 0.11 |
| Combined cycle | - | - | - | - | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | - |
| Available capacity | .. | .. | 2.06 | 2.24 | 2.09 | 2.09 | 2.09 | 2.08 | 2.00 |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Euro/ unit | | | | | | | | |
| Steam coal (t) | 31.11 | 42.38 | 40.48 | 41.92 | 58.01 | 59.20 | 61.12 | 97.76 | 69.88 |
| Heavy fuel oil (t) | 67.61 | 127.32 | 115.38 | 198.90 | 257.00 | 292.63 | 301.03 | 394.68 | 303.70 |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | 69.70 | 127.18 | 79.47 | 122.82 | 133.16 | 177.76 | 175.58 | 232.62 | 217.51 |
| | Euro/ toe | | | | | | | | |
| Steam coal | 51.1 | 69.6 | 66.5 | 68.8 | 95.2 | 97.2 | 100.3 | 160.5 | 114.7 |
| Heavy fuel oil | 70.4 | 132.6 | 120.2 | 207.2 | 267.7 | 304.8 | 313.6 | 411.1 | 316.4 |
| Natural gas ⁽²⁾ | 77.4 | 141.3 | 88.3 | 136.5 | 148.0 | 197.5 | 195.1 | 258.5 | 241.7 |
| End-user prices of electricity | | | | | | | | | |
| | Euro/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0323 | 0.0341 | 0.0406 | 0.0419 | 0.0566 | .. | 0.0594 | 0.0663 | 0.0701 |
| <i>of which: tax</i> | 0.0017 | 0.0017 | - | 0.0043 | 0.0045 | .. | 0.0023 | 0.0026 | 0.0026 |
| Household | | | | | | | | | |
| Price | 0.0399 | 0.0434 | 0.0661 | 0.0844 | 0.0973 | 0.1020 | 0.1061 | 0.1179 | 0.1251 |
| <i>of which: tax</i> | 0.0020 | 0.0022 | 0.0112 | 0.0222 | 0.0250 | 0.0258 | 0.0266 | 0.0301 | 0.0314 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

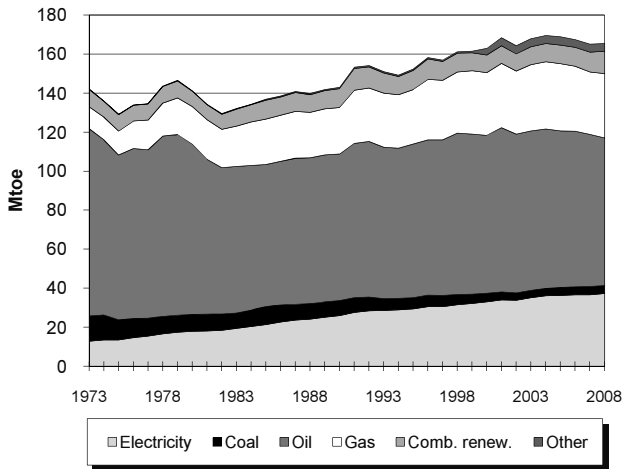


Figure 2. Electricity generation by fuel

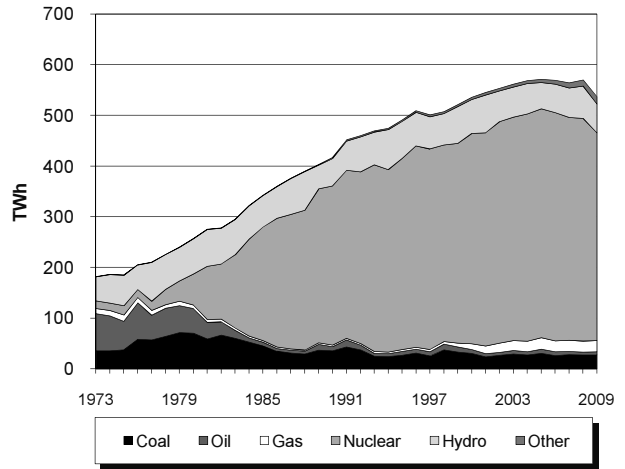


Figure 3. Electricity consumption by sector

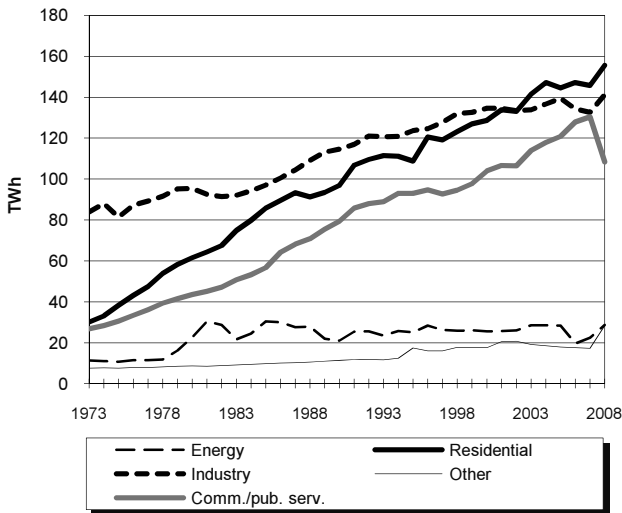


Figure 4. Electricity indicators

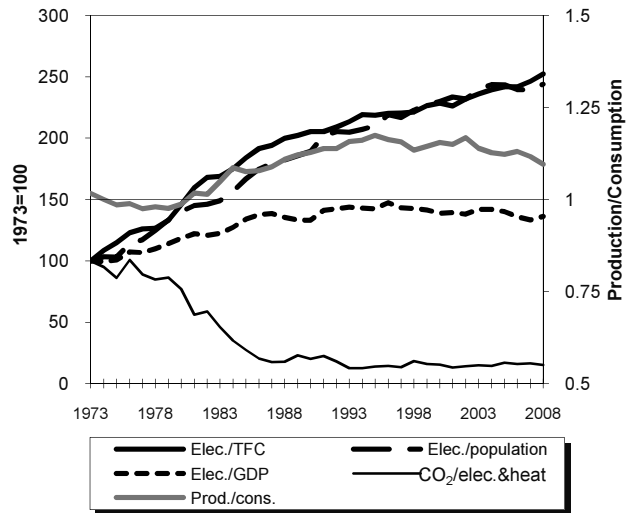
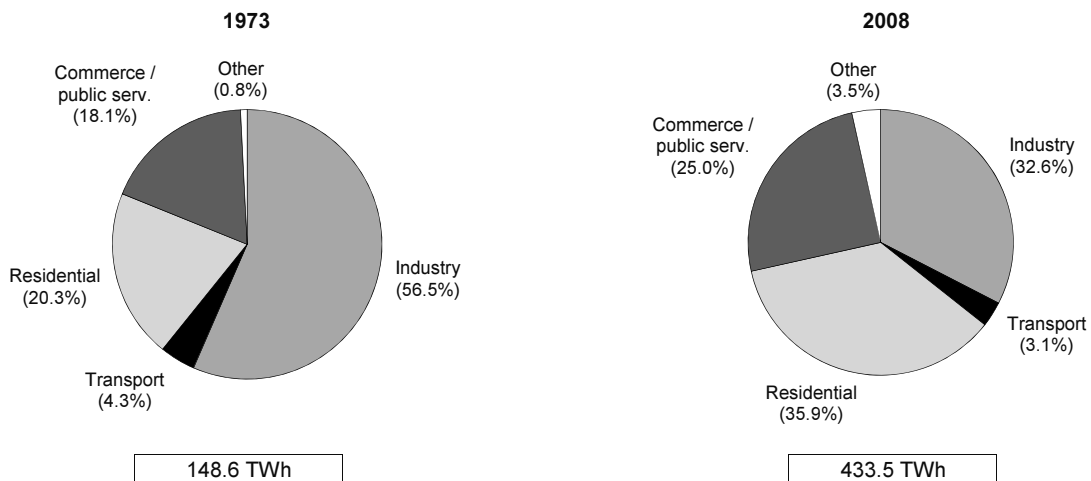


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|--------|--------|---------|---------|---------|---------|---------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 180.14 | 191.77 | 223.89 | 251.87 | 263.89 | 266.50 | 253.01 | 1.3 | 0.6 |
| GDP (billion 2000 USD) | 703.39 | 861.11 | 1091.83 | 1327.96 | 1508.53 | 1515.00 | 1496.72 | 2.6 | 1.7 |
| TPES/GDP ⁽¹⁾ | 0.26 | 0.22 | 0.21 | 0.19 | 0.17 | 0.18 | 0.17 | -1.3 | -1.0 |
| Population (millions) | 53.30 | 55.11 | 58.17 | 60.73 | 63.76 | 64.12 | 64.31 | 0.5 | 0.5 |
| TPES/population ⁽²⁾ | 3.38 | 3.48 | 3.85 | 4.15 | 4.14 | 4.16 | 3.93 | 0.8 | 0.1 |
| TPES/GDP (2000 = 100) | 135 | 117 | 108 | 100 | 92 | 93 | 89 | -1.3 | -1.0 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 73 | 84 | 96 | 100 | 97 | 99 | .. | 1.6 | .. |
| Ele.TFC/population ⁽⁴⁾ | 2790 | 3796 | 5197 | 6341 | 6684 | 6763 | .. | 3.7 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 182.51 | 257.31 | 417.21 | 536.05 | 564.35 | 570.27 | 537.03 | 5.0 | 1.3 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 180.14 | 191.77 | 223.89 | 251.87 | 263.89 | 266.50 | 253.01 | 1.3 | 0.6 |
| Coal | 29.24 | 32.89 | 20.21 | 15.04 | 13.64 | 12.88 | 9.98 | -2.1 | -3.6 |
| Oil | 119.81 | 106.32 | 83.92 | 82.03 | 83.96 | 83.20 | 79.59 | -2.1 | -0.3 |
| Gas | 13.56 | 21.64 | 26.02 | 35.76 | 38.48 | 39.87 | 38.45 | 3.9 | 2.1 |
| Comb. renew & waste | 9.79 | 8.64 | 10.99 | 10.84 | 12.56 | 13.97 | 14.64 | 0.7 | 1.5 |
| Nuclear | 3.84 | 15.96 | 81.85 | 108.19 | 114.60 | 114.53 | 106.78 | 19.7 | 1.4 |
| Geothermal | 0.00 | 0.01 | 0.11 | 0.13 | 0.11 | 0.11 | 0.12 | 28.9 | 0.4 |
| Solar, wind, tide ⁽¹⁾ | 0.05 | 0.05 | 0.07 | 0.07 | 0.43 | 0.58 | 0.77 | 2.1 | 13.6 |
| Hydro | 4.10 | 5.98 | 4.63 | 5.77 | 5.00 | 5.48 | 4.89 | 0.7 | 0.3 |
| Net electricity imports ⁽²⁾ | -0.25 | 0.28 | -3.91 | -5.98 | -4.89 | -4.13 | -2.21 | 17.6 | -3.0 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 182.5 | 258.0 | 420.7 | 540.7 | 576.2 | 569.8 | 574.9 | 541.7 |
| Nuclear | 14.7 | 61.3 | 314.1 | 415.2 | 451.5 | 439.7 | 439.5 | 409.7 |
| Hydro | 47.7 | 70.2 | 57.3 | 71.8 | 56.5 | 63.6 | 68.3 | 61.6 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 0.0 | 0.7 | 3.5 | 4.7 | 4.7 | 5.5 | 4.6 | 4.6 |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 |
| Tide, wave, ocean | 0.6 | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 |
| Wind | - | - | - | 0.1 | 1.0 | 4.1 | 5.7 | 7.8 |
| Combustible fuels | 119.5 | 126.0 | 48.8 | 53.1 | 66.7 | 61.9 | 60.8 | 62.0 |
| <i>Coal</i> | 35.9 | 70.4 | 35.4 | 30.9 e | 30.7 | 28.2 | 27.2 | 27.7 |
| <i>Oil</i> | 73.3 | 48.4 | 8.7 | 7.2 e | 7.9 | 6.2 | 5.8 | 5.9 |
| <i>Gas</i> | 10.1 | 7.0 | 3.0 | 11.5 e | 23.1 | 22.0 | 21.9 | 22.3 |
| <i>Comb. renew. & waste</i> | 0.2 e | 0.2 e | 1.6 e | 3.6 | 5.0 | 5.6 | 5.9 | 6.0 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - |
| - Own use by power plant | 8.0 | 11.3 | 19.4 | 23.8 | 25.9 | 25.3 | 25.3 | .. |
| Net production | 174.5 | 246.7 | 401.3 | 516.9 | 550.3 | 544.6 | 549.6 | .. |
| Nuclear | .. | 57.9 | 297.9 | 395.2 | 430.0 | 418.6 | 418.3 | .. |
| Hydro | .. | 69.3 | 56.6 | 70.9 | 55.9 | 62.9 | 67.6 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | - | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Tide, wave, ocean | .. | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | .. |
| Wind | .. | - | - | 0.1 | 1.0 | 4.1 | 5.7 | .. |
| Combustible fuels | .. | 118.9 | 46.2 e | 50.1 | 62.9 | 58.4 | 57.4 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | - | - | - | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | 0.2 | 1.0 | 4.9 | 6.6 | 6.6 | 7.7 | 6.5 | 6.8 |
| + Imports | 4.7 | 15.6 | 6.7 | 3.7 | 8.1 | 10.8 | 10.7 | 19.2 |
| - Exports | 7.5 | 12.4 | 52.1 | 73.2 | 68.4 | 67.6 | 58.7 | 44.9 |
| Electrical energy supplied | 171.4 | 249.0 | 351.0 | 440.8 | 483.3 | 480.0 | 495.1 | .. |
| - Transmission & distr. losses | 11.4 | 17.3 | 27.7 | 30.4 | 32.2 | 31.6 | 32.9 | .. |
| - Statistical difference | - | - | - | - | - | - | - | .. |
| Total consumption | 160.0 | 231.7 | 323.3 | 410.4 | 451.1 | 448.4 | 462.2 | .. |
| - Energy industry consumption ⁽²⁾ | 11.4 | 22.5 | 21.0 | 25.5 | 28.3 | 22.4 | 28.7 | .. |
| Final consumption | 148.6 | 209.1 | 302.2 | 384.9 | 422.8 | 426.0 | 433.5 | .. |
| Industry | 84.0 | 95.4 | 114.7 | 134.7 | 139.5 | 132.6 | 141.2 | .. |
| Transport | 6.4 | 6.9 | 8.9 | 11.7 | 12.2 | 12.4 | 13.3 | .. |
| Commercial & publ. serv. | 26.9 | 43.6 | 79.4 | 104.0 | 120.8 | 130.5 | 108.3 | .. |
| Residential | 30.2 | 61.5 | 96.9 | 128.7 | 144.5 | 145.8 | 155.6 | .. |
| Agriculture & fishing | 1.1 | 1.5 | 2.1 | 2.7 | 3.4 | 3.2 | 4.0 | .. |
| Sector non specified | 0.1 | 0.2 | 0.3 | 3.1 | 2.3 e | 1.6 e | 11.2 e | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 186.86 | 257.98 | 420.73 | 540.73 | 574.61 | 569.83 | 574.87 | 5.2 | 1.7 |
| - Hydro pumped storage | 0.01 | 0.67 | 3.53 | 4.68 | 5.28 | 5.48 | 4.60 | 43.4 | 1.5 |
| Total generation⁽¹⁾ | 186.85 | 257.31 | 417.21 | 536.05 | 569.33 | 564.35 | 570.27 | 5.1 | 1.8 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 153.59 | 224.41 | 394.49 | 524.91 | 552.32 | 546.68 | 553.56 | 6.1 | 1.9 |
| - Hydro pumped storage | 0.01 | 0.67 | 3.53 | 4.68 | 5.28 | 5.48 | 4.60 | 43.4 | 1.5 |
| Total generation ⁽¹⁾ | 153.58 | 223.74 | 390.97 | 520.23 | 547.04 | 541.20 | 548.96 | 6.0 | 1.9 |
| Nuclear | 14.70 | 61.25 | 314.08 | 415.16 | 450.19 | 439.73 | 439.47 | 21.1 | 1.9 |
| Hydro | 52.39 | 65.18 | 48.81 | 66.19 | 55.32 | 57.19 | 62.77 | -0.4 | 1.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | 0.60 | 0.50 | 0.57 | 0.64 | 2.58 | 4.40 | 5.92 | -0.3 | 13.9 |
| Coal | 16.46 | 50.28 | 22.28 | 28.35 | 22.80 | 24.35 | 25.40 e | 1.9 | 0.7 |
| Oil | 59.78 | 42.21 | 5.02 | 4.74 | 5.34 | 4.57 | 4.07 | -14.3 | -1.2 |
| Gas | 9.48 | 4.10 | 0.22 | 4.96 e | 10.53 | 10.64 | 10.98 e | -21.0 | 24.4 |
| Comb. renew. & waste | 0.18 | 0.22 | - | 0.20 | 0.29 | 0.34 | 0.36 | - | - |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 33.27 | 33.57 | 26.24 | 15.82 | 22.29 | 23.15 | 21.31 | -1.5 | -1.1 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 33.27 | 33.57 | 26.24 | 15.82 | 22.29 | 23.15 | 21.31 | -1.5 | -1.1 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 3.84 | 4.33 | 5.00 | 0.94 | 0.84 | 0.91 | 0.96 | 1.7 | -8.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.02 | 0.13 | 0.20 | 0.32 | - | - |
| Coal | 19.04 | 20.10 | 13.15 | 2.51 | 3.61 | 3.85 | 1.83 | -2.3 | -10.4 |
| Oil | 9.23 | 6.23 | 3.65 | 2.43 | 1.80 | 1.60 | 1.76 | -5.6 | -4.0 |
| Gas | 1.16 | 2.91 | 2.81 | 6.56 e | 11.24 | 11.35 | 10.91 e | 5.7 | 7.8 |
| Comb. renew. & waste | - | - | 1.63 e | 3.37 | 4.68 | 5.24 | 5.53 | - | 7.0 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|----------------|----------------|--------------|--------------|--------------|--------------|---------------|---|
| Total | 27928 e | 27380 e | 25171 | 14970 | 21069 | 21890 | 20166 | -1.2 |
| Total energy | - | - | 12831 | 1487 | 2993 | 3092 | 2863 e | -8.0 |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | 1487 | 2991 | 3090 | 2862 e | - |
| Energy non specified/other | - | - | 12831 | - | 2 | 2 | 1 e | -40.9 |
| Total industry | 27928 e | 27380 e | 9766 | 9272 | 10252 | 10619 | 9800 e | 0.0 |
| Iron and steel | 4347 e | 3064 e | 2381 | 1354 | 1395 | 1475 | 1325 e | -3.2 |
| Chemical and petrochemical | 5029 e | 5121 e | 4218 | 3253 | 3289 | 3399 | 3146 e | -1.6 |
| Non-ferrous metals | 182 e | 161 e | 280 | 18 | 19 | 19 | 17 e | -14.4 |
| Non-metallic minerals | 1 e | - | - | 8 | 22 | 23 | 22 e | - |
| Transport equipment | 262 e | 173 e | 220 | 331 | 418 | 429 | 400 e | 3.4 |
| Machinery | - | - | - | 62 | 47 | 48 | 44 e | - |
| Mining and quarrying | 14813 e | 15645 e | 254 | 27 | 41 | 43 | 40 e | -9.8 |
| Food and tobacco | 659 e | 719 e | 667 | 1208 | 1567 | 1613 | 1502 e | 4.6 |
| Pulp and printing | - | - | 1667 | 2354 | 2620 | 2716 | 2504 e | 2.3 |
| Wood and wood products | 1940 e | 1837 e | - | 28 | 67 | 68 | 64 e | - |
| Construction | - | - | - | 275 | 464 | 478 | 446 e | - |
| Textile and leather | 541 e | 276 e | 79 | 19 | 4 | 4 | 4 | -15.3 |
| Non specified/other industries | 154 e | 384 e | - | 335 | 299 | 304 | 286 e | - |
| Total transport | - | - | 1007 | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | 1007 | - | - | - | - | - |
| Other | - | - | 1567 | 4211 | 7824 | 8179 | 7503 e | 9.1 |
| Commerce and pub. services | - | - | - | 4197 | 7795 | 8149 | 7475 e | - |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | - | - | - | 14 | 29 | 30 | 28 | - |
| Sector non specified | - | - | 1567 | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|---------------|----------------|-----------------|---------------|---------------|---------------|---------------|---|
| Total | 9968 e | 19997 e | 135470 e | 174304 | 162790 | 157504 | 157504 | 12.1 |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | - | - | 18101 | 16596 | 15244 | 14863 | 14863 | - |
| Oil | - | - | 33897 | 28537 | 27313 | 23335 | 23335 | - |
| Gas | - | - | 59480 | 107537 | 99301 | 97970 | 97970 | - |
| Comb. renew. & waste | 9968 e | 19997 e | 23992 e | 21634 | 20932 | 21336 | 21336 | 0.4 |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | - | - | 38603 | 60739 | 55430 | 54726 | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | 2487 | 788 | 957 | 865 | .. | - |
| Oil | - | - | 15337 | 13886 | 11008 | 4753 | .. | - |
| Gas | - | - | 17377 | 41751 | 38613 | 44410 | .. | - |
| Comb. renew. & waste | - | - | 3402 | 4314 | 4852 | 4698 | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | 9968 e | 19997 e | 96867 e | 113565 | 107360 | 102778 | .. | 9.5 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | 15614 | 15808 | 14287 | 13998 | .. | - |
| Oil | - | - | 18560 | 14651 | 16305 | 18582 | .. | - |
| Gas | - | - | 42103 | 65786 | 60688 | 53560 | .. | - |
| Comb. renew. & waste | 9968 e | 19997 e | 20590 e | 17320 | 16080 | 16638 | .. | -1.0 |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 28.71 | 29.39 | 11.81 | 13.72 | 16.59 | 17.03 | 16.29 | -5.1 | 1.8 |
| Coal | 10.37 | 17.09 | 8.43 | 7.63 | 6.26 | 6.75 | 6.10 | -1.2 | -1.8 |
| Oil | 15.54 | 10.16 | 1.62 | 1.23 | 2.60 | 2.34 | 2.16 | -12.4 | 1.6 |
| Gas | 1.92 | 1.32 | 0.44 | 3.00 | 5.53 | 5.63 | 5.62 e | -8.4 | 15.2 |
| Comb. renew. & waste | 0.87 | 0.83 | 1.32 | 1.86 | 2.20 | 2.31 | 2.40 | 2.5 | 3.4 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 22.07 | 6.03 | 8.47 | 8.62 | 8.85 | 8.92 | .. | 2.2 |
| Coal | .. | 11.86 | 4.85 | 6.61 | 5.03 | 5.43 | 5.33 | .. | 0.5 |
| Oil | .. | 9.19 | 1.14 | 0.65 | 1.17 | 0.92 | 0.87 | .. | -1.5 |
| Gas | .. | 0.95 | 0.04 | 1.01 | 2.21 | 2.26 | 2.47 e | .. | 25.0 |
| Comb. renew. & waste | .. | 0.06 | - | 0.19 | 0.22 | 0.25 | 0.25 | .. | - |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|--------------|--------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 3.84 | 15.96 | 81.85 | 108.19 | 117.32 | 114.60 | 114.53 | 19.7 | 1.9 |
| Nuclear | 3.84 | 15.96 | 81.85 | 108.19 | 117.32 | 114.60 | 114.53 | 19.7 | 1.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 4.15 | 6.02 | 4.68 | 5.83 | 5.06 | 5.39 | 6.01 | 0.7 | 1.4 |
| Hydro | 4.10 | 5.98 | 4.63 | 5.77 | 4.83 | 5.00 | 5.48 | 0.7 | 0.9 |
| Tide, wave, ocean | 0.05 | 0.04 | 0.05 | 0.05 | 0.04 | 0.04 | 0.04 | 0.1 | -0.6 |
| Wind | - | - | - | 0.01 | 0.19 | 0.35 | 0.49 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

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8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|--------|----------|----------|--------|--------|---------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | 25527 | 11028 | 9591 | 7922 | 8555 | 7912 | -1.8 |
| Fuel input (TJ) | 571414 | 281299 e | 249381 e | 205972 | 222423 | 205700 | -1.7 |
| Electricity production (GWh) | 60951 | 29053 | 25525 e | 22195 | 23705 | 22728 e | -1.4 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 2385 | 1843 | 267 | - | - | - | - |
| Fuel input (TJ) | 32044 | 32174 e | 4905 | - | - | - | - |
| Electricity production (GWh) | 2765 | 2420 | 409 | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 76502 | 39312 | 39387 e | 35824 | 38238 | 31741 | -1.2 |
| Electricity production (GWh) | 6662 | 3950 | 3738 e | 3421 | 3651 | 3755 | -0.3 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 10628 | 1704 | 1460 e | 1742 | 1495 | 1388 | -1.1 |
| Fuel input (TJ) | 417311 | 69853 | 56284 e | 72452 | 62521 | 59134 | -0.9 |
| Electricity production (GWh) | 48439 | 8668 | 5441 e | 6132 | 5259 | 5021 e | -3.0 |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 66516 | 20319 | 10868 e | 20570 | 20784 | 25905 e | 1.4 |
| Electricity production (GWh) | 7006 | 3027 | 797 e | 1896 | 1916 | 2386 | -1.3 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | 1789 | 3171 | 3217 | 3378 | - |
| Electricity production (GWh) | - | - | 278 | 444 | 459 | 482 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 2676 e | 5316 e | 13992 e | 29564 | 29858 | 30506 | 10.2 |
| Electricity production (GWh) | 223 e | 443 e | 974 e | 2128 | 2260 | 2362 | 9.7 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 421 | 5422 | 11238 | 12818 | 14141 | 21.6 |
| Electricity production (GWh) | - | 32 | 255 | 458 | 538 | 594 | 17.6 |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | 126046 | 47593 | 37417 | 36674 | 37788 | 37328 | -1.3 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|--------|---------|--------|--------|----------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | .. | - | 833 | 695 | 750 | 590 | - |
| Fuel input (TJ) | .. | - | 21669 | 17949 | 19382 | 15332 | - |
| Electricity production (GWh) | .. | - | 1070 | 694 | 741 | 650 | - |
| CHP Heat production (TJ) | .. | - | 15533 | 12150 | 12977 | 12190 | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | .. | - | - | - | - | - | - |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Electricity production (GWh) | .. | - | - | - | - | - | - |
| CHP Heat production (TJ) | .. | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | .. | - | - | - | - | - | - |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Electricity production (GWh) | .. | - | - | - | - | - | - |
| CHP Heat production (TJ) | .. | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | .. | - | 3380 | 3154 | 3368 | 3871 | - |
| Electricity production (GWh) | .. | - | 118 | 94 | 100 | 98 | - |
| CHP Heat production (TJ) | .. | - | 2568 | 2123 | 2267 | 2673 | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | .. | - | 1204 | 1068 | 846 | 772 | - |
| Fuel input (TJ) | .. | - | 61492 | 46594 | 41630 | 37184 | - |
| Electricity production (GWh) | .. | - | 1724 | 1001 | 904 | 804 | - |
| CHP Heat production (TJ) | .. | - | 33897 | 30793 | 27313 | 23335 | - |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | .. | - | 128689 | 233960 | 236401 | 235380 e | - |
| Electricity production (GWh) | .. | - | 10717 | 19864 | 20071 | 19498 e | - |
| CHP Heat production (TJ) | .. | - | 59480 | 98275 | 99301 | 97970 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | .. | 6780 e | 5230 e | 5751 | 6345 | 6662 | -0.1 |
| Electricity production (GWh) | .. | 1116 e | 812 | 806 | 905 | 951 | -0.9 |
| CHP Heat production (TJ) | .. | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Electricity production (GWh) | .. | - | - | - | - | - | - |
| CHP Heat production (TJ) | .. | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | .. | - | 37964 e | 31690 | 33628 | 34694 | - |
| Electricity production (GWh) | .. | - | 1188 e | 1060 | 1326 | 1414 | - |
| CHP Heat production (TJ) | .. | - | 17814 e | 15548 | 16170 | 16574 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | .. | 291 | 287 | 809 | 1105 | 1385 | 9.1 |
| Electricity production (GWh) | .. | 41 | 54 | 69 | 88 | 89 | 4.4 |
| CHP Heat production (TJ) | .. | - | - | - | - | - | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | .. | 1157 | 15683 | 23588 | 24135 | 23504 | 18.2 |
| CHP Heat production (TJ) | .. | - | 129292 | 158889 | 158028 | 152742 | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

FRANCE

10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|---------|---------|---------|------|------|------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 21261 e | 42666 e | 13082 e | 9996 | 9794 | 9792 | -7.9 |
| Heat production (TJ) | 9968 e | 19997 e | 6178 e | 4860 | 4762 | 4762 | -7.7 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Heat production (TJ) | 9968 e | 19997 e | 6178 | 4860 | 4762 | 4762 | -7.7 |

Source: IEA/OECD Electricity Statistics.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

FRANCE

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 142.22 | 141.29 | 143.00 | 162.97 | 167.53 | 165.18 | 165.55 | 0.0 | 0.8 |
| Geothermal | 0.00 | 0.01 | 0.11 | 0.13 | 0.11 | 0.11 | 0.11 | 28.9 | 0.2 |
| Solar thermal | - | 0.01 | 0.02 | 0.02 | 0.03 | 0.04 | 0.04 | - | 4.6 |
| Coal | 13.07 | 8.56 | 7.78 | 4.43 | 4.03 | 4.24 | 4.11 | -3.0 | -3.5 |
| Oil | 96.03 | 87.36 | 75.04 | 80.94 | 79.75 | 78.02 | 75.62 | -1.4 | 0.0 |
| Gas | 11.17 | 19.32 | 23.92 | 32.14 | 33.39 | 31.99 | 33.05 | 4.6 | 1.8 |
| Comb. renew. & waste | 8.91 | 7.81 | 9.66 | 8.99 | 9.60 | 10.25 | 11.57 | 0.5 | 1.0 |
| Electricity | 12.78 | 17.98 | 25.99 | 33.10 | 36.72 | 36.64 | 37.28 | 4.3 | 2.0 |
| Heat | 0.26 | 0.24 | 0.48 | 3.24 | 3.91 | 3.89 | 3.76 | 3.7 | 12.1 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 41.69 | 41.21 | 32.96 | 34.58 | 33.36 | 32.70 | 33.37 | -1.4 | 0.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 7.17 | 5.36 | 5.86 | 3.64 | 3.49 | 3.73 | 3.62 | -1.2 | -2.6 |
| Oil | 21.86 | 19.27 | 6.55 | 5.45 | 7.38 | 6.74 | 6.26 | -6.8 | -0.3 |
| Gas | 4.27 | 7.25 | 9.19 | 12.34 | 9.27 | 8.94 | 9.36 | 4.6 | 0.1 |
| Comb. renew. & waste | 1.17 | 1.13 | 1.50 | 1.56 | 1.68 | 1.89 | 1.99 | 1.4 | 1.6 |
| Electricity | 7.22 | 8.20 | 9.86 | 11.58 | 11.55 | 11.40 | 12.14 | 1.8 | 1.2 |
| Heat | - | - | - | - | - | - | - | - | - |
| Transport | 24.71 | 30.31 | 38.46 | 45.52 | 45.18 | 45.59 | 44.54 | 2.6 | 0.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.07 | 0.02 | - | - | - | - | - | - | - |
| Oil | 24.08 | 29.69 | 37.69 | 44.18 | 43.33 | 43.01 | 41.04 | 2.7 | 0.5 |
| Gas | 0.01 | 0.01 | 0.00 | 0.00 | 0.06 | 0.06 | 0.08 | -23.4 | 42.0 |
| Comb. renew. & waste | - | - | - | 0.34 | 0.73 | 1.45 | 2.27 | - | - |
| Electricity | 0.55 | 0.59 | 0.76 | 1.00 | 1.06 | 1.07 | 1.14 | 1.9 | 2.3 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 36.63 | 30.21 | 18.07 | 18.14 | 20.64 | 20.69 | 19.04 | -4.1 | 0.3 |
| Geothermal | - | - | - | - | 0.03 | 0.03 | 0.03 | - | - |
| Solar thermal | - | - | - | - | 0.00 | 0.00 | 0.01 | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 32.43 | 22.17 | 5.10 | 4.31 | 4.10 | 3.68 | 4.34 | -10.3 | -0.9 |
| Gas | 1.89 | 4.29 | 6.10 | 4.52 e | 4.94 | 5.17 | 4.76 | 7.1 | -1.4 |
| Comb. renew. & waste | - | - | 0.05 | 0.37 | 0.56 | 0.59 | 0.60 | - | 15.0 |
| Electricity | 2.31 | 3.75 | 6.82 | 8.95 | 11.00 | 11.22 | 9.31 | 6.6 | 1.7 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 21.40 | 22.60 | 35.74 | 40.74 | 42.78 | 39.74 | 42.67 | 3.1 | 1.0 |
| Geothermal | 0.00 | 0.01 | 0.11 | 0.12 | 0.08 | 0.08 | 0.08 | 28.8 | -1.6 |
| Solar thermal | - | 0.01 | 0.02 | 0.02 | 0.03 | 0.03 | 0.04 | - | 3.9 |
| Coal | 5.84 | 3.18 | 1.66 e | 0.63 | 0.36 | 0.35 | 0.35 | -7.1 | -8.3 |
| Oil | 1.83 | 2.09 | 10.96 | 9.56 | 8.47 | 7.52 | 8.15 | 11.1 | -1.6 |
| Gas | 3.50 | 5.43 | 6.59 | 12.66 e | 14.61 | 12.94 | 14.00 | 3.8 | 4.3 |
| Comb. renew. & waste | 7.64 | 6.59 | 8.08 | 6.68 | 6.59 | 6.29 | 6.67 | 0.3 | -1.1 |
| Electricity | 2.59 | 5.29 | 8.33 | 11.07 | 12.65 | 12.53 | 13.38 | 7.1 | 2.7 |
| Heat | - | - | - | - | - | - | - | - | - |
| Agriculture & fishing | 2.88 | 3.24 | 3.90 | 4.23 | 3.97 | 3.93 | 4.08 | 1.8 | 0.3 |
| Geothermal | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 30.5 | 3.3 |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 2.74 | 2.94 | 3.54 | 3.65 | 3.36 | 3.37 | 3.47 | 1.5 | -0.1 |
| Gas | - | 0.13 | 0.14 | 0.30 | 0.27 | 0.24 | 0.23 | - | 3.0 |
| Comb. renew. & waste | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -0.0 | - |
| Electricity | 0.10 | 0.13 | 0.18 | 0.23 | 0.29 | 0.27 | 0.34 | 3.7 | 3.6 |
| Heat | - | - | - | - | - | - | - | - | - |
| Other | 0.32 | 0.31 | 0.50 | 3.54 | 7.09 | 7.21 | 8.08 | 2.7 | 16.7 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | 0.06 e | 0.05 e | 0.05 | - | - |
| Oil | - | - | - | 0.04 | 0.35 | 0.32 | 0.31 | - | - |
| Gas | - | - | - | - | 2.62 | 2.82 | 3.00 e | - | - |
| Comb. renew. & waste | 0.06 | 0.06 | - | - | - | - | - | - | - |
| Electricity | 0.01 | 0.01 | 0.03 | 0.27 | 0.16 e | 0.13 e | 0.96 e | 8.6 | 21.9 |
| Heat | 0.26 e | 0.24 e | 0.48 e | 3.24 | 3.91 | 3.89 | 3.76 | 3.7 | 12.1 |
| Non-energy use⁽¹⁾ | 14.60 | 13.41 | 13.36 | 16.23 | 14.52 | 15.32 | 13.76 | -0.52 | 0.17 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

FRANCE

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| TFC (Mtoe) | 142.22 | 141.29 | 143.00 | 162.97 | 168.96 | 167.53 | 165.18 | 165.55 |
| Total industry (Mtoe) | 41.69 | 41.21 | 32.96 | 34.58 | 33.40 | 33.36 | 32.70 | 33.37 |
| Iron and steel | 8.99 | 6.79 | 5.43 | 4.13 | 4.26 | 4.51 | 4.51 | 3.95 |
| Chem. and petrochemical | 5.44 | 6.33 | 6.21 | 5.85 | 7.15 | 7.03 | 7.19 | 7.29 |
| Non-ferrous metals | 2.15 | 2.23 | 1.68 | 1.47 | 1.21 | 1.17 | 1.11 | 1.21 |
| Non-metallic minerals | 3.34 | 3.24 | 4.04 | 3.70 | 4.03 | 4.07 | 3.90 | 4.14 |
| Transport equipment | 0.86 | 0.75 | 0.87 | 1.55 | 1.39 | 1.30 | 1.31 | 1.20 |
| Machinery | 1.71 | 2.45 | 3.01 | 2.47 | 2.12 | 2.27 | 2.20 | 2.32 |
| Mining and quarrying | 0.85 | 0.68 | 0.61 | 0.24 | 0.30 | 0.29 | 0.28 | 0.14 |
| Food and tobacco | 3.11 | 3.67 | 3.74 | 5.02 | 4.33 | 4.42 | 4.63 | 4.70 |
| Paper, pulp and printing | 2.75 | 2.66 | 2.95 | 3.57 | 2.91 | 3.17 | 2.66 | 2.56 |
| Wood and wood products | 0.87 | 0.73 | 1.17 | 1.05 | 1.21 | 1.23 | 1.42 | 1.62 |
| Construction | 3.23 | 2.04 | 1.07 | 1.11 | 1.57 | 1.50 | 1.27 | 1.53 |
| Textile and leather | 2.13 | 1.30 | 1.01 | 1.66 | 0.57 | 0.58 | 0.47 | 0.48 |
| Non specified/other | 6.25 | 8.35 | 1.18 | 2.75 | 2.35 | 1.82 | 1.76 | 2.22 |
| Electricity consumption (Mtoe) | 12.78 | 17.98 | 25.99 | 33.10 | 36.36 | 36.72 | 36.64 | 37.28 |
| Total industry (Mtoe) | 7.22 | 8.20 | 9.86 | 11.58 | 12.00 | 11.55 | 11.40 | 12.14 |
| Iron and steel | 1.22 | 1.31 | 1.00 | 1.48 | 1.34 | 1.37 | 1.36 | 1.05 |
| Chem. and petrochemical | 1.74 | 1.84 | 2.30 | 2.21 | 2.14 | 2.13 | 2.14 | 2.25 |
| Non-ferrous metals | 0.89 | 1.06 | 0.91 | 0.83 | 0.85 | 0.82 | 0.80 | 0.91 |
| Non-metallic minerals | 0.51 | 0.53 | 0.55 | 0.70 | 0.76 | 0.77 | 0.77 | 0.99 |
| Transport equipment | 0.40 | 0.47 | 0.69 | 0.74 | 0.71 | 0.68 | 0.68 | 0.79 |
| Machinery | 0.66 | 0.79 | 1.17 | 1.28 | 1.02 | 1.17 | 1.17 | 1.56 |
| Mining and quarrying | 0.14 | 0.18 | 0.32 | 0.16 | 0.14 | 0.14 | 0.14 | 0.00 |
| Food and tobacco | 0.42 | 0.61 | 1.19 | 1.52 | 1.70 | 1.73 | 1.75 | 1.87 |
| Paper, pulp and printing | 0.46 | 0.51 | 0.81 | 1.18 | 1.16 | 1.12 | 1.10 | 1.01 |
| Wood and wood products | 0.11 | 0.14 | 0.34 | 0.19 | 0.20 | 0.20 | 0.20 | 0.21 |
| Construction | 0.07 | 0.07 | 0.18 | 0.13 | 0.15 | 0.16 | 0.17 | 0.18 |
| Textile and leather | 0.58 | 0.60 | 0.36 | 0.31 | 0.22 | 0.21 | 0.20 | 0.21 |
| Non specified/other | 0.03 | 0.10 | 0.05 | 0.85 | 1.61 | 1.05 | 0.94 | 1.11 |
| Total industry (TWh) | 83.99 | 95.36 | 114.67 | 134.66 | 139.55 | 134.26 | 132.60 | 141.21 |
| Iron and steel | 14.23 | 15.23 | 11.64 | 17.15 | 15.61 | 15.92 | 15.86 | 12.18 |
| Chem. and petrochemical | 20.27 | 21.41 | 26.79 | 25.74 | 24.93 | 24.72 | 24.84 | 26.17 |
| Non-ferrous metals | 10.30 | 12.32 | 10.54 | 9.70 | 9.83 | 9.55 | 9.29 | 10.62 |
| Non-metallic minerals | 5.92 | 6.15 | 6.36 | 8.12 | 8.83 | 9.01 | 8.92 | 11.52 |
| Transport equipment | 4.62 | 5.46 | 8.02 | 8.66 | 8.26 | 7.96 | 7.88 | 9.15 |
| Machinery | 7.70 | 9.20 | 13.63 | 14.83 | 11.92 | 13.59 | 13.57 | 18.18 |
| Mining and quarrying | 1.66 | 2.06 | 3.66 | 1.89 | 1.65 | 1.62 | 1.66 | 0.06 |
| Food and tobacco | 4.85 | 7.05 | 13.80 | 17.70 | 19.75 | 20.10 | 20.29 | 21.76 |
| Paper, pulp and printing | 5.39 | 5.93 | 9.39 | 13.69 | 13.49 | 13.08 | 12.82 | 11.76 |
| Wood and wood products | 1.24 | 1.63 | 3.94 | 2.16 | 2.28 | 2.30 | 2.29 | 2.44 |
| Construction | 0.79 | 0.84 | 2.10 | 1.50 | 1.74 | 1.86 | 1.96 | 2.10 |
| Textile and leather | 6.73 | 6.97 | 4.24 | 3.63 | 2.57 | 2.40 | 2.27 | 2.41 |
| Non specified/other | 0.31 | 1.14 | 0.56 | 9.90 | 18.69 | 12.16 | 10.94 | 12.87 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

Note: Please refer to notes in the introductory information for data coverage.

FRANCE

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|
| Total imports⁽¹⁾ | 4654 | 15639 | 6674 | 2860 | 3695 | 8062 | 8522 | 10782 | 10683 |
| Imports from: | | | | | | | | | |
| Total OECD | 4636 | 15628 | 6674 | 2860 | 3695 | 8062 | 8522 | 10782 | 10683 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | 89 | 7810 | 3544 | 1244 | 202 | 2219 | 1977 | 2319 | 2029 |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | 1125 | 3741 | 534 | 390 | 618 | 782 | 1110 | 999 | 1189 |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | 318 | 736 | 183 | 267 | 392 | 697 | 715 | 1150 | 1133 |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | 2171 | 1285 | 1873 | 376 | 595 | 752 | 1474 | 1107 | 1656 |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | 911 | 2037 | 495 | 557 | 1888 | 2820 | 2347 | 2813 | 3752 |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | 22 | 19 | 45 | 26 | - | 792 | 899 | 2394 | 924 |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 18 | 11 | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

FRANCE

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total exports ⁽¹⁾ | 7543 | 12394 | 52112 | 72701 | 73174 | 68390 | 71863 | 67595 | 58689 |
| Exports to: | | | | | | | | | |
| Total OECD | 7543 | 12394 | 51935 | 72554 | 73093 | 68390 | 71863 | 67595 | 58440 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | 1320 | 1086 | 2312 | 5707 | 8512 | 6893 | 10787 | 8496 | 7442 |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | 3096 | 3659 | 8666 | 17357 | 15653 | 16525 | 16457 | 16713 | 10888 |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | 761 | 1425 | 15441 | 17637 | 16126 | 14469 | 14875 | 15149 | 12851 |
| Luxembourg | - | 2 | - | 47 | 42 | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | 244 | 1819 | 1513 | 5891 | 8504 | 7564 | 6210 | 6907 | 4577 |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | 1990 | 4381 | 12078 | 9620 | 9559 | 10465 | 11721 | 11000 | 9265 |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | 132 | 22 | 11925 | 16295 | 14697 | 12474 | 11813 | 9330 | 13417 |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | 177 | 147 | 81 | - | - | - | 249 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

FRANCE

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 36.48 | 54.58 | 95.18 | 99.42 | 109.27 | 109.02 | 108.98 | 109.76 | 110.92 |
| Nuclear | 2.89 | 14.39 | 55.75 | 58.52 | 63.18 | 63.26 | 63.26 | 63.26 | 63.26 |
| Hydro | 14.87 | 17.97 | 23.03 | 23.11 | 24.88 | 24.84 | 24.84 | 24.87 | 24.89 |
| <i>of which: pumped storage</i> | <i>0.08</i> | <i>1.61</i> | <i>4.29</i> | <i>4.29</i> | <i>4.30</i> | <i>4.30</i> | <i>4.30</i> | <i>4.30</i> | <i>4.30</i> |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | 0.01 | 0.01 | 0.07 |
| Tide, wave, ocean | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| Wind | - | - | - | - e | 0.05 | 0.67 | 1.35 | 2.10 | 3.21 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 18.48 | 21.97 | 16.16 | 17.55 | 20.92 | 20.01 | 19.28 | 19.28 | 19.26 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 2.85 | 4.60 | 2.36 | 1.67 | .. | .. | .. | .. | .. |
| Liquid fuels | 9.05 | 11.14 | 7.21 | 8.51 | .. | .. | .. | .. | .. |
| Natural gas | 0.57 | 0.45 | 0.08 | 0.08 | .. | .. | .. | .. | .. |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 4.23 | 3.90 | 5.68 | 6.26 | .. | .. | .. | .. | .. |
| Solid / natural gas | 0.48 | 0.72 | 0.25 | 0.25 | .. | .. | .. | .. | .. |
| Liquid / natural gas | 1.29 | 0.76 | 0.08 | 0.29 | .. | .. | .. | .. | .. |
| Solid / liquid / gas | - | 0.40 | 0.50 | 0.50 | .. | .. | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 15.29 | 16.48 | .. | .. | .. | .. | .. |
| Internal combustion | - | - | 0.24 | 0.23 | .. | .. | .. | .. | .. |
| Gas turbine | - | - | 0.64 | 0.84 | .. | .. | .. | .. | .. |
| Combined cycle | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | 63.40 | 66.80 | 72.39 | 86.00 | 86.30 | 89.00 | 89.00 |
| Available capacity | .. | .. | 69.00 | 76.30 | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 8.90 | 9.09 | 8.23 | 8.20 | 5.41 | 6.77 | 6.74 | 6.78 | 6.91 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 1.22 | 1.08 | 1.72 | 1.88 | 0.25 | 0.27 | 0.27 | 0.26 | 0.29 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 0.01 | 0.05 | 0.06 | 0.12 | 0.22 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 7.68 | 8.01 | 6.51 | 6.32 | 5.15 | 6.43 | 6.39 | 6.39 | 6.39 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 4.35 | 4.34 | 2.88 | 2.53 | .. | .. | .. | .. | .. |
| Liquid fuels | 0.66 | 0.66 | 0.65 | 1.00 | .. | .. | .. | .. | .. |
| Natural gas | 0.13 | 0.16 | 0.18 | 0.19 | .. | .. | .. | .. | .. |
| Comb. renew. & waste | - | - | - | - | .. | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 2.32 | 2.51 | 2.52 | 2.39 | .. | .. | .. | .. | .. |
| Solid / natural gas | 0.05 | 0.06 | 0.04 | 0.04 | .. | .. | .. | .. | .. |
| Liquid / natural gas | 0.17 | 0.29 | 0.24 | 0.17 | .. | .. | .. | .. | .. |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 5.82 | 5.30 | .. | .. | .. | .. | .. |
| Internal combustion | - | - | 0.13 | 0.24 | .. | .. | .. | .. | .. |
| Gas turbine | - | - | 0.57 | 0.77 | .. | .. | .. | .. | .. |
| Combined cycle | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Euro/ unit | | | | | | | | |
| Steam coal (t) | .. | 32.17 | 42.23 | 40.41 | 60.28 | 58.09 | 61.22 | 93.11 | 82.02 |
| Heavy fuel oil (t) | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Euro/ toe | | | | | | | | |
| Steam coal | .. | 51.8 | 68.0 | 65.1 | 97.1 | 93.5 | 98.6 | 149.9 | 132.1 |
| Heavy fuel oil | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas ⁽²⁾ | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| End-user prices of electricity | | | | | | | | | |
| | Euro/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0223 | 0.0309 | 0.0468 | 0.0388 | 0.0401 | 0.0404 | 0.0673 | 0.0717 | 0.0768 |
| <i>of which: tax</i> | - | - | - | - | 0.0045 | 0.0045 | 0.0071 | 0.0074 | 0.0079 |
| Household | | | | | | | | | |
| Price | 0.0554 | 0.0735 | 0.1246 | 0.1103 | 0.1140 | 0.1146 | 0.1142 | 0.1124 | 0.1146 |
| <i>of which: tax</i> | 0.0108 | 0.0145 | 0.0231 | 0.0233 | 0.0285 | 0.0285 | 0.0283 | 0.0280 | 0.0287 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

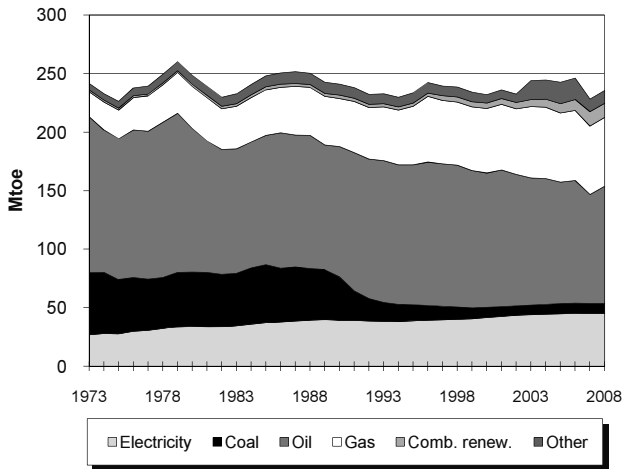


Figure 2. Electricity generation by fuel

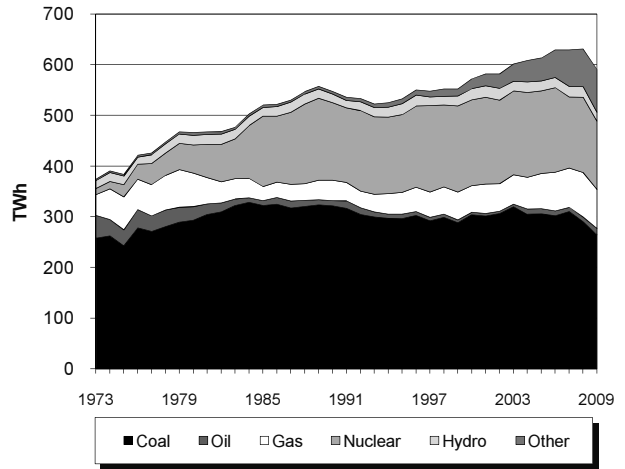


Figure 3. Electricity consumption by sector

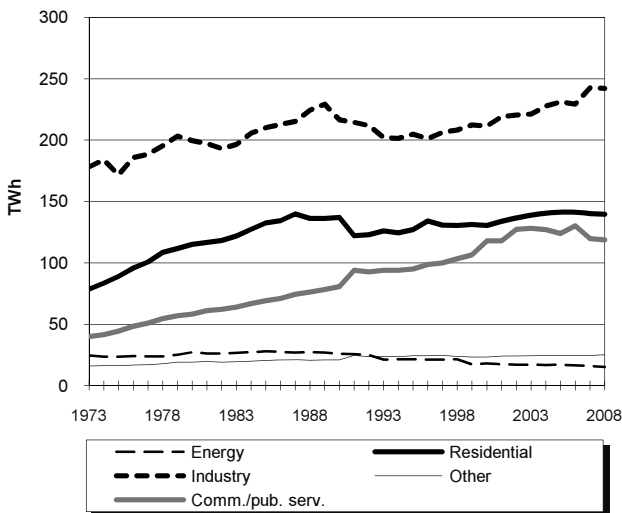


Figure 4. Electricity indicators

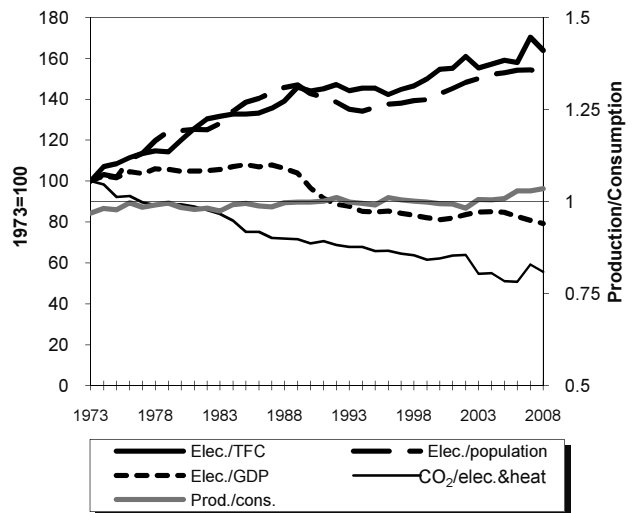
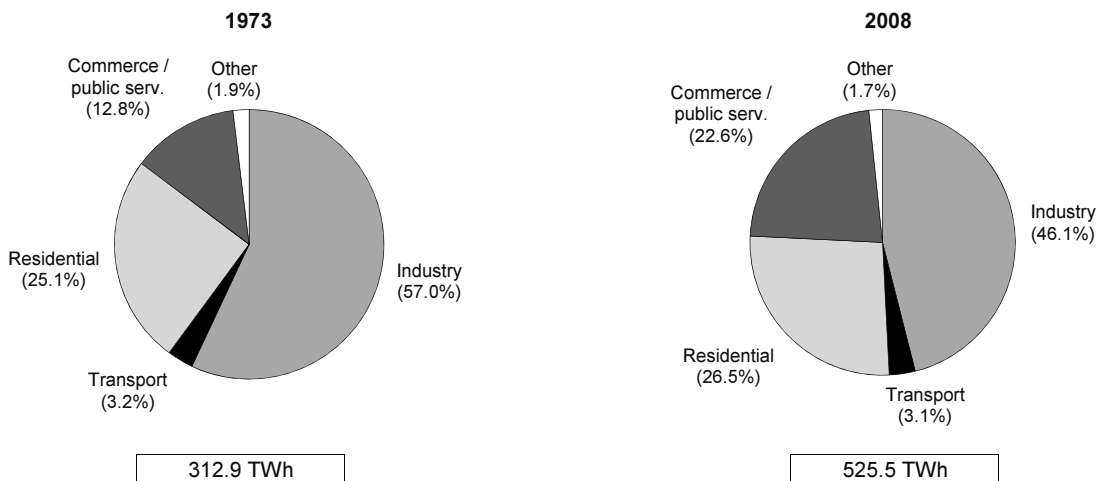


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--------------------------------------|---------|---------|---------|---------|---------|---------|---------|----------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 334.70 | 357.18 | 351.40 | 337.29 | 332.90 | 335.28 | 318.83 | 0.3 | -0.5 |
| GDP (billion 2000 USD) | 1038.75 | 1225.93 | 1543.20 | 1900.22 | 2069.15 | 2095.18 | 2027.79 | 2.4 | 1.4 |
| TPES/GDP ⁽¹⁾ | 0.32 | 0.29 | 0.23 | 0.18 | 0.16 | 0.16 | 0.16 | -2.0 | -1.9 |
| Population (millions) | 78.96 | 78.30 | 79.36 | 82.19 | 82.26 | 82.12 | 82.05 | 0.0 | 0.2 |
| TPES/population ⁽²⁾ | 4.24 | 4.56 | 4.43 | 4.10 | 4.05 | 4.08 | 3.89 | 0.3 | -0.7 |
| TPES/GDP (2000 = 100) | 182 | 164 | 128 | 100 | 91 | 90 | 89 | -2.0 | -1.9 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 118 | 126 | 116 | 100 | 100 | 99 | .. | -0.1 | .. |
| Ele.TFC/population ⁽⁴⁾ | 3964 | 5006 | 5736 | 5884 | 6413 | 6402 | .. | 2.2 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 374.35 | 466.34 | 547.65 | 572.31 | 629.55 | 631.21 | 590.74 | 2.3 | 0.4 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|-------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 334.70 | 357.18 | 351.40 | 337.29 | 332.90 | 335.28 | 318.83 | 0.3 | -0.5 |
| Coal | 139.37 | 141.03 | 128.54 | 84.83 | 86.67 | 80.97 | 72.51 | -0.5 | -3.0 |
| Oil | 158.70 | 143.86 | 121.64 | 125.40 | 104.40 | 111.13 | 103.90 | -1.6 | -0.8 |
| Gas | 28.67 | 51.18 | 54.99 | 71.83 | 76.85 | 76.53 | 76.40 | 3.9 | 1.7 |
| Comb. renew & waste | 2.50 | 4.35 | 4.80 | 7.86 | 23.78 | 23.42 | 25.76 | 3.9 | 9.3 |
| Nuclear | 3.15 | 14.50 | 39.84 | 44.20 | 36.62 | 38.70 | 35.16 | 16.1 | -0.7 |
| Geothermal | - | - | 0.01 | 0.12 | 0.21 | 0.25 | 0.45 | - | 24.6 |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.02 | 0.92 | 3.99 | 4.22 | 4.19 | - | 33.5 |
| Hydro | 1.31 | 1.64 | 1.50 | 1.87 | 1.80 | 1.80 | 1.50 | 0.8 | 0.0 |
| Net electricity imports ⁽²⁾ | 0.99 | 0.61 | 0.08 | 0.26 | -1.42 | -1.73 | -1.06 | -13.8 | - |
| Heat | - | - | -0.00 | -0.00 | -0.00 | -0.01 | -0.01 | - | 3.4 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 375.9 | 467.6 | 550.0 | 576.5 | 620.6 | 637.1 | 637.2 | 596.8 |
| Nuclear | 12.1 | 55.6 | 152.5 | 169.6 | 163.1 | 140.5 | 148.5 | 134.9 |
| Hydro | 16.8 | 20.3 | 19.8 | 26.0 | 26.7 | 28.5 | 27.0 | 23.5 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 1.6 | 1.2 | 2.4 | 4.2 | 7.1 | 7.6 | 6.0 | 6.1 |
| Geothermal | - | - | - | - | - | - | 0.0 | 0.0 |
| Solar | - | - | 0.0 | 0.1 | 1.3 | 3.1 | 4.4 | 6.2 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.1 | 9.4 | 27.2 | 39.7 | 40.6 | 37.8 |
| Combustible fuels | 347.0 | 391.7 | 377.7 | 371.6 e | 402.3 e | 425.3 | 416.8 | 394.3 |
| <i>Coal</i> | 258.3 | 293.5 | 321.6 | 304.2 e | 305.7 e | 310.4 e | 290.6 | 264.5 |
| <i>Oil</i> | 44.8 | 26.7 | 10.4 | 4.8 | 10.6 | 8.6 | 9.2 | 12.5 |
| <i>Gas</i> | 41.0 | 66.0 | 40.5 | 52.5 | 69.4 | 77.3 | 87.7 | 77.0 |
| <i>Comb. renew. & waste</i> | 2.9 | 5.4 | 5.2 | 10.1 e | 16.6 e | 29.1 | 29.2 | 40.3 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - |
| - Own use by power plant | 26.1 | 31.0 | 41.4 | 38.1 | 39.0 | 38.7 | 38.3 | .. |
| Net production | 349.8 | 436.6 | 508.6 | 538.5 | 581.6 | 598.4 | 598.9 | .. |
| Nuclear | .. | 52.5 | 144.4 | 160.7 | 154.6 | 133.2 | 140.7 | .. |
| Hydro | .. | 20.0 | 19.4 | 25.6 | 26.3 | 26.7 | 26.5 | .. |
| Geothermal | .. | - | - | - | - | - | 0.0 | .. |
| Solar | .. | - | 0.0 | 0.1 | 1.3 | 3.1 | 4.4 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | 0.1 | 9.4 | 27.2 | 39.7 | 40.6 | .. |
| Combustible fuels | .. | 364.1 | 344.7 | 342.8 e | 372.1 e | 395.7 | 386.7 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | - | - | - | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | 3.8 | 3.7 | 5.0 | 6.0 | 9.5 | 9.1 | 7.9 | 7.6 |
| + Imports | 19.7 | 23.4 | 31.7 | 45.1 | 56.9 | 46.0 | 41.7 | 41.9 |
| - Exports | 8.1 | 16.2 | 30.7 | 42.1 | 61.4 | 62.5 | 61.8 | 54.1 |
| Electrical energy supplied | 357.6 | 440.0 | 504.5 | 535.5 | 567.5 | 572.8 | 570.9 | .. |
| - Transmission & distr. losses | 20.0 | 20.8 | 23.5 | 34.1 | 29.4 | 29.5 | 30.1 | .. |
| - Statistical difference | - | - | - | - | - | - | - | .. |
| Total consumption | 337.6 | 419.2 | 481.0 | 501.4 | 538.1 | 543.2 | 540.8 | .. |
| - Energy industry consumption ⁽²⁾ | 24.7 | 27.3 | 25.9 | 18.0 | 17.2 | 15.9 | 15.2 | .. |
| Final consumption | 312.9 | 391.9 | 455.1 | 483.5 | 521.0 | 527.4 | 525.5 | .. |
| Industry | 178.3 | 199.5 | 216.5 | 211.6 | 231.3 | 242.8 | 242.1 | .. |
| Transport | 9.9 | 12.0 | 13.7 | 15.9 | 16.2 | 16.3 | 16.5 | .. |
| Commercial & publ. serv. | 40.1 | 58.2 | 80.7 | 117.9 | 123.9 | 119.8 | 118.7 | .. |
| Residential | 78.6 | 115.0 | 137.1 | 130.5 | 141.3 | 140.1 | 139.5 | .. |
| Agriculture & fishing | 6.1 | 7.1 | 7.2 | 7.5 | 8.3 | 8.4 | 8.7 | .. |
| Sector non specified | - | - | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

GERMANY

4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 392.14 | 467.58 | 550.02 | 576.54 | 636.76 | 637.10 | 637.23 | 2.1 | 0.8 |
| - Hydro pumped storage | 1.57 | 1.24 | 2.37 | 4.23 | 7.37 | 7.55 | 6.02 | 2.6 | 5.3 |
| Total generation⁽¹⁾ | 390.56 | 466.34 | 547.65 | 572.31 | 629.39 | 629.55 | 631.21 | 2.1 | 0.8 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 287.48 | 372.48 | 466.09 | 527.63 e | 585.66 | 583.87 | 587.84 | 3.1 | 1.3 |
| - Hydro pumped storage | 1.57 | 1.24 | 2.37 | 4.23 e | 7.37 | 7.55 | 6.02 | 2.6 | 5.3 |
| Total generation ⁽¹⁾ | 285.90 | 371.24 | 463.72 | 523.40 e | 578.29 | 576.31 | 581.81 | 3.1 | 1.3 |
| Nuclear | 14.46 | 54.50 | 151.37 | 169.61 | 167.27 | 140.53 | 148.50 | 15.8 | -0.1 |
| Hydro | 15.24 | 16.78 | 15.39 | 21.73 e | 19.57 | 20.53 | 20.60 | 0.1 | 1.6 |
| Geothermal | - | - | - | - | - | - | 0.02 | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 0.05 | 9.41 | 32.93 | 42.79 | 44.91 | - | 46.1 |
| Coal | 187.58 | 228.71 | 262.70 | 279.61 e | 281.81 e | 286.13 e | 270.38 e | 2.1 | 0.2 |
| Oil | 18.77 | 15.16 | 6.46 | 1.62 | 3.34 | 2.47 | 2.87 | -6.4 | -4.4 |
| Gas | 48.81 | 53.23 | 25.20 | 36.06 | 54.96 | 58.77 | 68.63 e | -4.0 | 5.7 |
| Comb. renew. & waste | 1.05 | 2.85 | 2.56 | 5.37 e | 18.41 e | 25.09 | 25.91 | 5.7 | 13.7 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 104.66 | 95.10 | 83.93 | 48.91 | 51.10 | 53.24 | 49.40 | -1.4 | -2.9 |
| - Hydro pumped storage | - | - | - | c | c | c | c | - | c |
| Total generation ⁽¹⁾ | 104.66 | 95.10 | 83.93 | 48.91 | 51.10 | 53.24 | 49.40 | -1.4 | -2.9 |
| Nuclear | - | 1.09 | 1.10 | c | c | c | c | - | c |
| Hydro | 2.40 | 2.29 | 2.04 | c | 0.36 | 0.37 | 0.34 | -1.0 | -9.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 0.02 | .. | .. | .. | 0.08 | - | 7.2 |
| Coal | 74.91 | 64.80 | 58.94 | 24.56 | 20.49 e | 24.24 e | 20.27 e | -1.5 | -5.8 |
| Oil | 13.54 | 11.58 | 3.94 | 3.17 | 6.21 | 6.13 | 6.37 | -7.4 | 2.7 |
| Gas | 11.88 | 12.76 | 15.26 | 16.44 | 21.12 e | 18.51 e | 19.03 e | 1.6 | 1.2 |
| Comb. renew. & waste | 1.93 | 2.59 | 2.63 | 4.75 | 2.92 e | 3.98 | 3.31 | 2.0 | 1.3 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|--------------|--------------|--------------|----------------|--------------|--------------|--------------|---|
| Total | 97419 | 88625 | 77616 | 45324 e | 46879 | 48982 | 45541 | -2.9 |
| Total energy | - | - | - | - | 16515 | 18113 | 15424 | - |
| Coal mines | - | - | - | - | 9616 | 10954 | 8025 | - |
| Oil and gas extraction | - | - | - | - | 183 | 227 | 135 | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | 1504 | 1716 | 1607 | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | - | 5212 | 5216 | 5657 | - |
| Energy non specified/other | - | - | - | - | - | - | - | - |
| Total industry | 70638 | 62280 | 56042 | 45324 e | 30364 | 30869 | 30117 | -3.4 |
| Iron and steel | 10300 | 7909 | 6010 | 5136 | 6477 | 6714 | 6548 | 0.5 |
| Chemical and petrochemical | 24010 | 18387 | 15688 | 17332 e | 12338 | 12402 | 12400 | -1.3 |
| Non-ferrous metals | 2520 | 1961 | 2099 | 108 | 50 | 46 | 61 | -17.8 |
| Non-metallic minerals | 202 | 182 | 125 | 251 | 155 | 139 | 135 | 0.4 |
| Transport equipment | - | - | 440 | 263 | 359 | 338 | 360 | -1.1 |
| Machinery | - | - | 119 | 81 | 1105 | 1091 | 124 | 0.2 |
| Mining and quarrying | 21711 | 21519 | 21405 | 14020 | 88 | 86 | 433 | -19.5 |
| Food and tobacco | 1090 | 1142 | 1214 | 1792 | 2090 | 1988 | 1956 | 2.7 |
| Pulp and printing | 4930 | 4743 | 4714 | 5486 | 6067 | 6374 | 6620 | 1.9 |
| Wood and wood products | - | - | 182 | 696 | 1214 | 1115 | 1118 | 10.6 |
| Construction | - | - | - | 8 | .. | .. | .. | .. |
| Textile and leather | 943 | 611 | 467 | 151 | 90 | 82 | 58 | -10.9 |
| Non specified/other industries | 4932 e | 5826 e | 3579 e | - e | 331 | 494 | 304 | -12.8 |
| Total transport | - | - | - | c | c | c | c | c |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | c | c | c | c | c |
| Other | 26781 | 26345 | 21574 | - | - | - | - | - |
| Commerce and pub. services | - | - | - | - | - | - | - | - |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | - | - | - | - | - | - | - | - |
| Sector non specified | 26781 | 26345 | 21574 | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

GERMANY

6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|---------------|---|
| Total | 360840 | 448383 | 315920 e | 814755 e | 468885 e | 479754 e | 470639 | 0.4 |
| Nuclear | 352 | 4279 | - | - | - | - | - | - |
| Geothermal | - | - | - | 450 | 576 | 587 | 595 | - |
| Coal | 223593 | 288500 | 165906 e | 163332 e | 161873 | 162855 | 159761 | -3.1 |
| Oil | 75067 | 38299 | 20146 e | 26519 | 6705 | 6259 | 6140 | -9.6 |
| Gas | 59048 | 97534 | 110500 e | 326867 e | 246849 | 250036 | 245286 | 5.4 |
| Comb. renew. & waste | 2780 | 19771 | 19368 e | 42863 e | 49291 | 55349 | 58857 | 5.9 |
| Non-spec. comb. fuels | - | - | - | 254724 e | 3591 e | 4668 e | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 360840 | 448383 | 315920 e | 490090 e | 468885 e | 479754 e | .. | 0.4 |
| Nuclear | 352 | 4279 | - | - | - | - | .. | - |
| Geothermal | - | - | - | 450 | 576 | 587 | .. | - |
| Coal | 223593 | 288500 | 165906 e | 158682 e | 161873 | 162855 | .. | -3.1 |
| Oil | 75067 | 38299 | 20146 e | 3593 | 6705 | 6259 | .. | -9.6 |
| Gas | 59048 | 97534 | 110500 e | 179422 e | 246849 | 250036 | .. | 5.4 |
| Comb. renew. & waste | 2780 | 19771 | 19368 e | 42863 e | 49291 | 55349 | .. | 5.9 |
| Non-spec. comb. fuels | - | - | - | 105080 e | 3591 e | 4668 e | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | - | - | 324665 e | - | - | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | 4650 e | - | - | .. | - |
| Oil | - | - | - | 22926 | - | - | .. | - |
| Gas | - | - | - | 147445 | - | - | .. | - |
| Comb. renew. & waste | - | - | - | - | - | - | .. | - |
| Non-spec. comb. fuels | - | - | - | 149644 e | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

GERMANY

7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|--------------|---------------|--------------|--------------|--------------|---------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 94.06 | 106.63 | 96.66 | 86.00 | 97.03 | 103.08 | 98.97 | 0.2 | 0.1 |
| Coal | 72.87 | 81.03 | 80.77 e | 69.17 e | 69.60 | 72.19 | 66.87 | 0.6 | -1.0 |
| Oil | 11.11 | 8.22 | 3.31 | 1.41 | 2.71 | 2.06 | 2.05 | -6.9 | -2.6 |
| Gas | 9.33 | 14.94 | 10.75 | 12.27 | 18.46 | 17.51 | 18.72 | 0.8 | 3.1 |
| Comb. renew. & waste | 0.75 | 2.44 e | 1.82 e | 3.16 e | 6.26 | 11.32 | 11.34 | 5.3 | 10.7 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 85.99 | 80.74 | 76.67 | 83.55 | 92.69 | 88.51 | .. | 0.5 |
| Coal | .. | 65.88 | 68.97 e | 64.04 e | 65.06 | 66.73 | 61.52 | .. | -0.6 |
| Oil | .. | 6.06 | 2.58 | 0.98 | 1.07 | 0.80 | 0.82 | .. | -6.2 |
| Gas | .. | 12.81 | 8.04 | 9.85 | 12.09 | 14.82 | 15.58 | .. | 3.7 |
| Comb. renew. & waste | .. | 1.24 | 1.15 e | 1.80 e | 5.33 | 10.34 | 10.59 | .. | 13.1 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 3.15 | 14.50 | 39.84 | 44.21 | 43.78 | 36.89 | 39.09 | 16.1 | -0.1 |
| Nuclear | 3.15 | 14.50 | 39.84 | 44.20 | 43.59 | 36.62 | 38.70 | 16.1 | -0.2 |
| Geothermal | - | - | - | - | 0.00 e | 0.00 | 0.02 | - | - |
| Solar | - | - | 0.00 | 0.01 | 0.19 | 0.26 | 0.38 | - | 59.4 |
| Non-Thermal | | | | | | | | | |
| Total | 1.31 | 1.64 | 1.50 | 2.67 | 4.36 | 5.21 | 5.29 | 0.8 | 7.2 |
| Hydro | 1.31 | 1.64 | 1.50 | 1.87 | 1.71 | 1.80 | 1.80 | 0.8 | 1.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.01 | 0.80 | 2.64 | 3.42 | 3.49 | - | 42.3 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

GERMANY

**8. Electricity production from combustible fuels
In electricity plants***

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|---------|---------|----------|----------|----------|----------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 39255 | 49133 | 48789 | 41650 | 44660 | 38802 | -1.3 |
| Fuel input (TJ) | 1141883 | 1256004 | 1269836 | 1090085 | 1180551 | 1030939 | -1.1 |
| Electricity production (GWh) | 115135 | 141837 | 143164 | 114088 e | 119867 e | 112749 e | -1.3 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 220851 | 209597 | 154304 | 156995 | 160639 | 154186 | -1.7 |
| Fuel input (TJ) | 1818740 | 1750685 | 1428335 | 1459583 | 1439698 | 1375859 | -1.3 |
| Electricity production (GWh) | 167916 | 169040 | 153523 e | 161462 e | 162988 e | 150199 e | -0.7 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 121434 | 106516 | 73622 | 79082 | 103026 | 90824 | -0.9 |
| Electricity production (GWh) | 10463 | 10764 | 7475 | 8295 e | 10424 e | 9086 | -0.9 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 6971 | 2770 | 891 | 1719 e | 1339 | 1416 | -3.7 |
| Fuel input (TJ) | 243595 | 97100 | 44684 | 66832 | 55629 | 55971 | -3.0 |
| Electricity production (GWh) | 26741 | 10397 | 4785 | 6286 | 5318 | 6552 | -2.5 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 669784 | 363331 | 385719 | 220819 | 209791 | 270454 | -1.6 |
| Electricity production (GWh) | 65990 | 40460 | 52495 | 23773 e | 26538 | 35878 | -0.7 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 4644 | 13805 e | - | 108716 | 113089 | 19.4 |
| Electricity production (GWh) | - | 129 | 804 | - | 6973 | 7331 | 25.2 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 24560 | 20526 | 43047 e | 763 e | 688 | 646 | -17.5 |
| Electricity production (GWh) | 2585 | 2373 | 3946 | 70 | 69 | 65 | -18.1 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 32444 | 22942 | 33723 | - | 82164 | 80960 | 7.3 |
| Electricity production (GWh) | 2852 | 2437 | 3688 | - | 6746 | 6716 | 5.8 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 6360 | 18360 e | - | 138538 | 133925 | 18.4 |
| Electricity production (GWh) | - | 247 | 1683 e | - | 8763 | 8701 | 21.9 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 391682 | 377684 | 371563 e | 313974 e | 347686 | 337277 | -0.6 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

GERMANY

**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|--------|--------|----------|----------|---------|---------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 3079 | 3193 | 3021 e | 8302 | 7074 | 7677 | 5.0 |
| Fuel input (TJ) | 89243 | 92936 | 80661 e | 217748 | 186007 | 202579 | 4.4 |
| Electricity production (GWh) | - | - | - | 14217 | 12235 e | 13083 | - |
| CHP Heat production (TJ) | 77668 | 83930 | 76711 e | 110931 e | 102730 | 107144 | 1.4 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 18699 | 25962 | 9990 e | 6779 e | 7299 | 7494 | -6.7 |
| Fuel input (TJ) | 158468 | 230295 | 97708 e | 66807 | 72524 | 74247 | -6.1 |
| Electricity production (GWh) | - | - | - | 3908 | 4504 | 5144 | - |
| CHP Heat production (TJ) | 137916 | 197450 | 85943 e | 33902 e | 37072 | 36010 | -9.0 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 9203 | 7884 | 2877 e | 6557 | 2630 | 2993 | -5.2 |
| Electricity production (GWh) | - | - | - | 327 | 353 | 384 | - |
| CHP Heat production (TJ) | 8009 | 7120 | 2650 e | 4571 | 116 | 104 | -20.9 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 2374 | 1165 | 461 | 1464 e | 614 | 560 | -4.0 |
| Fuel input (TJ) | 86253 | 42409 | 21206 e | 60248 | 27782 | 22668 | -3.4 |
| Electricity production (GWh) | - | - | - | 3263 | 3286 | 2692 | - |
| CHP Heat production (TJ) | 75067 | 38299 | 20146 e | 35151 | 1328 | 1015 | -18.3 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 75387 | 120000 | 129240 | 617392 | 464517 | 492130 | 8.2 |
| Electricity production (GWh) | - | - | - | 52304 e | 50734 e | 51776 e | - |
| CHP Heat production (TJ) | 59048 | 97534 | 110500 e | 316345 | 173372 | 171774 | 3.2 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 99469 e | 22042 | 25262 | - |
| Electricity production (GWh) | - | - | - | 6518 e | 1401 | 1629 | - |
| CHP Heat production (TJ) | - | - | - | 4398 e | 4696 | 6239 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | 5484 | 2196 | - |
| Electricity production (GWh) | - | - | - | - | 614 | 291 | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 3195 | 21893 | 23295 e | 73832 e | 64358 | 61804 | 5.9 |
| Electricity production (GWh) | - | - | - | 7278 e | 2296 | 2296 | - |
| CHP Heat production (TJ) | 2780 | 19771 | 19368 e | 32864 e | 26760 | 30248 | 2.4 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | 79954 e | 22243 | 21144 | - |
| Electricity production (GWh) | - | - | - | 7469 e | 2212 | 2190 | - |
| CHP Heat production (TJ) | - | - | - | 672 e | 538 | 555 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | - | - | - | 95284 e | 77635 | 79485 | - |
| CHP Heat production (TJ) | 360488 | 444104 | 315318 e | 647046 | 348094 | 355388 | -1.2 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

GERMANY

10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|-------|---------|---------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | 901 | 791 | - |
| Fuel input (TJ) | - | - | - | - | 21282 e | 20911 | - |
| Heat production (TJ) | - | - | - | - | 18554 | 16532 | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | 32 e | 64 e | 536 | 298 | - |
| Fuel input (TJ) | - | - | 669 e | 1346 e | 5523 | 2992 | - |
| Heat production (TJ) | - | - | 602 e | 1077 e | 3220 | 2866 | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | 336 | 254 | - |
| Heat production (TJ) | - | - | - | - | 181 | 199 | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | - | - | 183 e | 153 | 146 | - |
| Fuel input (TJ) | - | - | - | 7804 e | 6529 | 6010 | - |
| Heat production (TJ) | - | - | - | 6242 e | 5377 | 5244 | - |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | 18890 e | 140529 | 108613 | - |
| Heat production (TJ) | - | - | - | 14961 e | 73477 | 78262 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 4899 e | 8392 | 8829 | - |
| Heat production (TJ) | - | - | - | 3429 e | 4030 | 4267 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 3118 e | 20332 | 23388 | - |
| Heat production (TJ) | - | - | - | 2494 e | 12710 | 13504 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | 521 e | 880 | 901 | - |
| Heat production (TJ) | - | - | - | 376 e | 557 | 536 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | - | - | 602 e | 161151 | 120215 | 123779 | - |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

GERMANY

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 241.71 | 248.66 | 240.99 | 232.07 | 246.25 | 228.32 | 235.67 | -0.0 | -0.1 |
| Geothermal | - | - | 0.01 | 0.12 | 0.15 | 0.18 | 0.20 | - | 20.6 |
| Solar thermal | - | - | 0.01 | 0.11 | 0.28 | 0.32 | 0.36 | - | 21.2 |
| Coal | 53.14 | 46.87 | 37.26 | 8.94 | 8.70 | 8.28 | 8.52 | -2.1 | -7.9 |
| Oil | 133.30 | 122.68 | 111.42 | 114.67 | 104.81 | 93.19 | 100.19 | -1.0 | -0.6 |
| Gas | 21.13 | 35.81 | 41.04 | 55.12 | 59.84 | 58.40 | 58.79 | 4.0 | 2.0 |
| Comb. renew. & waste | 1.75 | 1.91 | 2.97 | 4.70 | 9.45 | 12.38 | 11.99 | 3.2 | 8.1 |
| Electricity | 26.91 | 33.70 | 39.14 | 41.58 | 45.22 | 45.35 | 45.20 | 2.2 | 0.8 |
| Heat | 5.49 | 7.69 | 9.15 | 6.83 | 17.80 | 10.22 | 10.43 | 3.1 | 0.7 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 88.24 | 78.83 | 66.16 | 51.33 | 57.33 | 56.16 | 55.25 | -1.7 | -1.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 26.47 | 24.54 | 19.84 | 7.38 | 7.45 | 6.69 | 6.93 | -1.7 | -5.7 |
| Oil | 32.31 | 17.91 | 7.07 | 5.14 | 3.88 | 3.60 | 3.53 | -8.6 | -3.8 |
| Gas | 12.51 | 17.22 | 17.44 | 19.26 | 17.25 | 17.80 | 17.27 | 2.0 | -0.1 |
| Comb. renew. & waste | 0.03 | 0.03 | 0.79 | 0.45 | 1.38 | 3.57 | 3.54 | 21.7 | 8.7 |
| Electricity | 15.34 | 17.16 | 18.62 | 18.20 | 19.73 | 20.88 | 20.82 | 1.1 | 0.6 |
| Heat | 1.59 | 1.97 | 2.41 | 0.90 | 7.63 | 3.62 | 3.16 | 2.5 | 1.5 |
| Transport | 36.13 | 44.20 | 54.66 | 60.06 | 56.33 | 55.16 | 54.10 | 2.5 | -0.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 1.72 | 0.25 | 0.02 | 0.01 | - | - | - | -24.2 | - |
| Oil | 33.56 | 42.86 | 53.47 | 58.47 | 51.46 | 49.93 | 49.60 | 2.8 | -0.4 |
| Gas | - | 0.06 | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | 0.22 | 3.47 | 3.83 | 3.08 | - | - |
| Electricity | 0.85 | 1.03 | 1.18 | 1.37 | 1.40 | 1.40 | 1.42 | 1.9 | 1.1 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 27.42 | 28.49 | 28.36 | 25.07 | 27.35 | 26.36 | 29.32 | 0.2 | 0.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | 0.01 | 0.01 | - | - | - |
| Coal | 6.52 | 6.81 | 5.68 | 0.31 | 0.36 | 0.30 | 0.27 | -0.8 | -15.5 |
| Oil | 16.09 | 14.97 | 10.53 | 8.82 | 8.46 | 6.18 | 8.82 | -2.5 | -1.0 |
| Gas | 0.63 | 0.72 | 5.21 | 5.80 e | 7.31 | 6.66 | 6.66 | 13.2 | 1.4 |
| Comb. renew. & waste | 0.73 | 0.98 | - | - | - | 0.01 | 0.01 | - | - |
| Electricity | 3.45 | 5.01 | 6.94 | 10.14 | 11.21 | 10.30 | 10.21 | 4.2 | 2.2 |
| Heat | - | - | - | - | - | 2.89 | 3.34 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

GERMANY

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 60.80 | 54.87 | 62.97 | 65.20 | 64.78 | 61.37 | 68.15 | 0.2 | 0.4 |
| Geothermal | - | - | 0.01 | 0.12 | 0.15 | 0.18 | 0.20 | - | 20.6 |
| Solar thermal | - | - | 0.01 e | 0.06 e | 0.27 | 0.30 | 0.36 | - | 24.1 |
| Coal | 14.31 | 12.09 | 9.72 | 0.92 | 0.60 | 0.91 | 0.97 | -2.2 | -12.0 |
| Oil | 33.73 | 25.03 | 18.09 | 19.48 | 18.19 | 11.09 | 16.33 | -3.6 | -0.6 |
| Gas | 1.12 | 1.25 | 14.44 | 23.43 e | 28.80 | 28.16 | 29.02 | 16.3 | 4.0 |
| Comb. renew. & waste | 0.99 | 0.89 | 2.18 | 4.03 e | 4.60 | 4.97 | 5.35 | 4.8 | 5.1 |
| Electricity | 6.76 | 9.89 | 11.79 | 11.22 | 12.17 | 12.05 | 12.00 | 3.3 | 0.1 |
| Heat | 3.90 | 5.72 | 6.74 | 5.93 e | - | 3.71 | 3.93 | 3.3 | -2.9 |
| Agriculture & fishing | 2.09 | 3.01 | 3.04 | 0.94 | 0.99 | 0.98 | 1.01 | 2.2 | -6.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.23 | 0.15 | 0.06 | 0.03 | 0.02 | - | - | -7.4 | - |
| Oil | 1.32 | 2.23 | 2.20 | - | - | - | - | 3.0 | - |
| Gas | 0.01 | 0.01 | 0.16 | 0.26 e | 0.26 | 0.26 | 0.26 | 19.5 | 2.7 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.52 | 0.61 | 0.62 | 0.65 | 0.71 | 0.72 | 0.75 | 1.0 | 1.0 |
| Heat | - | - | - | - | - | - | - | - | - |
| Other | 9.81 | 16.29 | 2.85 | 4.40 | 14.30 | 3.47 | 3.66 | -7.0 | 1.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | 0.00 e | 0.05 e | - | - | - | - | - |
| Coal | 1.64 | 1.47 | 1.10 | 0.02 | 0.00 | 0.00 | - | -2.3 | - |
| Oil | 2.11 | 0.95 | 0.21 | 0.11 | 0.06 | 0.03 | 0.00 | -12.6 | -19.1 |
| Gas | 6.06 | 13.87 | 1.53 | 4.21 e | 4.06 | 3.44 | 3.65 | -7.8 | 5.0 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | 10.17 e | - | - | - | - |
| Non-energy use⁽¹⁾ | 17.23 | 22.96 | 22.95 | 25.07 | 25.17 | 24.82 | 24.19 | 1.70 | 0.29 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

GERMANY

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| TFC (Mtoe) | 241.71 | 248.66 | 240.99 | 232.07 | 242.68 | 246.25 | 228.32 | 235.67 |
| Total industry (Mtoe) | 88.24 | 78.83 | 66.16 | 51.33 | 57.50 | 57.33 | 56.16 | 55.25 |
| Iron and steel | 20.40 | 15.20 | 11.06 | 8.51 | 8.59 | 9.39 | 9.64 | 9.70 |
| Chem. and petrochemical | 18.99 | 18.13 | 15.71 | 10.25 | 9.96 | 9.22 | 11.51 | 10.91 |
| Non-ferrous metals | 2.89 | 3.44 | 3.08 | 2.63 | 2.68 | 2.34 | 2.38 | 2.34 |
| Non-metallic minerals | 9.48 | 8.53 | 7.14 | 7.13 | 5.76 | 5.84 | 6.91 | 6.72 |
| Transport equipment | 2.68 | 3.00 | 3.12 | 2.91 | 2.71 | 2.70 | 3.01 | 2.88 |
| Machinery | 4.55 | 4.71 | 5.20 | 3.13 | 3.10 | 3.26 | 3.23 | 3.60 |
| Mining and quarrying | 3.14 | 2.87 | 2.36 | 0.46 | 0.48 | 0.41 | 0.42 | 0.39 |
| Food and tobacco | 6.08 | 6.54 | 5.65 | 4.51 | 3.96 | 4.00 | 4.64 | 4.35 |
| Paper, pulp and printing | 3.49 | 3.72 | 3.91 | 4.58 | 5.14 | 5.00 | 5.67 | 6.16 |
| Wood and wood products | 0.81 | 0.84 | 0.51 | 0.63 | 0.64 | 0.63 | 1.32 | 1.42 |
| Construction | 0.05 | 0.46 | 0.06 | 0.75 | 0.46 | 0.49 | 0.07 | 0.07 |
| Textile and leather | 2.84 | 2.68 | 2.36 | 0.93 | 0.71 | 0.66 | 0.67 | 0.61 |
| Non specified/other | 12.85 | 8.72 | 6.00 | 4.91 | 13.31 | 13.38 | 6.67 | 6.10 |
| Electricity consumption (Mtoe) | 26.91 | 33.70 | 39.14 | 41.58 | 44.80 | 45.22 | 45.35 | 45.20 |
| Total industry (Mtoe) | 15.34 | 17.16 | 18.62 | 18.20 | 19.89 | 19.73 | 20.88 | 20.82 |
| Iron and steel | 2.44 | 2.57 | 2.35 | 2.03 | 2.38 | 2.57 | 2.35 | 2.44 |
| Chem. and petrochemical | 5.41 | 5.67 | 5.37 | 4.16 | 4.55 | 4.23 | 4.31 | 4.45 |
| Non-ferrous metals | 1.25 | 1.69 | 1.71 | 1.59 | 1.54 | 1.37 | 1.53 | 1.49 |
| Non-metallic minerals | 0.88 | 0.92 | 1.00 | 1.28 | 1.07 | 1.10 | 1.09 | 1.10 |
| Transport equipment | 0.70 | 0.83 | 1.18 | 1.63 | 1.69 | 1.69 | 1.66 | 1.59 |
| Machinery | 0.75 | 0.92 | 1.07 | 0.88 | 0.86 | 0.89 | 0.86 | 1.02 |
| Mining and quarrying | 0.50 | 0.51 | 0.55 | 0.18 | 0.16 | 0.17 | 0.17 | 0.21 |
| Food and tobacco | 0.62 | 0.84 | 1.04 | 1.26 | 1.45 | 1.48 | 1.44 | 1.31 |
| Paper, pulp and printing | 0.90 | 1.10 | 1.46 | 1.87 | 2.31 | 2.19 | 1.82 | 2.08 |
| Wood and wood products | 0.21 | 0.24 | 0.30 | 0.34 | 0.38 | 0.39 | 0.36 | 0.40 |
| Construction | 0.05 | 0.06 | 0.06 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Textile and leather | 0.60 | 0.57 | 0.61 | 0.37 | 0.29 | 0.26 | 0.27 | 0.23 |
| Non specified/other | 1.04 | 1.24 | 1.92 | 2.53 | 3.14 | 3.31 | 4.93 | 4.43 |
| Total industry (TWh) | 178.33 | 199.55 | 216.48 | 211.59 | 231.29 | 229.40 | 242.75 | 242.12 |
| Iron and steel | 28.33 | 29.92 | 27.37 | 23.65 | 27.65 | 29.88 | 27.28 | 28.36 |
| Chem. and petrochemical | 62.94 | 65.92 | 62.50 | 48.34 | 52.86 | 49.24 | 50.16 | 51.73 |
| Non-ferrous metals | 14.51 | 19.66 | 19.86 | 18.50 | 17.90 | 15.93 | 17.84 | 17.30 |
| Non-metallic minerals | 10.18 | 10.72 | 11.59 | 14.83 | 12.46 | 12.79 | 12.66 | 12.80 |
| Transport equipment | 8.11 | 9.64 | 13.69 | 18.99 | 19.68 | 19.66 | 19.33 | 18.53 |
| Machinery | 8.74 | 10.74 | 12.49 | 10.24 | 10.03 | 10.37 | 10.02 | 11.87 |
| Mining and quarrying | 5.81 | 5.95 | 6.45 | 2.06 | 1.90 | 1.93 | 1.95 | 2.40 |
| Food and tobacco | 7.16 | 9.76 | 12.05 | 14.70 | 16.91 | 17.25 | 16.75 | 15.20 |
| Paper, pulp and printing | 10.52 | 12.74 | 16.95 | 21.77 | 26.85 | 25.47 | 21.21 | 24.22 |
| Wood and wood products | 2.49 | 2.76 | 3.46 | 4.01 | 4.41 | 4.56 | 4.22 | 4.68 |
| Construction | 0.54 | 0.71 | 0.70 | 0.81 | 0.82 | 0.82 | 0.85 | 0.85 |
| Textile and leather | 6.94 | 6.66 | 7.11 | 4.30 | 3.36 | 2.98 | 3.19 | 2.67 |
| Non specified/other | 12.06 | 14.39 | 22.27 | 29.41 | 36.47 | 38.53 | 57.30 | 51.53 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

GERMANY

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total imports⁽¹⁾ | 19685 | 23371 | 31669 | 39735 | 45134 | 56861 | 48464 | 45953 | 41670 |
| Imports from: | | | | | | | | | |
| Total OECD | - | - | 25127 | 39735 | 45134 | 56861 | 48464 | 45953 | 41670 |
| Austria | - | - | 4092 | 4818 | 5942 | 9103 | 7501 | 6082 | 7012 |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | 2350 | 8931 | 13019 | 12052 | 9419 | 7938 |
| Denmark | - | - | 4721 | 4522 | 6412 | 10398 | 6047 | 7885 | 9211 |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | 8626 | 17338 | 15352 | 16239 | 16181 | 16443 | 10572 |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | 965 | 778 | 738 | 1 | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | 1025 | 211 | 898 | 324 | 387 | 302 | 828 |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | 2350 | 688 | 1046 | 720 | 48 | 95 |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | 1124 | 654 | 3364 | 1492 | 1837 | 2539 |
| Switzerland | - | - | 5698 | 6244 | 5519 | 3367 | 4084 | 3937 | 3475 |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 19685 | 23371 | 6542 | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

GERMANY

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total exports⁽¹⁾ | 8123 | 16224 | 30739 | 34911 | 42077 | 61427 | 65441 | 62508 | 61770 |
| Exports to: | | | | | | | | | |
| Total OECD | - | - | 26011 | 34911 | 42077 | 61427 | 65441 | 62508 | 61770 |
| Austria | - | - | 4453 | 5543 | 7386 | 15464 | 14964 | 16207 | 15055 |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | 274 | 231 | 405 | 647 | 886 | 1323 |
| Denmark | - | - | 235 | 209 | 545 | 632 | 4165 | 1545 | 1413 |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | 472 | 503 | 407 | 494 | 839 | 725 | 867 |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | 3532 | 4233 | 4400 | 3929 | 3995 | 4094 | 4148 |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | 8524 | 12786 | 16684 | 19261 | 22335 | 18065 | 18858 |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | 3885 | 2005 | 2264 | 2546 | 4889 | 5576 |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | 12 | 92 | 438 | 1944 | 973 | 541 |
| Switzerland | - | - | 8795 | 7466 | 10327 | 18540 | 14006 | 15124 | 13989 |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 8123 | 16224 | 4728 | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

GERMANY

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 50.56 | 67.62 | 84.20 | 99.71 | 108.38 | 114.41 | 121.79 | 124.28 | 129.08 |
| Nuclear | 3.29 | 8.46 | 22.26 | 22.68 | 22.40 | 20.38 | 20.21 | 20.21 | 20.49 |
| Hydro | 4.35 | 5.90 | 6.31 | 8.35 | 8.98 | 8.28 | 8.93 | 10.00 | 9.95 |
| <i>of which: pumped storage</i> | - | - | - | 4.38 | 4.65 | 4.20 | 4.85 | 5.22 | 6.49 |
| Geothermal | - | - | - | - | - | - | - | - | 0.01 |
| Solar | - | - | - | 0.02 e | 0.11 | 1.51 | 2.83 | 3.81 | 5.33 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 6.10 | 18.43 | 20.62 | 22.25 | 23.86 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 42.92 | 53.26 | 55.63 | 68.66 | 70.79 | 65.82 | 69.20 | 68.01 | 69.44 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 21.54 | 23.35 | 18.96 | 28.65 | 29.14 | .. | .. | .. | .. |
| Liquid fuels | 5.93 | 8.48 | 4.92 | 4.42 | 3.54 | .. | .. | .. | .. |
| Natural gas | 5.61 | 7.31 | 5.76 | 7.88 | 9.81 | .. | .. | .. | .. |
| Comb. renew. & waste | - | - | 0.36 | 0.65 | 1.03 | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 6.06 | 6.55 | 9.03 | 8.92 | 9.30 | .. | .. | .. | .. |
| Solid / natural gas | 0.66 | 1.08 | 1.98 | 1.87 | 2.39 | .. | .. | .. | .. |
| Liquid / natural gas | 2.37 | 5.90 | 9.22 | 9.24 | 8.67 | .. | .. | .. | .. |
| Solid / liquid / gas | 0.75 | 0.59 | 5.41 | 7.03 | 6.90 | .. | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | 49.88 | 50.96 | 62.49 | 62.36 | .. | .. | .. | .. |
| Internal combustion | - | 0.05 | 0.14 | 0.16 | 0.68 | .. | .. | .. | .. |
| Gas turbine | - | 3.33 | 4.53 | 6.01 | 5.02 | .. | .. | .. | .. |
| Combined cycle | - | - | - | - | 2.73 | .. | .. | .. | .. |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | 51.69 | 62.32 | 70.85 | 74.60 | .. | 77.80 | .. | .. |
| Available capacity | .. | 68.56 | 79.73 | 96.11 | 89.50 | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

GERMANY

15. Net maximum electricity generating capacity on 31 December (continued)

(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|--------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 15.64 | 14.94 | 13.55 | 16.52 | 10.00 | 10.62 | 9.80 | 9.80 | 10.20 |
| Nuclear | - | 0.14 | 0.15 | 0.15 | c | c | c | c | c |
| Hydro | 0.46 | 0.55 | 0.54 | 0.53 | c | 0.06 | 0.07 | 0.07 | 0.05 |
| <i>of which: pumped storage</i> | - | - | - | 0.15 | c | c | c | c | c |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.05 | 1.14 | c | c | c | c | 0.03 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 15.18 | 14.25 | 12.81 | 14.70 | 10.00 | 10.56 | 9.73 | 9.73 | 10.11 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 9.30 | 8.61 | 7.36 | 7.95 | 3.52 | .. | .. | .. | .. |
| Liquid fuels | 3.13 | 3.34 | 1.13 | 1.21 | 0.60 | .. | .. | .. | .. |
| Natural gas | 1.02 | 1.06 | 3.77 | 4.88 | 4.63 | .. | .. | .. | .. |
| Comb. renew. & waste | - | - | 0.55 | 0.67 | 0.91 | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 0.80 | 0.59 | - | - | 0.16 | .. | .. | .. | .. |
| Solid / natural gas | 0.83 | 0.57 | - | - | 0.19 | .. | .. | .. | .. |
| Liquid / natural gas | 0.10 | 0.08 | - | - | - | .. | .. | .. | .. |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | 13.76 | 12.18 | 13.74 | 8.47 | .. | .. | .. | .. |
| Internal combustion | - | 0.06 | 0.09 | 0.11 | 0.28 | .. | .. | .. | .. |
| Gas turbine | - | 0.44 | 0.55 | 0.85 | 1.26 | .. | .. | .. | .. |
| Combined cycle | - | - | - | - | - | .. | .. | .. | .. |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | 12.61 | 10.69 | 12.46 | 6.25 | .. | .. | .. | .. |
| Available capacity | .. | .. | 12.11 | 13.41 | 9.99 | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

GERMANY

16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Euro/ unit | | | | | | | | |
| Steam coal (t) | 85.18 | 91.83 | 115.81 | 46.02 | 64.19 | 62.13 | 65.89 | 104.36 | 79.25 |
| Heavy fuel oil (t) | 106.60 | 183.60 | 120.80 | 181.50 | 231.80 | 282.20 | 271.90 | 391.30 | 302.50 |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | 80.15 | 117.75 | 130.58 | 166.48 | .. | .. | .. | .. | .. |
| | Euro/ toe | | | | | | | | |
| Steam coal | 123.2 | 132.8 | 167.5 | 66.6 | 92.8 | 89.9 | 95.3 | 150.9 | 114.6 |
| Heavy fuel oil | 108.8 | 187.3 | 123.2 | 185.2 | 236.5 | 288.0 | 277.5 | 399.3 | 308.7 |
| Natural gas ⁽²⁾ | 89.1 | 130.8 | 145.1 | 185.0 | .. | .. | .. | .. | .. |
| End-user prices of electricity | | | | | | | | | |
| | Euro/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0487 | 0.0535 | 0.0754 | 0.0440 | 0.0676 | 0.0751 | 0.0795 | .. | .. |
| <i>of which: tax</i> | 0.0021 | 0.0023 | 0.0057 | .. | .. | .. | .. | .. | .. |
| Household | | | | | | | | | |
| Price | 0.0877 | 0.0934 | 0.1353 | 0.1309 | 0.1710 | 0.1767 | 0.1921 | .. | .. |
| <i>of which: tax</i> | 0.0128 | 0.0143 | 0.0257 | 0.0180 | 0.0236 | 0.0244 | 0.0307 | .. | .. |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

GREECE

Figure 1. Total final consumption by fuel

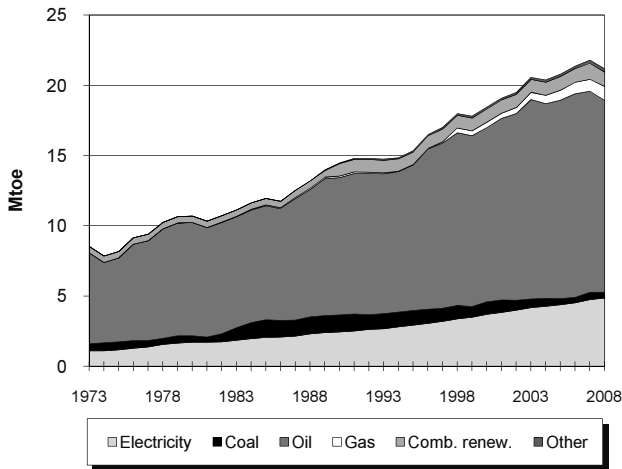


Figure 2. Electricity generation by fuel

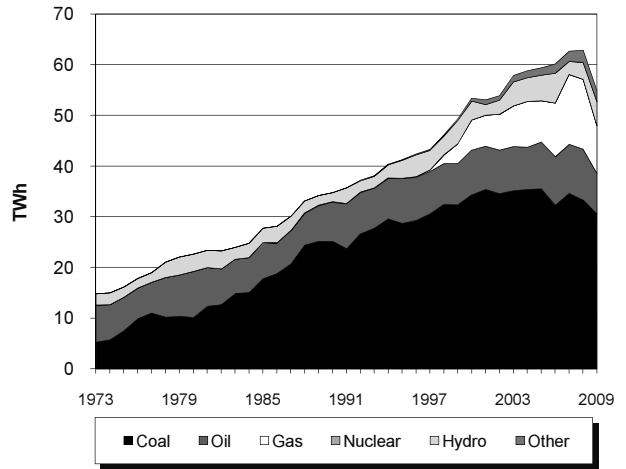


Figure 3. Electricity consumption by sector

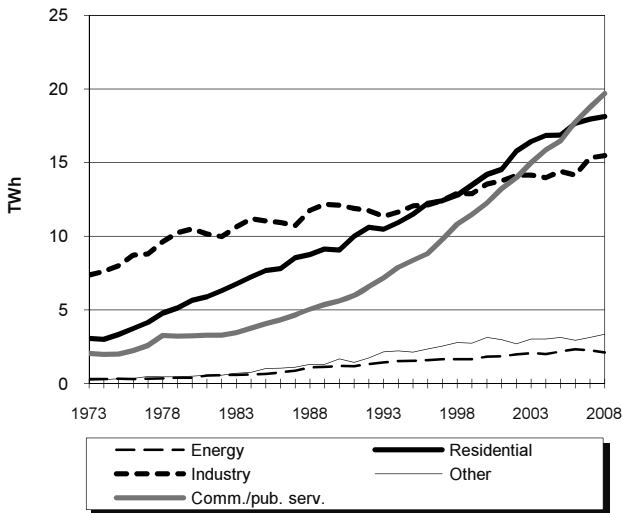


Figure 4. Electricity indicators

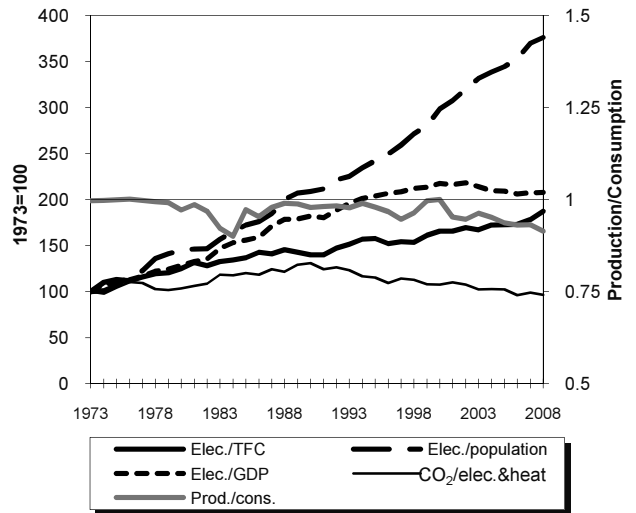
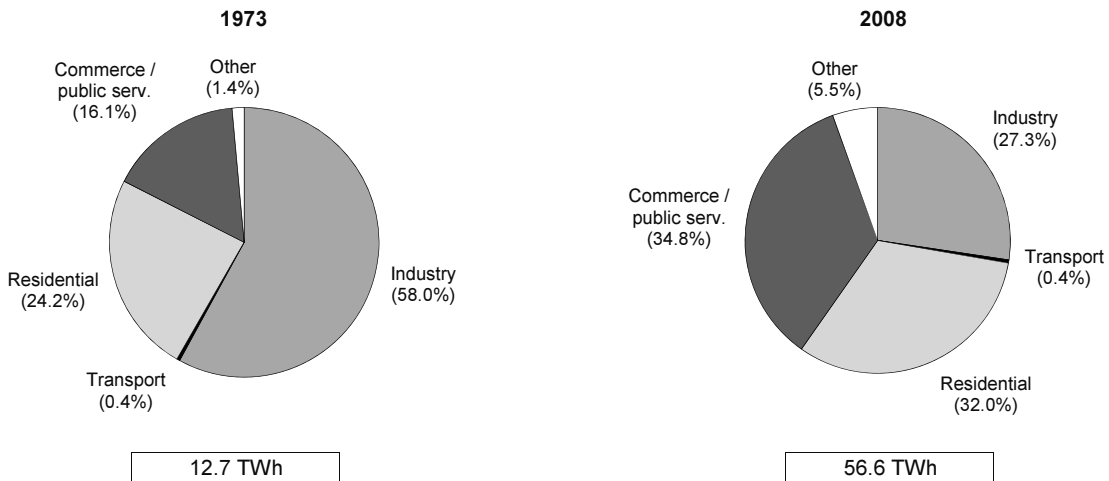


Figure 5. Total final electricity consumption by sector



GREECE

1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|-------|-------|--------|--------|--------|--------|--------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 11.81 | 14.98 | 21.44 | 27.09 | 30.22 | 30.42 | 29.05 | 3.6 | 1.6 |
| GDP (billion 2000 USD) | 77.13 | 94.16 | 100.82 | 127.09 | 169.50 | 172.92 | 171.00 | 1.6 | 2.8 |
| TPES/GDP ⁽¹⁾ | 0.15 | 0.16 | 0.21 | 0.21 | 0.18 | 0.18 | 0.17 | 2.0 | -1.2 |
| Population (millions) | 9.08 | 9.81 | 10.34 | 10.92 | 11.19 | 11.24 | 11.25 | 0.8 | 0.4 |
| TPES/population ⁽²⁾ | 1.30 | 1.53 | 2.07 | 2.48 | 2.70 | 2.71 | 2.58 | 2.8 | 1.2 |
| TPES/GDP (2000 = 100) | 72 | 75 | 100 | 100 | 84 | 83 | 80 | 2.0 | -1.2 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 49 | 62 | 83 | 100 | 96 | 96 | .. | 3.2 | .. |
| Ele.TFC/population ⁽⁴⁾ | 1400 | 2030 | 2755 | 3954 | 4932 | 5043 | .. | 4.1 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 14.82 | 22.65 | 34.78 | 53.43 | 62.71 | 62.91 | 54.92 | 5.1 | 2.4 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 11.81 | 14.98 | 21.44 | 27.09 | 30.22 | 30.42 | 29.05 | 3.6 | 1.6 |
| Coal | 2.10 | 3.26 | 8.07 | 9.04 | 8.84 | 8.32 | 8.02 | 8.2 | -0.0 |
| Oil | 9.06 | 10.92 | 12.07 | 14.88 | 15.91 | 16.39 | 15.93 | 1.7 | 1.5 |
| Gas | - | - | 0.14 | 1.70 | 3.36 | 3.51 | 2.97 | - | 17.5 |
| Comb. renew & waste | 0.45 | 0.45 | 0.89 | 1.01 | 1.18 | 1.05 | 0.97 | 4.1 | 0.4 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | 0.00 | 0.00 | 0.01 | 0.02 | 0.02 | - | 12.1 |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.06 | 0.14 | 0.32 | 0.37 | 0.35 | - | 10.1 |
| Hydro | 0.19 | 0.29 | 0.15 | 0.32 | 0.22 | 0.28 | 0.41 | -1.3 | 5.3 |
| Net electricity imports ⁽²⁾ | 0.00 | 0.05 | 0.06 | -0.00 | 0.37 | 0.48 | 0.38 | 17.6 | 10.0 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

GREECE

3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 14.8 | 22.7 | 35.0 | 53.8 | 60.0 | 63.5 | 63.7 | 55.8 |
| Nuclear | - | - | - | - | - | - | - | - |
| Hydro | 2.2 | 3.4 | 2.0 | 4.1 | 5.6 | 3.4 | 4.1 | 5.7 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | - | - | 0.2 | 0.4 | 0.6 | 0.8 | 0.8 | 0.9 |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.0 | 0.5 | 1.3 | 1.8 | 2.2 | 2.0 |
| Combustible fuels | 12.6 | 19.2 | 33.0 | 49.3 | 53.1 | 58.3 | 57.4 | 48.2 |
| <i>Coal</i> | 5.3 | 10.2 | 25.2 | 34.3 | 35.5 | 34.7 | 33.4 | 30.5 |
| <i>Oil</i> | 7.3 | 9.1 | 7.7 | 8.9 | 9.2 | 9.6 | 10.0 | 8.1 |
| <i>Gas</i> | - | - | 0.1 | 5.9 | 8.2 | 13.8 | 13.8 | 9.4 |
| <i>Comb. renew. & waste</i> | - | - | - | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - |
| - Own use by power plant | 0.8 | 1.4 | 2.9 | 4.0 | 4.3 | 4.4 | 4.3 | .. |
| Net production | 14.0 | 21.3 | 32.1 | 49.9 | 55.7 | 59.1 | 59.4 | .. |
| Nuclear | .. | - | - | - | - | - | - | .. |
| Hydro | .. | 3.4 | 2.0 | 4.1 | 5.6 | 3.4 | 4.1 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | - | - | 0.0 | 0.0 | 0.0 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | 0.0 | 0.5 | 1.3 | 1.8 | 2.2 | .. |
| Combustible fuels | .. | 17.9 | 30.2 | 45.3 | 48.9 | 53.9 | 53.1 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | - | - | - | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | - | - | 0.3 | 0.6 | 0.8 | 1.1 | 1.2 | 0.4 |
| + Imports | 0.1 | 0.7 | 1.3 | 1.7 | 5.6 | 6.4 | 7.6 | 7.6 |
| - Exports | 0.0 | 0.0 | 0.6 | 1.7 | 1.8 | 2.1 | 2.0 | 3.2 |
| Electrical energy supplied | 14.1 | 21.9 | 32.5 | 49.3 | 58.7 | 62.3 | 63.8 | .. |
| - Transmission & distr. losses | 1.0 | 1.6 | 2.9 | 4.3 | 5.6 | 4.9 | 5.1 | .. |
| - Statistical difference | - | - | - | - | - | -0.0 | - | .. |
| Total consumption | 13.0 | 20.3 | 29.7 | 45.0 | 53.1 | 57.5 | 58.8 | .. |
| - Energy industry consumption ⁽²⁾ | 0.3 | 0.4 | 1.2 | 1.8 | 2.2 | 2.3 | 2.1 | .. |
| Final consumption | 12.7 | 19.9 | 28.5 | 43.2 | 50.9 | 55.2 | 56.6 | .. |
| Industry | 7.4 | 10.5 | 12.1 | 13.5 | 14.4 | 15.3 | 15.5 | .. |
| Transport | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.2 | .. |
| Commercial & publ. serv. | 2.0 | 3.3 | 5.6 | 12.3 | 16.5 | 18.8 | 19.7 | .. |
| Residential | 3.1 | 5.7 | 9.1 | 14.2 | 16.9 | 18.0 | 18.1 | .. |
| Agriculture & fishing | 0.2 | 0.4 | 1.6 | 2.9 | 2.9 | 2.9 | 3.1 | .. |
| Sector non specified | - | - | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

GREECE

4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 15.02 | 22.65 | 35.00 | 53.84 | 60.79 | 63.50 | 63.75 | 5.4 | 3.4 |
| - Hydro pumped storage | - | - | 0.23 | 0.42 | 0.61 | 0.79 | 0.84 | - | 7.5 |
| Total generation⁽¹⁾ | 15.02 | 22.65 | 34.78 | 53.43 | 60.18 | 62.71 | 62.91 | 5.4 | 3.3 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 14.81 | 22.41 | 34.13 | 52.83 | 59.76 | 62.60 | 62.44 | 5.4 | 3.4 |
| - Hydro pumped storage | - | - | 0.23 | 0.42 | 0.61 | 0.79 | 0.84 | - | 7.5 |
| Total generation ⁽¹⁾ | 14.81 | 22.41 | 33.90 | 52.41 | 59.15 | 61.81 | 61.60 | 5.3 | 3.4 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 2.35 | 3.41 | 1.77 | 3.69 | 5.87 | 2.59 | 3.31 | -1.8 | 3.5 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 0.00 | 0.45 | 1.70 | 1.82 | 2.25 | - | 47.7 |
| Coal | 5.72 | 10.16 | 25.17 | 34.31 | 32.26 | 34.68 | 33.36 | 9.7 | 1.6 |
| Oil | 6.74 | 8.85 | 6.96 | 8.17 | 8.81 | 8.90 | 9.21 | 0.2 | 1.6 |
| Gas | - | - | - | 5.79 | 10.43 e | 13.67 | 13.31 | - | - |
| Comb. renew. & waste | - | - | - | - | 0.09 | 0.16 | 0.17 | - | - |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 0.21 | 0.24 | 0.88 | 1.01 | 1.03 | 0.90 | 1.31 | 9.3 | 2.3 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 0.21 | 0.24 | 0.88 | 1.01 | 1.03 | 0.90 | 1.31 | 9.3 | 2.3 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.21 | 0.24 | 0.78 | 0.72 | 0.79 | 0.74 | 0.78 | 8.5 | -0.0 |
| Gas | - | - | 0.09 | 0.13 | 0.18 e | 0.11 | 0.49 | - | 9.8 |
| Comb. renew. & waste | - | - | - | 0.16 | 0.05 | 0.05 | 0.04 | - | - |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

GREECE

5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|------------|------------|------------|------------|---------------|------------|-------------|---|
| Total | 212 | 243 | 859 | 990 | 1009 e | 877 | 1289 | 2.3 |
| Total energy | 30 | 27 | 584 | 634 | 815 e | 734 | 770 | 1.5 |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | 51 | 52 | 48 | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | 30 | 27 | 584 | 634 | 764 e | 682 | 722 | 1.2 |
| Energy non specified/other | - | - | - | - | - | - | - | - |
| Total industry | 182 | 216 | 275 | 356 | 167 | 120 | 468 | 3.0 |
| Iron and steel | - | - | - | - | - | - | - | - |
| Chemical and petrochemical | 125 | 148 | 195 | 191 | 25 | 22 | 19 | -12.1 |
| Non-ferrous metals | - | - | - | 54 | 30 | 41 | 403 | - |
| Non-metallic minerals | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | - | - | - | - | - | - | - | - |
| Mining and quarrying | - | - | - | - | - | - | - | - |
| Food and tobacco | 31 | 45 | 80 | 111 | 94 | 39 | 33 | -4.8 |
| Pulp and printing | 26 | 23 | - | - | - | - | - | - |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | - | - | - | - | 18 | 18 | 13 | - |
| Non specified/other industries | - | - | - | - | - | - | - | - |
| Total transport | - | - | - | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | 27 | 23 | 51 | - |
| Commerce and pub. services | - | - | - | - | 27 | 23 | 20 | - |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | - | - | - | - | - | - | 31 | - |
| Sector non specified | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

GREECE

6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|------|------|------|------|------|------|-------|---|
| Total | - | - | 1174 | 2049 | 1737 | 1837 | 1690 | - |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | - | - | 1174 | 2034 | 1737 | 1825 | 1678 | - |
| Oil | - | - | - | 15 | - | 12 | 12 | - |
| Gas | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | - | - | 1174 | 2049 | 1737 | 1837 | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | 1174 | 2034 | 1737 | 1825 | .. | - |
| Oil | - | - | - | 15 | - | 12 | .. | - |
| Gas | - | - | - | - | - | - | .. | - |
| Comb. renew. & waste | - | - | - | - | - | - | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | - | - | - | - | - | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | - | - | - | - | - | .. | - |
| Gas | - | - | - | - | - | - | .. | - |
| Comb. renew. & waste | - | - | - | - | - | - | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

GREECE

7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 3.14 | 4.76 | 8.74 | 11.57 | 11.99 | 13.04 | 12.85 | 6.2 | 2.2 |
| Coal | 1.40 | 2.63 | 6.89 | 8.17 | 7.98 | 8.32 | 7.95 | 9.8 | 0.8 |
| Oil | 1.74 | 2.14 | 1.83 | 2.05 | 2.09 | 2.23 | 2.37 | 0.3 | 1.4 |
| Gas | - | - | 0.02 | 1.28 | 1.89 | 2.45 | 2.49 | - | 31.5 |
| Comb. renew. & waste | - | - | - | 0.06 | 0.03 | 0.04 | 0.04 | - | - |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 4.74 | 8.57 | 11.37 | 11.86 | 12.82 | 12.48 | .. | 2.1 |
| Coal | .. | 2.63 | 6.89 | 8.17 | 7.98 | 8.32 | 7.95 | .. | 0.8 |
| Oil | .. | 2.11 | 1.68 | 1.95 | 2.00 | 2.03 | 2.08 | .. | 1.2 |
| Gas | .. | - | - | 1.25 | 1.87 | 2.44 | 2.42 | .. | - |
| Comb. renew. & waste | .. | - | - | - | 0.02 | 0.03 | 0.03 | .. | - |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 0.19 | 0.29 | 0.15 | 0.36 | 0.65 | 0.38 | 0.48 | -1.3 | 6.6 |
| Hydro | 0.19 | 0.29 | 0.15 | 0.32 | 0.50 | 0.22 | 0.28 | -1.3 | 3.5 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.00 | 0.04 | 0.15 | 0.16 | 0.19 | - | 47.7 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

GREECE

8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|--------|--------|--------|---------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | 6 | - | - | - | - |
| Fuel input (TJ) | - | - | 152 | - | - | - | - |
| Electricity production (GWh) | - | - | 14 | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 20634 | 50531 | 59835 | 48872 | 52715 | 48170 | -0.3 |
| Fuel input (TJ) | 139207 | 288477 | 322431 | 256179 | 278862 | 254819 | -0.7 |
| Electricity production (GWh) | 10159 | 25166 | 31957 | 24586 | 27613 | 24774 | -0.1 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 2192 | 1735 | 2016 | 2046 | 2083 | 2142 | 1.2 |
| Fuel input (TJ) | 95237 | 70698 | 82232 | 83361 | 84558 | 85431 | 1.1 |
| Electricity production (GWh) | 8845 | 6963 | 8166 | 8750 | 8871 | 9168 | 1.5 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 58138 | 87060 e | 113520 | 112666 | - |
| Electricity production (GWh) | - | - | 5788 | 10453 e | 13669 | 13306 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | 969 | 1239 | 1185 | - |
| Electricity production (GWh) | - | - | - | 85 | 160 | 171 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 19004 | 32129 | 45925 | 43874 e | 50313 | 47419 | 2.2 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

GREECE

**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|-------|-------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | 4053 | 15094 | 13153 | 16057 | - |
| Fuel input (TJ) | - | - | 21849 | 77842 | 69553 | 86693 | - |
| Electricity production (GWh) | - | - | 2342 | 7678 | 7063 | 8582 | - |
| CHP Heat production (TJ) | - | - | 1174 | 2295 | 1737 | 1825 | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 26 | 138 | 93 | 77 | 185 | 266 | 3.7 |
| Fuel input (TJ) | 1114 | 5546 | 4152 | 3520 | 8573 | 12282 | 4.5 |
| Electricity production (GWh) | 244 | 783 | 719 | 851 | 771 | 822 | 0.3 |
| CHP Heat production (TJ) | - | - | - | 54 | - | 12 | - |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 840 | 1415 | 817 | 584 | 3412 | 8.1 |
| Electricity production (GWh) | - | 92 | 132 | 157 | 105 | 491 | 9.8 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | 2662 | 233 | 233 | 168 | - |
| Electricity production (GWh) | - | - | 163 | 25 | 25 | 19 | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | 161 | 132 | 197 | - |
| Electricity production (GWh) | - | - | - | 29 | 24 | 20 | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 244 | 875 | 3356 | 8740 | 7988 | 9934 | 14.5 |
| CHP Heat production (TJ) | - | - | 1174 | 2349 | 1737 | 1837 | - |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

GREECE

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 8.53 | 10.70 | 14.49 | 18.45 | 21.38 | 21.80 | 21.19 | 3.2 | 2.1 |
| Geothermal | - | - | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | - | 11.0 |
| Solar thermal | - | - | 0.06 | 0.10 | 0.11 | 0.16 | 0.17 | - | 6.4 |
| Coal | 0.52 | 0.47 | 1.20 | 0.88 | 0.40 | 0.53 | 0.40 | 5.1 | -6.0 |
| Oil | 6.46 | 8.07 | 9.78 | 12.41 | 14.48 | 14.32 | 13.67 | 2.5 | 1.9 |
| Gas | 0.00 | 0.00 | 0.11 | 0.38 | 0.82 | 0.84 | 1.00 | 25.0 | 13.0 |
| Comb. renew. & waste | 0.45 | 0.45 | 0.89 | 0.95 | 0.98 | 1.14 | 1.01 | 4.1 | 0.7 |
| Electricity | 1.09 | 1.71 | 2.45 | 3.71 | 4.52 | 4.75 | 4.87 | 4.9 | 3.9 |
| Heat | - | - | - | 0.03 | 0.06 | 0.04 | 0.04 | - | - |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 2.93 | 3.87 | 3.98 | 4.44 | 4.21 | 4.59 | 4.21 | 1.8 | 0.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | 0.00 | - | - | - | - |
| Coal | 0.37 | 0.32 | 1.06 | 0.85 | 0.40 | 0.53 | 0.39 | 6.3 | -5.4 |
| Oil | 1.93 | 2.65 | 1.68 | 1.94 | 1.94 | 2.09 | 1.77 | -0.8 | 0.3 |
| Gas | 0.00 | 0.00 | 0.01 | 0.24 | 0.44 | 0.41 | 0.45 | 21.4 | 25.5 |
| Comb. renew. & waste | - | - | 0.19 | 0.23 | 0.22 | 0.24 | 0.26 | - | 1.8 |
| Electricity | 0.63 | 0.90 | 1.04 | 1.17 | 1.22 | 1.32 | 1.33 | 3.0 | 1.4 |
| Heat | - | - | - | - | - | - | - | - | - |
| Transport | 2.07 | 3.19 | 5.04 | 6.40 | 7.52 | 7.76 | 7.53 | 5.4 | 2.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.02 | 0.00 | 0.00 | - | - | - | - | -17.4 | - |
| Oil | 2.05 | 3.18 | 5.03 | 6.38 | 7.44 | 7.64 | 7.42 | 5.4 | 2.2 |
| Gas | - | - | - | - | 0.01 | 0.02 | 0.02 | - | - |
| Comb. renew. & waste | - | - | - | - | 0.05 | 0.09 | 0.07 | - | - |
| Electricity | 0.00 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 5.9 | 3.7 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 0.18 | 0.28 | 0.65 | 1.31 | 2.07 | 2.13 | 2.22 | 8.0 | 7.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 13.4 |
| Coal | - | - | 0.00 | - | - | - | - | - | - |
| Oil | - | - | 0.16 | 0.25 | 0.45 | 0.41 | 0.39 | - | 5.1 |
| Gas | 0.00 | 0.00 | 0.01 | 0.01 | 0.09 | 0.10 | 0.13 | 9.2 | 19.6 |
| Comb. renew. & waste | - | - | - | 0.00 | 0.01 | 0.00 | 0.00 | - | - |
| Electricity | 0.18 | 0.28 | 0.48 | 1.05 | 1.53 | 1.61 | 1.69 | 6.1 | 7.2 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

GREECE

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 1.96 | 1.99 | 3.05 | 4.48 | 5.49 | 5.38 | 5.21 | 2.6 | 3.0 |
| Geothermal | - | - | .. | .. | 0.01 | 0.01 | 0.01 | .. | .. |
| Solar thermal | - | - | 0.06 | 0.10 | 0.11 | 0.16 | 0.17 | - | 6.3 |
| Coal | 0.04 | 0.04 | 0.02 | 0.02 | 0.00 | 0.00 | 0.01 | -4.2 | -6.7 |
| Oil | 1.20 | 1.01 | 1.48 | 2.41 | 2.96 | 2.65 | 2.56 | 1.2 | 3.1 |
| Gas | 0.00 | 0.00 | 0.00 | 0.00 | 0.14 | 0.18 | 0.21 | 4.0 | 29.0 |
| Comb. renew. & waste | 0.45 | 0.45 | 0.70 | 0.70 | 0.70 | 0.80 | 0.66 | 2.7 | -0.3 |
| Electricity | 0.26 | 0.49 | 0.78 | 1.22 | 1.52 | 1.54 | 1.56 | 6.6 | 3.9 |
| Heat | - | - | - | 0.03 | 0.06 | 0.04 | 0.04 | - | - |
| Agriculture & fishing | 0.65 | 0.75 | 1.03 | 1.11 | 1.17 | 1.10 | 1.09 | 2.7 | 0.4 |
| Geothermal | - | - | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | - | 7.5 |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | 0.00 | 0.01 | 0.00 | - | - | - | - |
| Oil | 0.64 | 0.71 | 0.89 | 0.84 | 0.92 | 0.83 | 0.80 | 2.0 | -0.6 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | - | - |
| Electricity | 0.02 | 0.03 | 0.13 | 0.25 | 0.23 | 0.25 | 0.27 | 13.4 | 3.9 |
| Heat | - | - | - | - | - | - | - | - | - |
| Other | 0.20 | 0.13 | 0.05 | 0.00 | - | - | - | -7.9 | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.20 | 0.13 | 0.05 | - | - | - | - | -7.9 | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | 0.00 | - | - | - | - | - |
| Electricity | - | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 0.53 | 0.50 | 0.70 | 0.72 | 0.91 | 0.84 | 0.93 | 1.63 | 1.61 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

GREECE

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 8.53 | 10.70 | 14.49 | 18.45 | 20.79 | 21.38 | 21.80 | 21.19 |
| Total industry (Mtoe) | 2.93 | 3.87 | 3.98 | 4.44 | 4.14 | 4.21 | 4.59 | 4.21 |
| Iron and steel | 0.46 | 0.35 | 0.22 | 0.19 | 0.22 | 0.23 | 0.25 | 0.23 |
| Chem. and petrochemical | 0.28 | 0.21 | 0.31 | 0.27 | 0.27 | 0.27 | 0.22 | 0.26 |
| Non-ferrous metals | 0.55 | 0.69 | 0.62 | 0.81 | 0.84 | 0.79 | 0.85 | 0.74 |
| Non-metallic minerals | 0.52 | 1.16 | 1.28 | 1.29 | 1.12 | 1.10 | 1.48 | 1.12 |
| Transport equipment | 0.01 | 0.01 | 0.01 | 0.04 | 0.03 | 0.03 | 0.03 | 0.03 |
| Machinery | 0.03 | 0.03 | 0.04 | 0.07 | 0.06 | 0.06 | 0.07 | 0.07 |
| Mining and quarrying | 0.09 | 0.11 | 0.09 | 0.13 | 0.09 | 0.09 | 0.10 | 0.09 |
| Food and tobacco | 0.28 | 0.22 | 0.34 | 0.65 | 0.64 | 0.66 | 0.64 | 0.66 |
| Paper, pulp and printing | 0.14 | 0.15 | 0.14 | 0.17 | 0.13 | 0.15 | 0.15 | 0.14 |
| Wood and wood products | 0.01 | 0.01 | 0.01 | 0.05 | 0.05 | 0.05 | 0.06 | 0.05 |
| Construction | - | - | 0.00 | 0.17 | 0.17 | 0.18 | 0.16 | 0.15 |
| Textile and leather | 0.05 | 0.09 | 0.22 | 0.21 | 0.14 | 0.13 | 0.14 | 0.17 |
| Non specified/other | 0.54 | 0.84 | 0.71 | 0.40 | 0.39 | 0.47 | 0.45 | 0.50 |
| Electricity consumption (Mtoe) | 1.09 | 1.71 | 2.45 | 3.71 | 4.38 | 4.52 | 4.75 | 4.87 |
| Total industry (Mtoe) | 0.63 | 0.90 | 1.04 | 1.17 | 1.24 | 1.22 | 1.32 | 1.33 |
| Iron and steel | 0.04 | 0.08 | 0.09 | 0.08 | 0.14 | 0.15 | 0.17 | 0.15 |
| Chem. and petrochemical | 0.08 | 0.10 | 0.12 | 0.10 | 0.05 | 0.05 | 0.01 | 0.07 |
| Non-ferrous metals | 0.25 | 0.27 | 0.29 | 0.33 | 0.40 | 0.35 | 0.40 | 0.34 |
| Non-metallic minerals | 0.07 | 0.13 | 0.15 | 0.18 | 0.21 | 0.20 | 0.22 | 0.19 |
| Transport equipment | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| Machinery | 0.02 | 0.03 | 0.04 | 0.05 | 0.05 | 0.05 | 0.06 | 0.06 |
| Mining and quarrying | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 |
| Food and tobacco | 0.02 | 0.04 | 0.06 | 0.10 | 0.16 | 0.17 | 0.19 | 0.19 |
| Paper, pulp and printing | 0.03 | 0.04 | 0.04 | 0.04 | 0.05 | 0.05 | 0.06 | 0.05 |
| Wood and wood products | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 |
| Construction | - | - | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| Textile and leather | 0.05 | 0.09 | 0.09 | 0.09 | 0.07 | 0.06 | 0.07 | 0.07 |
| Non specified/other | 0.05 | 0.08 | 0.12 | 0.12 | 0.07 | 0.07 | 0.08 | 0.14 |
| Total industry (TWh) | 7.37 | 10.50 | 12.11 | 13.55 | 14.42 | 14.16 | 15.33 | 15.49 |
| Iron and steel | 0.50 | 0.95 | 1.00 | 0.98 | 1.68 | 1.78 | 1.99 | 1.69 |
| Chem. and petrochemical | 0.97 | 1.20 | 1.38 | 1.21 | 0.57 | 0.53 | 0.10 | 0.76 |
| Non-ferrous metals | 2.90 | 3.18 | 3.32 | 3.86 | 4.62 | 4.11 | 4.59 | 3.96 |
| Non-metallic minerals | 0.78 | 1.55 | 1.78 | 2.07 | 2.41 | 2.31 | 2.58 | 2.25 |
| Transport equipment | 0.06 | 0.12 | 0.16 | 0.18 | 0.13 | 0.12 | 0.13 | 0.16 |
| Machinery | 0.22 | 0.33 | 0.41 | 0.61 | 0.57 | 0.60 | 0.67 | 0.68 |
| Mining and quarrying | 0.14 | 0.21 | 0.28 | 0.28 | 0.26 | 0.32 | 0.36 | 0.36 |
| Food and tobacco | 0.24 | 0.46 | 0.71 | 1.21 | 1.90 | 2.01 | 2.24 | 2.23 |
| Paper, pulp and printing | 0.32 | 0.49 | 0.51 | 0.51 | 0.54 | 0.58 | 0.65 | 0.61 |
| Wood and wood products | 0.06 | 0.11 | 0.10 | 0.14 | 0.22 | 0.24 | 0.27 | 0.27 |
| Construction | - | - | 0.01 | 0.08 | 0.01 | 0.01 | 0.01 | 0.01 |
| Textile and leather | 0.60 | 1.03 | 1.07 | 1.00 | 0.76 | 0.74 | 0.83 | 0.84 |
| Non specified/other | 0.59 | 0.88 | 1.38 | 1.43 | 0.77 | 0.82 | 0.91 | 1.67 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

GREECE

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-----------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Total imports⁽¹⁾ | 79 | 654 | 1330 | 1390 | 1729 | 5616 | 6140 | 6412 | 7575 |
| Imports from: | | | | | | | | | |
| Total OECD | - | - | 16 | 44 | - | 263 | 453 | 1218 | 1759 |
| Austria | - | - | 16 | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | 44 | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | 263 | 453 | 1129 | 1759 |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | 89 | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | 79 | 654 | 1314 | 1346 | 1729 | 5353 | 5687 | 5194 | 5816 |
| Albania | - | 151 | 165 | 198 | 50 | 15 | 26 | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | 320 | 652 | 1067 | 4543 | 4460 | 4293 | 4628 |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | 795 | 1201 | 901 | 1188 |
| Georgia | - | 58 | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | 79 | 445 | 829 | 496 | 612 | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

GREECE

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|-----------|-----------|------------|------------|-------------|-------------|-------------|-------------|-------------|
| Total exports ⁽¹⁾ | 34 | 38 | 619 | 593 | 1740 | 1836 | 1938 | 2057 | 1962 |
| Exports to: | | | | | | | | | |
| Total OECD | - | - | - | - | - | 710 | 945 | 173 | 210 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | 710 | 945 | 173 | 180 |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | 30 |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | 34 | 38 | 619 | 593 | 1740 | 1126 | 993 | 1884 | 1752 |
| Albania | - | - | 457 | 391 | 1111 | 1056 | 978 | 1773 | 1657 |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | 67 | 9 | 205 | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | 70 | 15 | 111 | 95 |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | 34 | 38 | 95 | 193 | 424 | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

GREECE

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 3.81 | 5.16 | 8.31 | 8.72 | 10.69 | 13.05 | 13.33 | 13.51 | 13.73 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 1.29 | 1.42 | 2.41 | 2.52 | 3.07 | 3.11 | 3.13 | 3.15 | 3.18 |
| <i>of which: pumped storage</i> | - | - | 0.32 | 0.32 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | 0.01 | 0.01 | 0.01 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.03 | 0.23 | 0.49 | 0.75 | 0.85 | 1.02 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 2.53 | 3.74 | 5.90 | 6.17 | 7.39 | 9.45 | 9.44 | 9.51 | 9.52 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 1.08 | 1.86 | 3.89 | 4.22 | 4.49 | 4.81 | 4.81 | 4.81 | 4.81 |
| Liquid fuels | 1.13 | 1.66 | 2.01 | 1.96 | 1.84 | 2.17 | 2.17 | 2.23 | 2.24 |
| Natural gas | 0.10 | - | - | - | 1.06 | 2.45 | 2.45 | 2.45 | 2.45 |
| Comb. renew. & waste | - | - | - | - | - | 0.02 | 0.01 | 0.02 | 0.02 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 0.22 | 0.22 | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | - | - | - |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 5.31 | 5.48 | 5.68 | 6.00 | 6.00 | 6.05 | 6.00 |
| Internal combustion | - | - | 0.29 | 0.40 | 0.56 | 0.76 | 0.75 | 0.76 | 0.82 |
| Gas turbine | - | - | 0.29 | 0.16 | 0.30 | 0.46 | 0.46 | 0.46 | 0.46 |
| Combined cycle | - | - | - | 0.13 | 0.85 | 2.24 | 2.24 | 2.24 | 2.24 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | 3.55 | 4.92 | 6.06 | 8.53 | 9.64 | 9.96 | 10.61 | 10.39 |
| Available capacity | .. | .. | 6.04 | 6.31 | 10.32 | 9.80 | 9.67 | 11.09 | 11.09 |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

GREECE

15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 0.13 | 0.17 | 0.20 | 0.22 | 0.21 | 0.26 | 0.24 | 0.18 | 0.53 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 0.13 | 0.17 | 0.20 | 0.22 | 0.21 | 0.26 | 0.24 | 0.18 | 0.53 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 0.04 | - | - | - | - | - | - | - | - |
| Liquid fuels | 0.09 | 0.17 | 0.13 | 0.15 | 0.13 | 0.15 | 0.15 | 0.13 | 0.15 |
| Natural gas | - | - | 0.02 | 0.02 | 0.05 | 0.08 | 0.07 | 0.03 | 0.37 |
| Comb. renew. & waste | - | - | 0.05 | 0.05 | 0.04 | 0.03 | 0.02 | 0.01 | 0.01 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | - | - | - |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 0.11 | 0.13 | 0.13 | 0.11 | 0.08 | 0.05 | 0.05 |
| Internal combustion | - | - | - | - | - | 0.02 | 0.03 | 0.03 | 0.03 |
| Gas turbine | - | - | 0.02 | 0.02 | 0.02 | 0.07 | 0.06 | 0.05 | 0.39 |
| Combined cycle | - | - | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.05 | 0.05 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

GREECE

16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-------------------|--------|--------|--------|--------|------|------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Euro/ unit | | | | | | | | |
| Steam coal (t) | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil (t) | 7.35 | 17.04 | 74.15 | .. | .. | .. | .. | .. | .. |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | .. | .. | .. | c | c | c | c | c | c |
| | Euro/ toe | | | | | | | | |
| Steam coal | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil | 8 | 18 | 77 | .. | .. | .. | .. | .. | .. |
| Natural gas ⁽²⁾ | .. | .. | .. | c | c | c | c | c | c |
| End-user prices of electricity | | | | | | | | | |
| | Euro/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0029 | 0.0053 | 0.0302 | 0.0452 | 0.0539 | .. | .. | 0.0768 | 0.0820 |
| <i>of which: tax</i> | - | - | - | - | - | .. | .. | - | - |
| Household | | | | | | | | | |
| Price | 0.0068 | 0.0093 | 0.0550 | 0.0757 | 0.0903 | .. | .. | 0.1073 | 0.1093 |
| <i>of which: tax</i> | 0.0006 | 0.0008 | 0.0082 | 0.0056 | 0.0073 | .. | .. | 0.0092 | 0.0095 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

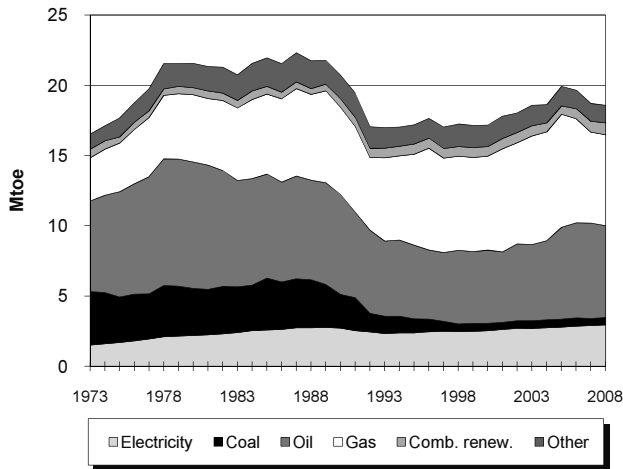


Figure 2. Electricity generation by fuel

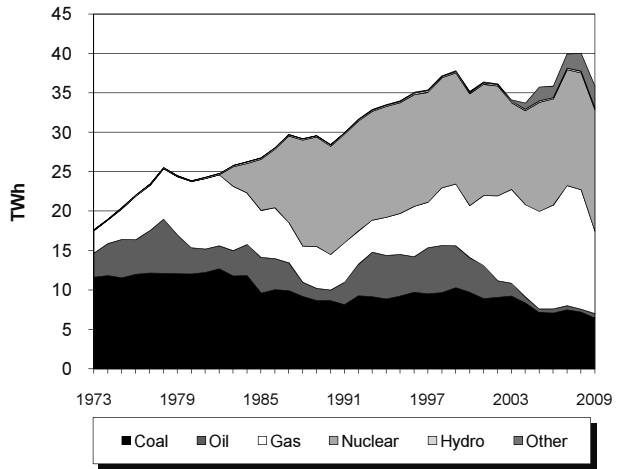


Figure 3. Electricity consumption by sector

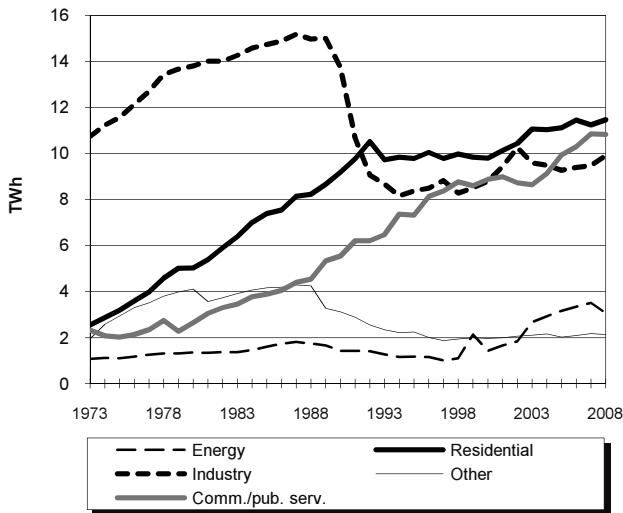


Figure 4. Electricity indicators

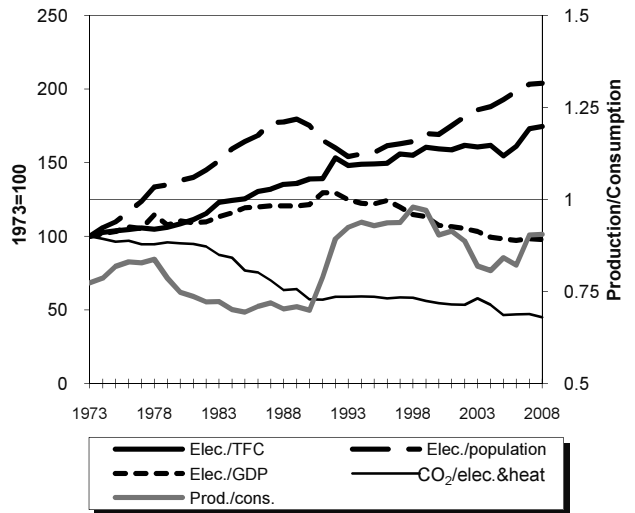
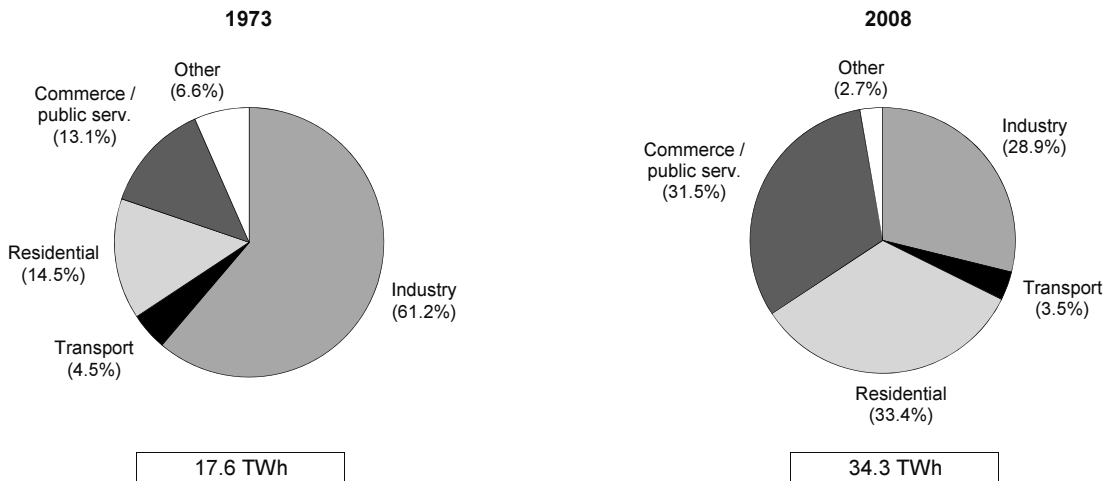


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 21.28 | 28.35 | 28.66 | 25.00 | 26.73 | 26.46 | 24.86 | 1.8 | -0.7 |
| GDP (billion 2000 USD) | 30.67 | 39.28 | 43.99 | 47.29 | 61.10 | 61.49 | 59.82 | 2.1 | 1.6 |
| TPES/GDP ⁽¹⁾ | 0.69 | 0.72 | 0.65 | 0.53 | 0.44 | 0.43 | 0.42 | -0.4 | -2.3 |
| Population (millions) | 10.43 | 10.71 | 10.37 | 10.21 | 10.06 | 10.04 | 10.01 | -0.0 | -0.2 |
| TPES/population ⁽²⁾ | 2.04 | 2.65 | 2.76 | 2.45 | 2.66 | 2.64 | 2.48 | 1.8 | -0.6 |
| TPES/GDP (2000 = 100) | 131 | 137 | 123 | 100 | 83 | 81 | 79 | -0.4 | -2.3 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 92 | 105 | 115 | 100 | 89 | 90 | .. | 1.3 | .. |
| Ele.TFC/population ⁽⁴⁾ | 1684 | 2390 | 3049 | 2884 | 3357 | 3421 | .. | 3.6 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 17.64 | 23.88 | 28.44 | 35.19 | 39.96 | 40.03 | 35.91 | 2.8 | 1.2 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 21.28 | 28.35 | 28.66 | 25.00 | 26.73 | 26.46 | 24.86 | 1.8 | -0.7 |
| Coal | 7.91 | 8.43 | 6.10 | 3.85 | 3.13 | 3.04 | 2.61 | -1.5 | -4.4 |
| Oil | 8.15 | 10.79 | 8.35 | 6.63 | 7.28 | 6.99 | 6.73 | 0.1 | -1.1 |
| Gas | 4.17 | 7.97 | 8.91 | 9.65 | 10.70 | 10.56 | 9.11 | 4.6 | 0.1 |
| Comb. renew & waste | 0.64 | 0.52 | 0.66 | 0.76 | 1.32 | 1.52 | 1.75 | 0.2 | 5.3 |
| Nuclear | - | - | 3.58 | 3.71 | 3.84 | 3.87 | 4.03 | - | 0.6 |
| Geothermal | - | - | 0.09 | 0.09 | 0.09 | 0.10 | 0.10 | - | 0.9 |
| Solar, wind, tide ⁽¹⁾ | - | - | - | - | 0.01 | 0.02 | 0.03 | - | - |
| Hydro | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 3.4 | 1.3 |
| Net electricity imports ⁽²⁾ | 0.40 | 0.64 | 0.96 | 0.30 | 0.34 | 0.34 | 0.47 | 5.3 | -3.6 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 17.6 | 23.9 | 28.4 | 35.2 | 35.8 | 40.0 | 40.0 | 35.9 |
| Nuclear | - | - | 13.7 | 14.2 | 13.8 | 14.7 | 14.8 | 15.4 |
| Hydro | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | 0.0 | 0.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 0.0 | 0.1 | 0.2 | 0.3 |
| Combustible fuels | 17.5 | 23.8 | 14.5 | 20.8 e | 21.7 | 25.0 | 24.8 | 19.9 |
| <i>Coal</i> | 11.6 | 12.0 | 8.7 | 9.7 | 7.1 | 7.5 | 7.2 | 6.4 |
| <i>Oil</i> | 3.0 | 3.3 | 1.4 | 4.4 | 0.5 e | 0.5 | 0.4 | 0.6 |
| <i>Gas</i> | 2.9 | 8.4 | 4.5 | 6.6 | 12.4 | 15.2 | 15.2 | 10.5 |
| <i>Comb. renew. & waste</i> | - | - | 0.0 | 0.1 | 1.7 | 1.7 | 2.1 | 2.4 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - |
| - Own use by power plant | 1.8 | 2.0 | 2.5 | 2.9 | 2.5 | 2.7 | 2.6 | .. |
| Net production | 15.9 | 21.9 | 25.9 | 32.3 | 33.2 | 37.2 | 37.4 | .. |
| Nuclear | .. | - | 12.9 | 13.0 | 12.8 | 13.8 | 14.0 | .. |
| Hydro | .. | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | - | - | - | - | 0.0 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | - | - | 0.0 | 0.1 | 0.2 | .. |
| Combustible fuels | .. | 21.8 | 12.8 | 19.1 e | 20.2 | 23.1 | 23.0 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | - | - | - | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | - | - | - | - | - | - | - | - |
| + Imports | 5.7 | 10.2 | 13.3 | 9.5 | 15.6 | 14.7 | 12.8 | 10.7 |
| - Exports | 1.1 | 2.8 | 2.2 | 6.1 | 9.4 | 10.7 | 8.9 | 5.2 |
| Electrical energy supplied | 20.5 | 29.3 | 37.0 | 35.7 | 39.4 | 41.2 | 41.3 | .. |
| - Transmission & distr. losses | 1.9 | 2.4 | 4.0 | 4.8 | 3.9 | 4.0 | 3.9 | .. |
| - Statistical difference | - | - | - | - | - | - | - | .. |
| Total consumption | 18.6 | 26.9 | 33.0 | 30.9 | 35.5 | 37.2 | 37.4 | .. |
| - Energy industry consumption ⁽²⁾ | 1.1 | 1.4 | 1.4 | 1.4 | 3.2 | 3.5 | 3.1 | .. |
| Final consumption | 17.6 | 25.6 | 31.6 | 29.4 | 32.3 | 33.7 | 34.3 | .. |
| Industry | 10.7 | 13.8 | 13.8 | 8.8 | 9.3 | 9.5 | 9.9 | .. |
| Transport | 0.8 | 1.1 | 1.2 | 1.0 | 1.1 | 1.2 | 1.2 | .. |
| Commercial & publ. serv. | 2.3 | 2.6 | 5.5 | 8.9 | 9.9 | 10.9 | 10.8 | .. |
| Residential | 2.6 | 5.0 | 9.2 | 9.8 | 11.1 | 11.3 | 11.5 | .. |
| Agriculture & fishing | 1.0 | 1.6 | 1.9 | 1.0 | 0.9 | 0.9 | 0.9 | .. |
| Sector non specified | 0.2 | 1.5 | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 18.99 | 23.88 | 28.44 | 35.19 | 35.86 | 39.96 | 40.03 | 2.6 | 1.9 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation⁽¹⁾ | 18.99 | 23.88 | 28.44 | 35.19 | 35.86 | 39.96 | 40.03 | 2.6 | 1.9 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 17.92 | 22.66 | 27.46 | 34.69 | 35.50 | 39.63 | 39.64 | 2.7 | 2.1 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 17.92 | 22.66 | 27.46 | 34.69 | 35.50 | 39.63 | 39.64 | 2.7 | 2.1 |
| Nuclear | - | - | 13.73 | 14.18 | 13.46 | 14.68 | 14.82 | - | 0.4 |
| Hydro | 0.08 | 0.11 | 0.18 | 0.18 | 0.19 | 0.21 | 0.21 | 5.0 | 1.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | 0.04 | 0.11 | 0.21 | - | - |
| Coal | 11.15 | 11.60 | 8.54 | 9.71 | 7.09 | 7.49 | 7.21 | -1.7 | -0.9 |
| Oil | 3.82 | 2.97 | 1.03 | 4.34 | 0.50 | 0.54 | 0.36 | -7.9 | -5.7 |
| Gas | 2.86 | 7.98 | 3.96 | 6.18 | 12.88 | 14.96 | 14.87 | 2.0 | 7.6 |
| Comb. renew. & waste | - | - | 0.03 | 0.11 | 1.35 | 1.65 | 1.98 | - | 25.3 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 1.07 | 1.21 | 0.97 | 0.50 | 0.36 | 0.33 | 0.38 | -0.6 | -5.1 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 1.07 | 1.21 | 0.97 | 0.50 | 0.36 | 0.33 | 0.38 | -0.6 | -5.1 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | - | - | 0.00 | - | - |
| Coal | 0.67 | 0.44 | 0.13 | - | - | - | - | -9.6 | - |
| Oil | 0.25 | 0.35 | 0.33 | 0.07 | 0.02 | - | - | 1.7 | - |
| Gas | 0.15 | 0.43 | 0.51 | 0.42 | 0.29 | 0.28 | 0.31 | 7.9 | -2.8 |
| Comb. renew. & waste | - | - | - | 0.01 | 0.05 | 0.06 | 0.08 | - | - |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|------------|-------------|------------|------------|------------|------------|------------|---|
| Total | 963 | 1091 | 876 | 492 | 326 | 304 | 357 | -4.9 |
| Total energy | - | - | - | 123 | 24 | 36 | 25 | - |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | 80 | 24 | 36 | 25 | - |
| Energy non specified/other | - | - | - | 43 | - | - | - | - |
| Total industry | - | - | - | 369 | 271 | 248 | 311 | - |
| Iron and steel | - | - | - | - | - | - | - | - |
| Chemical and petrochemical | - | - | - | 81 | 45 | 72 | 51 | - |
| Non-ferrous metals | - | - | - | 29 | - | - | - | - |
| Non-metallic minerals | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | - | - | - | 1 | 22 | 20 | 20 | - |
| Mining and quarrying | - | - | - | - | - | - | - | - |
| Food and tobacco | - | - | - | 186 | 159 | 107 | 206 | - |
| Pulp and printing | - | - | - | 64 | 45 | 49 | 34 | - |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | - | - | - | 1 | - | - | - | - |
| Non specified/other industries | - | - | - | 7 | - | - | - | - |
| Total transport | - | - | - | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | - | - | - | - |
| Other | 963 | 1091 | 876 | - | 31 | 20 | 21 | -18.7 |
| Commerce and pub. services | - | - | - | - | 31 | 20 | 20 | - |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | - | - | - | - | - | - | - | - |
| Sector non specified | 963 | 1091 | 876 | - | - | - | 1 | -31.4 |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|--------------|--------------|--------------|----------------|--------------|--------------|--------------|---|
| Total | 79310 | 73854 | 69157 | 63596 e | 57021 | 56125 | 51730 | -1.5 |
| Nuclear | - | - | 606 | 669 | 540 | 554 | 509 | - |
| Geothermal | - | - | 218 | 234 | 196 | 201 | 221 | - |
| Coal | 27748 | 23580 | 18749 | 9387 | 10349 | 9562 | 6979 | -4.9 |
| Oil | 19857 | 12886 | 4831 | 1040 | 137 | 487 | 750 | -16.6 |
| Gas | 31619 | 36830 | 43791 | 51035 | 44076 | 43380 | 41400 | 0.9 |
| Comb. renew. & waste | 86 | 558 | 962 | 1231 e | 1723 | 1941 | 1871 | 7.2 |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 50287 | 53676 | 64007 | 61507 e | 54961 | 54127 | .. | 0.0 |
| Nuclear | - | - | 606 | 669 | 540 | 554 | .. | - |
| Geothermal | - | - | 218 | 234 | 196 | 201 | .. | - |
| Coal | 20559 | 19620 | 18749 | 9387 | 10299 | 9532 | .. | -3.9 |
| Oil | 9599 | 6260 | 4420 | 995 | 137 | 487 | .. | -13.2 |
| Gas | 20129 | 27238 | 39127 | 49014 | 42096 | 41436 | .. | 2.4 |
| Comb. renew. & waste | - | 558 | 887 | 1208 e | 1693 | 1917 | .. | 7.1 |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | 29023 | 20178 | 5150 | 2089 | 2060 | 1998 | .. | -12.1 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | 7189 | 3960 | - | - | 50 | 30 | .. | -23.8 |
| Oil | 10258 | 6626 | 411 | 45 | - | - | .. | - |
| Gas | 11490 | 9592 | 4664 | 2021 | 1980 | 1944 | .. | -8.5 |
| Comb. renew. & waste | 86 | - | 75 | 23 | 30 | 24 | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 6.35 | 9.35 | 6.03 | 6.46 | 6.22 | 6.70 | 6.57 | -0.3 | 0.5 |
| Coal | 4.04 | 4.82 | 3.13 | 2.87 | 2.05 | 2.16 | 2.07 | -1.5 | -2.3 |
| Oil | 1.17 | 1.45 | 0.71 | 1.07 | 0.15 | 0.14 | 0.10 | -2.9 | -10.5 |
| Gas | 1.13 | 3.08 | 2.16 | 2.45 | 3.56 | 3.87 | 3.72 | 3.9 | 3.1 |
| Comb. renew. & waste | 0.00 | 0.00 | 0.03 | 0.06 | 0.47 | 0.54 | 0.68 | 16.8 | 18.8 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 8.13 | 5.22 | 6.27 | 6.12 | 6.60 | 6.46 | .. | 1.2 |
| Coal | .. | 4.52 | 2.97 | 2.87 | 2.05 | 2.15 | 2.07 | .. | -2.0 |
| Oil | .. | 1.03 | 0.45 | 1.06 | 0.14 | 0.14 | 0.10 | .. | -8.2 |
| Gas | .. | 2.59 | 1.77 | 2.28 | 3.47 | 3.78 | 3.62 | .. | 4.1 |
| Comb. renew. & waste | .. | - | 0.03 | 0.06 | 0.46 | 0.53 | 0.67 | .. | 18.7 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | - | - | 3.58 | 3.71 | 3.52 | 3.84 | 3.87 | - | 0.4 |
| Nuclear | - | - | 3.58 | 3.71 | 3.52 | 3.84 | 3.87 | - | 0.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | 0.00 | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.03 | 0.04 | 3.4 | 4.9 |
| Hydro | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 3.4 | 1.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 0.00 | 0.01 | 0.02 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

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8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|--------|-------|---------|-------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | 98 | 154 | 161 | - |
| Fuel input (TJ) | - | - | - | 2494 | 3780 | 3632 | - |
| Electricity production (GWh) | - | - | - | 115 | 268 | 265 | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 14379 | 10826 | 10429 | 9262 | 9315 | 9024 | -1.0 |
| Fuel input (TJ) | 129149 | 93889 | 87353 | 67875 | 70331 | 67769 | -1.8 |
| Electricity production (GWh) | 11148 | 7861 | 8290 | 6457 | 6697 | 6442 | -1.1 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 1395 | 293 | - | 11 | 479 | 943 | 6.7 |
| Electricity production (GWh) | 109 | 22 | - | 2 | 25 | 56 | 5.3 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 719 | 241 | 962 | 121 | 138 | 83 | -5.8 |
| Fuel input (TJ) | 29039 | 9590 | 38687 | 4472 | 5169 | 3372 | -5.6 |
| Electricity production (GWh) | 2658 | 850 | 4149 | 453 | 517 | 334 | -5.1 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 89261 | 38859 | 37602 | 55923 | 70042 | 71432 | 3.4 |
| Electricity production (GWh) | 7490 | 3152 | 3620 | 5940 | 7296 | 7257 | 4.7 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 14366 | 16533 | 21540 | - |
| Electricity production (GWh) | - | - | - | 1106 | 1331 | 1685 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 405 | 54 | 64 | - |
| Electricity production (GWh) | - | - | - | 38 | 5 | 5 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 228 | 1140 | 596 | - |
| Electricity production (GWh) | - | - | - | 22 | 116 | 48 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 21405 | 11885 | 16059 e | 14133 | 16255 | 16092 | 1.7 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|-------|-------|-------|-------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | 61 | 51 | 31 | - |
| Fuel input (TJ) | - | - | - | 1529 | 1398 | 743 | - |
| Electricity production (GWh) | - | - | - | 63 | 67 | 42 | - |
| CHP Heat production (TJ) | - | - | - | 1001 | 906 | 439 | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 2430 | 2551 | 2586 | 354 | 352 | 408 | -9.7 |
| Fuel input (TJ) | 22077 | 22237 | 27324 | 5135 | 5146 | 5445 | -7.5 |
| Electricity production (GWh) | 713 | 688 | 1300 | 367 | 341 | 337 | -3.9 |
| CHP Heat production (TJ) | 13014 | 13888 | 15193 | 2793 | 2909 | 3066 | -8.0 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 842 | 1013 | 5541 | 3640 | 3821 | 3260 | 6.7 |
| Electricity production (GWh) | 72 | 98 | 117 | 88 | 89 | 63 | -2.4 |
| CHP Heat production (TJ) | 329 | 395 | 3545 | 2176 | 2333 | 2028 | 9.5 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 361 | 219 | 145 | 25 | 2 | 14 | -14.2 |
| Fuel input (TJ) | 14533 | 8793 | 5604 | 1001 | 80 | 581 | -14.0 |
| Electricity production (GWh) | 658 | 501 | 255 | 68 | 18 | 21 | -16.2 |
| CHP Heat production (TJ) | 8301 | 4910 | 4014 | 561 | - | 390 | -13.1 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 25948 | 35818 | 55915 | 84404 | 90479 | 85779 | 5.0 |
| Electricity production (GWh) | 916 | 1321 | 2982 | 7220 | 7936 | 7919 | 10.5 |
| CHP Heat production (TJ) | 14221 | 20002 | 27052 | 32624 | 30503 | 31222 | 2.5 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | 133 | 398 | 823 | 2201 | - |
| Electricity production (GWh) | - | - | 10 | 27 | 43 | 75 | - |
| CHP Heat production (TJ) | - | - | 75 | 249 | 449 | 667 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 988 | 2436 | 3694 | 3388 | 3266 | 6.9 |
| Electricity production (GWh) | - | 34 | 110 | 166 | 166 | 170 | 9.4 |
| CHP Heat production (TJ) | - | 318 | 815 | 1018 | 996 | 1076 | 7.0 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | 191 | 255 | 412 | - |
| Electricity production (GWh) | - | - | - | 37 | 48 | 69 | - |
| CHP Heat production (TJ) | - | - | - | 1 | 1 | 1 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 2359 | 2642 | 4774 | 8036 | 8708 | 8696 | 6.8 |
| CHP Heat production (TJ) | 35865 | 39513 | 50694 | 40423 | 38097 | 38889 | -0.1 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|-------|-------|-------|-------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 72 | 9 | - | 67 | 77 | 65 | 11.6 |
| Fuel input (TJ) | 1622 | 246 | - | 1688 | 1985 | 1517 | 10.6 |
| Heat production (TJ) | 1033 | 170 | - | 1351 | 1629 | 1239 | 11.7 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 1810 | 1214 | 1 | 116 | 116 | 100 | -13.0 |
| Fuel input (TJ) | 19968 | 12675 | 12 | 1306 | 1338 | 1534 | -11.1 |
| Heat production (TJ) | 12844 | 8586 | 11 | 1006 | 1058 | 1252 | -10.1 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 812 | 784 | - | 2207 | 2102 | 2105 | 5.6 |
| Heat production (TJ) | 528 | 541 | - | 1480 | 1514 | 1538 | 6.0 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 413 | 272 | 22 | 11 | 4 | 3 | -22.2 |
| Fuel input (TJ) | 17254 | 11229 | 907 | 395 | 161 | 115 | -22.5 |
| Heat production (TJ) | 11556 | 7976 | 817 | 329 | 137 | 97 | -21.7 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 28128 | 25668 | 20510 | 20806 | 19459 | 15938 | -2.6 |
| Heat production (TJ) | 17398 | 16828 | 16739 | 15852 | 13573 | 12158 | -1.8 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 133 | 291 | 107 | 268 | 375 | 247 | -0.9 |
| Heat production (TJ) | 86 | 240 | 72 | 229 | 277 | 197 | -1.1 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | 43445 | 34341 | 17639 | 20247 | 18188 | 16481 | -4.0 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 16.53 | 21.57 | 20.73 | 17.18 | 19.67 | 18.71 | 18.58 | 1.3 | -0.6 |
| Geothermal | - | - | 0.09 | 0.08 | 0.08 | 0.08 | 0.09 | - | 0.3 |
| Solar thermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Coal | 3.81 | 3.35 | 2.40 | 0.54 | 0.59 | 0.50 | 0.51 | -2.7 | -8.2 |
| Oil | 6.46 | 9.00 | 7.12 | 5.20 | 6.77 | 6.79 | 6.56 | 0.6 | -0.5 |
| Gas | 3.07 | 4.80 | 6.20 | 6.69 | 7.40 | 6.47 | 6.47 | 4.2 | 0.2 |
| Comb. renew. & waste | 0.62 | 0.49 | 0.62 | 0.69 | 0.73 | 0.78 | 0.84 | 0.0 | 1.7 |
| Electricity | 1.51 | 2.20 | 2.72 | 2.53 | 2.86 | 2.90 | 2.95 | 3.5 | 0.5 |
| Heat | 1.06 | 1.72 | 1.59 | 1.45 | 1.24 | 1.19 | 1.16 | 2.4 | -1.8 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 6.13 | 7.41 | 6.04 | 3.26 | 3.13 | 3.09 | 3.10 | -0.1 | -3.6 |
| Geothermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 1.50 | 1.24 | 0.52 | 0.29 | 0.35 | 0.36 | 0.35 | -6.1 | -2.2 |
| Oil | 1.53 | 1.70 | 0.90 | 0.27 | 0.21 | 0.21 | 0.20 | -3.1 | -7.9 |
| Gas | 1.69 | 2.64 | 3.20 | 1.37 | 1.26 | 1.22 | 1.21 | 3.8 | -5.3 |
| Comb. renew. & waste | 0.02 | 0.01 | 0.00 | 0.06 | 0.12 | 0.12 | 0.12 | -10.5 | 23.0 |
| Electricity | 0.92 | 1.19 | 1.18 | 0.76 | 0.81 | 0.81 | 0.85 | 1.5 | -1.8 |
| Heat | 0.46 | 0.63 | 0.23 | 0.52 | 0.38 | 0.36 | 0.36 | -4.0 | 2.6 |
| Transport | 2.28 | 2.88 | 2.93 | 3.04 | 4.28 | 4.42 | 4.53 | 1.5 | 2.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.38 | 0.13 | 0.00 | 0.00 | - | - | - | -30.3 | - |
| Oil | 1.84 | 2.66 | 2.83 | 2.95 | 4.17 | 4.29 | 4.26 | 2.6 | 2.3 |
| Gas | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 14.9 |
| Comb. renew. & waste | - | - | - | - | 0.01 | 0.03 | 0.16 | - | - |
| Electricity | 0.07 | 0.09 | 0.10 | 0.09 | 0.10 | 0.11 | 0.10 | 2.4 | 0.0 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 1.12 | 1.40 | 2.02 | 3.02 | 3.21 | 2.84 | 2.79 | 3.5 | 1.8 |
| Geothermal | - | - | 0.08 | 0.08 | 0.07 | 0.07 | 0.08 | - | -0.6 |
| Solar thermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Coal | 0.43 | 0.21 | 0.09 | 0.02 | 0.00 | 0.00 | 0.00 | -8.7 | -16.8 |
| Oil | 0.17 | 0.45 | 0.29 | 0.07 | 0.03 | 0.02 | 0.02 | 3.2 | -14.0 |
| Gas | 0.13 | 0.21 | 0.61 | 1.77 | 1.96 | 1.53 | 1.44 | 9.4 | 4.9 |
| Comb. renew. & waste | - | 0.00 | 0.01 | 0.05 | 0.07 | 0.08 | 0.08 | - | 11.8 |
| Electricity | 0.20 | 0.23 | 0.48 | 0.76 | 0.89 | 0.93 | 0.93 | 5.3 | 3.8 |
| Heat | 0.20 | 0.30 | 0.46 | 0.26 | 0.20 | 0.21 | 0.24 | 5.1 | -3.5 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 3.79 | 5.15 | 6.76 | 5.59 | 6.20 | 5.55 | 5.57 | 3.5 | -1.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Coal | 1.39 | 1.73 | 1.74 | 0.19 | 0.23 | 0.14 | 0.16 | 1.3 | -12.4 |
| Oil | 0.99 | 1.23 | 1.17 | 0.31 | 0.16 | 0.12 | 0.10 | 1.0 | -12.6 |
| Gas | 0.34 | 0.61 | 1.64 | 3.02 | 3.64 | 3.17 | 3.29 | 9.7 | 3.9 |
| Comb. renew. & waste | 0.56 | 0.46 | 0.59 | 0.55 | 0.52 | 0.54 | 0.46 | 0.3 | -1.3 |
| Electricity | 0.22 | 0.43 | 0.79 | 0.84 | 0.98 | 0.97 | 0.99 | 7.8 | 1.2 |
| Heat | 0.29 | 0.68 | 0.83 | 0.67 | 0.66 | 0.62 | 0.55 | 6.4 | -2.2 |
| Agriculture & fishing | 1.05 | 1.42 | 1.13 | 0.67 | 0.55 | 0.50 | 0.53 | 0.5 | -4.1 |
| Geothermal | - | - | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | - | 14.5 |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.05 | 0.01 | 0.02 | 0.03 | 0.00 | 0.00 | 0.00 | -4.0 | -12.3 |
| Oil | 0.79 | 1.12 | 0.67 | 0.34 | 0.25 | 0.24 | 0.26 | -0.9 | -5.2 |
| Gas | 0.02 | 0.07 | 0.19 | 0.20 | 0.19 | 0.15 | 0.17 | 13.6 | -0.6 |
| Comb. renew. & waste | 0.02 | 0.02 | 0.01 | 0.03 | 0.01 | 0.01 | 0.01 | -4.0 | 0.4 |
| Electricity | 0.08 | 0.13 | 0.17 | 0.08 | 0.08 | 0.08 | 0.08 | 4.1 | -3.9 |
| Heat | 0.09 | 0.07 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | -0.9 | -28.8 |
| Other | 0.87 | 0.85 | 0.11 | 0.02 | - | - | - | -11.5 | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.06 | 0.03 | 0.03 | 0.00 | - | - | - | -5.0 | - |
| Oil | 0.47 | 0.31 | 0.08 | 0.02 | - | - | - | -9.7 | - |
| Gas | 0.29 | 0.36 | - | - | - | - | - | - | - |
| Comb. renew. & waste | 0.01 | 0.00 | 0.00 | - | - | - | - | -15.5 | - |
| Electricity | 0.02 | 0.13 | - | - | - | - | - | - | - |
| Heat | 0.02 | 0.03 | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 1.28 | 2.45 | 1.74 | 1.59 | 2.29 | 2.30 | 2.07 | 1.79 | 0.97 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

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12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 16.53 | 21.57 | 20.73 | 17.18 | 19.93 | 19.67 | 18.71 | 18.58 |
| Total industry (Mtoe) | 6.13 | 7.41 | 6.04 | 3.26 | 3.12 | 3.13 | 3.09 | 3.10 |
| Iron and steel | 1.72 | 1.90 | 1.28 | 0.45 | 0.37 | 0.39 | 0.39 | 0.37 |
| Chem. and petrochemical | 0.75 | 1.12 | 1.04 | 0.83 | 0.59 | 0.62 | 0.67 | 0.63 |
| Non-ferrous metals | 0.34 | 0.38 | 0.26 | 0.25 | 0.24 | 0.20 | 0.19 | 0.19 |
| Non-metallic minerals | 1.01 | 1.22 | 1.02 | 0.58 | 0.65 | 0.62 | 0.64 | 0.66 |
| Transport equipment | 0.21 | 0.24 | 0.17 | 0.09 | 0.14 | 0.15 | 0.15 | 0.15 |
| Machinery | 0.51 | 0.58 | 0.48 | 0.17 | 0.28 | 0.27 | 0.27 | 0.25 |
| Mining and quarrying | 0.17 | 0.17 | 0.17 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 |
| Food and tobacco | 0.65 | 0.88 | 0.95 | 0.47 | 0.46 | 0.47 | 0.42 | 0.45 |
| Paper, pulp and printing | 0.10 | 0.11 | 0.09 | 0.16 | 0.17 | 0.18 | 0.16 | 0.17 |
| Wood and wood products | 0.06 | 0.08 | 0.07 | 0.06 | 0.06 | 0.05 | 0.06 | 0.05 |
| Construction | 0.23 | 0.25 | 0.15 | 0.02 | 0.06 | 0.06 | 0.04 | 0.06 |
| Textile and leather | 0.34 | 0.41 | 0.30 | 0.07 | 0.04 | 0.03 | 0.03 | 0.02 |
| Non specified/other | 0.05 | 0.07 | 0.05 | 0.09 | 0.05 | 0.07 | 0.07 | 0.09 |
| Electricity consumption (Mtoe) | 1.51 | 2.20 | 2.72 | 2.53 | 2.78 | 2.86 | 2.90 | 2.95 |
| Total industry (Mtoe) | 0.92 | 1.19 | 1.18 | 0.76 | 0.80 | 0.81 | 0.81 | 0.85 |
| Iron and steel | 0.13 | 0.16 | 0.15 | 0.05 | 0.07 | 0.07 | 0.06 | 0.06 |
| Chem. and petrochemical | 0.21 | 0.30 | 0.30 | 0.24 | 0.18 | 0.21 | 0.23 | 0.23 |
| Non-ferrous metals | 0.14 | 0.16 | 0.15 | 0.09 | 0.08 | 0.04 | 0.04 | 0.04 |
| Non-metallic minerals | 0.07 | 0.10 | 0.10 | 0.07 | 0.08 | 0.08 | 0.08 | 0.10 |
| Transport equipment | 0.03 | 0.04 | 0.03 | 0.03 | 0.06 | 0.08 | 0.08 | 0.08 |
| Machinery | 0.09 | 0.11 | 0.13 | 0.05 | 0.11 | 0.11 | 0.11 | 0.11 |
| Mining and quarrying | 0.03 | 0.03 | 0.03 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 |
| Food and tobacco | 0.06 | 0.10 | 0.14 | 0.09 | 0.11 | 0.11 | 0.10 | 0.11 |
| Paper, pulp and printing | 0.03 | 0.04 | 0.05 | 0.04 | 0.05 | 0.05 | 0.04 | 0.04 |
| Wood and wood products | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Construction | 0.02 | 0.03 | 0.02 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 |
| Textile and leather | 0.07 | 0.08 | 0.07 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 |
| Non specified/other | 0.02 | 0.03 | 0.00 | 0.05 | 0.02 | 0.03 | 0.03 | 0.04 |
| Total industry (TWh) | 10.74 | 13.80 | 13.75 | 8.80 | 9.27 | 9.39 | 9.47 | 9.91 |
| Iron and steel | 1.52 | 1.89 | 1.75 | 0.58 | 0.76 | 0.78 | 0.74 | 0.75 |
| Chem. and petrochemical | 2.49 | 3.43 | 3.45 | 2.80 | 2.13 | 2.41 | 2.64 | 2.72 |
| Non-ferrous metals | 1.68 | 1.86 | 1.77 | 0.99 | 0.91 | 0.51 | 0.47 | 0.47 |
| Non-metallic minerals | 0.77 | 1.12 | 1.15 | 0.87 | 0.91 | 0.94 | 0.94 | 1.12 |
| Transport equipment | 0.40 | 0.51 | 0.37 | 0.29 | 0.75 | 0.89 | 0.94 | 0.96 |
| Machinery | 0.99 | 1.24 | 1.47 | 0.58 | 1.25 | 1.24 | 1.26 | 1.31 |
| Mining and quarrying | 0.34 | 0.38 | 0.31 | 0.10 | 0.08 | 0.07 | 0.06 | 0.06 |
| Food and tobacco | 0.75 | 1.12 | 1.64 | 1.09 | 1.23 | 1.25 | 1.19 | 1.25 |
| Paper, pulp and printing | 0.40 | 0.51 | 0.56 | 0.51 | 0.58 | 0.56 | 0.49 | 0.45 |
| Wood and wood products | 0.12 | 0.17 | 0.21 | 0.14 | 0.15 | 0.15 | 0.16 | 0.17 |
| Construction | 0.25 | 0.36 | 0.20 | 0.03 | 0.07 | 0.07 | 0.07 | 0.08 |
| Textile and leather | 0.79 | 0.90 | 0.83 | 0.23 | 0.19 | 0.15 | 0.14 | 0.12 |
| Non specified/other | 0.26 | 0.32 | 0.05 | 0.59 | 0.26 | 0.40 | 0.40 | 0.45 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

HUNGARY

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|--------------|--------------|-------------|-------------|--------------|--------------|--------------|--------------|
| Total imports⁽¹⁾ | 5732 | 10182 | 13299 | 3210 | 9523 | 15637 | 15393 | 14680 | 12774 |
| Imports from: | | | | | | | | | |
| Total OECD | 473 | 801 | 1076 | 1334 | 7976 | 9616 | 9056 | 10513 | 8296 |
| Austria | 170 | 252 | 298 | 482 | 426 | 809 | 465 | 1455 | 840 |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | 303 | 549 | 778 | 852 | 7550 | 8807 | 8591 | 9058 | 7456 |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | 5259 | 9381 | 12223 | 1876 | 1547 | 6021 | 6337 | 4167 | 4478 |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | 1 | 1 | - | - | 54 | - | 5 |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | 1428 | 955 | - | 283 | - | 1187 | 1432 | 252 | 720 |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | 36 | 100 | 62 | - | - | 18 | 1 | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | 3795 | 8326 | 12160 | 1592 | 1547 | 4816 | 4850 | 3915 | 3753 |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

HUNGARY

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|-------------|-------------|------------|-------------|-------------|-------------|--------------|-------------|
| Total exports⁽¹⁾ | 1070 | 2796 | 2152 | 805 | 6083 | 9410 | 8186 | 10694 | 8871 |
| Exports to: | | | | | | | | | |
| Total OECD | 1044 | 2641 | 1787 | 518 | 842 | 854 | 1063 | 243 | 722 |
| Austria | 492 | 364 | 281 | 173 | 842 | 854 | 1063 | 243 | 722 |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | 552 | 2277 | 1506 | 345 | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | 26 | 155 | 365 | 287 | 5241 | 8556 | 7123 | 10451 | 8149 |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | 117 | 4472 | 6690 | 5561 | 6537 | 5300 |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | 2 | 15 | 61 | 88 | - | 146 | 29 | 379 | 105 |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | 24 | 116 | 294 | 65 | 765 | 1693 | 1519 | 3430 | 2653 |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | 24 | 10 | 17 | 4 | 27 | 14 | 105 | 91 |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

HUNGARY

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 3.70 | 5.22 | 6.97 | 7.22 | 8.08 | 8.45 | 8.49 | 8.41 | 8.50 |
| Nuclear | - | - | 1.76 | 1.84 | 1.85 | 1.87 | 1.87 | 1.83 | 1.94 |
| Hydro | 0.02 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | 0.02 | 0.03 | 0.06 | 0.13 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 3.68 | 5.17 | 5.17 | 5.33 | 6.19 | 6.52 | 6.54 | 6.47 | 6.37 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 2.12 | 2.06 | 2.03 | 1.99 | 1.83 | 1.24 | 1.18 | 1.22 | 1.15 |
| Liquid fuels | 0.12 | 0.20 | 0.20 | 0.35 | 0.58 | 0.41 | 0.41 | 0.41 | 0.40 |
| Natural gas | - | - | - | - | - | 0.42 | 0.50 | 1.03 | 1.07 |
| Comb. renew. & waste | - | - | - | - | - | 0.37 | 0.37 | 0.31 | 0.31 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | 0.13 | 0.13 | 0.01 | - |
| Liquid / natural gas | 1.44 | 2.91 | 2.93 | 2.99 | 3.78 | 3.95 | 3.94 | 3.49 | 3.44 |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | 3.48 | 4.80 | 4.77 | 4.83 | 4.97 | 4.43 | 4.43 | 4.40 | 4.27 |
| Internal combustion | - | - | - | - | - | 0.43 | 0.43 | 0.44 | 0.47 |
| Gas turbine | 0.12 | 0.20 | 0.20 | 0.35 | 0.58 | 0.68 | 0.68 | 0.48 | 0.47 |
| Combined cycle | 0.08 | 0.17 | 0.20 | 0.15 | 0.64 | 0.99 | 1.01 | 1.16 | 1.16 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | 4.02 | 5.11 | 6.53 | 5.73 | 5.74 | 6.44 | 6.43 | 6.28 | 6.47 |
| Available capacity | 4.34 | 6.25 | 8.94 | 7.82 | 8.75 | 7.43 | 7.44 | 7.46 | 6.93 |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

HUNGARY

15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|------|------|------|------|------|------|------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 0.21 | 0.17 | 0.21 | 0.19 | 0.20 | 0.14 | 0.14 | 0.14 | 0.14 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 0.21 | 0.17 | 0.21 | 0.19 | 0.20 | 0.14 | 0.14 | 0.14 | 0.14 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | - | - | - | - | - | - | - |
| Liquid fuels | - | - | - | - | - | - | - | - | - |
| Natural gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | - | - | - |
| Solid / liquid / gas | 0.21 | 0.17 | 0.21 | 0.19 | 0.20 | 0.14 | 0.14 | 0.14 | 0.14 |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | 0.18 | 0.14 | 0.04 | 0.05 | 0.05 | - | - | - | - |
| Internal combustion | - | - | - | - | - | - | - | - | - |
| Gas turbine | - | - | - | - | - | - | - | - | - |
| Combined cycle | 0.03 | 0.03 | 0.17 | 0.14 | 0.15 | 0.14 | 0.14 | 0.14 | 0.14 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

HUNGARY

16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|--------------------------------|------|------|-------|-------|-------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Hungarian Forints/ unit | | | | | | | | |
| Steam coal (t) | .. | 372 | 1700 | c | c | c | c | c | c |
| Heavy fuel oil (t) | .. | 2740 | 5635 | 41246 | .. | .. | .. | .. | .. |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | .. | 2147 | 6217 | 28191 | 57038 | 82454 | 90714 | 107559 | 103825 |
| | Hungarian Forints/ toe | | | | | | | | |
| Steam coal | .. | 1564 | 8181 | c | c | c | c | c | c |
| Heavy fuel oil | .. | 2825 | 5809 | 42522 | .. | .. | .. | .. | .. |
| Natural gas ⁽²⁾ | .. | 2386 | 6908 | 31323 | 63375 | 91616 | 100793 | 119510 | 115361 |
| End-user prices of electricity | | | | | | | | | |
| | Hungarian Forints/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | .. | .. | 4.70 | 13.75 | 19.07 | 22.01 | 24.66 | 29.26 | 32.28 |
| <i>of which: tax</i> | .. | .. | - | - | 0.19 | 0.19 | 0.19 | 0.25 | 0.25 |
| Household | | | | | | | | | |
| Price | .. | 1.03 | 2.45 | 18.44 | 29.15 | 30.32 | 34.57 | 38.66 | 41.67 |
| <i>of which: tax</i> | .. | - | - | 1.98 | 5.59 | 5.05 | 5.76 | 6.44 | 7.65 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

ICELAND

Figure 1. Total final consumption by fuel

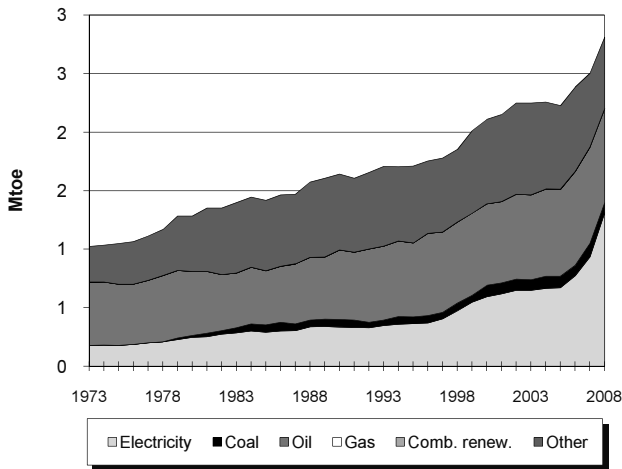


Figure 2. Electricity generation by fuel

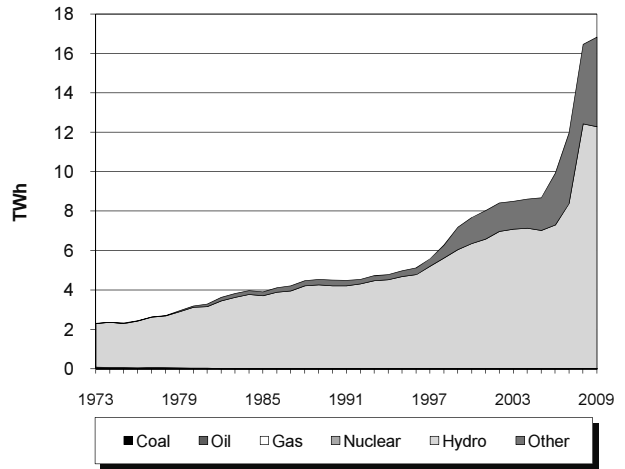


Figure 3. Electricity consumption by sector

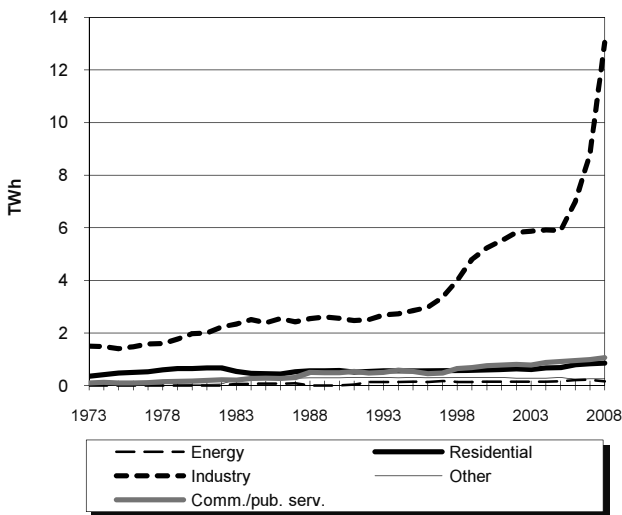


Figure 4. Electricity indicators

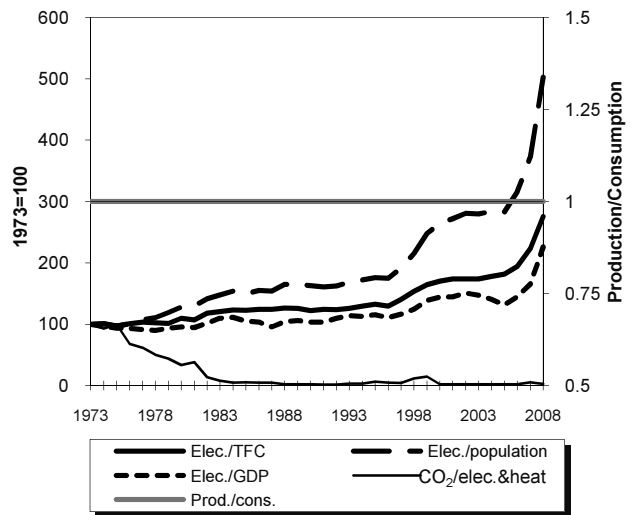
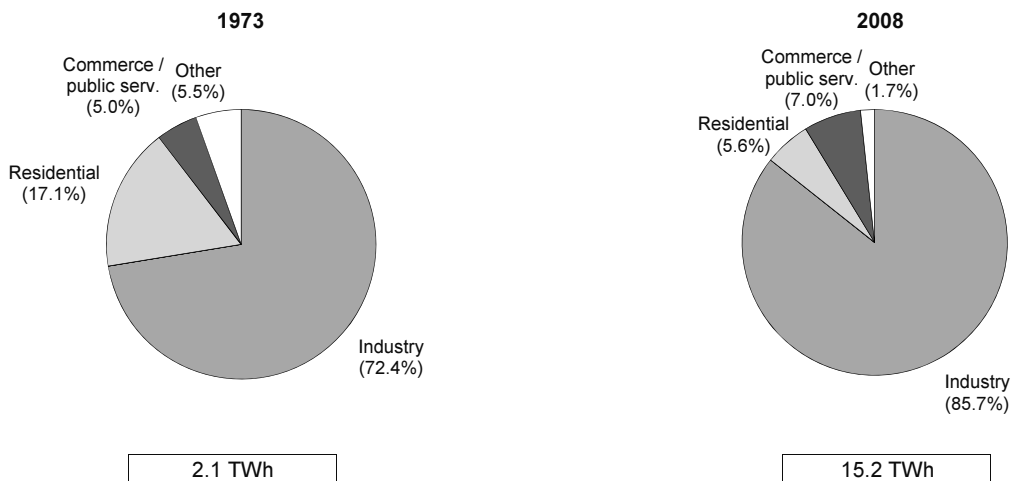


Figure 5. Total final electricity consumption by sector



ICELAND

1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|------|-------|-------|-------|-------|-------|-------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 1.12 | 1.50 | 2.09 | 3.10 | 4.89 | 5.25 | 5.52 | 3.7 | 5.3 |
| GDP (billion 2000 USD) | 3.58 | 5.16 | 6.76 | 8.70 | 11.82 | 11.98 | 11.37 | 3.8 | 2.8 |
| TPES/GDP ⁽¹⁾ | 0.31 | 0.29 | 0.31 | 0.36 | 0.41 | 0.44 | 0.49 | -0.1 | 2.4 |
| Population (millions) | 0.21 | 0.23 | 0.26 | 0.28 | 0.31 | 0.32 | 0.32 | 1.1 | 1.2 |
| TPES/population ⁽²⁾ | 5.28 | 6.56 | 8.19 | 11.03 | 15.74 | 16.47 | 17.31 | 2.6 | 4.0 |
| TPES/GDP (2000 = 100) | 88 | 81 | 87 | 100 | 116 | 123 | 136 | -0.1 | 2.4 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 73 | 70 | 73 | 100 | 116 | 160 | .. | -0.0 | .. |
| Ele.TFC/population ⁽⁴⁾ | 9772 | 12557 | 15339 | 24603 | 35016 | 47794 | .. | 2.7 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 2.32 | 3.18 | 4.51 | 7.68 | 11.98 | 16.47 | 16.84 | 4.0 | 7.2 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 1.12 | 1.50 | 2.09 | 3.10 | 4.89 | 5.25 | 5.52 | 3.7 | 5.3 |
| Coal | 0.00 | 0.02 | 0.06 | 0.10 | 0.11 | 0.09 | 0.08 | 31.3 | 1.0 |
| Oil | 0.58 | 0.58 | 0.62 | 0.70 | 0.83 | 0.81 | 0.84 | 0.5 | 1.6 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew & waste | - | - | - | 0.00 | 0.01 | 0.00 | 0.00 | - | - |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | 0.35 | 0.64 | 1.04 | 1.76 | 3.22 | 3.28 | 3.55 | 6.6 | 6.7 |
| Solar, wind, tide ⁽¹⁾ | - | - | - | - | - | - | - | - | - |
| Hydro | 0.19 | 0.27 | 0.36 | 0.55 | 0.72 | 1.07 | 1.06 | 3.9 | 5.8 |
| Net electricity imports ⁽²⁾ | - | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

ICELAND

3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|------------|------------|------------|------------|------------|-------------|-------------|-------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 2.3 | 3.2 | 4.5 | 7.7 | 8.7 | 12.0 | 16.5 | 16.8 |
| Nuclear | - | - | - | - | - | - | - | - |
| Hydro | 2.2 | 3.1 | 4.2 | 6.4 | 7.0 | 8.4 | 12.4 | 12.3 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | - | - | - | - | - | - | - | - |
| Geothermal | 0.0 | 0.1 | 0.3 | 1.3 | 1.7 | 3.6 | 4.0 | 4.6 |
| Solar | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - |
| Combustible fuels | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| <i>Coal</i> | - | - | - | - | - | - | - | - |
| <i>Oil</i> | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| <i>Gas</i> | - | - | - | - | - | - | - | - |
| <i>Comb. renew. & waste</i> | - | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - |
| - Own use by power plant | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | .. |
| Net production | 2.3 | 3.2 | 4.5 | 7.6 | 8.5 | 11.8 | 16.2 | .. |
| Nuclear | .. | - | - | - | - | - | - | .. |
| Hydro | .. | 3.1 | 4.2 | 6.3 | 6.9 | 8.3 | 12.3 | .. |
| Geothermal | .. | 0.1 | 0.3 | 1.3 | 1.6 | 3.5 | 3.9 | .. |
| Solar | .. | - | - | - | - | - | - | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | - | - | - | - | - | .. |
| Combustible fuels | .. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | - | - | - | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| - Used for pumped storage | - | - | - | - | - | - | - | - |
| + Imports | - | - | - | - | - | - | - | - |
| - Exports | - | - | - | - | - | - | - | - |
| Electrical energy supplied | 2.3 | 3.2 | 4.3 | 7.4 | 8.3 | 11.6 | 16.0 | .. |
| - Transmission & distr. losses | 0.2 | 0.3 | 0.4 | 0.3 | 0.4 | 0.5 | 0.6 | .. |
| - Statistical difference | - | - | - | - | - | - | 0.0 | .. |
| Total consumption | 2.1 | 2.9 | 3.9 | 7.1 | 8.0 | 11.1 | 15.4 | .. |
| - Energy industry consumption ⁽²⁾ | - | - | 0.0 | 0.2 | 0.2 | 0.2 | 0.2 | .. |
| Final consumption | 2.1 | 2.9 | 3.9 | 6.9 | 7.8 | 10.9 | 15.2 | .. |
| Industry | 1.5 | 2.0 | 2.6 | 5.2 | 5.9 | 8.8 | 13.1 | .. |
| Transport | - | - | - | - | - | - | - | .. |
| Commercial & publ. serv. | 0.1 | 0.2 | 0.5 | 0.8 | 0.9 | 1.0 | 1.1 | .. |
| Residential | 0.4 | 0.6 | 0.6 | 0.6 | 0.7 | 0.8 | 0.9 | .. |
| Agriculture & fishing | - | - | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | .. |
| Sector non specified | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

ICELAND

4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 2.37 | 3.18 | 4.51 | 7.68 | 9.93 | 11.98 | 16.47 | 4.1 | 7.5 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation⁽¹⁾ | 2.37 | 3.18 | 4.51 | 7.68 | 9.93 | 11.98 | 16.47 | 4.1 | 7.5 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 2.36 | 3.17 | 4.51 | 7.68 | 9.93 | 11.98 | 16.47 | 4.1 | 7.5 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 2.36 | 3.17 | 4.51 | 7.68 | 9.93 | 11.98 | 16.47 | 4.1 | 7.5 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 2.28 | 3.08 | 4.20 | 6.35 | 7.29 | 8.39 | 12.43 | 3.9 | 6.2 |
| Geothermal | 0.01 | 0.05 | 0.30 | 1.32 | 2.63 | 3.58 | 4.04 | 25.4 | 15.5 |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.07 | 0.05 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | -15.4 | -5.0 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | - | - | - | - |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | - | - | - | - |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | - | - | - |
| Geothermal | - | 0.01 | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | - | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

ICELAND

5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|------|------|------|------|------|------|------|---|
| Total | 5 | 10 | 5 | 5 | 5 | - | - | - |
| Total energy | - | 5 | - | - | - | - | - | - |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | - | - | - | - | - |
| Energy non specified/other | - | 5 | - | - | - | - | - | - |
| Total industry | - | - | - | - | - | - | - | - |
| Iron and steel | - | - | - | - | - | - | - | - |
| Chemical and petrochemical | - | - | - | - | - | - | - | - |
| Non-ferrous metals | - | - | - | - | - | - | - | - |
| Non-metallic minerals | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | - | - | - | - | - | - | - | - |
| Mining and quarrying | - | - | - | - | - | - | - | - |
| Food and tobacco | - | - | - | - | - | - | - | - |
| Pulp and printing | - | - | - | - | - | - | - | - |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | - | - | - | - | - | - | - | - |
| Non specified/other industries | - | - | - | - | - | - | - | - |
| Total transport | - | - | - | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | - | - | - | - |
| Other | 5 | 5 | 5 | 5 | 5 | - | - | - |
| Commerce and pub. services | - | - | - | - | - | - | - | - |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | 5 | 5 | 5 | 5 | 5 | - | - | - |
| Sector non specified | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

ICELAND

6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|---|
| Total | 1576 | 5282 | 8007 | 9293 | 9250 | 10903 | 10889 | 4.1 |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | 1576 | 4819 | 7369 | 8670 | 8515 | 10195 | 10195 | 4.3 |
| Coal | - | - | - | - | - | - | - | - |
| Oil | - | - | 20 | - | 38 | 37 | 23 | - |
| Gas | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | 45 | 56 | 40 | 34 | 28 | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | 463 | 573 | 567 | 657 | 637 | 643 | 1.8 |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 1576 | 5282 | 8007 | 9293 | 9230 | 10889 | .. | 4.1 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | 1576 | 4819 | 7369 | 8670 | 8515 | 10195 | .. | 4.3 |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | - | 20 | - | 25 | 28 | .. | - |
| Gas | - | - | - | - | - | - | .. | - |
| Comb. renew. & waste | - | - | 45 | 56 | 40 | 34 | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | 463 | 573 | 567 | 650 | 632 | .. | 1.7 |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | - | - | - | 20 | 14 | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | - | - | - | 13 | 9 | .. | - |
| Gas | - | - | - | - | - | - | .. | - |
| Comb. renew. & waste | - | - | - | - | - | - | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | 7 | 5 | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

ICELAND

7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | -15.9 | 10.1 |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -15.9 | 3.9 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | 0.00 | 0.00 | 0.01 | 0.00 | - | - |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | .. | 10.1 |
| Coal | .. | - | - | - | - | - | - | .. | - |
| Oil | .. | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | .. | 3.9 |
| Gas | .. | - | - | - | - | - | - | .. | - |
| Comb. renew. & waste | .. | - | - | 0.00 | 0.00 | 0.01 | 0.00 | .. | - |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 0.04 | 0.14 | 0.42 | 1.11 | 2.02 | 2.59 | 2.73 | 14.7 | 10.9 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | 0.04 | 0.14 | 0.42 | 1.11 | 2.02 | 2.59 | 2.73 | 14.7 | 10.9 |
| Solar | - | - | - | - | - | - | - | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 0.19 | 0.27 | 0.36 | 0.55 | 0.63 | 0.72 | 1.07 | 3.9 | 6.2 |
| Hydro | 0.19 | 0.27 | 0.36 | 0.55 | 0.63 | 0.72 | 1.07 | 3.9 | 6.2 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

ICELAND

8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|------|------|------|------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 10 | 1 | 1 | 1 | - | 1 | - |
| Fuel input (TJ) | 399 | 66 | 46 | 46 | 15 | 22 | -5.9 |
| Electricity production (GWh) | 47 | 6 | 5 | 4 | 2 | 2 | -5.9 |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 14 | 202 | 112 | - |
| Electricity production (GWh) | - | - | - | 1 | 2 | 1 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | 12 | 2 | 2 | - |
| Electricity production (GWh) | - | - | - | 1 | - | - | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | 47 | 6 | 5 | 6 | 4 | 3 | -3.8 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

ICELAND

10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|------|------|------|------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | 1 | - |
| Fuel input (TJ) | - | - | 22 | - | 39 | 42 | - |
| Heat production (TJ) | - | - | 20 | - | 38 | 37 | - |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | 56 | 70 | 50 | 42 | - |
| Heat production (TJ) | - | - | 45 | 56 | 40 | 34 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Heat production (TJ) | - | - | 65 | 56 | 78 | 71 | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

ICELAND

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 1.02 | 1.28 | 1.64 | 2.11 | 2.39 | 2.50 | 2.81 | 2.8 | 3.0 |
| Geothermal | 0.30 | 0.44 | 0.55 | 0.55 | 0.50 | 0.45 | 0.37 | 3.5 | -2.1 |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.00 | 0.02 | 0.06 | 0.10 | 0.09 | 0.11 | 0.09 | 31.3 | 1.7 |
| Oil | 0.54 | 0.55 | 0.59 | 0.70 | 0.80 | 0.82 | 0.80 | 0.6 | 1.7 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | 0.00 | 0.00 | - | - |
| Electricity | 0.18 | 0.25 | 0.34 | 0.59 | 0.77 | 0.94 | 1.31 | 3.8 | 7.9 |
| Heat | - | 0.03 | 0.10 | 0.17 | 0.22 | 0.18 | 0.24 | - | 5.0 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 0.27 | 0.35 | 0.42 | 0.72 | 0.84 | 1.00 | 1.34 | 2.6 | 6.7 |
| Geothermal | 0.03 | 0.02 | 0.05 | 0.06 | 0.04 | 0.02 | 0.01 | 2.5 | -7.4 |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | 0.02 | 0.06 | 0.10 | 0.09 | 0.11 | 0.09 | - | 1.7 |
| Oil | 0.11 | 0.14 | 0.09 | 0.11 | 0.11 | 0.11 | 0.11 | -1.3 | 1.4 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.13 | 0.17 | 0.22 | 0.45 | 0.60 | 0.76 | 1.12 | 3.2 | 9.5 |
| Heat | - | - | - | - | - | - | 0.01 | - | - |
| Transport | 0.13 | 0.16 | 0.21 | 0.21 | 0.30 | 0.32 | 0.31 | 3.0 | 2.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.13 | 0.16 | 0.21 | 0.21 | 0.30 | 0.31 | 0.31 | 3.0 | 2.1 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | 0.00 | 0.00 | - | - |
| Electricity | - | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 0.02 | 0.03 | 0.07 | 0.12 | 0.14 | 0.14 | 0.20 | 7.2 | 6.1 |
| Geothermal | 0.01 | 0.02 | 0.02 | 0.04 | 0.05 | 0.05 | 0.07 | 3.1 | 6.7 |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | - | - | - | - | - | 0.00 | - | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.01 | 0.02 | 0.04 | 0.07 | 0.08 | 0.09 | 0.09 | 9.6 | 4.4 |
| Heat | - | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.04 | - | 10.9 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

ICELAND

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 0.45 | 0.53 | 0.58 | 0.60 | 0.63 | 0.57 | 0.50 | 1.5 | -0.8 |
| Geothermal | 0.24 | 0.38 | 0.44 | 0.39 | 0.36 | 0.33 | 0.26 | 3.6 | -2.9 |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.00 | - | - | - | - | - | - | - | - |
| Oil | 0.17 | 0.07 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | -13.3 | -8.4 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.03 | 0.06 | 0.05 | 0.05 | 0.07 | 0.07 | 0.07 | 2.9 | 2.3 |
| Heat | - | 0.03 | 0.07 | 0.15 | 0.19 | 0.16 | 0.16 | - | 4.5 |
| Agriculture & fishing | 0.13 | 0.18 | 0.28 | 0.31 | 0.26 | 0.26 | 0.26 | 4.7 | -0.2 |
| Geothermal | 0.02 | 0.02 | 0.04 | 0.05 | 0.05 | 0.05 | 0.04 | 4.4 | -1.0 |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.10 | 0.16 | 0.21 | 0.24 | 0.19 | 0.18 | 0.18 | 4.3 | -0.8 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | - | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | - | 1.2 |
| Heat | - | - | - | - | - | - | 0.02 | - | - |
| Other | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.00 | - | 3.7 | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.00 | 0.00 | - | - | 0.01 | - | - | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.01 | 0.00 | 0.01 | 0.01 | - | 0.00 | - | -2.2 | - |
| Heat | - | - | 0.02 | 0.02 | 0.02 | - | - | - | - |
| Non-energy use⁽¹⁾ | 0.02 | 0.02 | 0.07 | 0.13 | 0.19 | 0.21 | 0.20 | 6.57 | 6.42 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

ICELAND

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| TFC (Mtoe) | 1.02 | 1.28 | 1.64 | 2.11 | 2.23 | 2.39 | 2.50 | 2.81 |
| Total industry (Mtoe) | 0.27 | 0.35 | 0.42 | 0.72 | 0.76 | 0.84 | 1.00 | 1.34 |
| Iron and steel | - | 0.04 | 0.10 | 0.17 | 0.17 | 0.16 | 0.18 | 0.13 |
| Chem. and petrochemical | - | 0.01 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| Non-ferrous metals | 0.09 | 0.11 | 0.13 | 0.32 | 0.37 | 0.46 | 0.61 | 0.99 |
| Non-metallic minerals | - | - | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.04 |
| Transport equipment | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Machinery | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mining and quarrying | - | - | 0.00 | 0.05 | 0.03 | 0.03 | 0.00 | 0.00 |
| Food and tobacco | - | - | 0.06 | 0.09 | 0.09 | 0.06 | 0.05 | 0.05 |
| Paper, pulp and printing | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Wood and wood products | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Construction | - | - | 0.03 | 0.06 | 0.08 | 0.08 | 0.08 | 0.09 |
| Textile and leather | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Non specified/other | 0.17 | 0.20 | 0.06 | 0.00 | 0.00 | 0.02 | 0.04 | 0.04 |
| Electricity consumption (Mtoe) | 0.18 | 0.25 | 0.34 | 0.59 | 0.67 | 0.77 | 0.94 | 1.31 |
| Total industry (Mtoe) | 0.13 | 0.17 | 0.22 | 0.45 | 0.51 | 0.60 | 0.76 | 1.12 |
| Iron and steel | - | 0.02 | 0.05 | 0.08 | 0.08 | 0.08 | 0.09 | 0.08 |
| Chem. and petrochemical | - | 0.01 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| Non-ferrous metals | 0.09 | 0.11 | 0.12 | 0.31 | 0.36 | 0.45 | 0.61 | 0.99 |
| Non-metallic minerals | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Transport equipment | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Machinery | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mining and quarrying | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Food and tobacco | - | - | 0.02 | 0.03 | 0.04 | 0.04 | 0.03 | 0.03 |
| Paper, pulp and printing | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Wood and wood products | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Construction | - | - | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 |
| Textile and leather | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Non specified/other | 0.03 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total industry (TWh) | 1.50 | 1.98 | 2.56 | 5.24 | 5.89 | 6.99 | 8.81 | 13.06 |
| Iron and steel | - | 0.27 | 0.57 | 0.98 | 0.98 | 0.98 | 1.01 | 0.89 |
| Chem. and petrochemical | - | 0.13 | 0.22 | 0.11 | 0.02 | 0.02 | 0.05 | 0.02 |
| Non-ferrous metals | 1.10 | 1.23 | 1.45 | 3.61 | 4.21 | 5.29 | 7.11 | 11.55 |
| Non-metallic minerals | - | - | 0.03 | 0.05 | 0.05 | 0.04 | 0.05 | 0.05 |
| Transport equipment | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Machinery | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Mining and quarrying | - | - | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| Food and tobacco | - | - | 0.18 | 0.39 | 0.44 | 0.43 | 0.39 | 0.41 |
| Paper, pulp and printing | - | - | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| Wood and wood products | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Construction | - | - | 0.02 | 0.01 | 0.11 | 0.16 | 0.13 | 0.07 |
| Textile and leather | - | - | 0.03 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 |
| Non specified/other | 0.41 | 0.35 | 0.05 | 0.02 | 0.03 | 0.03 | 0.02 | 0.03 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

ICELAND

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 0.48 | 0.67 | 0.91 | 1.05 | 1.35 | 1.51 | 1.70 | 2.36 | 2.57 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.38 | 0.54 | 0.75 | 0.88 | 1.06 | 1.16 | 1.16 | 1.76 | 1.88 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | 0.01 | 0.05 | 0.05 | 0.17 | 0.23 | 0.42 | 0.49 | 0.58 |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 0.10 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.11 | 0.12 | 0.12 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | - | - | - | - | - | - | - |
| Liquid fuels | 0.10 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.11 | 0.12 | 0.12 |
| Natural gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | - | - | - |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | 0.02 | 0.02 | - | - | - | - | - | - | - |
| Internal combustion | 0.04 | 0.06 | 0.08 | 0.08 | 0.09 | 0.08 | 0.08 | 0.09 | 0.08 |
| Gas turbine | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| Combined cycle | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | 0.40 | 0.52 | 0.67 | 0.73 | 1.07 | 1.20 | 1.44 | 1.83 | 2.13 |
| Available capacity | 0.48 | 0.67 | 0.91 | 0.97 | 1.27 | 1.39 | 1.70 | 2.24 | 2.57 |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

ICELAND

15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|------|------|------|------|------|------|------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | .. | - |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | .. | - |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | 0.01 | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | .. | - |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | - | - | - | - | - | - | - |
| Liquid fuels | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | .. | - |
| Natural gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | - | - | - |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | - | - | - | - | - | - | - |
| Internal combustion | 0.01 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | .. | - |
| Gas turbine | - | - | - | - | - | - | - | - | - |
| Combined cycle | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | - | - | .. | .. | .. | .. | .. | .. | - |
| Available capacity | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | .. | - |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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Figure 1. Total final consumption by fuel

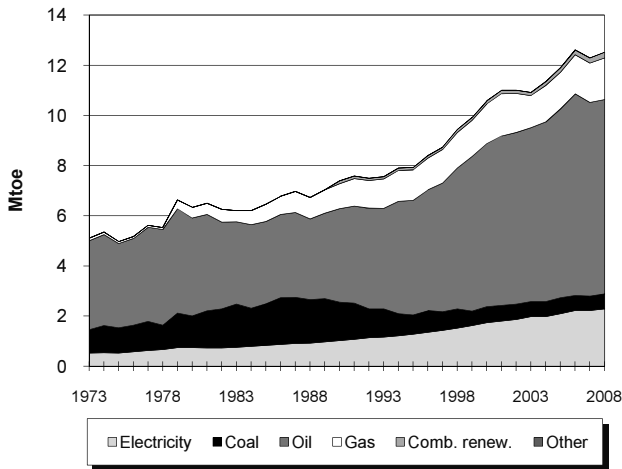


Figure 2. Electricity generation by fuel

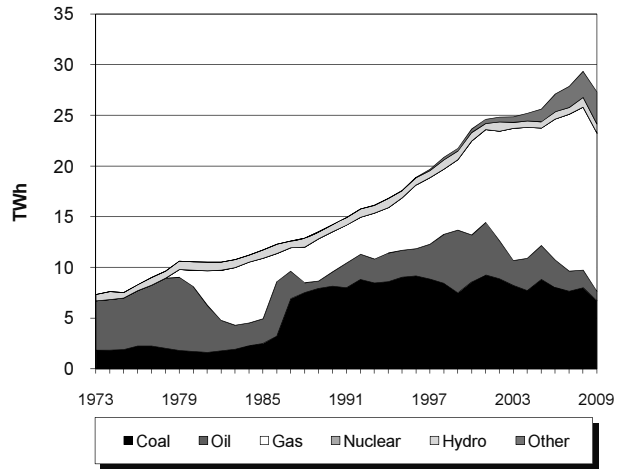


Figure 3. Electricity consumption by sector

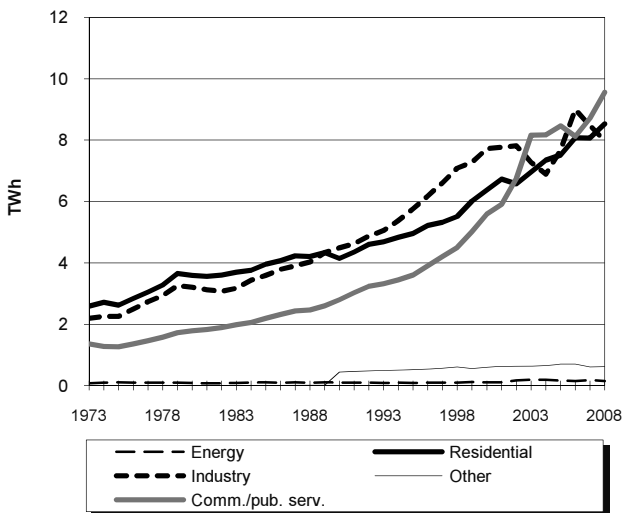


Figure 4. Electricity indicators

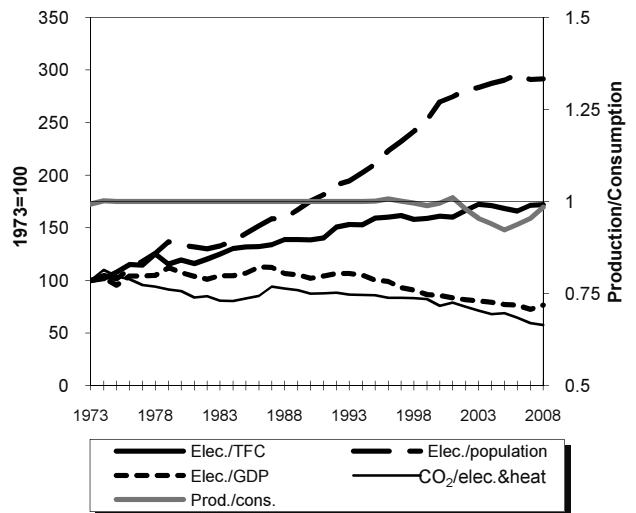
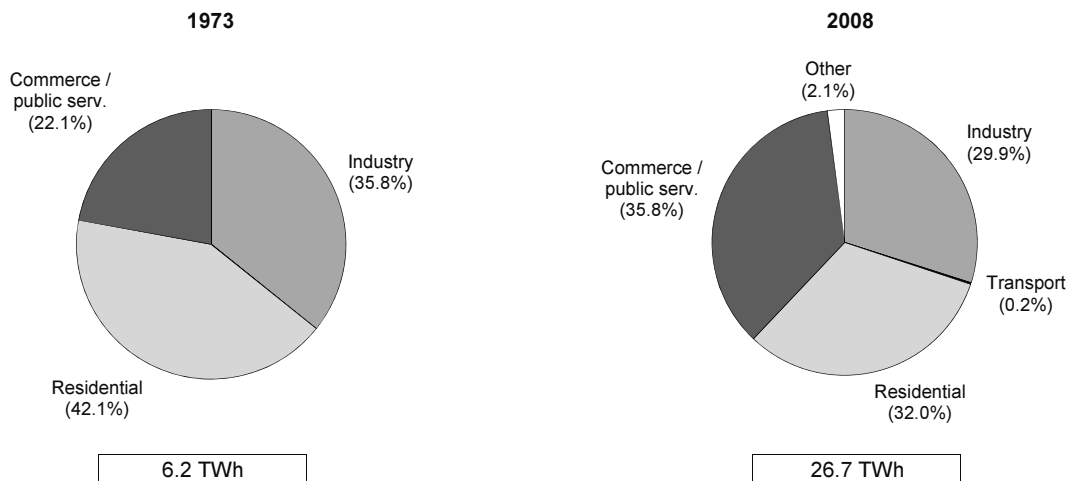


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|-------|-------|-------|-------|--------|--------|--------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 6.91 | 8.24 | 9.99 | 13.70 | 15.00 | 14.98 | 14.01 | 2.2 | 1.8 |
| GDP (billion 2000 USD) | 24.77 | 34.09 | 48.66 | 96.58 | 140.81 | 136.54 | 129.28 | 4.1 | 5.3 |
| TPES/GDP ⁽¹⁾ | 0.28 | 0.24 | 0.21 | 0.14 | 0.11 | 0.11 | 0.11 | -1.8 | -3.3 |
| Population (millions) | 3.07 | 3.40 | 3.51 | 3.80 | 4.36 | 4.44 | 4.51 | 0.8 | 1.3 |
| TPES/population ⁽²⁾ | 2.25 | 2.42 | 2.85 | 3.61 | 3.44 | 3.37 | 3.10 | 1.4 | 0.5 |
| TPES/GDP (2000 = 100) | 197 | 170 | 145 | 100 | 75 | 77 | 76 | -1.8 | -3.3 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 118 | 120 | 116 | 100 | 87 | 93 | .. | -0.1 | .. |
| Ele.TFC/population ⁽⁴⁾ | 2002 | 2529 | 3386 | 5341 | 5938 | 6006 | .. | 3.1 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 7.35 | 10.57 | 14.23 | 23.67 | 27.88 | 29.35 | 27.31 | 4.0 | 3.5 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|-------------|-------------|-------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 6.91 | 8.24 | 9.99 | 13.70 | 15.00 | 14.98 | 14.01 | 2.2 | 1.8 |
| Coal | 1.59 | 1.91 | 3.47 | 2.63 | 2.31 | 2.37 | 2.06 | 4.7 | -2.7 |
| Oil | 5.26 | 5.52 | 4.47 | 7.39 | 7.83 | 7.53 | 6.99 | -1.0 | 2.4 |
| Gas | - | 0.74 | 1.87 | 3.43 | 4.28 | 4.48 | 4.28 | - | 4.4 |
| Comb. renew & waste | - | - | 0.11 | 0.14 | 0.24 | 0.27 | 0.27 | - | 5.0 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 27.2 |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.00 | 0.02 | 0.17 | 0.21 | 0.26 | - | 57.2 |
| Hydro | 0.06 | 0.07 | 0.06 | 0.07 | 0.06 | 0.08 | 0.08 | 0.5 | 1.4 |
| Net electricity imports ⁽²⁾ | 0.00 | - | - | 0.01 | 0.11 | 0.04 | 0.07 | - | - |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 7.3 | 10.9 | 14.5 | 24.0 | 26.0 | 28.2 | 29.7 | 27.7 |
| Nuclear | - | - | - | - | - | - | - | - |
| Hydro | 0.6 | 1.2 | 1.0 | 1.2 | 1.0 | 1.0 | 1.3 | 1.3 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | - | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.2 | 1.1 | 2.0 | 2.4 | 3.0 |
| Combustible fuels | 6.7 | 9.7 | 13.5 | 22.6 | 23.9 | 25.3 | 26.0 | 23.4 |
| <i>Coal</i> | 1.8 | 1.7 | 8.2 | 8.6 | 8.8 | 7.7 | 8.0 | 6.7 |
| <i>Oil</i> | 4.9 | 6.4 | 1.4 e | 4.6 e | 3.3 | 2.0 | 1.7 | 0.9 |
| <i>Gas</i> | - | 1.6 | 3.9 | 9.3 | 11.6 | 15.5 | 16.1 | 15.6 |
| <i>Comb. renew. & waste</i> | - | - | - | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - |
| - Own use by power plant | 0.4 | 0.6 | 0.9 | 1.3 | 1.7 | 0.5 | 1.3 | .. |
| Net production | 7.0 | 10.3 | 13.7 | 22.7 | 24.3 | 27.7 | 28.4 | .. |
| Nuclear | .. | - | - | - | - | - | - | .. |
| Hydro | .. | 1.1 | 1.0 | 1.1 | 1.0 | 1.0 | 1.3 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | - | - | - | - | - | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | - | 0.2 | 1.1 | 2.0 | 2.4 | .. |
| Combustible fuels | .. | 9.2 | 12.7 | 21.3 | 22.2 | 24.8 | 24.7 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | - | - | - | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | - | 0.5 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.6 |
| + Imports | 0.1 | - | - | 0.2 | 2.0 | 1.4 | 0.8 | 0.9 |
| - Exports | 0.0 | - | - | 0.1 | 0.0 | 0.1 | 0.3 | 0.2 |
| Electrical energy supplied | 7.0 | 9.8 | 13.2 | 22.3 | 25.8 | 28.5 | 28.3 | .. |
| - Transmission & distr. losses | 0.8 | 1.1 | 1.3 | 2.0 | 2.1 | 2.3 | 2.2 | .. |
| - Statistical difference | - | - | - | -0.1 | -0.8 | 0.2 | -0.8 | .. |
| Total consumption | 6.2 | 8.7 | 12.0 | 20.4 | 24.5 | 26.0 | 26.8 | .. |
| - Energy industry consumption ⁽²⁾ | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | .. |
| Final consumption | 6.2 | 8.6 | 11.9 | 20.3 | 24.4 | 25.9 | 26.7 | .. |
| Industry | 2.2 | 3.2 | 4.5 | 7.7 | 7.7 | 8.5 | 8.0 | .. |
| Transport | - | - | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | .. |
| Commercial & publ. serv. | 1.4 | 1.8 | 2.8 | 5.6 | 8.5 | 8.7 | 9.6 | .. |
| Residential | 2.6 | 3.6 | 4.1 | 6.4 | 7.5 | 8.1 | 8.5 | .. |
| Agriculture & fishing | - | - | 0.4 | 0.6 | 0.6 | 0.6 | 0.6 | .. |
| Sector non specified | - | - | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 7.86 | 10.88 | 14.52 | 23.98 | 27.48 | 28.23 | 29.69 | 3.9 | 4.1 |
| - Hydro pumped storage | 0.22 | 0.32 | 0.29 | 0.30 | 0.36 | 0.35 | 0.33 | 1.5 | 0.8 |
| Total generation⁽¹⁾ | 7.63 | 10.57 | 14.23 | 23.67 | 27.12 | 27.88 | 29.35 | 4.0 | 4.1 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 7.68 | 10.74 | 14.30 | 23.40 | 25.89 | 26.40 | 27.80 | 4.0 | 3.8 |
| - Hydro pumped storage | 0.22 | 0.32 | 0.29 | 0.30 | 0.36 | 0.35 | 0.33 | 1.5 | 0.8 |
| Total generation ⁽¹⁾ | 7.45 | 10.42 | 14.02 | 23.09 | 25.53 | 26.05 | 27.47 | 4.0 | 3.8 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.79 | 0.84 | 0.70 | 0.85 | 0.72 | 0.67 | 0.97 | -0.7 | 1.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.24 | 1.62 | 1.96 | 2.41 | - | - |
| Coal | 1.80 | 1.70 | 8.08 | 8.54 | 7.99 | 7.64 | 7.99 | 9.8 | -0.1 |
| Oil | 4.87 | 6.27 | 1.41 | 4.59 | 2.67 | 1.94 | 1.70 | -7.5 | 1.1 |
| Gas | - | 1.61 | 3.83 | 8.79 | 12.41 | 13.74 | 14.28 | - | 7.6 |
| Comb. renew. & waste | - | - | - | 0.10 | 0.11 | 0.10 | 0.13 | - | - |
| <u>Autoproductors</u> | | | | | | | | | |
| Gross production | 0.18 | 0.15 | 0.21 | 0.58 | 1.59 | 1.83 | 1.88 | 1.0 | 12.9 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 0.18 | 0.15 | 0.21 | 0.58 | 1.59 | 1.83 | 1.88 | 1.0 | 12.9 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | - | - | - | - | - |
| Coal | 0.04 | 0.04 | 0.08 | 0.05 | 0.03 | 0.03 | 0.03 | 4.9 | -5.6 |
| Oil | 0.14 | 0.11 | 0.02 | 0.05 | 0.04 | 0.04 | 0.03 | -10.8 | 1.9 |
| Gas | - | - | 0.11 | 0.48 | 1.50 | 1.72 | 1.79 | - | 16.9 |
| Comb. renew. & waste | - | - | - | - | 0.02 | 0.03 | 0.03 | - | - |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|------------|------------|------------|------------|-------------|-------------|-------------|---|
| Total | 165 | 139 | 202 | 547 | 1549 | 1767 | 1823 | 13.0 |
| Total energy | 10 | 5 | 14 | 44 | 66 | 68 | 57 | 8.1 |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | 29 | 26 | 27 | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | 44 | 37 | 42 | 30 | - |
| Energy non specified/other | 10 | 5 | 14 | - | - | - | - | - |
| Total industry | 153 | 132 | 185 | 399 | 1391 | 1588 | 1653 | 12.9 |
| Iron and steel | - | - | - | - | - | - | - | - |
| Chemical and petrochemical | 20 | - | 23 | 67 | 26 | 26 | 27 | 0.9 |
| Non-ferrous metals | - | - | - | - | 1007 | 1186 | 1265 | - |
| Non-metallic minerals | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | - | - | - | - | - | - | - | - |
| Mining and quarrying | 34 | 33 | 56 | - | - | - | - | - |
| Food and tobacco | 62 | 79 | 106 | 332 | 307 | 322 | 301 | 6.0 |
| Pulp and printing | 30 | 13 | - | - | - | - | - | - |
| Wood and wood products | - | - | - | - | 8 | 13 | 16 | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | 7 | 7 | - | - | - | - | - | - |
| Non specified/other industries | - | - | - | - | 43 | 41 | 44 | - |
| Total transport | - | - | - | 8 | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | 8 | - | - | - | - |
| Other | 2 | 2 | 3 | 96 | 92 | 111 | 113 | 22.3 |
| Commerce and pub. services | - | - | - | 87 | 92 | 111 | 113 | - |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | - | - | - | - | - | - | - | - |
| Sector non specified | 2 | 2 | 3 | 9 | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

IRELAND

7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|------|------|------|------|------|------|------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 1.71 | 2.40 | 3.03 | 4.78 | 4.86 | 4.75 | 4.82 | 3.4 | 2.6 |
| Coal | 0.65 | 0.59 | 1.85 | 1.92 | 1.73 | 1.58 | 1.63 | 6.4 | -0.7 |
| Oil | 1.06 | 1.42 | 0.34 | 1.01 | 0.69 | 0.40 | 0.35 | -6.5 | 0.1 |
| Gas | - | 0.39 | 0.84 | 1.82 | 2.41 | 2.73 | 2.80 | - | 6.9 |
| Comb. renew. & waste | - | - | - | 0.02 | 0.03 | 0.03 | 0.04 | - | - |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 2.36 | 2.98 | 4.66 | 4.66 | 4.49 | 4.56 | .. | 2.4 |
| Coal | .. | 0.58 | 1.83 | 1.90 | 1.72 | 1.57 | 1.61 | .. | -0.7 |
| Oil | .. | 1.40 | 0.33 | 1.00 | 0.69 | 0.40 | 0.34 | .. | 0.2 |
| Gas | .. | 0.39 | 0.82 | 1.74 | 2.23 | 2.50 | 2.57 | .. | 6.6 |
| Comb. renew. & waste | .. | - | - | 0.02 | 0.03 | 0.02 | 0.03 | .. | - |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|------|------|------|------|------|------|------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | - | - | - | - | - | - | - | - | - |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 0.06 | 0.07 | 0.06 | 0.09 | 0.20 | 0.23 | 0.29 | 0.5 | 9.2 |
| Hydro | 0.06 | 0.07 | 0.06 | 0.07 | 0.06 | 0.06 | 0.08 | 0.5 | 1.8 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.02 | 0.14 | 0.17 | 0.21 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

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**8. Electricity production from combustible fuels
In electricity plants***

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|-------|--------|--------|--------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 47 | 1959 | 2341 | 2043 | 1815 | 1690 | -0.8 |
| Fuel input (TJ) | 1047 | 51982 | 59740 | 52980 | 47065 | 43823 | -0.9 |
| Electricity production (GWh) | 73 | 5896 | 6793 | 5884 | 5499 | 5228 | -0.7 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | 2613 | 3114 | 2571 | 2347 | 2316 | 3002 | -0.2 |
| Fuel input (TJ) | 21884 | 24782 | 20018 | 18865 | 18648 | 23777 | -0.2 |
| Electricity production (GWh) | 1625 | 2185 | 1742 | 2108 | 2144 | 2761 | 1.3 |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 1465 | 350 | 1041 | 713 | 413 | 356 | 0.1 |
| Fuel input (TJ) | 58737 | 14469 | 42976 | 28677 | 16556 | 14239 | -0.1 |
| Electricity production (GWh) | 6286 | 1422 e | 4587 e | 2672 | 1939 | 1699 | 1.0 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 18079 | 38000 | 80911 | 103680 | 116134 | 119656 | 6.6 |
| Electricity production (GWh) | 1610 | 3834 | 8787 | 12408 | 13743 | 14278 | 7.6 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 10 | 4 | 147 | - |
| Electricity production (GWh) | - | - | - | 1 | - | 17 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 988 | 1064 | 1001 | 1085 | - |
| Electricity production (GWh) | - | - | 95 | 108 | 102 | 111 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 9594 | 13337 | 22004 | 23181 | 23427 | 24094 | 3.3 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|------|------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | 6 | 6 | - | - | - | - |
| Fuel input (TJ) | - | 161 | 173 | - | - | - | - |
| Electricity production (GWh) | - | 22 | 24 | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | 54 | 62 | 69 | 42 | 38 | 39 | -2.5 |
| Fuel input (TJ) | 450 | 483 | 535 | 526 | 476 | 515 | 0.4 |
| Electricity production (GWh) | 35 | 60 | 28 | 30 | 28 | 29 | -4.0 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 24 | 2 | 11 | 6 | 7 | 5 | 5.2 |
| Fuel input (TJ) | 794 | 60 | 496 | 301 | 345 | 234 | 7.9 |
| Electricity production (GWh) | 99 | 6 | 51 | 40 | 44 | 32 | 9.7 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 1130 | 3969 | 8545 | 10930 | 10829 | 13.4 |
| Electricity production (GWh) | - | 107 | 476 | 1500 | 1723 | 1787 | 16.9 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 102 | 134 | 154 | - |
| Electricity production (GWh) | - | - | - | 8 | 13 | 16 | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | 103 | 211 | 216 | - |
| Electricity production (GWh) | - | - | - | 12 | 17 | 17 | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 134 | 195 | 579 | 1590 | 1825 | 1881 | 13.4 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

IRELAND

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|-------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 5.11 | 6.34 | 7.39 | 10.58 | 12.62 | 12.30 | 12.53 | 2.2 | 3.0 |
| Geothermal | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 28.0 |
| Solar thermal | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 25.6 |
| Coal | 0.93 | 1.27 | 1.53 | 0.63 | 0.59 | 0.57 | 0.59 | 3.0 | -5.2 |
| Oil | 3.55 | 3.90 | 3.73 | 6.51 | 8.05 | 7.72 | 7.75 | 0.3 | 4.1 |
| Gas | 0.10 | 0.43 | 1.00 | 1.58 | 1.56 | 1.57 | 1.66 | 14.3 | 2.9 |
| Comb. renew. & waste | - | - | 0.11 | 0.12 | 0.19 | 0.21 | 0.23 | - | 4.3 |
| Electricity | 0.53 | 0.74 | 1.02 | 1.74 | 2.23 | 2.22 | 2.29 | 3.9 | 4.6 |
| Heat | - | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 1.70 | 2.17 | 1.73 | 2.50 | 2.79 | 2.54 | 2.48 | 0.1 | 2.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.04 | 0.10 | 0.25 | 0.11 | 0.13 | 0.14 | 0.13 | 10.7 | -3.7 |
| Oil | 1.44 | 1.43 | 0.68 | 1.15 | 1.09 | 0.90 | 0.94 | -4.3 | 1.8 |
| Gas | 0.02 | 0.36 | 0.36 | 0.47 | 0.63 | 0.62 | 0.59 | 17.0 | 2.9 |
| Comb. renew. & waste | - | - | 0.06 | 0.10 | 0.16 | 0.15 | 0.14 | - | 4.5 |
| Electricity | 0.19 | 0.28 | 0.39 | 0.66 | 0.77 | 0.73 | 0.69 | 4.3 | 3.3 |
| Heat | - | - | - | - | - | - | - | - | - |
| Transport | 1.13 | 1.54 | 1.64 | 3.44 | 4.56 | 4.77 | 4.53 | 2.2 | 5.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 1.13 | 1.54 | 1.64 | 3.43 | 4.55 | 4.75 | 4.47 | 2.2 | 5.7 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | 0.00 | 0.02 | 0.05 | - | - |
| Electricity | - | - | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | - | 7.1 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 0.25 | 0.58 | 0.98 | 1.36 | 1.60 | 1.71 | 1.81 | 8.4 | 3.5 |
| Geothermal | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 19.4 |
| Solar thermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Coal | - | 0.07 | 0.02 | 0.00 | 0.03 | 0.03 | 0.03 | - | 2.7 |
| Oil | 0.13 | 0.35 | 0.63 | 0.58 | 0.56 | 0.57 | 0.56 | 9.6 | -0.7 |
| Gas | - | - | 0.09 | 0.29 | 0.31 | 0.35 | 0.39 | - | 8.3 |
| Comb. renew. & waste | - | - | - | - | 0.00 | 0.01 | 0.01 | - | - |
| Electricity | 0.12 | 0.15 | 0.24 | 0.48 | 0.70 | 0.75 | 0.82 | 4.3 | 7.1 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|--------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 1.81 | 1.82 | 2.17 | 2.43 | 2.99 | 2.85 | 3.11 | 1.1 | 2.0 |
| Geothermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Solar thermal | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 25.3 |
| Coal | 0.88 | 1.10 | 1.27 | 0.52 | 0.43 | 0.41 | 0.44 | 2.1 | -5.7 |
| Oil | 0.62 | 0.35 | 0.38 | 0.91 | 1.22 | 1.13 | 1.24 | -2.8 | 6.8 |
| Gas | 0.08 | 0.07 | 0.12 | 0.44 | 0.63 | 0.59 | 0.67 | 2.4 | 10.2 |
| Comb. renew. & waste | - | - | 0.04 | 0.02 | 0.02 | 0.02 | 0.02 | - | -3.6 |
| Electricity | 0.22 | 0.31 | 0.36 | 0.55 | 0.70 | 0.69 | 0.73 | 2.8 | 4.1 |
| Heat | - | - | - | - | - | - | - | - | - |
| Agriculture & fishing | 0.02 | 0.03 | 0.25 | 0.31 | 0.32 | 0.30 | 0.30 | 15.0 | 1.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.02 | 0.03 | 0.21 | 0.26 | 0.26 | 0.25 | 0.26 | 13.9 | 1.0 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | 0.00 | 0.00 | - | - |
| Electricity | - | - | 0.04 | 0.05 | 0.05 | 0.05 | 0.05 | - | 1.5 |
| Heat | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | - | - | - | - | - | - | - | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 0.21 | 0.20 | 0.62 | 0.55 | 0.36 | 0.13 | 0.30 | 6.71 | -3.99 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

IRELAND

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 5.11 | 6.34 | 7.39 | 10.58 | 11.91 | 12.62 | 12.30 | 12.53 |
| Total industry (Mtoe) | 1.70 | 2.17 | 1.73 | 2.50 | 2.58 | 2.79 | 2.54 | 2.48 |
| Iron and steel | 0.02 | 0.02 | 0.08 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 |
| Chem. and petrochemical | 0.03 | 0.15 | 0.19 | 0.35 | 0.39 | 0.38 | 0.35 | 0.31 |
| Non-ferrous metals | - | - | 0.27 | 0.41 | 0.38 | 0.50 | 0.38 | 0.40 |
| Non-metallic minerals | 0.03 | 0.11 | 0.30 | 0.38 | 0.49 | 0.53 | 0.57 | 0.53 |
| Transport equipment | 0.00 | 0.01 | 0.02 | 0.03 | 0.03 | 0.03 | 0.02 | 0.03 |
| Machinery | 0.01 | 0.05 | 0.07 | 0.20 | 0.24 | 0.28 | 0.25 | 0.25 |
| Mining and quarrying | 0.01 | 0.03 | 0.04 | 0.13 | 0.11 | 0.11 | 0.12 | 0.16 |
| Food and tobacco | 0.04 | 0.40 | 0.43 | 0.59 | 0.60 | 0.58 | 0.52 | 0.52 |
| Paper, pulp and printing | 0.01 | 0.03 | 0.02 | 0.06 | 0.04 | 0.04 | 0.04 | 0.04 |
| Wood and wood products | 0.01 | 0.00 | 0.07 | 0.13 | 0.15 | 0.15 | 0.14 | 0.13 |
| Construction | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Textile and leather | 0.02 | 0.03 | 0.05 | 0.06 | 0.04 | 0.04 | 0.02 | 0.01 |
| Non specified/other | 1.52 | 1.33 | 0.20 | 0.12 | 0.11 | 0.13 | 0.14 | 0.12 |
| Electricity consumption (Mtoe) | 0.53 | 0.74 | 1.02 | 1.74 | 2.09 | 2.23 | 2.22 | 2.29 |
| Total industry (Mtoe) | 0.19 | 0.28 | 0.39 | 0.66 | 0.66 | 0.77 | 0.73 | 0.69 |
| Iron and steel | 0.01 | 0.00 | 0.02 | 0.03 | 0.00 | 0.00 | - | - |
| Chem. and petrochemical | 0.03 | 0.05 | 0.04 | 0.11 | 0.11 | 0.12 | 0.11 | 0.10 |
| Non-ferrous metals | - | - | 0.05 | 0.04 | 0.04 | 0.02 | 0.04 | 0.04 |
| Non-metallic minerals | 0.03 | 0.04 | 0.03 | 0.05 | 0.06 | 0.09 | 0.08 | 0.07 |
| Transport equipment | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Machinery | 0.01 | 0.02 | 0.03 | 0.09 | 0.14 | 0.17 | 0.16 | 0.15 |
| Mining and quarrying | 0.01 | 0.02 | 0.01 | 0.04 | 0.05 | 0.06 | 0.05 | 0.05 |
| Food and tobacco | 0.04 | 0.07 | 0.11 | 0.16 | 0.14 | 0.16 | 0.15 | 0.14 |
| Paper, pulp and printing | 0.01 | 0.01 | 0.01 | 0.03 | 0.02 | 0.03 | 0.02 | 0.02 |
| Wood and wood products | 0.01 | 0.00 | 0.01 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| Construction | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Textile and leather | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| Non specified/other | 0.02 | 0.02 | 0.06 | 0.05 | 0.05 | 0.07 | 0.06 | 0.06 |
| Total industry (TWh) | 2.20 | 3.21 | 4.49 | 7.73 | 7.67 | 8.99 | 8.48 | 7.98 |
| Iron and steel | 0.09 | 0.02 | 0.24 | 0.33 | 0.01 | 0.01 | - | - |
| Chem. and petrochemical | 0.36 | 0.55 | 0.41 | 1.34 | 1.25 | 1.44 | 1.30 | 1.21 |
| Non-ferrous metals | - | - | 0.58 | 0.48 | 0.44 | 0.19 | 0.50 | 0.49 |
| Non-metallic minerals | 0.31 | 0.41 | 0.36 | 0.59 | 0.75 | 1.00 | 0.90 | 0.84 |
| Transport equipment | 0.03 | 0.05 | 0.05 | 0.12 | 0.11 | 0.14 | 0.12 | 0.12 |
| Machinery | 0.15 | 0.27 | 0.31 | 1.10 | 1.58 | 2.02 | 1.87 | 1.75 |
| Mining and quarrying | 0.13 | 0.27 | 0.10 | 0.46 | 0.58 | 0.68 | 0.61 | 0.57 |
| Food and tobacco | 0.50 | 0.86 | 1.23 | 1.82 | 1.65 | 1.88 | 1.70 | 1.59 |
| Paper, pulp and printing | 0.17 | 0.16 | 0.11 | 0.32 | 0.28 | 0.30 | 0.27 | 0.25 |
| Wood and wood products | 0.06 | 0.05 | 0.11 | 0.34 | 0.33 | 0.38 | 0.35 | 0.32 |
| Construction | 0.03 | 0.04 | 0.02 | 0.06 | 0.07 | 0.07 | 0.07 | 0.07 |
| Textile and leather | 0.18 | 0.28 | 0.22 | 0.20 | 0.09 | 0.10 | 0.09 | 0.08 |
| Non specified/other | 0.18 | 0.26 | 0.75 | 0.58 | 0.53 | 0.79 | 0.70 | 0.66 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

IRELAND

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|------|------|------|------|------|------|------|------|------|
| Total imports ⁽¹⁾ | 74 | - | - | 20 | 169 | 2045 | 1787 | 1412 | 753 |
| Imports from: | | | | | | | | | |
| Total OECD | 74 | - | - | 20 | 169 | 2045 | 1787 | 1412 | 753 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | 74 e | - | - | 20 | 169 | 2045 | 1787 | 1412 | 753 |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

IRELAND

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|------|------|------|------|------|------|------|------|------|
| Total exports ⁽¹⁾ | 29 | - | - | 35 | 71 | 1 | 9 | 82 | 303 |
| Exports to: | | | | | | | | | |
| Total OECD | 29 | - | - | 35 | 71 | 1 | 9 | 82 | 303 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | 29 e | - | - | 35 | 71 | 1 | 9 | 82 | 303 |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

IRELAND

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 2.03 | 3.02 | 3.74 | 3.97 | 4.58 | 6.13 | 6.18 | 7.20 | 7.11 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.51 | 0.51 | 0.51 | 0.52 | 0.53 | 0.53 | 0.53 | 0.53 | 0.53 |
| <i>of which: pumped storage</i> | <i>0.29</i> | <i>0.29</i> | <i>0.29</i> | <i>0.29</i> | <i>0.29</i> | <i>0.29</i> | <i>0.29</i> | <i>0.29</i> | <i>0.29</i> |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.01 | 0.12 | 0.49 | 0.75 | 0.86 | 1.03 |
| Other (e.g. fuel cells) | - | - | - | - | - | 0.12 | - | 0.20 | 0.20 |
| Combustible fuels | 1.52 | 2.51 | 3.23 | 3.44 | 3.94 | 4.99 | 4.91 | 5.62 | 5.35 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 0.41 | 0.45 | 1.29 | 1.23 | 1.24 | 0.35 | 0.35 | 0.35 | 0.35 |
| Liquid fuels | 1.03 | 1.65 | 0.58 | 0.69 | 0.82 | 1.02 | 1.02 | 1.02 | 1.02 |
| Natural gas | - | 0.41 | 0.26 | 0.26 | 0.26 | 1.00 | 1.00 | 1.41 | 1.41 |
| Comb. renew. & waste | - | - | - | - | 0.02 | 0.02 | 0.03 | 0.03 | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 0.09 | - | - | - | - | 0.86 | 0.86 | 0.85 | 0.86 |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | 1.10 | 1.26 | 1.60 | 1.72 | 1.65 | 1.96 | 1.72 |
| Solid / liquid / gas | - | - | - | - | - | 0.01 | 0.01 | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 2.61 | 2.70 | 2.81 | 2.73 | 2.73 | 2.72 | 2.49 |
| Internal combustion | - | - | - | - | 0.02 | 0.03 | 0.03 | 0.01 | 0.01 |
| Gas turbine | - | - | 0.36 | 0.49 | 0.38 | 0.74 | 0.66 | 0.59 | 0.59 |
| Combined cycle | - | - | 0.26 | 0.26 | 0.74 | 1.48 | 1.48 | 2.27 | 2.27 |
| Other | - | - | - | - | - | 0.01 | 0.01 | 0.03 | 0.03 |
| Peak load | .. | .. | 2.60 | 3.08 | 3.84 | 4.83 | 5.04 | 4.91 | 4.88 |
| Available capacity | .. | .. | 3.40 | 3.77 | 4.29 | 5.24 | 5.35 | 5.45 | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 0.06 | 0.06 | 0.07 | 0.09 | 0.13 | 0.15 | 0.26 | 0.29 | 0.29 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 0.06 | 0.06 | 0.07 | 0.09 | 0.13 | 0.15 | 0.26 | 0.29 | 0.29 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 |
| Liquid fuels | 0.06 | 0.06 | 0.01 | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| Natural gas | - | - | 0.03 | 0.04 | 0.09 | 0.12 | 0.12 | 0.11 | 0.11 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | 0.01 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | 0.11 | 0.16 | 0.16 |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | - | - | 0.05 | 0.03 | 0.01 | 0.01 | 0.01 |
| Internal combustion | 0.06 | 0.06 | 0.07 | 0.09 | 0.03 | 0.04 | 0.03 | 0.01 | 0.05 |
| Gas turbine | - | - | - | - | 0.04 | 0.07 | 0.22 | 0.28 | 0.23 |
| Combined cycle | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | 0.01 | - | - | 0.01 |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

IRELAND

16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|--------|--------|-------------------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | | | Euro/ unit | | | | | | |
| Steam coal (t) | .. | .. | 42.89 | 32.89 | 56.42 | 48.82 | 60.92 | 68.03 | 81.87 |
| Heavy fuel oil (t) | .. | .. | 85.67 | 152.42 | 229.12 | 273.51 | 247.64 | 387.23 | .. |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | .. | .. | 89.83 | 107.47 | c | c | c | c | c |
| | | | Euro/ toe | | | | | | |
| Steam coal | .. | .. | 69.24 | 53.10 | 91.09 | 78.81 | 98.35 | 109.83 | 132.17 |
| Heavy fuel oil | .. | .. | 90.37 | 160.78 | 241.69 | 288.51 | 261.23 | 408.47 | .. |
| Natural gas ⁽²⁾ | .. | .. | 99.81 | 119.41 | c | c | c | c | c |
| End-user prices of electricity | | | | | | | | | |
| | | | Euro/ kWh | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0249 | 0.0315 | 0.0519 | 0.0531 | 0.0800 | 0.0970 | 0.1088 | 0.1272 | 0.1216 |
| <i>of which: tax</i> | - | - | - | - | - | - | - | - | - |
| Household | | | | | | | | | |
| Price | 0.0373 | 0.0474 | 0.1008 | 0.1100 | 0.1600 | 0.1590 | 0.1778 | 0.1827 | 0.1836 |
| <i>of which: tax</i> | - | - | 0.0085 | 0.0122 | 0.0200 | 0.0190 | 0.0211 | 0.0217 | 0.0218 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

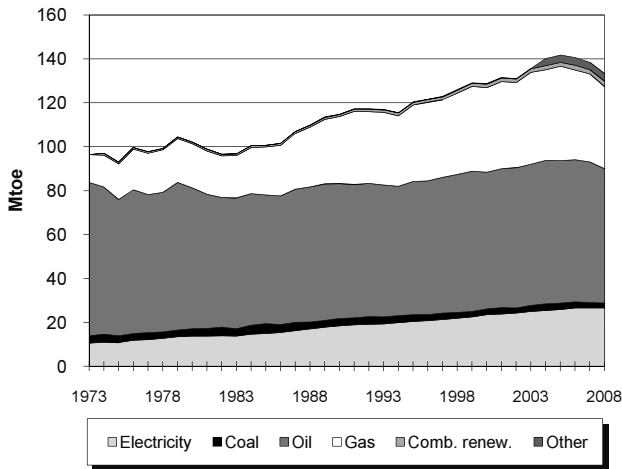


Figure 2. Electricity generation by fuel

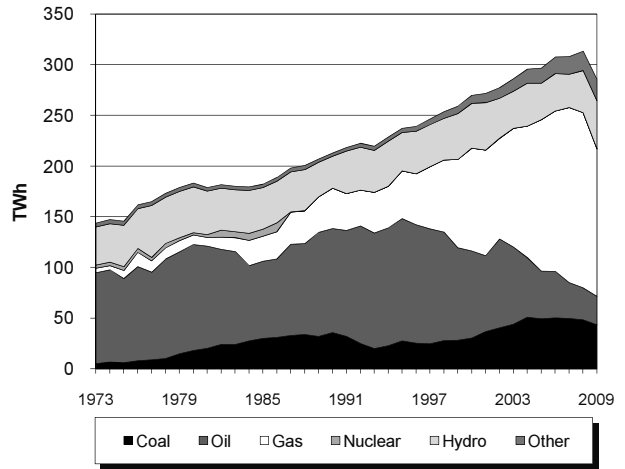


Figure 3. Electricity consumption by sector

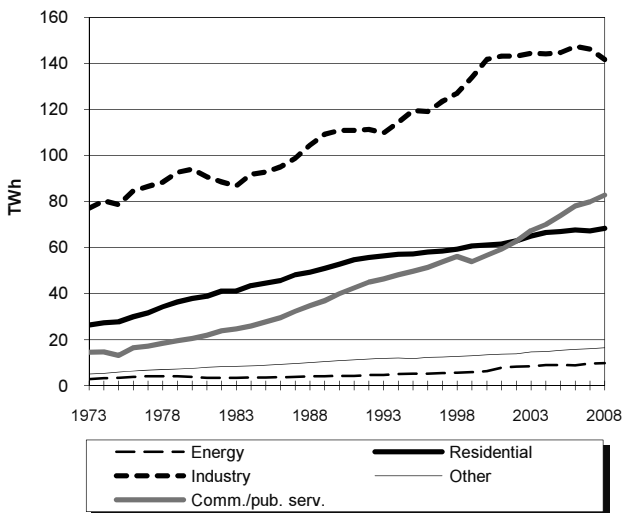


Figure 4. Electricity indicators

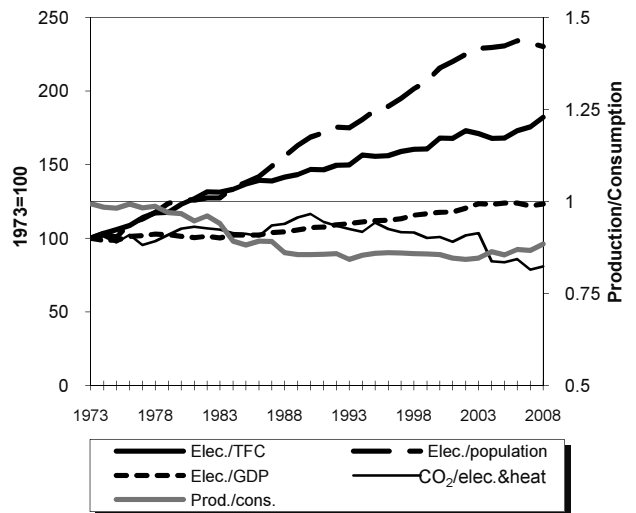
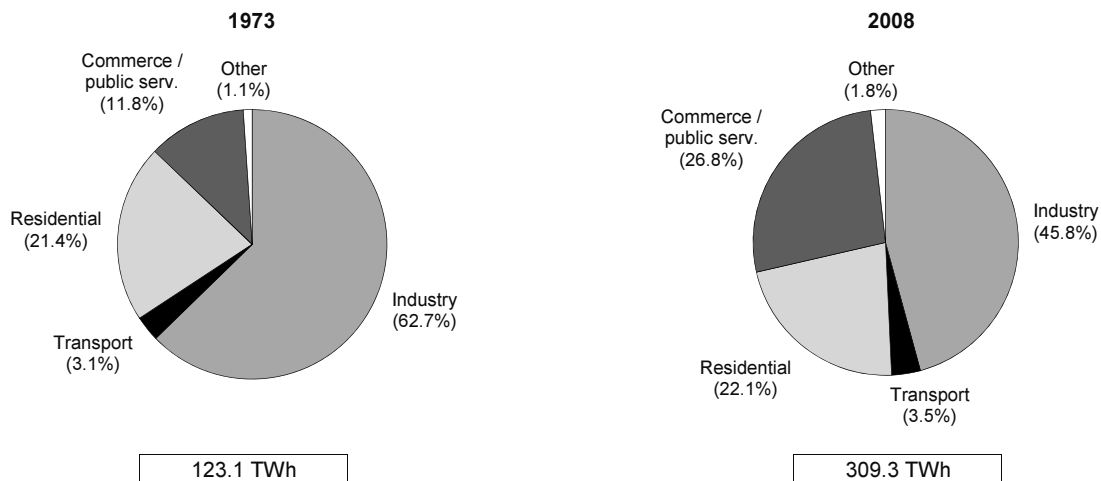


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|--------|--------|--------|---------|---------|---------|---------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 119.12 | 130.84 | 146.56 | 171.52 | 179.09 | 176.03 | 162.71 | 1.2 | 0.6 |
| GDP (billion 2000 USD) | 575.62 | 739.13 | 937.60 | 1097.34 | 1188.49 | 1176.14 | 1127.74 | 2.9 | 1.0 |
| TPES/GDP ⁽¹⁾ | 0.21 | 0.18 | 0.16 | 0.16 | 0.15 | 0.15 | 0.14 | -1.6 | -0.4 |
| Population (millions) | 54.75 | 56.43 | 56.72 | 56.94 | 59.38 | 59.89 | 59.74 | 0.2 | 0.3 |
| TPES/population ⁽²⁾ | 2.18 | 2.32 | 2.58 | 3.01 | 3.02 | 2.94 | 2.72 | 1.0 | 0.3 |
| TPES/GDP (2000 = 100) | 132 | 113 | 100 | 100 | 96 | 96 | 92 | -1.6 | -0.4 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 86 | 87 | 92 | 100 | 105 | 106 | .. | 0.4 | .. |
| Ele.TFC/population ⁽⁴⁾ | 2248 | 2832 | 3785 | 4796 | 5211 | 5167 | .. | 3.1 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 143.92 | 183.47 | 213.15 | 269.95 | 308.22 | 313.53 | 285.71 | 2.3 | 1.6 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 119.12 | 130.84 | 146.56 | 171.52 | 179.09 | 176.03 | 162.71 | 1.2 | 0.6 |
| Coal | 8.10 | 11.68 | 14.63 | 12.56 | 16.78 | 16.28 | 12.24 | 3.5 | -0.9 |
| Oil | 90.30 | 88.23 | 83.32 | 86.85 | 75.96 | 72.46 | 66.96 | -0.5 | -1.1 |
| Gas | 14.22 | 22.72 | 38.99 | 57.92 | 69.51 | 69.50 | 63.91 | 6.1 | 2.6 |
| Comb. renew & waste | 0.24 | 0.92 | 0.94 | 2.25 | 4.64 | 5.31 | 6.22 | 8.3 | 10.4 |
| Nuclear | 0.82 | 0.58 | - | - | - | - | - | - | - |
| Geothermal | 2.13 | 2.30 | 2.97 | 4.26 | 5.00 | 4.96 | 4.81 | 2.0 | 2.6 |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.01 | 0.06 e | 0.40 | 0.50 | 0.67 | - | 29.0 |
| Hydro | 3.23 | 3.89 | 2.72 | 3.80 | 2.82 | 3.58 | 4.09 | -1.0 | 2.2 |
| Net electricity imports ⁽²⁾ | 0.08 | 0.52 | 2.98 | 3.81 | 3.98 | 3.44 | 3.82 | 24.1 | 1.3 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 145.5 | 185.7 | 216.6 | 276.6 | 303.7 | 313.9 | 319.1 | 289.9 |
| Nuclear | 3.1 | 2.2 | - | - | - | - | - | - |
| Hydro | 39.1 | 47.5 | 35.1 | 50.9 | 42.9 | 38.5 | 47.2 | 51.7 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 1.6 | 2.3 | 3.5 | 6.7 | 6.9 | 5.7 | 5.6 | 4.2 |
| Geothermal | 2.5 | 2.7 | 3.2 | 4.7 | 5.3 | 5.6 | 5.5 | 5.3 |
| Solar | - | - | 0.0 e | 0.0 e | 0.0 | 0.0 | 0.2 | 0.8 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.0 | 0.6 | 2.3 | 4.0 | 4.9 | 6.1 |
| Combustible fuels | 100.8 | 133.4 | 178.3 | 219.7 | 252.0 | 264.7 | 260.4 | 225.1 |
| <i>Coal</i> | 5.2 | 18.3 | 35.8 | 30.5 | 49.4 | 49.7 | 48.6 | 43.3 |
| <i>Oil</i> | 89.7 | 104.6 | 102.7 | 85.9 | 47.1 | 35.4 | 31.5 | 28.1 |
| <i>Gas</i> | 4.5 | 9.2 | 39.7 | 101.4 | 149.3 | 172.6 | 172.7 | 145.8 |
| <i>Comb. renew. & waste</i> | 1.4 | 1.3 | 0.1 | 1.9 e | 6.2 | 7.0 | 7.7 | 7.9 |
| Other (e.g. fuel cells) | - | - | - | 0.8 | 1.1 | 1.0 | 0.9 | 0.9 |
| - Own use by power plant | 6.4 | 8.3 | 11.5 | 13.3 | 13.1 | 12.6 | 12.1 | .. |
| Net production | 139.1 | 177.4 | 205.1 | 263.3 | 290.6 | 301.3 | 307.1 | .. |
| Nuclear | .. | 2.1 | - | - | - | - | - | .. |
| Hydro | .. | 47.2 | 34.6 | 50.2 | 42.4 | 38.0 | 46.7 | .. |
| Geothermal | .. | 2.6 | 3.1 | 4.4 | 5.0 | 5.2 | 5.2 | .. |
| Solar | .. | - | 0.0 e | 0.0 e | 0.0 | 0.0 | 0.2 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | 0.0 | 0.6 | 2.3 | 4.0 | 4.9 | .. |
| Combustible fuels | .. | 125.5 | 167.4 | 207.3 | 239.8 | 253.0 | 249.3 | .. |
| Other (e.g. fuel cells) | .. | - | - | 0.7 | 1.1 | 1.0 | 0.9 | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | 2.3 | 3.2 | 4.8 | 9.1 | 9.3 | 7.7 | 7.6 | 5.7 |
| + Imports | 3.2 | 8.1 | 35.6 | 44.8 | 50.3 | 48.9 | 43.4 | 46.6 |
| - Exports | 2.4 | 2.0 | 0.9 | 0.5 | 1.1 | 2.6 | 3.4 | 2.1 |
| Electrical energy supplied | 137.7 | 180.3 | 234.9 | 298.5 | 330.5 | 339.9 | 339.5 | .. |
| - Transmission & distr. losses | 11.8 | 16.6 | 16.2 | 19.2 | 20.6 | 21.0 | 20.4 | .. |
| - Statistical difference | - | - | - | - | - | -0.0 | 0.0 | .. |
| Total consumption | 125.8 | 163.6 | 218.8 | 279.3 | 309.8 | 319.0 | 319.0 | .. |
| - Energy industry consumption ⁽²⁾ | 2.8 | 3.9 | 4.2 | 6.3 | 9.0 | 9.6 | 9.7 | .. |
| Final consumption | 123.1 | 159.8 | 214.6 | 273.0 | 300.9 | 309.3 | 309.3 | .. |
| Industry | 77.1 | 94.0 | 110.9 | 141.8 | 144.8 | 146.2 | 141.6 | .. |
| Transport | 3.8 | 4.8 | 6.7 | 8.5 | 9.9 | 10.4 | 10.8 | .. |
| Commercial & publ. serv. | 14.5 | 20.5 | 40.0 | 56.6 | 73.9 | 79.9 | 82.8 | .. |
| Residential | 26.3 | 37.8 | 52.7 | 61.1 | 67.0 | 67.2 | 68.4 | .. |
| Agriculture & fishing | 1.3 | 2.6 | 4.2 | 4.9 | 5.4 | 5.7 | 5.7 | .. |
| Sector non specified | - | - | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 148.91 | 185.74 | 216.60 | 276.64 | 314.12 | 313.89 | 319.13 | 2.4 | 2.2 |
| - Hydro pumped storage | 1.55 | 2.27 | 3.45 | 6.70 | 6.43 | 5.67 | 5.60 | 5.1 | 2.7 |
| Total generation⁽¹⁾ | 147.35 | 183.47 | 213.15 | 269.95 | 307.69 | 308.22 | 313.53 | 2.3 | 2.2 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 117.77 | 153.67 | 190.33 | 276.64 | 295.76 | 294.77 | 300.36 | 3.0 | 2.6 |
| - Hydro pumped storage | 1.55 | 2.27 | 3.43 | 6.70 | 6.43 | 5.67 | 5.60 | 5.1 | 2.8 |
| Total generation ⁽¹⁾ | 116.22 | 151.40 | 186.90 | 269.95 | 289.33 | 289.11 | 294.76 | 3.0 | 2.6 |
| Nuclear | 3.41 | 2.21 | - | - | - | - | - | - | - |
| Hydro | 30.35 | 37.27 | 25.90 | 44.21 | 36.14 | 32.11 | 40.75 | -1.0 | 2.5 |
| Geothermal | 2.50 | 2.67 | 3.22 | 4.71 | 5.53 | 5.57 | 5.52 | 1.6 | 3.0 |
| Solar, wind, tide ⁽²⁾ | - | - | 0.01 | 1.37 e | 3.51 | 4.54 | 5.42 | - | 46.0 |
| Coal | 3.85 | 14.49 | 32.02 | 30.52 | 49.96 | 49.64 | 48.58 | 14.2 | 2.3 |
| Oil | 74.56 | 87.93 | 93.54 | 85.88 | 39.39 | 28.94 | 25.76 | 1.4 | -6.9 |
| Gas | 1.49 | 6.74 | 32.14 | 101.36 | 148.29 | 161.58 | 161.39 | 21.2 | 9.4 |
| Comb. renew. & waste | 0.06 | 0.09 | 0.08 | 1.91 e | 6.53 | 6.74 | 7.35 | 1.4 | 29.0 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 31.13 | 32.07 | 26.27 | .. | 18.36 | 19.12 | 18.77 | -1.1 | -1.9 |
| - Hydro pumped storage | - | - | 0.03 | .. | .. | .. | .. | - | .. |
| Total generation ⁽¹⁾ | 31.13 | 32.07 | 26.25 | .. | 18.36 | 19.12 | 18.77 | -1.1 | -1.8 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 7.44 | 7.97 | 5.72 | .. | 0.86 | 0.70 | 0.88 | -1.6 | -9.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | .. | 0.53 | 0.56 | 0.55 | - | - |
| Coal | 2.77 | 3.76 | 3.74 | .. | 0.48 | 0.10 | 0.02 | 1.9 | -26.1 |
| Oil | 16.70 | 16.66 | 9.18 | - | 6.48 | 6.47 | 5.70 | -3.7 | -2.6 |
| Gas | 2.53 | 2.48 | 7.57 | .. | 9.79 | 11.07 | 11.31 | 7.1 | 2.3 |
| Comb. renew. & waste | 1.69 | 1.20 | 0.03 | .. | 0.22 | 0.22 | 0.31 | -22.6 | 14.4 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|--------------|--------------|--------------|------|--------------|--------------|--------------|---|
| Total | 22160 | 22673 | 25105 | .. | 17406 | 18124 | 17861 | -1.9 |
| Total energy | - | - | 1629 | .. | 4332 | 5060 | 4651 | 6.0 |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | 155 | 154 | 150 | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | - | 3594 | 4381 | 4108 | - |
| Energy non specified/other | - | - | 1629 | .. | 583 | 525 | 393 | -7.6 |
| Total industry | 22160 | 22673 | 23476 | .. | 12365 | 12348 | 12495 | -3.4 |
| Iron and steel | 2992 | 3744 | 5658 | .. | 609 | 783 | 904 | -9.7 |
| Chemical and petrochemical | 12165 | 11068 | 12072 | .. | 2792 | 2676 | 2629 | -8.1 |
| Non-ferrous metals | 2569 | 3508 | 75 | .. | 32 | 28 | 41 | -3.3 |
| Non-metallic minerals | 408 | 504 | 591 | .. | 1136 | 1112 | 1194 | 4.0 |
| Transport equipment | - | - | - | .. | 940 | 923 | 859 | - |
| Machinery | 312 | 357 | 1241 | .. | 275 | 243 | 255 | -8.4 |
| Mining and quarrying | 34 | 30 | 47 | - | 3 | 3 | 27 | -3.0 |
| Food and tobacco | 598 | 665 | 490 | .. | 1002 | 932 | 1011 | 4.1 |
| Pulp and printing | 1881 | 1985 | 1897 | .. | 4488 | 4560 | 4408 | 4.8 |
| Wood and wood products | - | - | - | .. | 195 | 217 | 223 | - |
| Construction | - | - | - | - | 1 | 1 | 1 | - |
| Textile and leather | 1098 | 681 | 1171 | .. | 520 | 454 | 385 | -6.0 |
| Non specified/other industries | 103 | 131 | 234 | .. | 372 | 416 | 558 | 4.9 |
| Total transport | - | - | - | - | 282 | 350 | 368 | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | 282 | 350 | 368 | - |
| Other | - | - | - | .. | 427 | 366 | 347 | - |
| Commerce and pub. services | - | - | - | - | 406 | 343 | 308 | - |
| Residential | - | - | - | - | - | - | 4 | - |
| Agriculture and fishing | - | - | - | - | 21 | 23 | 35 | - |
| Sector non specified | - | - | - | .. | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|------|------|------|--------|--------|--------|--------|---|
| Total | - | - | .. | 193064 | 204411 | 198373 | 168000 | - |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | - | - | - | 5372 | 2596 | 1888 | 1570 | - |
| Oil | - | - | .. | 55792 | 68432 | 64656 | 56700 | - |
| Gas | - | - | - | 120822 | 123607 | 121037 | 98696 | - |
| Comb. renew. & waste | - | - | - | 11078 | 9776 | 10792 | 11034 | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | - | - | - | 72641 | 83339 | 80815 | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | 3826 | 2196 | 1429 | .. | - |
| Oil | - | - | - | 6475 | 11380 | 10782 | .. | - |
| Gas | - | - | - | 52596 | 61294 | 59318 | .. | - |
| Comb. renew. & waste | - | - | - | 9744 | 8469 | 9286 | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | - | .. | 120423 | 121072 | 117558 | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | 1546 | 400 | 459 | .. | - |
| Oil | - | - | .. | 49317 | 57052 | 53874 | .. | - |
| Gas | - | - | - | 68226 | 62313 | 61719 | .. | - |
| Comb. renew. & waste | - | - | - | 1334 | 1307 | 1506 | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 21.72 | 28.91 | 37.65 | 44.79 | 52.63 | 49.24 | 51.95 | 3.3 | 1.8 |
| Coal | 1.33 | 4.19 | 8.01 | 6.71 | 13.38 | 11.68 | 11.59 | 11.1 | 2.1 |
| Oil | 19.12 | 22.59 | 21.53 | 18.95 | 9.26 | 6.85 | 6.74 | 0.7 | -6.2 |
| Gas | 1.02 | 1.98 | 8.07 | 18.68 | 27.49 | 28.08 | 30.97 | 12.9 | 7.8 |
| Comb. renew. & waste | 0.24 e | 0.15 e | 0.04 | 0.44 e | 2.49 | 2.63 | 2.65 | -10.2 | 26.3 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 23.38 | 33.73 | 44.79 | 46.88 | 43.16 | 45.93 | .. | 1.7 |
| Coal | .. | 3.41 | 7.12 | 6.71 | 13.21 | 11.64 | 11.58 | .. | 2.7 |
| Oil | .. | 18.44 | 19.72 | 18.95 | 7.00 | 4.41 | 4.35 | .. | -8.0 |
| Gas | .. | 1.50 | 6.88 | 18.68 | 24.30 | 24.61 | 27.50 | .. | 8.0 |
| Comb. renew. & waste | .. | 0.03 e | 0.02 | 0.44 e | 2.37 | 2.50 | 2.50 | .. | 29.6 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 2.95 | 2.87 | 2.77 | 4.05 | 4.75 | 4.79 | 4.76 | -0.4 | 3.1 |
| Nuclear | 0.82 | 0.58 | - | - | - | - | - | - | - |
| Geothermal | 2.13 | 2.30 | 2.77 | 4.04 e | 4.75 | 4.79 | 4.75 | 1.6 | 3.0 |
| Solar | - | - | 0.00 | 0.00 e | 0.00 | 0.00 | 0.02 | - | 24.0 |
| Non-Thermal | | | | | | | | | |
| Total | 3.23 | 3.89 | 2.72 | 3.85 | 3.44 | 3.17 | 4.00 | -1.0 | 2.2 |
| Hydro | 3.23 | 3.89 | 2.72 | 3.80 | 3.18 | 2.82 | 3.58 | -1.0 | 1.5 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.00 | 0.05 | 0.26 | 0.35 | 0.42 | - | 54.2 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

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8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|--------|--------|----------|--------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 4959 | 10693 | 9530 e | 16484 | 16773 | 16822 | 2.5 |
| Fuel input (TJ) | 123758 | 283096 | 239946 e | 520954 | 429047 | 429311 | 2.3 |
| Electricity production (GWh) | 13254 | 30697 | 25736 | 43725 | 43700 | 42842 | 1.9 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 1993 | 1058 | 4 e | - | - | - | - |
| Fuel input (TJ) | 13461 | 12345 | 52 e | - | - | - | - |
| Electricity production (GWh) | 1267 | 1171 | 6 | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 40512 | 32700 | 14371 e | 19944 | 13827 | 15062 | -4.2 |
| Electricity production (GWh) | 3729 | 2936 | 1535 | 2028 | 1413 | 1539 | -3.5 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 23288 | 20924 | 17478 e | 6826 | 4427 | 3661 | -9.2 |
| Fuel input (TJ) | 945769 | 853169 | 691096 e | 265141 | 164698 | 134525 | -9.8 |
| Electricity production (GWh) | 104586 | 94455 | 73074 | 27003 | 16173 | 13365 | -10.3 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 92227 | 323771 | 543995 | 653546 | 714095 | 725501 | 4.6 |
| Electricity production (GWh) | 9226 | 32386 | 58284 | 83033 | 91800 | 95128 | 6.2 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | 1046 e | 20091 | 21819 | 25298 | - |
| Electricity production (GWh) | - | - | 87 e | 1406 | 1563 | 1929 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | 670 | 1644 | 1587 | 1376 | - |
| Electricity production (GWh) | - | - | 56 | 107 | 103 | 80 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 921 | 3204 e | 21844 | 22685 | 23735 | 19.8 |
| Electricity production (GWh) | - | 71 | 267 | 1094 | 1182 | 1270 | 17.4 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 5093 e | 11661 | 12362 | 13844 | - |
| Electricity production (GWh) | - | - | 524 | 1095 | 1161 | 1333 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 133350 | 161716 | 159569 | 159491 | 157095 | 157486 | -0.1 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|-------|----------|--------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | .. | 31 | 99 e | 226 | 191 | 97 | 6.5 |
| Fuel input (TJ) | .. | 840 | 2575 e | 6151 | 5272 | 2683 | 6.7 |
| Electricity production (GWh) | .. | 178 | 530 | 483 | 412 | 231 | 1.5 |
| CHP Heat production (TJ) | .. | - | - | 3008 | 1967 | 1011 | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | .. | - | .. | - | - | - | - |
| Fuel input (TJ) | .. | 3 | .. | - | - | - | - |
| Electricity production (GWh) | .. | 1 | .. | - | - | - | - |
| CHP Heat production (TJ) | .. | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | .. | - | - | - | - | - | - |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Electricity production (GWh) | .. | - | - | - | - | - | - |
| CHP Heat production (TJ) | .. | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | .. | 5040 | 20647 e | 39004 | 42980 | 39878 | 12.2 |
| Electricity production (GWh) | .. | 779 | 2717 | 4202 | 4210 | 3979 | 9.5 |
| CHP Heat production (TJ) | .. | - | - | 1587 | 629 | 877 | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | .. | 1579 | 5677 e | 13344 | 13651 | 13010 | 12.4 |
| Fuel input (TJ) | .. | 63763 | 102336 e | 220377 | 222756 | 206101 | 6.7 |
| Electricity production (GWh) | .. | 8264 | 12804 | 18872 | 19236 | 18094 | 4.4 |
| CHP Heat production (TJ) | .. | - | .. | 71928 | 68432 | 64656 | - |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | .. | 56767 | 331791 | 696073 | 744480 | 715473 | 15.1 |
| Electricity production (GWh) | .. | 7323 | 43076 | 75046 | 80846 | 77571 | 14.0 |
| CHP Heat production (TJ) | .. | - | - | 119038 | 123607 | 121037 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | .. | 84 | 3379 e | 12974 | 10639 | 12269 | 31.9 |
| Electricity production (GWh) | .. | 12 | 338 e | 907 | 735 | 817 | 26.4 |
| CHP Heat production (TJ) | .. | - | - | 3384 | 3390 | 3621 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | .. | 586 | 562 | 1002 | 1075 | 752 | 1.4 |
| Electricity production (GWh) | .. | 16 | 56 | 72 | 81 | 63 | 7.9 |
| CHP Heat production (TJ) | .. | - | - | 194 | 137 | 134 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | .. | 18 | 3980 e | 31806 | 35933 | 29776 | 50.9 |
| Electricity production (GWh) | .. | 2 | 537 | 1822 | 1842 | 1842 | 46.1 |
| CHP Heat production (TJ) | .. | - | - | 8653 | 5559 | 6181 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | .. | 42 | 387 e | 3364 | 3878 | 4024 | 28.8 |
| Electricity production (GWh) | .. | 2 | 43 | 241 | 287 | 330 | 32.8 |
| CHP Heat production (TJ) | .. | - | - | 1107 | 690 | 856 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | .. | 16577 | 60101 | 101645 | 107649 | 102927 | 10.7 |
| CHP Heat production (TJ) | .. | - | - | 208899 | 204411 | 198373 | - |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

ITALY

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 96.56 | 102.23 | 114.94 | 128.83 | 140.64 | 138.52 | 133.40 | 1.0 | 0.8 |
| Geothermal | - | - | 0.20 | 0.21 | 0.21 | 0.21 | 0.21 | - | 0.3 |
| Solar thermal | - | - | 0.00 | 0.01 | 0.03 | 0.05 | 0.07 | - | 15.7 |
| Coal | 3.26 | 3.34 | 3.38 | 2.68 | 2.79 | 2.44 | 2.12 | 0.2 | -2.6 |
| Oil | 69.94 | 64.20 | 61.45 | 62.30 | 64.78 | 64.06 | 61.36 | -0.8 | -0.0 |
| Gas | 12.78 | 20.21 | 30.58 | 38.58 | 40.89 | 40.17 | 37.31 | 5.3 | 1.1 |
| Comb. renew. & waste | - | 0.74 | 0.86 | 1.58 | 2.25 | 1.91 | 2.55 | - | 6.2 |
| Electricity | 10.58 | 13.74 | 18.46 | 23.48 | 26.55 | 26.60 | 26.60 | 3.3 | 2.1 |
| Heat | - | - | - | - | 3.13 | 3.07 | 3.17 | - | - |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 39.06 | 35.84 | 34.09 | 38.25 | 39.83 | 40.81 | 35.26 | -0.8 | 0.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 2.65 | 2.97 | 3.28 | 2.45 | 2.62 | 2.26 | 1.95 | 1.3 | -2.8 |
| Oil | 21.12 | 15.61 | 8.08 | 6.70 | 6.65 | 7.20 | 6.45 | -5.5 | -1.2 |
| Gas | 8.65 | 9.05 | 12.97 | 16.62 | 14.73 | 15.69 | 11.30 | 2.4 | -0.8 |
| Comb. renew. & waste | - | 0.12 | 0.22 | 0.29 | 0.28 | 0.24 | 0.34 | - | 2.5 |
| Electricity | 6.63 | 8.09 | 9.54 | 12.20 | 12.67 | 12.57 | 12.18 | 2.2 | 1.4 |
| Heat | - | - | - | - | 2.89 | 2.83 | 3.03 | - | - |
| Transport | 18.96 | 24.35 | 32.71 | 39.66 | 42.17 | 42.29 | 40.67 | 3.3 | 1.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.14 | 0.00 | - | - | - | - | - | - | - |
| Oil | 18.37 | 23.68 | 31.92 | 38.60 | 40.72 | 40.77 | 38.46 | 3.3 | 1.0 |
| Gas | 0.12 | 0.26 | 0.21 | 0.33 | 0.41 | 0.48 | 0.55 | 3.1 | 5.5 |
| Comb. renew. & waste | - | - | - | - | 0.16 | 0.14 | 0.72 | - | - |
| Electricity | 0.33 | 0.41 | 0.58 | 0.73 | 0.88 | 0.89 | 0.93 | 3.4 | 2.7 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 1.55 | 2.17 | 7.97 | 10.76 | 14.88 | 14.51 | 16.89 | 10.1 | 4.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.31 | 0.41 | 0.32 | 0.32 | 0.46 | 0.44 | 1.08 | 0.2 | 7.1 |
| Gas | - | - | 4.21 | 5.57 | 7.61 | 7.10 | 8.62 | - | 4.1 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 1.25 | 1.77 | 3.44 | 4.87 | 6.71 | 6.87 | 7.12 | 6.1 | 4.1 |
| Heat | - | - | - | - | 0.10 | 0.10 | 0.07 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

ITALY

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|--------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 26.78 | 28.96 | 26.27 | 28.13 | 30.01 | 27.84 | 27.27 | -0.1 | 0.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | 0.00 | 0.01 | 0.03 | 0.05 | 0.07 | - | 15.7 |
| Coal | 0.47 | 0.36 | 0.10 | 0.06 | 0.01 | 0.01 | 0.00 | -8.9 | -15.7 |
| Oil | 20.05 | 15.90 | 9.52 | 6.68 | 5.34 | 4.54 | 3.94 | -4.3 | -4.8 |
| Gas | 4.00 | 8.82 | 11.50 | 14.97 | 17.04 | 15.97 | 16.01 | 6.4 | 1.9 |
| Comb. renew. & waste | - | 0.63 e | 0.61 | 1.15 | 1.62 | 1.36 | 1.33 | - | 4.4 |
| Electricity | 2.26 | 3.25 | 4.53 | 5.26 | 5.82 | 5.78 | 5.88 | 4.2 | 1.5 |
| Heat | - | - | - | - | 0.14 | 0.13 | 0.04 | - | - |
| Agriculture & fishing | 1.93 | 2.20 | 3.11 | 3.22 | 3.40 | 3.26 | 3.17 | 2.9 | 0.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 1.81 | 1.97 | 2.72 | 2.55 | 2.58 | 2.45 | 2.38 | 2.4 | -0.7 |
| Gas | 0.00 | 0.01 | 0.02 | 0.12 | 0.15 | 0.16 | 0.14 | 16.7 | 10.6 |
| Comb. renew. & waste | - | - | - | 0.13 | 0.20 | 0.17 | 0.16 | - | - |
| Electricity | 0.11 | 0.22 | 0.36 | 0.42 | 0.47 | 0.49 | 0.49 | 7.1 | 1.6 |
| Heat | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Other | - | - | 0.38 | 0.38 | 0.35 | 0.33 | 0.34 | - | -0.6 |
| Geothermal | - | - | 0.20 | 0.21 | 0.21 | 0.21 | 0.21 | - | 0.3 |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | - | - | 0.15 | 0.17 | 0.14 | 0.12 | 0.10 | - | -2.2 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | 0.03 e | - | - | - | - | - | - |
| Electricity | - | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | - | - | 0.03 | - | - |
| Non-energy use⁽¹⁾ | 8.28 | 8.70 | 10.42 | 8.43 | 10.00 | 9.48 | 9.80 | 1.37 | -0.34 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

ITALY

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| TFC (Mtoe) | 96.56 | 102.23 | 114.94 | 128.83 | 141.84 | 140.64 | 138.52 | 133.40 |
| Total industry (Mtoe) | 39.06 | 35.84 | 34.09 | 38.25 | 40.39 | 39.83 | 40.81 | 35.26 |
| Iron and steel | 5.67 | 6.82 | 5.66 | 5.60 | 6.00 | 5.87 | 5.46 | 5.13 |
| Chem. and petrochemical | 11.93 | 7.48 | 6.84 | 6.16 | 6.42 | 6.11 | 7.16 | 5.10 |
| Non-ferrous metals | 0.86 | 0.85 | 0.83 | 0.97 | 0.96 | 0.98 | 0.95 | 0.93 |
| Non-metallic minerals | 8.29 | 8.69 | 7.45 | 8.23 | 8.94 | 8.86 | 8.34 | 7.98 |
| Transport equipment | 0.22 | 0.27 | 0.33 | 0.41 | 0.48 | 0.49 | 0.48 | 0.46 |
| Machinery | 4.07 | 3.56 | 2.94 | 4.72 | 4.91 | 4.92 | 5.02 | 4.65 |
| Mining and quarrying | 0.26 | 0.15 | 0.14 | 0.17 | 0.18 | 0.19 | 0.18 | 0.18 |
| Food and tobacco | 2.20 | 2.43 | 2.10 | 3.49 | 3.56 | 3.34 | 3.47 | 3.29 |
| Paper, pulp and printing | 1.84 | 1.60 | 1.83 | 2.64 | 2.78 | 2.78 | 3.85 | 2.57 |
| Wood and wood products | 0.12 | 0.18 | 0.15 | 0.35 | 0.39 | 0.43 | 0.40 | 0.40 |
| Construction | 0.05 | 0.11 | 0.12 | 0.20 | 0.21 | 0.21 | 0.20 | 0.20 |
| Textile and leather | 2.12 | 2.13 | 1.98 | 2.71 | 2.36 | 2.34 | 1.95 | 1.66 |
| Non specified/other | 1.42 | 1.57 | 3.73 | 2.60 | 3.18 | 3.31 | 3.33 | 2.71 |
| Electricity consumption (Mtoe) | 10.58 | 13.74 | 18.46 | 23.48 | 25.88 | 26.55 | 26.60 | 26.60 |
| Total industry (Mtoe) | 6.63 | 8.09 | 9.54 | 12.20 | 12.45 | 12.67 | 12.57 | 12.18 |
| Iron and steel | 1.19 | 1.71 | 1.67 | 1.75 | 1.75 | 1.87 | 1.86 | 1.86 |
| Chem. and petrochemical | 1.67 | 1.89 | 1.70 | 1.89 | 1.64 | 1.62 | 1.56 | 1.51 |
| Non-ferrous metals | 0.46 | 0.59 | 0.53 | 0.48 | 0.48 | 0.49 | 0.48 | 0.48 |
| Non-metallic minerals | 0.64 | 0.84 | 0.97 | 1.18 | 1.26 | 1.29 | 1.27 | 1.20 |
| Transport equipment | 0.22 | 0.27 | 0.33 | 0.41 | 0.36 | 0.38 | 0.39 | 0.37 |
| Machinery | 0.63 | 0.87 | 1.21 | 1.76 | 2.03 | 2.07 | 2.05 | 1.99 |
| Mining and quarrying | 0.11 | 0.11 | 0.11 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| Food and tobacco | 0.34 | 0.43 | 0.64 | 1.00 | 1.12 | 1.10 | 1.11 | 1.10 |
| Paper, pulp and printing | 0.41 | 0.49 | 0.61 | 0.87 | 0.94 | 0.94 | 0.92 | 0.88 |
| Wood and wood products | 0.12 | 0.18 | 0.15 | 0.35 | 0.38 | 0.39 | 0.38 | 0.37 |
| Construction | 0.05 | 0.08 | 0.08 | 0.11 | 0.15 | 0.15 | 0.15 | 0.16 |
| Textile and leather | 0.59 | 0.59 | 0.84 | 0.99 | 0.78 | 0.77 | 0.72 | 0.65 |
| Non specified/other | 0.19 | 0.04 | 0.68 | 1.35 | 1.47 | 1.52 | 1.59 | 1.52 |
| Total industry (TWh) | 77.15 | 94.02 | 110.92 | 141.85 | 144.76 | 147.36 | 146.17 | 141.65 |
| Iron and steel | 13.88 | 19.84 | 19.41 | 20.35 | 20.40 | 21.69 | 21.68 | 21.63 |
| Chem. and petrochemical | 19.38 | 22.00 | 19.82 | 21.95 | 19.02 | 18.84 | 18.19 | 17.53 |
| Non-ferrous metals | 5.38 | 6.87 | 6.16 | 5.53 | 5.64 | 5.75 | 5.55 | 5.60 |
| Non-metallic minerals | 7.47 | 9.73 | 11.31 | 13.70 | 14.68 | 14.94 | 14.79 | 13.97 |
| Transport equipment | 2.56 | 3.14 | 3.79 | 4.71 | 4.24 | 4.43 | 4.48 | 4.26 |
| Machinery | 7.28 | 10.14 | 14.12 | 20.45 | 23.55 | 24.08 | 23.80 | 23.13 |
| Mining and quarrying | 1.26 | 1.27 | 1.27 | 1.05 | 1.07 | 1.09 | 1.07 | 1.03 |
| Food and tobacco | 3.92 | 4.99 | 7.50 | 11.64 | 13.00 | 12.84 | 12.86 | 12.83 |
| Paper, pulp and printing | 4.82 | 5.66 | 7.12 | 10.10 | 10.94 | 10.88 | 10.65 | 10.28 |
| Wood and wood products | 1.43 | 2.11 | 1.76 | 4.04 | 4.37 | 4.49 | 4.46 | 4.32 |
| Construction | 0.62 | 0.89 | 0.96 | 1.23 | 1.71 | 1.76 | 1.80 | 1.89 |
| Textile and leather | 6.90 | 6.91 | 9.77 | 11.46 | 9.12 | 8.94 | 8.41 | 7.57 |
| Non specified/other | 2.27 | 0.47 | 7.93 | 15.65 | 17.05 | 17.65 | 18.45 | 17.63 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

Note: Please refer to notes in the introductory information for data coverage.

ITALY

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total imports⁽¹⁾ | 3248 | 8072 | 35577 | 38662 | 44831 | 50264 | 46596 | 48931 | 43433 |
| Imports from: | | | | | | | | | |
| Total OECD | 3248 | 7347 | 34231 | 37911 | 40298 | 42274 | 41213 | 45694 | 38707 |
| Austria | 328 | 711 | 1703 | 1323 | 1958 | 1479 | 1419 | 1396 | 1360 |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | 760 | 1426 | 15443 | 17648 | 16175 | 14616 | 14946 | 15259 | 12990 |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | 713 | 945 | 174 | 179 |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | 2160 | 5210 | 17085 | 18940 | 22165 | 25466 | 23903 | 28865 | 24178 |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | 725 | 1346 | 751 | 4533 | 7990 | 5383 | 3237 | 4726 |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | 725 | 1346 | 751 | 4533 | 7990 | 5383 | 3237 | 4726 |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

ITALY

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|-------------|-------------|------------|-------------|------------|-------------|-------------|-------------|-------------|
| Total exports ⁽¹⁾ | 2369 | 1989 | 922 | 1235 | 484 | 1109 | 1611 | 2648 | 3398 |
| Exports to: | | | | | | | | | |
| Total OECD | 2342 | 1917 | 203 | 291 | 412 | 1109 | 1598 | 2351 | 3303 |
| Austria | 122 | 22 | - | 1 | - | - | 4 | - | 2 |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | 317 | 736 | 181 | 267 | 404 | 706 | 724 | 1158 | 1151 |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | 272 | 453 | 1128 | 1751 |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | 1903 | 1159 | 22 | 23 | 8 | 131 | 417 | 65 | 399 |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | 27 | 72 | 719 | 944 | 72 | - | 13 | 297 | 95 |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | 27 | 72 | 719 | 944 | 72 | - | 13 | 297 | 95 |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

ITALY

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 30.65 | 38.45 | 49.14 | 57.11 | 75.51 | 80.66 | 84.64 | 88.90 | 93.06 |
| Nuclear | 0.55 | 1.42 | - | - | - | - | - | - | - |
| Hydro | 12.90 | 13.85 | 17.04 | 18.02 | 20.35 | 20.79 | 20.87 | 20.93 | 21.09 |
| <i>of which: pumped storage</i> | - | - | 6.19 | 6.88 | 6.96 | 7.10 | 7.54 | 7.54 | 7.54 |
| Geothermal | 0.38 | 0.43 | 0.50 | 0.47 | 0.59 | 0.67 | 0.67 | 0.67 | 0.67 |
| Solar | - | - | - | 0.02 | 0.02 | 0.03 | 0.05 | 0.09 | 0.43 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.02 | 0.36 | 1.63 | 1.90 | 2.70 | 3.52 |
| Other (e.g. fuel cells) | - | - | - | 0.01 | 0.16 | 0.12 | 0.19 | 0.19 | 0.19 |
| Combustible fuels | 16.82 | 22.75 | 31.60 | 38.57 | 54.03 | 57.41 | 60.96 | 64.33 | 67.15 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 0.07 | 0.06 | 0.02 | 0.02 | 0.02 | 0.06 | 0.05 | 0.05 | 0.03 |
| Liquid fuels | 7.05 | 13.71 | 15.26 | 17.72 | 14.56 | 12.24 | 12.39 | 11.92 | 11.16 |
| Natural gas | - | - | 0.04 | 0.23 | 5.87 | 13.65 | 21.50 | 23.38 | 25.19 |
| Comb. renew. & waste | - | - | 0.04 | 0.09 | 0.69 | 0.98 | 1.03 | 1.09 | 1.15 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 7.35 | 4.23 | 6.02 | 6.02 | 7.69 | 6.29 | 4.71 | 6.23 | 6.22 |
| Solid / natural gas | - | - | - | - | - | 1.03 | 1.03 | 1.03 | 1.21 |
| Liquid / natural gas | 1.74 | 3.82 | 9.24 | 13.45 | 20.36 | 20.81 | 16.60 | 18.60 | 19.51 |
| Solid / liquid / gas | 0.60 | 0.92 | 0.98 | 1.05 | 4.85 | 2.36 | 3.66 | 2.04 | 2.68 |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 29.55 | 34.03 | 40.05 | 29.31 | 28.80 | 27.85 | 27.37 |
| Internal combustion | - | - | 0.19 | 0.24 | 0.83 | 0.77 | 0.81 | 0.91 | 0.95 |
| Gas turbine | - | - | 1.86 | 4.29 | 5.31 | 3.22 | 3.24 | 3.25 | 3.34 |
| Combined cycle | - | - | - | 0.01 | 7.84 | 24.12 | 28.11 | 32.31 | 35.49 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | 36.26 | 39.65 | .. | 55.02 | 55.62 | 56.82 | 55.29 |
| Available capacity | .. | .. | 36.46 | 45.67 | .. | 56.30 | 58.90 | 61.15 | 63.50 |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-----------|-------------|-------------|-------------|-------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 7.70 | 8.37 | 7.42 | 8.81 | .. | 4.84 | 4.85 | 4.70 | 5.57 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 1.97 | 1.97 | 1.73 | 1.82 | .. | 0.20 | 0.20 | 0.19 | 0.19 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | 0.08 | .. | 0.12 | 0.12 | 0.13 | 0.13 |
| Combustible fuels | 5.73 | 6.40 | 5.69 | 6.91 | .. | 4.52 | 4.53 | 4.38 | 5.25 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 0.87 | 0.12 | 0.01 | - | - | 0.01 | 0.01 | 0.01 | - |
| Liquid fuels | 2.47 | 2.25 | 1.18 | 0.92 | .. | 0.79 | 0.77 | 0.69 | 0.72 |
| Natural gas | 0.26 | 0.40 | 0.45 | 1.68 | .. | 1.79 | 1.87 | 1.80 | 2.66 |
| Comb. renew. & waste | - | - | 0.09 | 0.06 | .. | 0.03 | 0.03 | 0.03 | 0.05 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 0.67 | 1.82 | 0.36 | 0.45 | .. | 0.04 | 0.04 | 0.01 | 0.01 |
| Solid / natural gas | - | - | - | - | - | - | 0.02 | 0.02 | 0.02 |
| Liquid / natural gas | 1.46 | 1.82 | 1.96 | 2.21 | .. | 1.66 | 1.61 | 1.70 | 1.66 |
| Solid / liquid / gas | - | - | 1.64 | 1.59 | .. | 0.20 | 0.19 | 0.13 | 0.14 |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 5.22 | 4.86 | .. | 2.73 | 2.63 | 2.33 | 2.24 |
| Internal combustion | - | - | 0.05 | 0.13 | .. | 0.33 | 0.38 | 0.38 | 0.46 |
| Gas turbine | - | - | 0.26 | 0.43 | .. | 0.73 | 0.73 | 0.75 | 0.71 |
| Combined cycle | - | - | 0.12 | 1.50 | .. | 0.72 | 0.79 | 0.93 | 1.85 |
| Other | - | - | 0.05 | - | - | - | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Euro/ unit | | | | | | | | |
| Steam coal (t) | 16.03 | 22.46 | 37.13 | c | 58.54 | 54.13 | 62.04 | 95.80 | 74.07 |
| Heavy fuel oil (t) | 37.56 | 80.11 | 83.32 | c | c | c | c | c | c |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | 35.79 | 76.51 | 72.34 | c | c | c | c | c | c |
| | Euro/ toe | | | | | | | | |
| Steam coal | 25.85 | 36.23 | 59.89 | c | 95.97 | 90.22 | 105.15 | 165.17 | 125.54 |
| Heavy fuel oil | 39.13 | 83.45 | 86.79 | c | c | c | c | c | c |
| Natural gas ⁽²⁾ | 39.77 | 85.01 | 80.38 | c | c | c | c | c | c |
| End-user prices of electricity | | | | | | | | | |
| | Euro/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0189 | 0.0288 | 0.0604 | 0.0965 | 0.1400 | 0.1670 | 0.1730 | 0.1982 | 0.1988 |
| <i>of which: tax</i> | 0.0003 | 0.0003 | 0.0147 | 0.0147 | 0.0300 | 0.0370 | 0.0410 | 0.0413 | 0.0425 |
| Household | | | | | | | | | |
| Price | 0.0219 | 0.0340 | 0.0970 | 0.1470 | 0.1590 | 0.1800 | 0.1880 | 0.2088 | 0.2046 |
| <i>of which: tax</i> | 0.0017 | 0.0024 | 0.0265 | 0.0336 | 0.0390 | 0.0500 | 0.0540 | 0.0536 | 0.0505 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

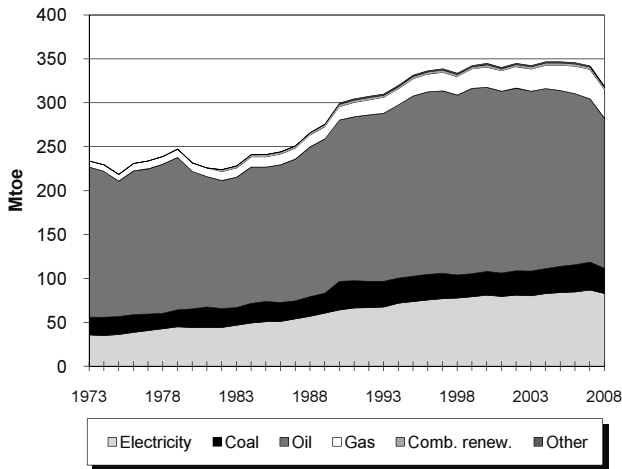


Figure 2. Electricity generation by fuel

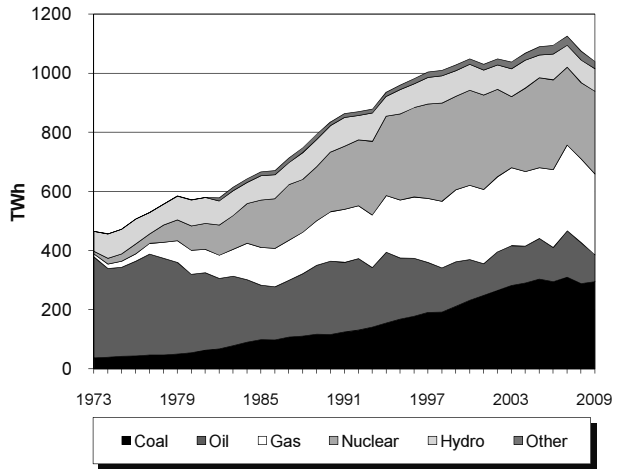


Figure 3. Electricity consumption by sector

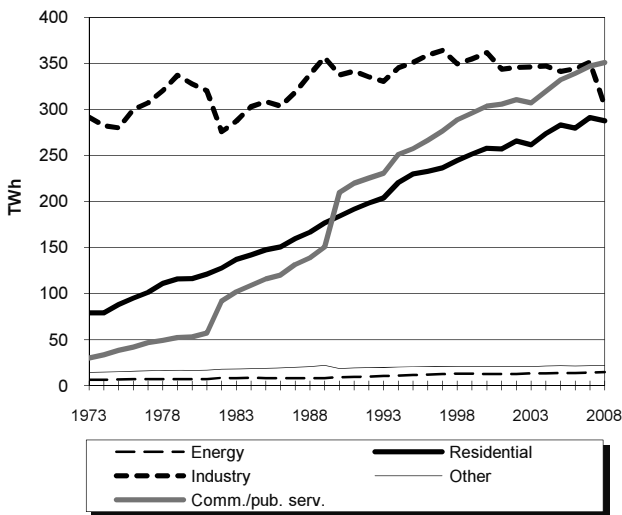


Figure 4. Electricity indicators

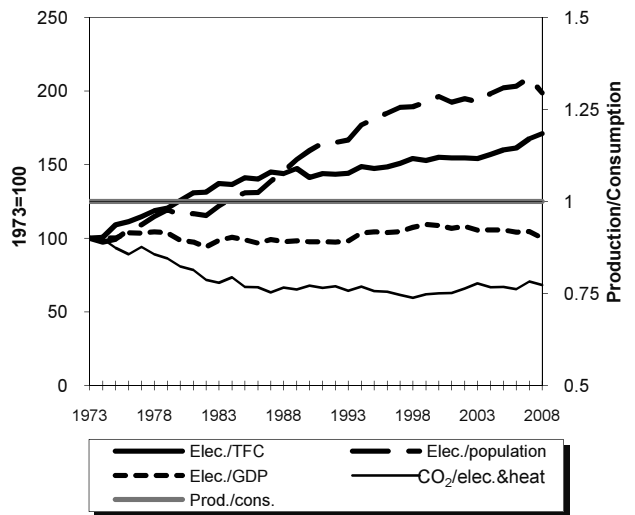
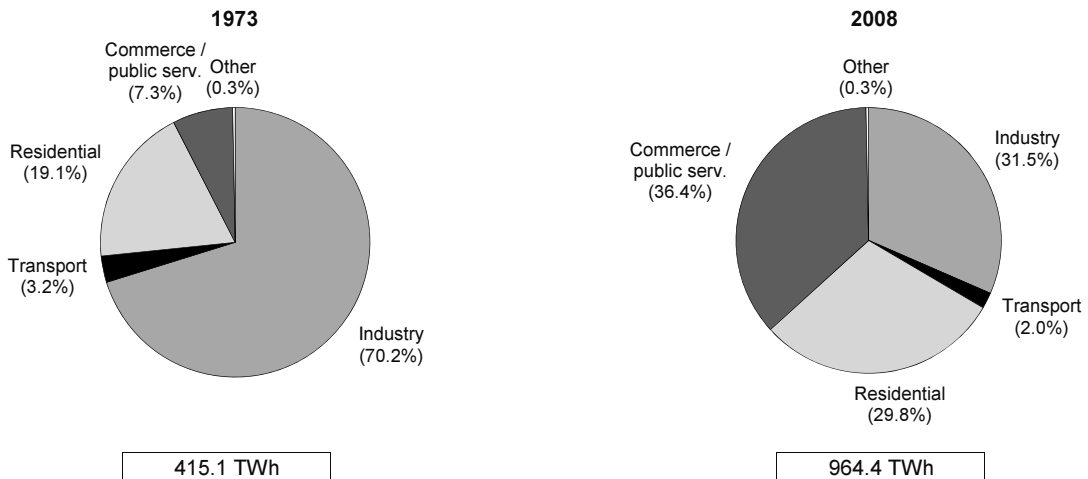


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|---------|---------|---------|---------|---------|---------|---------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 320.37 | 344.52 | 439.32 | 518.95 | 515.33 | 495.84 | 473.69 | 1.9 | 0.4 |
| GDP (billion 2000 USD) | 2219.37 | 2800.62 | 4122.36 | 4667.47 | 5202.72 | 5166.27 | 4912.48 | 3.7 | 0.9 |
| TPES/GDP ⁽¹⁾ | 0.14 | 0.12 | 0.11 | 0.11 | 0.10 | 0.10 | 0.10 | -1.8 | -0.5 |
| Population (millions) | 108.90 | 117.06 | 123.61 | 126.93 | 127.77 | 127.69 | 127.28 | 0.7 | 0.2 |
| TPES/population ⁽²⁾ | 2.94 | 2.94 | 3.55 | 4.09 | 4.03 | 3.88 | 3.72 | 1.1 | 0.2 |
| TPES/GDP (2000 = 100) | 130 | 111 | 96 | 100 | 89 | 86 | 87 | -1.8 | -0.5 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 93 | 91 | 90 | 100 | 96 | 92 | .. | -0.2 | .. |
| Ele.TFC/population ⁽⁴⁾ | 3813 | 4386 | 6066 | 7438 | 7918 | 7555 | .. | 2.8 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 465.39 | 572.53 | 835.51 | 1048.98 | 1125.49 | 1074.96 | 1039.72 | 3.5 | 1.2 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 320.37 | 344.52 | 439.32 | 518.95 | 515.33 | 495.84 | 473.69 | 1.9 | 0.4 |
| Coal | 57.86 | 59.56 | 76.62 | 96.86 | 116.24 | 113.50 | 101.87 | 1.7 | 1.5 |
| Oil | 248.93 | 233.68 | 250.42 | 255.21 | 229.83 | 214.29 | 202.04 | 0.0 | -1.1 |
| Gas | 5.07 | 21.40 | 44.16 | 65.65 | 83.05 | 83.71 | 80.66 | 13.6 | 3.2 |
| Comb. renew & waste | - | - | 4.99 | 5.85 | 7.36 | 7.01 | 6.00 | - | 1.0 |
| Nuclear | 2.53 | 21.52 | 52.71 | 83.93 | 68.76 | 67.27 | 72.90 | 19.6 | 1.7 |
| Geothermal | 0.23 | 0.77 | 1.58 | 3.10 | 2.82 | 2.57 | 2.70 | 11.9 | 2.9 |
| Solar, wind, tide ⁽¹⁾ | - | - | 1.17 | 0.85 e | 0.91 e | 0.93 e | 0.98 | - | -0.9 |
| Hydro | 5.74 | 7.59 | 7.68 | 7.50 | 6.36 | 6.56 | 6.53 | 1.7 | -0.8 |
| Net electricity imports ⁽²⁾ | - | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 470.3 | 576.3 | 842.0 | 1058.5 | 1099.8 | 1135.7 | 1082.0 | 1046.4 |
| Nuclear | 9.7 | 82.6 | 202.3 | 322.0 | 304.8 | 263.8 | 258.1 | 279.8 |
| Hydro | 71.7 | 92.1 | 95.8 | 96.8 | 86.4 | 84.2 | 83.3 | 82.6 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 4.9 | 3.8 | 6.5 | 9.6 | 9.9 | 10.2 | 7.1 | 6.7 |
| Geothermal | 0.3 | 0.9 | 1.7 | 3.3 | 3.2 | 3.0 | 2.8 | 2.9 |
| Solar | - | - | 0.0 | 0.3 | 1.5 | 2.0 | 2.3 | 2.3 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.1 | 1.8 | 2.6 | 2.6 | 3.4 |
| Combustible fuels | 388.6 | 400.7 | 542.2 | 635.9 | 702.2 | 780.0 | 733.0 | 675.4 |
| <i>Coal</i> | 37.3 | 54.9 | 116.7 | 232.3 | 303.6 | 310.8 | 288.3 | 295.1 |
| <i>Oil</i> | 340.8 | 264.7 | 247.9 | 137.1 | 137.5 | 156.3 | 139.2 | 90.3 |
| <i>Gas</i> | 10.5 | 81.1 | 167.1 | 251.3 | 239.0 | 289.9 | 283.2 | 273.7 |
| <i>Comb. renew. & waste</i> | - | - | 10.5 | 15.2 | 22.1 | 23.0 | 22.4 | 16.3 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - |
| - Own use by power plant | 15.7 | 24.6 | 32.1 | 39.3 | 42.9 | 42.9 | 41.6 | .. |
| Net production | 454.6 | 551.8 | 809.9 | 1019.3 | 1056.9 | 1092.8 | 1040.4 | .. |
| Nuclear | .. | 78.6 | 193.9 | 308.7 | 291.3 | 251.7 | 246.2 | .. |
| Hydro | .. | 91.5 | 95.1 | 96.1 | 85.6 | 83.5 | 82.5 | .. |
| Geothermal | .. | - | 1.6 | 3.1 | 3.0 | 2.8 | 2.5 | .. |
| Solar | .. | - | 0.0 | 0.3 | 1.5 | 2.0 | 2.3 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | - | 0.1 | 1.8 | 2.6 | 2.6 | .. |
| Combustible fuels | .. | 381.6 | 519.3 | 611.0 | 673.8 | 750.2 | 704.3 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | - | - | - | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - e | 0.3 | 1.1 | 1.1 | 1.2 | 1.1 | 1.1 |
| - Used for pumped storage | 4.7 | 6.1 | 10.0 | 14.8 | 13.5 | 14.9 | 9.0 | 7.5 |
| + Imports | - | - | - | - | - | - | - | - |
| - Exports | - | - | - | - | - | - | - | - |
| Electrical energy supplied | 449.8 | 545.6 | 799.6 | 1003.4 | 1042.3 | 1076.8 | 1030.2 | .. |
| - Transmission & distr. losses | 28.1 | 25.4 | 40.8 | 46.9 | 50.4 | 51.0 | 51.3 | .. |
| - Statistical difference | - | - | 0.0 | -0.0 | 0.0 | 0.0 | 0.0 | .. |
| Total consumption | 421.7 | 520.2 | 758.8 | 956.5 | 991.8 | 1025.8 | 978.9 | .. |
| - Energy industry consumption ⁽²⁾ | 6.5 | 7.0 | 9.2 | 12.7 | 13.8 | 14.5 | 14.5 | .. |
| Final consumption | 415.1 | 513.3 | 749.6 | 943.7 | 978.1 | 1011.3 | 964.4 | .. |
| Industry | 291.4 | 327.8 | 337.3 | 361.6 | 341.1 | 351.3 | 303.8 | .. |
| Transport | 13.2 | 15.2 | 16.8 | 18.6 | 19.1 | 18.9 | 18.8 | .. |
| Commercial & publ. serv. | 30.1 | 53.0 | 209.7 | 303.7 | 332.3 | 347.2 | 351.0 | .. |
| Residential | 79.2 | 116.1 | 184.1 | 257.9 | 283.1 | 291.0 | 287.6 | .. |
| Agriculture & fishing | 1.2 | 1.2 | 1.6 | 1.6 | 1.0 | 0.9 | 0.9 | .. |
| Sector non specified | - | - | - | 0.3 | 1.5 | 2.0 | 2.2 | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 459.08 | 576.33 | 842.04 | 1058.55 | 1104.59 | 1135.72 | 1082.01 | 3.9 | 1.4 |
| - Hydro pumped storage | 2.10 | 3.80 | 6.53 | 9.56 | 9.82 | 10.23 | 7.06 | 7.3 | 0.4 |
| Total generation⁽¹⁾ | 456.98 | 572.53 | 835.51 | 1048.98 | 1094.77 | 1125.49 | 1074.96 | 3.8 | 1.4 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 397.75 | 511.86 | 757.59 | 940.68 | 972.88 | 1004.62 | 957.89 | 4.1 | 1.3 |
| - Hydro pumped storage | 2.10 | 3.80 | 6.53 | 9.56 | 9.82 | 10.23 | 7.06 | 7.3 | 0.4 |
| Total generation ⁽¹⁾ | 395.65 | 508.06 | 751.06 | 931.11 | 963.07 | 994.40 | 950.83 | 4.1 | 1.3 |
| Nuclear | 19.70 | 82.01 | 201.40 | 321.34 | 303.43 | 263.83 | 258.13 | 15.6 | 1.4 |
| Hydro | 76.55 | 81.35 | 82.22 | 79.76 | 79.19 | 66.63 | 68.86 | 0.4 | -1.0 |
| Geothermal | 0.10 | 0.90 | 1.49 | 3.12 | 2.88 | 2.85 | 2.56 | 18.4 | 3.1 |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.00 | 0.01 | 0.01 | 0.01 | - | - |
| Coal | 30.35 | 37.95 | 94.30 | 191.66 | 251.03 | 264.96 | 244.05 | 7.3 | 5.4 |
| Oil | 253.60 | 224.75 | 205.83 | 87.50 | 69.48 | 113.73 | 100.33 | -1.3 | -3.9 |
| Gas | 15.35 | 81.11 | 165.26 | 245.67 | 251.74 | 276.85 | 271.55 | 16.0 | 2.8 |
| Comb. renew. & waste | - | - | 0.58 | 2.06 | 5.32 | 5.55 | 5.36 | - | 13.2 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 61.32 | 64.47 | 84.45 | 117.87 | 131.71 | 131.10 | 124.13 | 2.0 | 2.2 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 61.32 | 64.47 | 84.45 | 117.87 | 131.71 | 131.10 | 124.13 | 2.0 | 2.2 |
| Nuclear | - | 0.58 | 0.87 | 0.71 | - | - | - | - | - |
| Hydro | 6.13 | 6.95 | 7.09 | 7.49 | 8.34 | 7.38 | 7.38 | 0.9 | 0.2 |
| Geothermal | - | - | 0.26 | 0.23 | 0.20 | 0.20 | 0.20 | - | -1.5 |
| Solar, wind, tide ⁽²⁾ | - | - | 0.00 | 0.46 e | 4.00 e | 4.63 e | 4.87 e | - | 60.3 |
| Coal | 9.41 | 16.98 | 22.41 | 40.59 | 44.41 | 45.82 | 44.21 | 5.6 | 3.8 |
| Oil | 45.79 | 39.96 | 42.06 | 49.58 | 46.06 | 42.52 | 38.84 | -0.5 | -0.4 |
| Gas | - | - | 1.83 | 5.66 | 11.71 | 13.07 | 11.60 | - | 10.8 |
| Comb. renew. & waste | - | - | 9.94 | 13.15 | 16.99 | 17.47 | 17.03 | - | 3.0 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---|
| Total | 51586 | 53218 | 84450 | 117870 | 131705 | 131097 | 124125 | 2.2 |
| Total energy | - | - | 3979 | 9987 | 18488 | 17930 | 18916 | 9.0 |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | 3979 | 9987 | 18488 | 17930 | 18916 | 9.0 |
| Energy non specified/other | - | - | - | - | - | - | - | - |
| Total industry | 51586 | 50521 | 80471 | 107538 | 111429 | 111160 | 102966 | 1.4 |
| Iron and steel | - | 11195 | 15845 | 25279 | 28424 | 28780 | 25709 | 2.7 |
| Chemical and petrochemical | - | 17152 | 28110 | 31664 | 26556 | 26203 | 24316 | -0.8 |
| Non-ferrous metals | - | 5569 | 2344 | 1539 | 1445 | 1396 | 1314 | -3.2 |
| Non-metallic minerals | - | 2007 | 8889 | 12487 | 13031 | 13160 | 12865 | 2.1 |
| Transport equipment | - | 2 | - | - | - | - | - | - |
| Machinery | - | 4 | 2006 | 2957 | 4331 | 4702 | 3757 | 3.5 |
| Mining and quarrying | - | 981 | - | - | - | - | - | - |
| Food and tobacco | - | 473 | - | - | - | - | - | - |
| Pulp and printing | - | 10435 | 17055 | 25414 | 25123 | 24739 | 22782 | 1.6 |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | - | 30 | - | - | - | - | - | - |
| Non specified/other industries | 51586 | 2673 | 6222 | 8198 | 12519 | 12180 | 12223 | 3.8 |
| Total transport | - | - | - | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | - | - | - | - |
| Other | - | 2697 | - | 345 | 1788 | 2007 | 2243 | - |
| Commerce and pub. services | - | - | - | - | - | - | - | - |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | - | - | - | - | - | - | - | - |
| Sector non specified | - | 2697 | - | 345 | 1788 | 2007 | 2243 | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|---|
| Total | 4270 | 8464 | 23428 | 25984 | 25969 | 24609 | 24928 | 6.1 |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | 637 | 541 | 611 | 536 | 519 | 497 | - | -0.5 |
| Oil | 1201 | 1729 | 1489 | 896 | 413 | 364 | 295 | -8.3 |
| Gas | 1949 | 4054 | 12517 | 15342 | 15855 | 14887 | 16586 | 7.5 |
| Comb. renew. & waste | - | 1333 | 5412 | 5710 | 5478 | 5228 | 4143 | 7.9 |
| Non-spec. comb. fuels | 483 | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | 807 | 3399 | 3500 | 3704 | 3633 | 3904 | 8.7 |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 4270 | 8464 | 23428 | 25984 | 25969 | 24609 | .. | 6.1 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | 637 | 541 | 611 | 536 | 519 | 497 | .. | -0.5 |
| Oil | 1201 | 1729 | 1489 | 896 | 413 | 364 | .. | -8.3 |
| Gas | 1949 | 4054 | 12517 | 15342 | 15855 | 14887 | .. | 7.5 |
| Comb. renew. & waste | - | 1333 | 5412 | 5710 | 5478 | 5228 | .. | 7.9 |
| Non-spec. comb. fuels | 483 | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | 807 | 3399 | 3500 | 3704 | 3633 | .. | 8.7 |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | - | - | - | - | - | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | - | - | - | - | - | .. | - |
| Gas | - | - | - | - | - | - | .. | - |
| Comb. renew. & waste | - | - | - | - | - | - | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 84.59 | 88.97 | 111.78 | 126.22 | 137.47 | 153.58 | 143.31 | 1.7 | 1.4 |
| Coal | 11.97 | 10.52 | 25.41 | 48.35 | 61.27 | 64.20 | 60.47 | 4.5 | 4.9 |
| Oil | 70.62 | 62.87 | 50.64 | 27.52 | 22.74 | 31.11 | 26.24 | -1.9 | -3.6 |
| Gas | 2.00 | 15.58 | 33.42 | 47.20 | 48.99 | 53.68 | 52.15 | 18.0 | 2.5 |
| Comb. renew. & waste | - | - | 2.31 | 3.16 | 4.47 | 4.58 | 4.44 | - | 3.7 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 75.18 | 95.91 | 105.53 | 115.77 | 132.11 | 123.24 | .. | 1.4 |
| Coal | .. | 8.03 | 20.43 | 40.23 | 52.83 | 55.52 | 52.18 | .. | 5.3 |
| Oil | .. | 51.57 | 42.26 | 18.58 | 14.76 | 23.91 | 19.66 | .. | -4.2 |
| Gas | .. | 15.58 | 33.05 | 46.15 | 46.95 | 51.40 | 50.15 | .. | 2.3 |
| Comb. renew. & waste | .. | - | 0.17 | 0.56 | 1.25 | 1.28 | 1.25 | .. | 11.7 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 2.76 | 22.30 | 54.21 | 86.84 | 81.88 | 71.55 | 69.83 | 19.1 | 1.4 |
| Nuclear | 2.53 | 21.52 | 52.71 | 83.93 | 79.07 | 68.76 | 67.27 | 19.6 | 1.4 |
| Geothermal | 0.23 | 0.77 | 1.50 | 2.88 | 2.65 | 2.62 | 2.37 | 11.6 | 2.6 |
| Solar | - | - | 0.00 | 0.03 e | 0.15 e | 0.17 e | 0.19 e | - | 53.5 |
| Non-Thermal | | | | | | | | | |
| Total | 5.74 | 7.59 | 7.68 | 7.51 | 7.72 | 6.59 | 6.78 | 1.7 | -0.7 |
| Hydro | 5.74 | 7.59 | 7.68 | 7.50 | 7.53 | 6.36 | 6.56 | 1.7 | -0.9 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.01 | 0.19 | 0.23 | 0.23 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

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8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|---------|---------|---------|---------|---------|---------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | 11998 | 31019 | 64856 | 89471 | 94324 | 90224 | 6.1 |
| Fuel input (TJ) | 264554 | 770119 | 1672079 | 2241922 | 2363539 | 2260784 | 6.2 |
| Electricity production (GWh) | 27851 | 84640 | 191412 | 257134 | 272253 | 256092 | 6.3 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | 6 | 30 | - | - | - | - |
| Fuel input (TJ) | - | 227 | 1113 | - | - | - | - |
| Electricity production (GWh) | - | 24 | 130 | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 278254 | 300051 | 359336 | 330909 | 331780 | 277827 | -0.4 |
| Electricity production (GWh) | 27084 | 32042 | 40708 | 38299 | 38524 | 32161 | 0.0 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 63133 | 49703 | 27012 | 22406 | 30704 | 25864 | -3.6 |
| Fuel input (TJ) | 2508740 | 2241726 | 1224831 | 1005729 | 1383929 | 1165800 | -3.6 |
| Electricity production (GWh) | 264706 | 247886 | 137080 | 115544 | 156257 | 139171 | -3.2 |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 833295 | 1548964 | 2181663 | 2262659 | 2479773 | 2410278 | 2.5 |
| Electricity production (GWh) | 81107 | 167083 | 251335 | 263446 | 289923 | 283153 | 3.0 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 78611 | 84772 | 119103 | 124429 | 118712 | 2.3 |
| Electricity production (GWh) | - | 8713 | 10410 | 15029 | 15751 | 15079 | 3.1 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | 814 | 3568 | 3361 | 3700 | - |
| Electricity production (GWh) | - | - | 97 | 449 | 425 | 472 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 16439 e | 40934 e | 58451 | 58548 | 58060 | 7.3 |
| Electricity production (GWh) | - | 1807 | 4706 | 6837 | 6837 | 6837 | 7.7 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | 400748 | 542195 | 635878 | 696738 | 779970 | 732965 | 1.7 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|-------|-------|-------|-------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | 38 | 32 | 27 | 24 | 23 | 22 | -2.1 |
| Fuel input (TJ) | 960 | 803 | 690 | 600 | 580 | 540 | -2.2 |
| Heat production (TJ) | 637 | 541 | 611 | 526 | 519 | 497 | -0.5 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 40 | 57 | 36 | 15 | 10 | 9 | -9.7 |
| Fuel input (TJ) | 1816 | 2512 | 1655 | 669 | 460 | 392 | -9.8 |
| Heat production (TJ) | 1201 | 1729 | 1489 | 588 | 413 | 364 | -8.3 |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 2946 | 6169 | 14515 | 17205 | 18160 | 16594 | 5.7 |
| Heat production (TJ) | 1949 | 4054 | 12517 | 14704 | 15855 | 14887 | 7.5 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | 80 | 173 | 106 | 80 | 74 | -0.4 |
| Heat production (TJ) | - | 54 | 153 | 93 | 72 | 68 | 1.3 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 1751 | 5488 | 5906 | 5573 | 5351 | 6.4 |
| Heat production (TJ) | - | 1279 | 5259 | 5608 | 5406 | 5160 | 8.1 |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Heat production (TJ) | 4270 | 7657 | 20029 | 21519 | 22265 | 20976 | 5.8 |

Source: IEA/OECD Electricity Statistics.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 233.98 | 231.89 | 300.08 | 345.12 | 345.79 | 342.27 | 318.81 | 1.5 | 0.3 |
| Geothermal | - | - | 0.08 | 0.22 | 0.21 | 0.20 | 0.20 | - | 5.4 |
| Solar thermal | - | - | 1.17 | 0.81 | 0.54 | 0.51 | 0.51 | - | -4.5 |
| Coal | 20.17 | 21.37 | 32.31 | 27.07 | 31.08 | 31.80 | 28.39 | 2.8 | -0.7 |
| Oil | 171.06 | 156.56 | 183.99 | 209.55 | 194.60 | 186.10 | 171.04 | 0.4 | -0.4 |
| Gas | 7.02 | 9.71 | 15.24 | 23.10 | 31.45 | 33.33 | 32.61 | 4.7 | 4.3 |
| Comb. renew. & waste | - | - | 2.62 | 2.66 | 2.66 | 2.75 | 2.55 | - | -0.2 |
| Electricity | 35.70 | 44.14 | 64.46 | 81.16 | 84.68 | 86.97 | 82.94 | 3.5 | 1.4 |
| Heat | 0.03 | 0.10 | 0.20 | 0.54 | 0.58 | 0.60 | 0.57 | 12.3 | 6.0 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 104.89 | 91.23 | 102.84 | 99.75 | 98.09 | 97.59 | 86.79 | -0.1 | -0.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 18.22 | 20.82 | 30.95 | 26.12 | 30.14 | 30.86 | 27.47 | 3.2 | -0.7 |
| Oil | 59.54 | 39.49 | 36.67 | 34.81 | 28.46 | 26.04 | 23.18 | -2.8 | -2.5 |
| Gas | 2.07 | 2.73 | 3.69 | 5.11 | 7.23 | 7.74 | 7.47 | 3.5 | 4.0 |
| Comb. renew. & waste | - | - | 2.52 | 2.62 | 2.64 | 2.73 | 2.53 | - | 0.0 |
| Electricity | 25.06 | 28.19 | 29.01 | 31.10 | 29.62 | 30.21 | 26.13 | 0.9 | -0.6 |
| Heat | - | - | - | - | - | - | - | - | - |
| Transport | 40.75 | 53.98 | 71.75 | 87.94 | 83.18 | 81.27 | 78.03 | 3.4 | 0.5 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.20 | - | - | - | - | - | - | - | - |
| Oil | 39.41 | 52.67 | 70.31 | 86.34 | 81.56 | 79.65 | 76.41 | 3.5 | 0.5 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 1.14 | 1.31 | 1.45 | 1.60 | 1.61 | 1.62 | 1.62 | 1.4 | 0.6 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 20.20 | 20.34 | 46.01 | 61.87 | 69.02 | 67.60 | 65.71 | 5.0 | 2.0 |
| Geothermal | - | - | 0.04 | 0.13 | 0.12 | 0.12 | 0.11 | - | 5.4 |
| Solar thermal | - | - | 0.04 | 0.02 | 0.02 | 0.02 | 0.02 | - | -5.0 |
| Coal | - | - | 0.90 | 0.61 | 0.54 | 0.54 | 0.52 | - | -2.9 |
| Oil | 16.30 | 14.25 | 22.94 | 25.67 | 23.98 | 20.58 | 18.61 | 2.0 | -1.2 |
| Gas | 1.28 | 1.43 | 3.89 | 8.81 | 14.65 | 15.92 | 15.72 | 6.8 | 8.1 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 2.59 | 4.55 | 18.03 | 26.12 | 29.18 | 29.86 | 30.18 | 12.1 | 2.9 |
| Heat | 0.03 | 0.10 | 0.17 | 0.51 | 0.55 | 0.57 | 0.54 | 11.2 | 6.7 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 20.92 | 25.74 | 37.99 | 48.62 | 48.43 | 49.16 | 47.56 | 3.6 | 1.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | 1.12 | 0.79 | 0.52 | 0.49 | 0.49 | - | -4.5 |
| Coal | 1.75 | 0.55 | 0.07 | - | - | - | - | -17.5 | - |
| Oil | 8.75 | 9.67 | 13.48 | 16.59 | 14.59 | 14.30 | 13.21 | 2.6 | -0.1 |
| Gas | 3.61 | 5.53 | 7.35 | 8.99 | 9.21 | 9.29 | 9.07 | 4.3 | 1.2 |
| Comb. renew. & waste | - | - | 0.10 | 0.05 | 0.02 | 0.02 | 0.02 | - | -8.0 |
| Electricity | 6.81 | 9.98 | 15.84 | 22.18 | 24.05 | 25.03 | 24.74 | 5.1 | 2.5 |
| Heat | - | - | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | - | 0.2 |
| Agriculture & fishing | 2.74 | 3.47 | 6.93 | 5.40 | 4.48 | 4.21 | 3.74 | 5.6 | -3.4 |
| Geothermal | - | - | 0.03 | 0.09 | 0.09 | 0.09 | 0.09 | - | 5.4 |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | 0.00 | - | - | - | - | - | - |
| Oil | 2.64 | 3.36 | 6.76 | 5.17 | 4.32 | 4.04 | 3.57 | 5.7 | -3.5 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.10 | 0.10 | 0.14 | 0.14 | 0.07 | 0.08 | 0.08 | 1.9 | -3.4 |
| Heat | - | - | - | - | - | - | - | - | - |
| Other | 7.60 | 8.71 | - | 0.03 | 0.15 | 0.17 | 0.19 | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 7.54 | 8.69 | - | - | - | - | - | - | - |
| Gas | 0.06 | 0.02 | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | - | - | 0.03 | 0.15 | 0.17 | 0.19 | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 36.87 | 28.43 | 34.55 | 41.51 | 42.45 | 42.26 | 36.80 | -0.38 | 0.35 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

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12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| TFC (Mtoe) | 233.98 | 231.89 | 300.08 | 345.12 | 346.94 | 345.79 | 342.27 | 318.81 |
| Total industry (Mtoe) | 104.89 | 91.23 | 102.84 | 99.75 | 97.13 | 98.09 | 97.59 | 86.79 |
| Iron and steel | 34.47 | 28.28 | 21.83 | 20.27 | 22.16 | 22.63 | 23.65 | 21.04 |
| Chem. and petrochemical | 14.27 | 10.32 | 17.94 | 18.86 | 17.55 | 18.60 | 18.79 | 16.25 |
| Non-ferrous metals | 3.96 | 3.72 | 2.76 | 2.06 | 1.98 | 2.12 | 2.21 | 2.05 |
| Non-metallic minerals | 11.83 | 11.13 | 10.51 | 9.54 | 8.67 | 8.87 | 8.63 | 8.30 |
| Transport equipment | 0.87 | 1.19 | - | - | - | - | - | - |
| Machinery | 0.76 | 1.02 | 10.05 | 8.49 | 9.27 | 10.07 | 10.16 | 9.19 |
| Mining and quarrying | 0.50 | 0.44 | 0.50 | 0.39 | 0.33 | 0.32 | 0.31 | 0.30 |
| Food and tobacco | 3.72 | 3.54 | 5.01 | 5.55 | 5.09 | 4.85 | 4.64 | 4.46 |
| Paper, pulp and printing | 5.77 | 4.50 | 9.57 | 9.53 | 8.93 | 8.85 | 8.81 | 8.40 |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | 3.34 | 3.49 | 4.86 | 4.86 | 4.17 | 4.11 | 4.02 | 3.98 |
| Textile and leather | 5.72 | 4.00 | - | - | - | - | - | - |
| Non specified/other | 19.68 | 19.59 | 19.80 | 20.21 | 18.99 | 17.67 | 16.37 | 12.81 |
| Electricity consumption (Mtoe) | 35.70 | 44.14 | 64.46 | 81.16 | 84.11 | 84.68 | 86.97 | 82.94 |
| Total industry (Mtoe) | 25.06 | 28.19 | 29.01 | 31.10 | 29.34 | 29.62 | 30.21 | 26.13 |
| Iron and steel | 6.16 | 6.32 | 6.03 | 5.82 | 5.87 | 6.07 | 6.18 | 5.43 |
| Chem. and petrochemical | 4.39 | 3.85 | 5.20 | 4.95 | 4.62 | 4.74 | 4.78 | 4.40 |
| Non-ferrous metals | 2.48 | 2.28 | 1.23 | 1.32 | 1.29 | 1.40 | 1.53 | 1.43 |
| Non-metallic minerals | 1.19 | 1.48 | 2.03 | 2.02 | 1.97 | 2.03 | 2.02 | 1.95 |
| Transport equipment | 0.87 | 1.19 | - | - | - | - | - | - |
| Machinery | 0.76 | 1.02 | 4.84 | 6.03 | 6.60 | 7.31 | 7.38 | 6.69 |
| Mining and quarrying | 0.16 | 0.14 | 0.17 | 0.12 | 0.08 | 0.09 | 0.08 | 0.08 |
| Food and tobacco | 0.40 | 0.57 | 0.93 | 1.26 | 1.29 | 1.37 | 1.44 | 1.45 |
| Paper, pulp and printing | 1.78 | 1.99 | 2.76 | 3.05 | 2.96 | 2.97 | 2.98 | 2.79 |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | - | - | 0.20 | 0.16 | 0.09 | 0.09 | 0.08 | 0.08 |
| Textile and leather | 0.61 | 0.55 | - | - | - | - | - | - |
| Non specified/other | 6.27 | 8.79 | 5.63 | 6.37 | 4.57 | 3.55 | 3.76 | 1.85 |
| Total industry (TWh) | 291.38 | 327.79 | 337.32 | 361.63 | 341.14 | 344.41 | 351.28 | 303.80 |
| Iron and steel | 71.67 | 73.50 | 70.14 | 67.72 | 68.23 | 70.53 | 71.86 | 63.10 |
| Chem. and petrochemical | 51.06 | 44.71 | 60.46 | 57.54 | 53.73 | 55.16 | 55.53 | 51.15 |
| Non-ferrous metals | 28.78 | 26.51 | 14.32 | 15.33 | 14.99 | 16.29 | 17.74 | 16.61 |
| Non-metallic minerals | 13.85 | 17.22 | 23.64 | 23.45 | 22.89 | 23.58 | 23.46 | 22.68 |
| Transport equipment | 10.06 | 13.84 | - | - | - | - | - | - |
| Machinery | 8.83 | 11.92 | 56.25 | 70.16 | 76.79 | 85.01 | 85.76 | 77.78 |
| Mining and quarrying | 1.85 | 1.67 | 1.94 | 1.34 | 0.96 | 1.01 | 0.90 | 0.89 |
| Food and tobacco | 4.60 | 6.63 | 10.78 | 14.68 | 14.96 | 15.89 | 16.75 | 16.80 |
| Paper, pulp and printing | 20.68 | 23.13 | 32.06 | 35.49 | 34.38 | 34.56 | 34.60 | 32.44 |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | - | - | 2.32 | 1.84 | 1.09 | 1.06 | 0.98 | 0.88 |
| Textile and leather | 7.13 | 6.42 | - | - | - | - | - | - |
| Non specified/other | 72.87 | 102.24 | 65.42 | 74.08 | 53.13 | 41.32 | 43.71 | 21.46 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 92.47 | 129.36 | 175.07 | 202.95 | 228.60 | 235.19 | 234.82 | 233.98 | 234.33 |
| Nuclear | 3.89 | 15.51 | 31.48 | 41.19 | 45.08 | 49.58 | 49.47 | 49.47 | 47.94 |
| Hydro | 22.48 | 28.67 | 36.45 | 42.08 | 44.85 | 45.90 | 45.96 | 45.88 | 45.87 |
| <i>of which: pumped storage</i> | - | 11.50 | 17.01 | 22.29 | 24.31 | 25.16 | 25.16 | 25.49 | 25.49 |
| Geothermal | 0.02 | 0.13 | 0.24 | 0.47 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 66.08 | 85.05 | 106.91 | 119.20 | 138.16 | 139.22 | 138.89 | 138.13 | 140.02 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 5.64 | 5.26 | 7.66 | 14.87 | 25.42 | 34.52 | 34.49 | 34.49 | 34.49 |
| Liquid fuels | 57.34 | 59.48 | 50.83 | 49.20 | 51.12 | 40.68 | 39.32 | 39.32 | 39.32 |
| Natural gas | 3.10 | 20.31 | 15.62 | 20.82 | 35.27 | 39.36 | 40.68 | 40.68 | 40.68 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | 32.81 | 34.31 | 26.36 | 24.67 | 24.40 | 23.63 | 25.53 |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | - | - | - |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 105.60 | 117.20 | 136.93 | 137.93 | 137.61 | 136.70 | 138.53 |
| Internal combustion | - | - | 0.51 | 0.63 | 0.72 | 0.76 | 0.76 | 0.77 | 0.80 |
| Gas turbine | - | - | 0.80 | 1.37 | 0.51 | 0.53 | 0.52 | 0.66 | 0.69 |
| Combined cycle | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | 143.72 | 171.13 | 173.07 | 177.70 | 174.98 | 179.28 | 179.00 |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 11.74 | 14.34 | 19.66 | 24.57 | 31.89 | 42.13 | 43.89 | 45.17 | 46.20 |
| Nuclear | 0.01 | 0.18 | 0.17 | 0.17 | 0.17 | - | - | - | - |
| Hydro | 1.07 | 1.11 | 1.38 | 1.37 | 1.47 | 1.40 | 1.40 | 1.43 | 1.47 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| Solar | - | - | - | 0.04 e | 0.33 e | 1.42 e | 1.71 e | 1.92 e | 2.14 e |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 0.08 | 1.22 | 1.80 | 1.52 | 1.75 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 10.66 | 13.02 | 18.08 | 22.95 | 29.81 | 38.05 | 38.95 | 40.27 | 40.80 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 3.20 | 3.92 | .. | .. | .. | .. | .. | .. | .. |
| Liquid fuels | 7.46 | 9.11 | .. | .. | .. | .. | .. | .. | .. |
| Natural gas | - | - | .. | .. | .. | .. | .. | .. | .. |
| Comb. renew. & waste | - | - | .. | .. | .. | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | .. | .. | .. | .. | .. | .. | .. |
| Solid / natural gas | - | - | .. | .. | .. | .. | .. | .. | .. |
| Liquid / natural gas | - | - | .. | .. | .. | .. | .. | .. | .. |
| Solid / liquid / gas | - | - | .. | .. | .. | .. | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | 9.67 | 11.35 | 14.20 | 15.68 | 19.54 | 24.73 | 25.62 | 27.02 | 27.95 |
| Internal combustion | 0.77 | 1.02 | 1.57 | 3.40 | 4.10 | 5.85 | 5.64 | 5.46 | 5.11 |
| Gas turbine | 0.22 | 0.66 | 2.32 | 3.38 | 4.84 | 5.97 | 6.19 | 6.29 | 6.24 |
| Combined cycle | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | 0.49 | 1.32 | 1.50 | 1.50 | 1.50 | 1.50 |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|--------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | 1000 Japanese Yen/ unit | | | | | | | | |
| Steam coal (t) | 15 | 16 | 12 | 4 | .. | .. | .. | .. | .. |
| Heavy fuel oil (t) | 23 | 57 | 30 | .. | .. | .. | .. | .. | .. |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | 20 | 44 | 24 | .. | .. | .. | .. | .. | .. |
| | 1000 Japanese Yen/ toe | | | | | | | | |
| Steam coal | 27.23 | 29.22 | 21.07 | 7.92 | .. | .. | .. | .. | .. |
| Heavy fuel oil | 24.00 | 59.10 | 31.24 | .. | .. | .. | .. | .. | .. |
| Natural gas ⁽²⁾ | 21.98 | 49.26 | 26.89 | .. | .. | .. | .. | .. | .. |
| End-user prices of electricity | | | | | | | | | |
| | 1000 Japanese Yen/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0131 | 0.0196 | 0.0177 | 0.0154 | 0.0135 | 0.0136 | 0.0137 | 0.0144 | 0.0148 |
| <i>of which: tax</i> | 0.0004 | 0.0007 | 0.0010 | 0.0012 | 0.0010 | 0.0010 | 0.0010 | 0.0011 | 0.0011 |
| Household | | | | | | | | | |
| Price | 0.0196 | 0.0266 | 0.0256 | 0.0231 | 0.0208 | 0.0207 | 0.0208 | 0.0213 | 0.0213 |
| <i>of which: tax</i> | 0.0008 | 0.0011 | 0.0012 | 0.0015 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

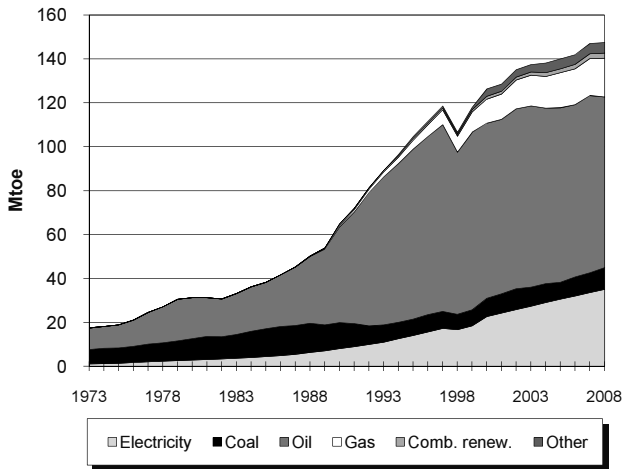


Figure 2. Electricity generation by fuel

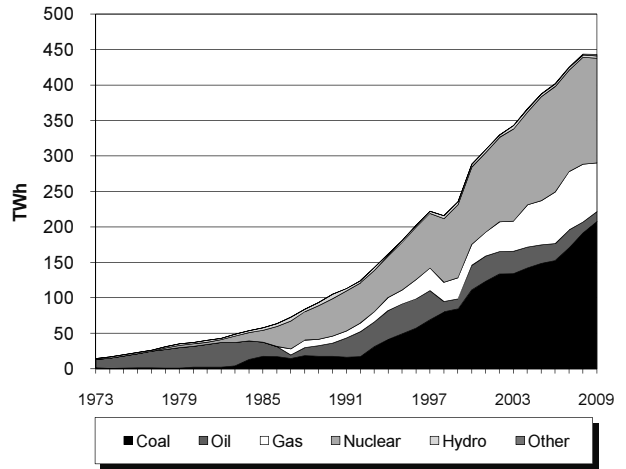


Figure 3. Electricity consumption by sector

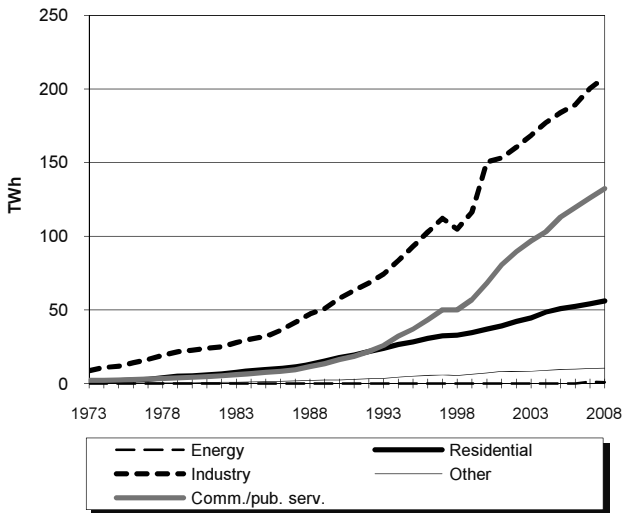


Figure 4. Electricity indicators

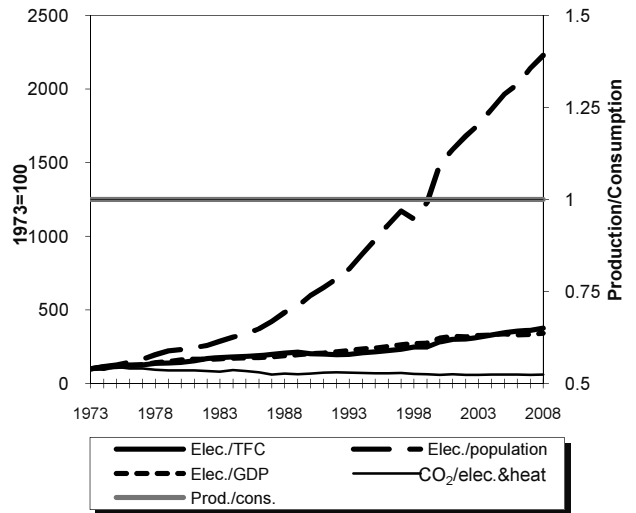
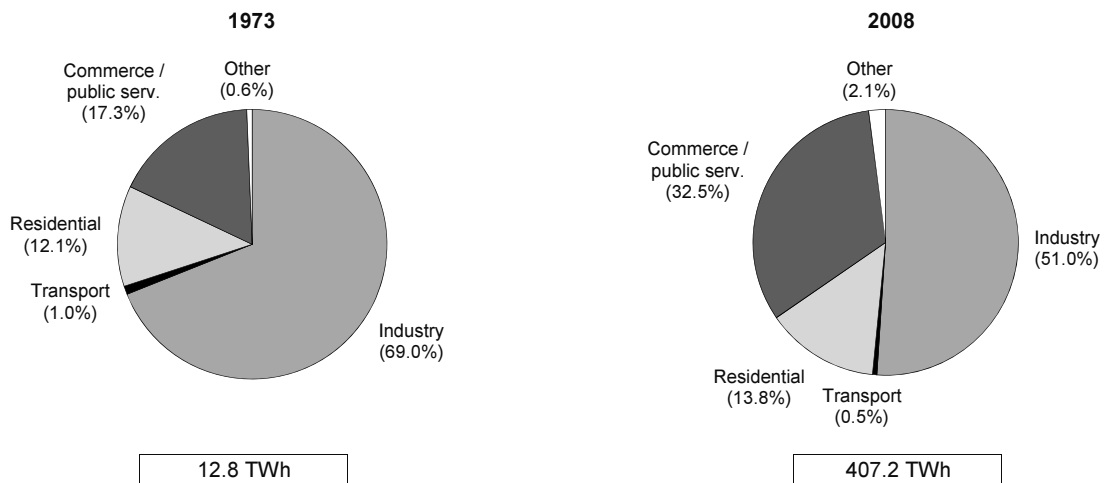


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|-------|--------|--------|--------|--------|--------|--------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 21.54 | 41.21 | 93.09 | 185.66 | 222.15 | 226.95 | 228.75 | 9.0 | 4.8 |
| GDP (billion 2000 USD) | 80.63 | 128.03 | 295.60 | 533.38 | 734.48 | 750.81 | 765.72 | 7.9 | 5.1 |
| TPES/GDP ⁽¹⁾ | 0.27 | 0.32 | 0.31 | 0.35 | 0.30 | 0.30 | 0.30 | 1.0 | -0.3 |
| Population (millions) | 34.10 | 38.12 | 42.87 | 47.01 | 48.46 | 48.61 | 48.67 | 1.4 | 0.7 |
| TPES/population ⁽²⁾ | 0.63 | 1.08 | 2.17 | 3.95 | 4.58 | 4.67 | 4.70 | 7.5 | 4.1 |
| TPES/GDP (2000 = 100) | 77 | 92 | 90 | 100 | 87 | 87 | 86 | 1.0 | -0.3 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 32 | 52 | 65 | 100 | 108 | 110 | .. | 4.2 | .. |
| Ele.TFC/population ⁽⁴⁾ | 376 | 859 | 2202 | 5599 | 8076 | 8379 | .. | 11.0 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 14.83 | 37.24 | 105.37 | 288.53 | 425.91 | 443.94 | 443.17 | 12.2 | 7.9 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|--------------|--------------|--------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 21.54 | 41.21 | 93.09 | 185.66 | 222.15 | 226.95 | 228.75 | 9.0 | 4.8 |
| Coal | 8.13 | 13.49 | 25.56 | 39.45 | 56.14 | 62.77 | 64.29 | 7.0 | 5.0 |
| Oil | 13.31 | 26.65 | 49.73 | 99.04 | 94.45 | 89.62 | 91.49 | 8.1 | 3.3 |
| Gas | - | - | 2.72 | 17.01 | 31.15 | 31.81 | 30.81 | - | 13.6 |
| Comb. renew & waste | - | - | 0.73 | 1.38 | 2.75 | 3.00 | 3.18 | - | 8.0 |
| Nuclear | - | 0.91 | 13.78 | 28.40 | 37.25 | 39.34 | 38.51 | - | 5.6 |
| Geothermal | - | - | - | - | 0.01 | 0.02 | 0.02 | - | - |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.01 | 0.04 e | 0.07 | 0.09 | 0.17 | - | 16.2 |
| Hydro | 0.11 | 0.17 | 0.55 | 0.34 | 0.31 | 0.26 | 0.24 | 9.9 | -4.2 |
| Net electricity imports ⁽²⁾ | - | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | 0.02 | 0.04 | 0.04 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|---------------|---------------|----------------|--------------|--------------|--------------|--------------|--------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 14.8 | 37.2 | 105.4 e | 290.1 | 389.4 | 427.3 | 446.4 | 446.0 |
| Nuclear | - | 3.5 | 52.9 | 109.0 | 146.8 | 142.9 | 151.0 | 147.8 |
| Hydro | 1.3 | 2.0 | 6.4 | 5.6 | 5.2 | 5.0 | 5.6 | 5.6 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | - | - | - | 1.6 | 1.5 | 1.4 | 2.5 | 2.8 |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | 0.0 e | 0.0 e | 0.0 | 0.1 | 0.3 | 1.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.0 e | 0.1 | 0.4 | 0.4 | 0.7 |
| Combustible fuels | 13.5 e | 31.8 e | 46.1 | 175.5 e | 237.2 | 278.8 | 289.1 | 290.8 |
| <i>Coal</i> | 1.3 e | 2.5 e | 17.7 | 111.4 | 148.8 | 170.7 | 191.8 | 207.7 |
| <i>Oil</i> | 12.2 | 29.3 | 18.9 e | 34.6 | 26.0 e | 25.2 e | 15.4 | 14.2 |
| <i>Gas</i> | - | - | 9.6 | 29.5 | 62.2 | 82.4 | 81.3 | 68.4 |
| <i>Comb. renew. & waste</i> | - | - | - | 0.1 e | 0.3 e | 0.6 | 0.7 | 0.6 |
| Other (e.g. fuel cells) | - | - | - | - | 0.0 | 0.1 | 0.1 | 0.1 |
| - Own use by power plant | 0.7 e | 2.0 e | 5.1 | 12.4 | 16.6 | 16.9 | 17.8 | .. |
| Net production | 14.1 e | 35.2 e | 100.3 e | 277.7 | 372.8 | 410.4 | 428.7 | .. |
| Nuclear | .. | 3.3 e | 50.4 | 103.5 | 139.3 | 136.6 | 144.3 | .. |
| Hydro | .. | 2.0 e | 6.3 | 5.6 | 5.1 | 5.0 | 5.5 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | 0.0 e | 0.0 e | 0.0 | 0.1 | 0.3 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | - | 0.0 e | 0.1 | 0.4 | 0.4 | .. |
| Combustible fuels | .. | 30.0 e | 43.6 | 168.6 e | 228.2 | 268.3 | 278.1 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | 0.0 | 0.1 | 0.1 | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | - | 0.1 | 2.3 | 2.1 | 2.0 | 1.8 | 3.2 | 3.7 |
| + Imports | - | - | - | - | - | - | - | - |
| - Exports | - | - | - | - | - | - | - | - |
| Electrical energy supplied | 14.1 e | 35.1 e | 98.0 e | 275.6 | 370.8 | 408.6 | 425.4 | .. |
| - Transmission & distr. losses | 1.3 e | 2.4 e | 3.6 | 12.5 | 13.7 | 15.3 | 16.1 | .. |
| - Statistical difference | - | - | 0.0 e | - | -0.5 | 0.6 | 1.3 | .. |
| Total consumption | 12.8 | 32.7 | 94.4 | 263.1 | 357.6 | 392.7 | 408.0 | .. |
| - Energy industry consumption ⁽²⁾ | - | - | - | - | - | 1.5 | 0.9 | .. |
| Final consumption | 12.8 | 32.7 | 94.4 | 263.1 | 357.6 | 391.2 | 407.2 | .. |
| Industry | 8.8 | 22.7 | 57.8 | 150.4 | 184.0 | 200.5 | 207.9 | .. |
| Transport | 0.1 | 0.4 | 1.0 | 2.0 | 2.6 | 2.5 | 2.2 | .. |
| Commercial & publ. serv. | 2.2 | 4.1 | 16.4 | 68.3 | 113.2 | 126.2 | 132.5 | .. |
| Residential | 1.5 | 5.3 | 17.7 | 37.1 | 50.9 | 54.2 | 56.2 | .. |
| Agriculture & fishing | 0.1 | 0.2 | 1.5 | 5.3 | 7.0 | 7.8 | 8.4 | .. |
| Sector non specified | - | - | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

KOREA

4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 16.84 | 37.24 | 105.37 | 290.13 | 404.02 | 427.32 | 446.43 | 12.1 | 8.4 |
| - Hydro pumped storage | - | - | - | 1.60 | 1.75 | 1.41 | 2.49 | - | - |
| Total generation⁽¹⁾ | 16.84 | 37.24 | 105.37 | 288.53 | 402.27 | 425.91 | 443.94 | 12.1 | 8.3 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 16.81 | 37.18 | 99.48 | 262.37 | 379.41 | 400.94 | 420.36 | 11.8 | 8.3 |
| - Hydro pumped storage | - | - | - | 1.60 | 1.75 | 1.41 | 2.49 | - | - |
| Total generation ⁽¹⁾ | 16.81 | 37.18 | 99.48 | 260.77 | 377.66 | 399.53 | 417.87 | 11.8 | 8.3 |
| Nuclear | - | 3.48 | 52.89 | 108.96 | 148.75 | 142.94 | 150.96 | - | 6.0 |
| Hydro | 1.91 | 1.98 | 6.36 | 4.01 | 3.47 | 3.63 | 3.07 | 7.8 | -4.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.01 e | 0.24 | 0.39 | 0.64 | - | - |
| Coal | 0.72 | 2.42 | 11.77 | 97.55 | 139.18 | 154.63 | 173.40 | 19.1 | 16.1 |
| Oil | 14.19 | 29.30 | 18.86 | 21.75 | 16.90 | 18.08 | 10.12 | 1.8 | -3.4 |
| Gas | - | - | 9.60 | 28.50 | 68.96 | 79.52 | 79.23 | - | 12.4 |
| Comb. renew. & waste | - | - | - | - | 0.17 | 0.34 | 0.45 | - | - |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 0.03 | 0.06 | 5.89 | 27.75 | 24.62 | 26.37 | 26.07 | 40.7 | 8.6 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 0.03 | 0.06 | 5.89 | 27.75 | 24.62 | 26.37 | 26.07 | 40.7 | 8.6 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 0.00 | 0.01 e | 0.11 | 0.13 | 0.16 | - | 32.6 |
| Coal | 0.03 e | 0.06 e | 5.89 | 13.85 | 13.73 | 16.07 | 18.36 | 40.7 | 6.5 |
| Oil | - | - | - | 12.83 | 6.90 | 7.10 | 5.23 | - | - |
| Gas | - | - | - | 0.97 | 3.70 | 2.84 | 2.10 | - | - |
| Comb. renew. & waste | - | - | - | 0.09 | 0.18 | 0.23 | 0.22 | - | - |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|-----------|-----------|---------------|----------------|--------------|--------------|--------------|---|
| Total | 25 | 60 | 5729 e | 27754 e | 24615 | 26372 | 26065 | 8.8 |
| Total energy | - | - | - | - | - | 1467 | 886 | - |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | - | - | 1458 | 886 | - |
| Energy non specified/other | - | - | - | - | - | 9 | - | - |
| Total industry | - | - | 5728 | 27338 e | 24364 | 24578 | 24825 | 8.5 |
| Iron and steel | - | - | 5728 | 13156 e | 14292 | 15630 | 16892 | 6.2 |
| Chemical and petrochemical | - | - | - | 8147 e | 5681 | 4749 | 4274 | - |
| Non-ferrous metals | - | - | - | 376 e | 366 | 424 | 336 | - |
| Non-metallic minerals | - | - | - | 70 e | 150 | 175 | 163 | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | - | - | - | 1432 e | 819 | 410 | 185 | - |
| Mining and quarrying | - | - | - | - | - | - | - | - |
| Food and tobacco | - | - | - | 415 e | 144 | 76 | 305 | - |
| Pulp and printing | - | - | - | 1317 e | 895 | 861 | 529 | - |
| Wood and wood products | - | - | - | 97 e | 39 | 25 | 38 | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | - | - | - | 2328 e | 1978 | 2228 | 2103 | - |
| Non specified/other industries | - | - | - | - | - | - | - | - |
| Total transport | - | - | - | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | - | - | - | - |
| Other | 25 | 60 | 1 e | 416 e | 251 | 327 | 354 | 38.6 |
| Commerce and pub. services | - | - | 1 e | 140 e | 251 | 310 | 322 | 37.8 |
| Residential | - | - | - | - | - | 17 | 32 | - |
| Agriculture and fishing | - | - | - | - | - | - | - | - |
| Sector non specified | 25 | 60 | - | 276 e | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

KOREA

6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|------|------|----------|----------|----------|----------|--------|---|
| Total | - | - | 140095 e | 192499 e | 198638 e | 201649 e | 153228 | - |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | - | - | 33102 | 35225 | 33795 | 42005 | 42005 | - |
| Oil | - | - | 65755 | 100660 e | 105208 | 86928 | 56592 | - |
| Gas | - | - | 37885 | 48116 | 48072 | 57126 | 41449 | - |
| Comb. renew. & waste | - | - | 3353 e | 7996 e | 10872 | 13827 | 11419 | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | 502 e | 691 e | 1763 e | 1763 | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | - | - | 47562 | 64280 e | 61168 | 60606 | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | - | 9733 | 16101 e | 12418 | 6580 | .. | - |
| Gas | - | - | 37829 | 47887 | 47854 | 53410 | .. | - |
| Comb. renew. & waste | - | - | - | 292 | 896 | 616 | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | - | 92533 e | 128219 e | 137470 e | 141043 e | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | 33102 | 35225 | 33795 | 42005 | .. | - |
| Oil | - | - | 56022 | 84559 e | 92790 | 80348 | .. | - |
| Gas | - | - | 56 | 229 | 218 | 3716 | .. | - |
| Comb. renew. & waste | - | - | 3353 e | 7704 e | 9976 | 13211 | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | 502 e | 691 e | 1763 e | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

KOREA

7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 3.36 | 7.66 | 12.52 | 37.48 | 57.60 | 60.07 | 62.17 | 8.0 | 9.3 |
| Coal | 0.34 e | 0.84 e | 5.98 e | 23.58 e | 37.80 | 38.16 | 42.99 | 18.5 | 11.6 |
| Oil | 3.02 | 6.82 | 4.51 | 8.04 | 6.73 | 7.04 | 4.33 | 2.4 | -0.2 |
| Gas | - | - | 2.04 | 5.76 | 12.68 | 14.39 | 14.29 | - | 11.4 |
| Comb. renew. & waste | - | - | - | 0.10 | 0.39 | 0.49 | 0.57 | - | - |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 7.64 | 10.47 | 32.99 | 50.89 | 52.79 | 55.22 | .. | 9.7 |
| Coal | .. | 0.82 | 3.92 e | 20.96 e | 33.80 | 34.05 | 38.52 | .. | 13.5 |
| Oil | .. | 6.82 | 4.51 | 6.27 | 5.11 | 4.78 | 2.75 | .. | -2.7 |
| Gas | .. | - | 2.04 | 5.76 | 11.93 | 13.86 | 13.83 | .. | 11.2 |
| Comb. renew. & waste | .. | - | - | - | 0.05 | 0.11 | 0.12 | .. | - |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | - | 0.91 | 13.78 | 28.40 | 38.77 | 37.26 | 39.37 | - | 6.0 |
| Nuclear | - | 0.91 | 13.78 | 28.40 | 38.76 | 37.25 | 39.34 | - | 6.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | - | 36.9 |
| Non-Thermal | | | | | | | | | |
| Total | 0.11 | 0.17 | 0.55 | 0.35 | 0.32 | 0.35 | 0.30 | 9.9 | -3.2 |
| Hydro | 0.11 | 0.17 | 0.55 | 0.34 | 0.30 | 0.31 | 0.26 | 9.9 | -4.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.00 e | 0.02 | 0.03 | 0.04 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

KOREA

8. Electricity production from combustible fuels In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|--------|----------|----------|----------|----------|---------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | 1865 | 7706 | 36337 | 52769 | 58537 | 65984 | 12.7 |
| Fuel input (TJ) | 33967 | 164293 | 967487 | 1419541 | 1430541 | 1622270 | 13.6 |
| Electricity production (GWh) | 2421 | 11770 | 98078 | 139664 | 155168 | 173963 | 16.1 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 6704 | 4434 e | 5889 e | 4565 e | 4379 e | 2549 | -3.0 |
| Fuel input (TJ) | 291058 | 193646 e | 258885 | 194473 e | 188249 e | 106253 | -3.3 |
| Electricity production (GWh) | 29297 | 18857 e | 26537 | 18698 e | 20048 e | 11575 | -2.7 |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | 102859 | 140950 | 430052 | 504146 | 488851 | 9.0 |
| Electricity production (GWh) | - | 9604 | 17617 | 57608 | 66623 | 64555 | 11.2 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | 433 e | 304 | 236 | 361 | - |
| Electricity production (GWh) | - | - | 46 | 32 | 25 | 38 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 109 | 104 | 160 | - |
| Electricity production (GWh) | - | - | - | 12 | 11 | 17 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 112 | 1739 | 3258 | 3775 | - |
| Electricity production (GWh) | - | - | 11 | 166 | 311 | 419 | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | 31718 | 40231 | 142289 e | 216180 | 242186 | 250567 | 10.7 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

KOREA

**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|-------|-------|---------|--------|--------|--------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | 1939 | 2370 | 2360 | 2666 | - |
| Fuel input (TJ) | - | - | 53580 | 63838 | 57559 | 65341 | - |
| Electricity production (GWh) | - | - | 2037 | 2535 | 2581 | 2733 | - |
| CHP Heat production (TJ) | - | - | 33102 | 35637 | 33441 | 41616 | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 724 e | 85897 | 94717 | 100171 | 110513 | 117767 | 1.8 |
| Electricity production (GWh) | 60 e | 5891 | 11280 | 10715 | 12955 | 15065 | 5.4 |
| CHP Heat production (TJ) | - | - | - | 422 | 354 | 389 | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | - | 3396 e | 3126 | 3557 | 2659 | - |
| Fuel input (TJ) | - | - | 154012 | 142776 | 164061 | 116980 | - |
| Electricity production (GWh) | - | - | 8044 | 5094 | 5134 | 3776 | - |
| CHP Heat production (TJ) | - | - | 59190 | 89990 | 101006 | 84822 | - |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 123037 | 153698 | 162709 | 172940 | - |
| Electricity production (GWh) | - | - | 11844 | 15048 | 15737 | 16777 | - |
| CHP Heat production (TJ) | - | - | 36767 | 39231 | 45880 | 54640 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | 558 | - |
| Electricity production (GWh) | - | - | - | - | - | 2 | - |
| CHP Heat production (TJ) | - | - | - | - | - | 422 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | 344 e | 6861 | 8720 | 9375 | - |
| Electricity production (GWh) | - | - | 36 e | 137 | 195 | 157 | - |
| CHP Heat production (TJ) | - | - | - | 1595 | 2735 | 4429 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | - | 856 | 823 | - |
| Electricity production (GWh) | - | - | - | - | 31 | 34 | - |
| CHP Heat production (TJ) | - | - | - | - | 627 | 369 | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | 60 e | 5891 | 33241 e | 33529 | 36633 | 38544 | 11.0 |
| CHP Heat production (TJ) | - | - | 129059 | 166875 | 184043 | 186687 | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

KOREA

10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|---------|-------|-------|-------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | - | 177 | 240 | 118 | 60 | - |
| Fuel input (TJ) | - | - | 7954 | 10502 | 4980 | 2427 | - |
| Heat production (TJ) | - | - | 6565 | 8908 | 4202 | 2106 | - |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 1235 | 6213 | 2617 | 2945 | - |
| Heat production (TJ) | - | - | 1118 | 5163 | 2192 | 2486 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | 3353 e | 6818 | 7241 | 8245 | - |
| Heat production (TJ) | - | - | 3353 e | 6818 | 7241 | 8245 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | 542 | 313 | 399 | - |
| Heat production (TJ) | - | - | - | 459 | 269 | 362 | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Heat production (TJ) | - | - | 11036 e | 21348 | 13904 | 13199 | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

KOREA

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|-------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 17.49 | 31.29 | 64.91 | 126.39 | 142.08 | 147.10 | 147.54 | 8.0 | 4.7 |
| Geothermal | - | - | - | - | 0.01 | 0.01 | 0.02 | - | - |
| Solar thermal | - | - | 0.01 | 0.04 | 0.03 | 0.03 | 0.03 | - | 5.9 |
| Coal | 6.49 | 9.74 | 11.72 | 8.35 | 8.75 | 8.95 | 9.98 | 3.5 | -0.9 |
| Oil | 9.90 | 18.73 | 43.66 | 79.88 | 78.61 | 80.81 | 77.77 | 9.1 | 3.3 |
| Gas | - | - | 0.67 | 10.92 | 16.30 | 16.81 | 17.58 | - | 19.9 |
| Comb. renew. & waste | - | - | 0.73 | 1.27 | 2.04 | 2.25 | 2.43 | - | 6.9 |
| Electricity | 1.10 | 2.82 | 8.12 | 22.63 | 31.94 | 33.64 | 35.02 | 12.5 | 8.5 |
| Heat | - | - | - | 3.29 | 4.40 | 4.59 | 4.72 | - | - |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 6.42 | 10.31 | 19.28 | 37.78 | 40.64 | 41.61 | 43.18 | 6.7 | 4.6 |
| Geothermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Solar thermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Coal | 0.39 | 1.35 | 3.05 | 7.78 | 7.65 | 7.57 | 8.49 | 12.9 | 5.8 |
| Oil | 5.27 | 7.01 | 10.90 | 11.01 | 7.85 | 7.30 | 6.46 | 4.4 | -2.9 |
| Gas | - | - | 0.07 | 2.88 | 4.36 | 4.71 | 5.47 | - | 27.1 |
| Comb. renew. & waste | - | - | 0.28 | 1.05 | 1.62 | 1.78 | 1.89 | - | 11.1 |
| Electricity | 0.76 | 1.95 | 4.97 | 12.93 | 16.29 | 17.25 | 17.88 | 11.7 | 7.4 |
| Heat | - | - | - | 2.12 | 2.86 | 3.00 | 2.99 | - | - |
| Transport | 2.50 | 4.78 | 14.56 | 26.23 | 29.22 | 30.21 | 28.83 | 10.9 | 3.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.01 | 0.00 | - | - | - | - | - | - | - |
| Oil | 2.48 | 4.74 | 14.47 | 26.06 | 28.51 | 29.35 | 27.78 | 10.9 | 3.7 |
| Gas | - | - | - | - | 0.45 | 0.58 | 0.71 | - | - |
| Comb. renew. & waste | - | - | - | - | 0.04 | 0.08 | 0.15 | - | - |
| Electricity | 0.01 | 0.03 | 0.09 | 0.18 | 0.22 | 0.21 | 0.19 | 12.9 | 4.5 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 0.89 | 2.55 | 8.69 | 17.21 | 17.85 | 18.35 | 18.49 | 14.3 | 4.3 |
| Geothermal | - | - | - | - | 0.01 | 0.01 | 0.02 | - | - |
| Solar thermal | - | - | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | - | 1.2 |
| Coal | 0.10 | 0.09 e | 0.03 e | - | - | - | - | -7.3 | - |
| Oil | 0.60 | 2.10 | 7.06 | 9.28 | 3.86 | 3.64 | 3.31 | 15.6 | -4.1 |
| Gas | - | - | 0.14 e | 1.81 | 3.18 | 3.29 | 3.15 | - | 19.1 |
| Comb. renew. & waste | - | - | 0.05 | 0.16 | 0.33 | 0.35 | 0.36 | - | 11.4 |
| Electricity | 0.19 | 0.35 | 1.41 | 5.87 | 10.28 | 10.85 | 11.39 | 12.5 | 12.3 |
| Heat | - | - | - | 0.10 | 0.18 | 0.20 | 0.26 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

KOREA

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 6.19 | 9.26 | 12.94 | 15.03 | 18.79 | 18.45 | 18.79 | 4.4 | 2.1 |
| Geothermal | - | - | - | - | 0.00 | - | 0.00 | - | - |
| Solar thermal | - | - | 0.01 | 0.04 | 0.03 | 0.02 | 0.02 | - | 8.0 |
| Coal | 5.99 e | 8.30 e | 8.64 e | 0.57 e | 1.10 | 1.00 | 1.05 | 2.2 | -11.0 |
| Oil | 0.07 | 0.50 | 1.92 | 3.88 | 3.45 | 3.10 | 3.15 | 21.3 | 2.8 |
| Gas | - | - | 0.46 e | 6.23 | 8.27 | 8.22 | 8.23 | - | 17.3 |
| Comb. renew. & waste | - | - | 0.39 | 0.06 | 0.05 | 0.04 | 0.03 | - | -13.4 |
| Electricity | 0.13 | 0.46 | 1.53 | 3.19 | 4.52 | 4.66 | 4.84 | 15.4 | 6.6 |
| Heat | - | - | - | 1.07 | 1.37 | 1.39 | 1.47 | - | - |
| Agriculture & fishing | 0.01 | 0.42 | 1.66 | 3.62 | 2.92 | 2.93 | 2.61 | 37.8 | 2.6 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | - | 0.41 | 1.53 | 3.16 | 2.26 | 2.26 | 1.89 | - | 1.2 |
| Gas | - | - | - | 0.01 | 0.03 | 0.00 | 0.01 | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.01 | 0.02 | 0.13 | 0.46 | 0.63 | 0.67 | 0.72 | 18.4 | 10.2 |
| Heat | - | - | - | - | - | - | - | - | - |
| Other | 0.35 | 0.90 | 1.06 | 1.47 | 0.91 | 0.94 | 0.85 | 6.8 | -1.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.35 | 0.90 | 1.06 | 1.47 | 0.91 | 0.94 | 0.85 | 6.8 | -1.2 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 1.13 | 3.06 | 6.73 | 25.03 | 31.76 | 34.60 | 34.77 | 11.04 | 9.56 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

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12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|
| TFC (Mtoe) | 17.49 | 31.29 | 64.91 | 126.39 | 140.18 | 142.08 | 147.10 | 147.54 |
| Total industry (Mtoe) | 6.42 | 10.31 | 19.28 | 37.78 | 38.79 | 40.64 | 41.61 | 43.18 |
| Iron and steel | 0.50 | 1.30 | 2.27 | 6.68 | 8.14 | 8.98 | 9.13 | 10.14 |
| Chem. and petrochemical | 0.22 | 0.41 | 3.68 | 6.34 | 7.63 | 7.62 | 8.01 | 7.93 |
| Non-ferrous metals | - | - | 0.16 | 0.26 | 0.21 | 0.22 | 0.34 | 0.87 |
| Non-metallic minerals | 0.10 | 0.68 | 3.72 | 5.53 | 5.32 | 5.74 | 5.79 | 6.03 |
| Transport equipment | 0.02 | 0.03 | 0.04 | 2.39 | 2.30 | 2.33 | 2.22 | 2.28 |
| Machinery | 0.03 | 0.20 | 1.87 | 2.81 | 3.89 | 4.19 | 4.86 | 5.37 |
| Mining and quarrying | 0.04 | 0.06 | 0.20 | 0.13 | 0.17 | 0.18 | 0.18 | 0.17 |
| Food and tobacco | 0.06 | 0.13 | 1.35 | 1.63 | 1.57 | 1.54 | 1.56 | 1.59 |
| Paper, pulp and printing | 0.05 | 0.13 | 1.23 | 2.40 | 2.38 | 2.27 | 2.21 | 2.21 |
| Wood and wood products | - | 0.03 | 0.12 | 0.21 | 0.26 | 0.26 | 0.28 | 0.27 |
| Construction | - | - | 0.51 | 0.45 | 0.60 | 0.84 | 0.77 | 0.75 |
| Textile and leather | 0.13 | 0.39 | 2.41 | 4.23 | 3.33 | 3.05 | 2.94 | 2.66 |
| Non specified/other | 5.26 | 6.95 | 1.69 | 4.70 | 2.98 | 3.43 | 3.32 | 2.91 |
| Electricity consumption (Mtoe) | 1.10 | 2.82 | 8.12 | 22.63 | 30.76 | 31.94 | 33.64 | 35.02 |
| Total industry (Mtoe) | 0.76 | 1.95 | 4.97 | 12.93 | 15.82 | 16.29 | 17.25 | 17.88 |
| Iron and steel | 0.11 | 0.40 | 0.87 | 3.09 | 3.72 | 3.75 | 4.13 | 3.81 |
| Chem. and petrochemical | 0.18 | 0.37 | 0.94 | 2.93 | 3.43 | 3.48 | 3.53 | 3.61 |
| Non-ferrous metals | - | - | - | 0.03 | 0.03 | 0.03 | 0.04 | 0.55 |
| Non-metallic minerals | 0.10 | 0.22 | 0.48 | 0.78 | 0.86 | 0.90 | 0.97 | 1.00 |
| Transport equipment | - | - | - | 0.81 | 1.26 | 1.36 | 1.47 | 1.53 |
| Machinery | 0.03 | 0.20 | 1.04 | 2.16 | 3.35 | 3.67 | 3.98 | 4.32 |
| Mining and quarrying | 0.04 | 0.06 | 0.09 | 0.09 | 0.11 | 0.12 | 0.13 | 0.12 |
| Food and tobacco | 0.06 | 0.13 | 0.30 | 0.55 | 0.66 | 0.67 | 0.68 | 0.67 |
| Paper, pulp and printing | 0.05 | 0.13 | 0.33 | 0.82 | 0.87 | 0.88 | 0.88 | 0.86 |
| Wood and wood products | - | 0.03 | 0.05 | 0.10 | 0.13 | 0.13 | 0.14 | 0.14 |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | 0.13 | 0.39 | 0.82 | 1.44 | 1.21 | 1.11 | 1.11 | 1.07 |
| Non specified/other | 0.07 | 0.02 | 0.05 | 0.15 | 0.18 | 0.19 | 0.20 | 0.20 |
| Total industry (TWh) | 8.85 | 22.72 | 57.79 | 150.39 | 183.95 | 189.46 | 200.53 | 207.85 |
| Iron and steel | 1.31 | 4.68 | 10.06 | 35.89 | 43.21 | 43.61 | 48.03 | 44.30 |
| Chem. and petrochemical | 2.05 | 4.28 | 10.92 | 34.04 | 39.90 | 40.48 | 40.99 | 41.95 |
| Non-ferrous metals | - | - | - | 0.31 | 0.40 | 0.37 | 0.43 | 6.41 |
| Non-metallic minerals | 1.14 | 2.61 | 5.63 | 9.03 | 9.98 | 10.47 | 11.28 | 11.58 |
| Transport equipment | - | - | - | 9.37 | 14.71 | 15.77 | 17.11 | 17.80 |
| Machinery | 0.38 | 2.31 | 12.09 | 25.14 | 38.92 | 42.68 | 46.28 | 50.18 |
| Mining and quarrying | 0.44 | 0.67 | 1.01 | 1.00 | 1.32 | 1.39 | 1.48 | 1.41 |
| Food and tobacco | 0.71 | 1.52 | 3.54 | 6.42 | 7.65 | 7.77 | 7.90 | 7.84 |
| Paper, pulp and printing | 0.58 | 1.53 | 3.88 | 9.52 | 10.16 | 10.22 | 10.23 | 10.02 |
| Wood and wood products | - | 0.34 | 0.62 | 1.21 | 1.54 | 1.54 | 1.58 | 1.63 |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | 1.47 | 4.55 | 9.51 | 16.75 | 14.02 | 12.96 | 12.93 | 12.48 |
| Non specified/other | 0.77 | 0.23 | 0.53 | 1.70 | 2.14 | 2.20 | 2.29 | 2.28 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

KOREA

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|------|-------|-------|--------|-------|-------|-------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | - | - | .. | 32.18 | 48.45 | 60.72 | 64.48 | 67.74 | 74.15 |
| Nuclear | - | - | - | 8.62 | 13.72 | 17.18 | 17.72 | 17.72 | 17.72 |
| Hydro | - | - | 2.34 | 3.09 | 3.15 | 3.88 | 5.49 | 5.49 | 5.51 |
| <i>of which: pumped storage</i> | - | - | 1.00 | 1.60 | 1.60 | 2.30 | 3.90 | 3.90 | 3.90 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | 0.01 | 0.02 | 0.30 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | 0.10 e | 0.17 | 0.19 | 0.19 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | - | - | .. | 20.48 | 31.59 | 39.56 | 41.10 | 44.32 | 50.44 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | .. | 6.80 | 12.74 | 16.84 | 17.34 | 19.34 | 22.58 |
| Liquid fuels | - | - | .. | 6.12 | 4.87 | 4.61 | 4.69 | 5.47 | 5.47 |
| Natural gas | - | - | .. | 4.49 | 6.30 | 16.96 | 17.95 | 18.30 | 21.18 |
| Comb. renew. & waste | - | - | - | - | - | 0.03 | - | 0.08 | 0.08 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | .. | 1.02 | 1.29 | 1.13 | 1.13 | 1.13 | 1.13 |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | .. | 2.05 | 6.39 | - | - | - | - |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | .. | 14.03 | 20.06 | 23.84 | 24.39 | 27.34 | 33.09 |
| Internal combustion | - | - | .. | 0.26 | 0.27 | 0.30 | 0.13 | 0.30 | 0.14 |
| Gas turbine | - | - | - | - | - | - | 0.17 | 0.17 | 0.17 |
| Combined cycle | - | - | .. | 6.18 | 11.26 | 15.42 | 16.41 | 16.51 | 17.04 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | .. | 29.88 | 41.01 | 54.63 | 58.99 | 62.29 | 62.79 |
| Available capacity | .. | .. | .. | 31.97 | 46.08 | 61.74 | 64.78 | 66.78 | 68.52 |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

KOREA

15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|------|------|--------|--------|------|------|------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | - | - | .. | .. | 5.24 | 5.82 | 5.60 | 5.64 | 5.71 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | 0.01 e | 0.03 | 0.06 | 0.06 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 0.01 | - | 0.01 | - | 0.11 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | - | - | .. | .. | 5.23 | 5.81 | 5.57 | 5.57 | 5.54 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | .. | .. | 0.09 e | 2.90 | 3.18 | 3.51 | 3.70 |
| Liquid fuels | - | - | .. | .. | 3.66 e | 2.44 | 2.22 | 1.83 | 1.66 |
| Natural gas | - | - | .. | .. | 0.10 e | 0.07 | 0.10 | 0.14 | 0.09 |
| Comb. renew. & waste | - | - | .. | .. | 0.48 e | 0.05 | 0.07 | 0.09 | 0.09 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | .. | .. | 0.32 e | 0.31 | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | .. | .. | 0.58 e | 0.04 | - | - | - |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | .. | .. | 4.87 e | 5.38 | 4.53 | 5.02 | 5.04 |
| Internal combustion | - | - | - | - | - | 0.06 | 0.04 | 0.05 | 0.03 |
| Gas turbine | - | - | - | - | - | 0.17 | 0.40 | 0.41 | 0.38 |
| Combined cycle | - | - | - | - | 0.36 e | 0.19 | 0.60 | 0.09 | 0.09 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | 1000 South Korean Wons/ unit | | | | | | | | |
| Steam coal (t) | .. | .. | .. | .. | 56 | 49 | 56 | 100 | 105 |
| Heavy fuel oil (t) | .. | 152 | 93 | 312 | .. | .. | .. | .. | .. |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | .. | .. | .. | .. | 376 | 454 | 455 | 744 | 577 |
| | 1000 South Korean Wons/ toe | | | | | | | | |
| Steam coal | .. | .. | .. | .. | 86 | 74 | 85 | 152 | 159 |
| Heavy fuel oil | .. | 165 | 101 | 339 | .. | .. | .. | .. | .. |
| Natural gas ⁽²⁾ | .. | .. | .. | .. | 418 | 505 | 506 | 826 | 641 |
| End-user prices of electricity | | | | | | | | | |
| | 1000 South Korean Wons/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0207 | 0.0493 | 0.0495 | 0.0583 | 0.0603 | 0.0619 | 0.0646 | 0.0662 | 0.0737 |
| <i>of which: tax</i> | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Household | | | | | | | | | |
| Price | 0.0322 | 0.0596 | 0.0681 | 0.0947 | 0.0911 | 0.0937 | 0.0948 | 0.0976 | 0.0981 |
| <i>of which: tax</i> | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Energy Prices & Taxes.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

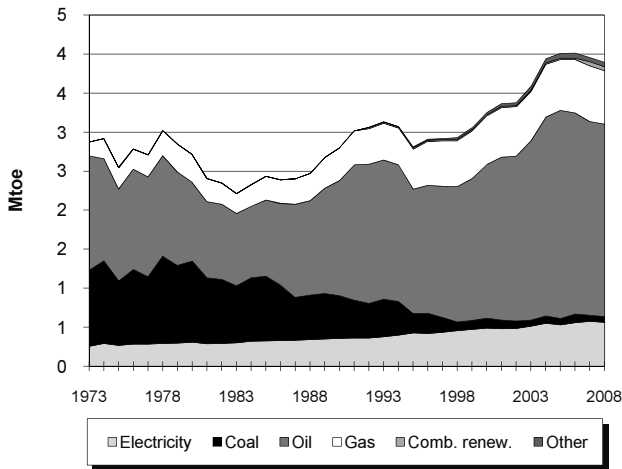


Figure 2. Electricity generation by fuel

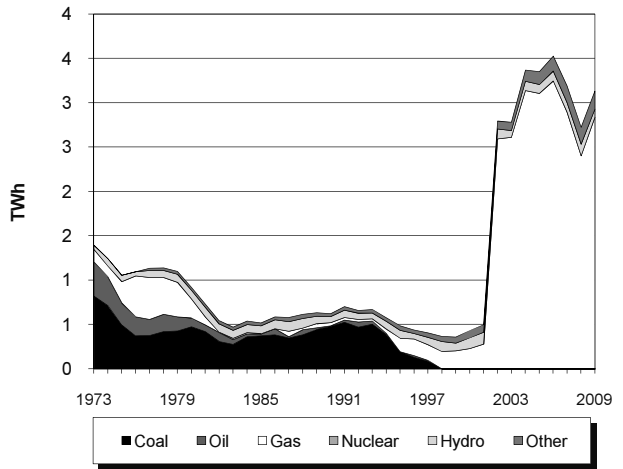


Figure 3. Electricity consumption by sector

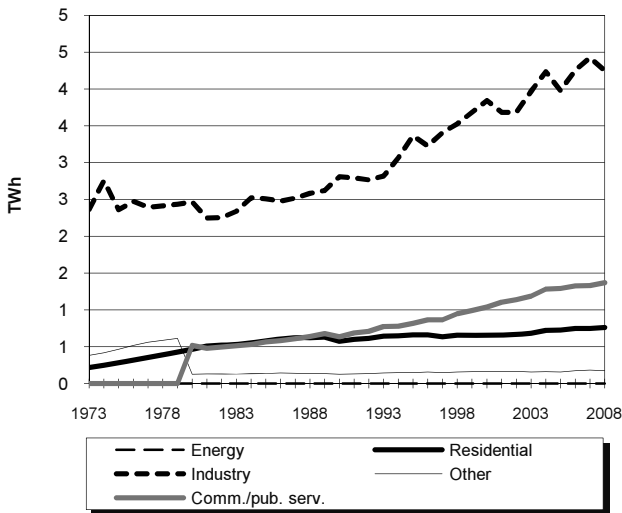


Figure 4. Electricity indicators

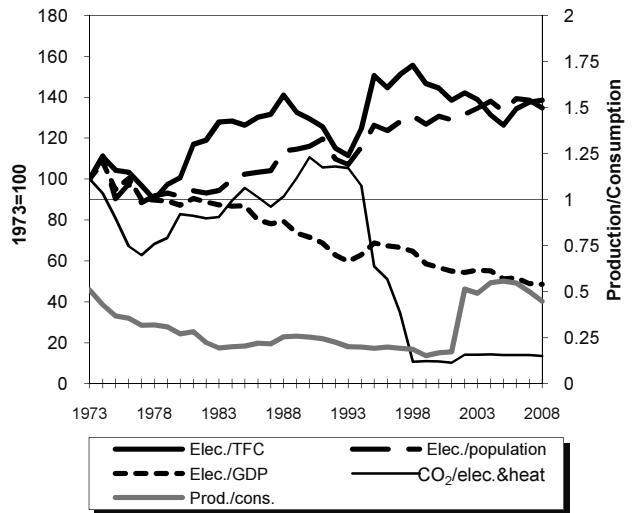
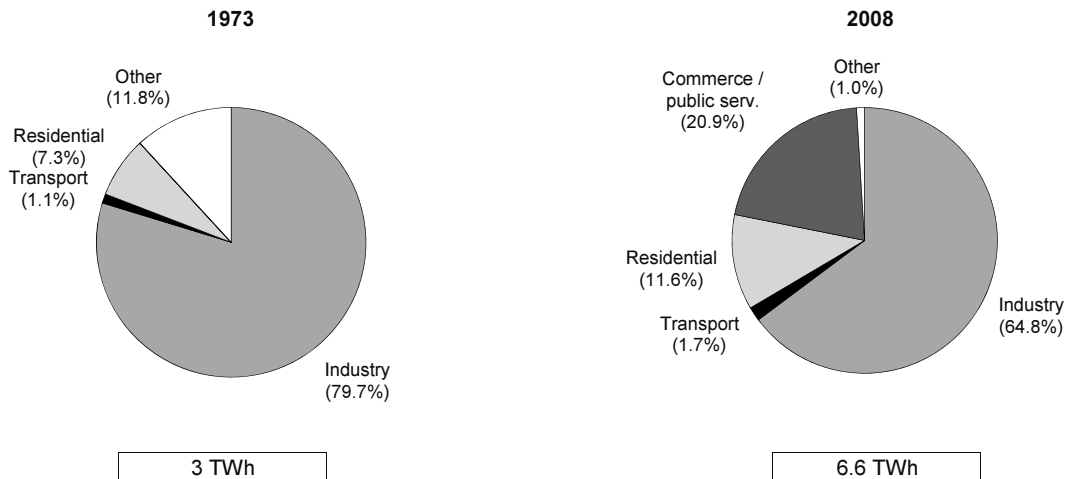


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|-------|------|-------|-------|-------|-------|-------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 4.43 | 3.56 | 3.41 | 3.32 | 4.22 | 4.12 | 3.90 | -1.5 | 0.7 |
| GDP (billion 2000 USD) | 7.02 | 7.65 | 12.40 | 20.27 | 27.18 | 27.19 | 26.79 | 3.4 | 4.1 |
| TPES/GDP ⁽¹⁾ | 0.63 | 0.47 | 0.28 | 0.16 | 0.16 | 0.15 | 0.15 | -4.8 | -3.3 |
| Population (millions) | 0.35 | 0.36 | 0.38 | 0.44 | 0.48 | 0.49 | 0.50 | 0.5 | 1.4 |
| TPES/population ⁽²⁾ | 12.63 | 9.78 | 8.93 | 7.55 | 8.79 | 8.42 | 7.83 | -2.0 | -0.7 |
| TPES/GDP (2000 = 100) | 386 | 284 | 168 | 100 | 95 | 93 | 89 | -4.8 | -3.3 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 150 | 166 | 119 | 100 | 87 | 86 | .. | -1.4 | .. |
| Ele.TFC/population ⁽⁴⁾ | 8456 | 9830 | 10865 | 12998 | 13938 | 13408 | .. | 1.5 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 1.39 | 0.92 | 0.62 | 0.43 | 3.19 | 2.72 | 3.13 | -4.6 | 8.9 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 4.43 | 3.56 | 3.41 | 3.32 | 4.22 | 4.12 | 3.90 | -1.5 | 0.7 |
| Coal | 2.44 | 1.82 | 1.13 | 0.13 | 0.08 | 0.07 | 0.06 | -4.4 | -14.5 |
| Oil | 1.60 | 1.04 | 1.48 | 1.97 | 2.48 | 2.46 | 2.32 | -0.5 | 2.4 |
| Gas | 0.22 | 0.42 | 0.43 | 0.67 | 1.20 | 1.09 | 1.11 | 4.1 | 5.1 |
| Comb. renew & waste | - | 0.02 | 0.02 | 0.04 | 0.10 | 0.10 | 0.10 | - | 7.6 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽¹⁾ | - | - | - | 0.00 | 0.01 | 0.01 | 0.01 | - | - |
| Hydro | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 2.4 | 1.5 |
| Net electricity imports ⁽²⁾ | 0.18 | 0.24 | 0.34 | 0.49 | 0.34 | 0.37 | 0.29 | 3.9 | -0.7 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|------------|------------|------------|------------|------------|------------|------------|------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 2.2 | 1.1 | 1.4 | 1.2 | 4.1 | 4.0 | 3.6 | 3.9 |
| Nuclear | - | - | - | - | - | - | - | - |
| Hydro | 0.8 | 0.3 | 0.8 | 0.9 | 0.9 | 0.9 | 1.0 | 0.8 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | <i>0.8</i> | <i>0.2</i> | <i>0.8</i> | <i>0.7</i> | <i>0.8</i> | <i>0.8</i> | <i>0.8</i> | <i>0.7</i> |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| Combustible fuels | 1.3 | 0.8 | 0.6 | 0.3 | 3.2 | 3.0 | 2.5 | 3.0 |
| <i>Coal</i> | <i>0.8</i> | <i>0.5</i> | <i>0.5</i> | - | - | - | - | - |
| <i>Oil</i> | <i>0.4</i> | <i>0.1</i> | <i>0.0</i> | - | - | - | - | - |
| <i>Gas</i> | <i>0.1</i> | <i>0.2</i> | <i>0.0</i> | <i>0.2</i> | <i>3.1</i> | <i>2.9</i> | <i>2.4</i> | <i>2.8</i> |
| <i>Comb. renew. & waste</i> | - | <i>0.0</i> | <i>0.0</i> | <i>0.1</i> | <i>0.1</i> | <i>0.1</i> | <i>0.1</i> | <i>0.1</i> |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - |
| - Own use by power plant | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Net production | 2.1 | 1.1 | 1.3 | 1.1 | 4.1 | 4.0 | 3.5 | .. |
| Nuclear | .. | - | - | - | - | - | - | .. |
| Hydro | .. | 0.3 | 0.8 | 0.9 | 0.9 | 0.9 | 1.0 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | - | - | 0.0 | 0.0 | 0.0 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | - | 0.0 | 0.1 | 0.1 | 0.1 | .. |
| Combustible fuels | .. | 0.8 | 0.5 | 0.3 | 3.2 | 3.0 | 2.5 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | - | - | - | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | 1.1 | 0.3 | 1.0 | 1.0 | 1.1 | 1.1 | 1.2 | 1.0 |
| + Imports | 2.8 | 3.0 | 4.7 | 6.5 | 6.4 | 6.8 | 6.8 | 6.0 |
| - Exports | 0.8 | 0.2 | 0.7 | 0.7 | 3.1 | 2.9 | 2.5 | 2.6 |
| Electrical energy supplied | 3.1 | 3.6 | 4.2 | 5.9 | 6.3 | 6.8 | 6.7 | .. |
| - Transmission & distr. losses | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | .. |
| - Statistical difference | - | - | -0.0 | 0.0 | - | -0.0 | 0.0 | .. |
| Total consumption | 3.0 | 3.6 | 4.1 | 5.7 | 6.2 | 6.7 | 6.6 | .. |
| - Energy industry consumption ⁽²⁾ | - | - | - | - | - | - | - | .. |
| Final consumption | 3.0 | 3.6 | 4.1 | 5.7 | 6.2 | 6.7 | 6.6 | .. |
| Industry | 2.4 | 2.5 | 2.8 | 3.8 | 4.0 | 4.4 | 4.2 | .. |
| Transport | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | .. |
| Commercial & publ. serv. | - | 0.5 | 0.6 | 1.0 | 1.3 | 1.3 e | 1.4 | .. |
| Residential | 0.2 | 0.5 | 0.6 | 0.7 | 0.7 | 0.7 e | 0.8 | .. |
| Agriculture & fishing | - | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 e | 0.1 | .. |
| Sector non specified | 0.4 | - | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 2.08 | 1.11 | 1.38 | 1.18 | 4.33 | 4.00 | 3.56 | -2.5 | 5.4 |
| - Hydro pumped storage | 0.84 | 0.19 | 0.75 | 0.74 | 0.81 | 0.81 | 0.83 | -0.7 | 0.6 |
| Total generation⁽¹⁾ | 1.24 | 0.92 | 0.62 | 0.43 | 3.53 | 3.19 | 2.72 | -4.2 | 8.5 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 0.92 | 0.32 | 0.85 | 0.94 | 3.84 | 3.58 | 3.11 | -0.5 | 7.4 |
| - Hydro pumped storage | 0.84 | 0.19 | 0.75 | 0.74 | 0.81 | 0.81 | 0.83 | -0.7 | 0.6 |
| Total generation ⁽¹⁾ | 0.08 | 0.13 | 0.10 | 0.19 | 3.03 | 2.77 | 2.28 | 1.2 | 18.9 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.08 | 0.10 | 0.07 | 0.11 | 0.11 | 0.10 | 0.13 | -1.3 | 3.5 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.03 | 0.06 | 0.06 | 0.06 | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | - | - | - | - | - | - | - | - | - |
| Gas | - | - | - | - | 2.81 | 2.53 | 2.02 | - | - |
| Comb. renew. & waste | - | 0.03 | 0.03 | 0.05 | 0.06 | 0.07 | 0.07 | - | 3.7 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 1.16 | 0.79 | 0.52 | 0.24 | 0.50 | 0.43 | 0.45 | -4.9 | -0.8 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 1.16 | 0.79 | 0.52 | 0.24 | 0.50 | 0.43 | 0.45 | -4.9 | -0.8 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | - | 4.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | 0.02 | 0.02 | 0.02 | - | - |
| Coal | 0.71 | 0.47 | 0.48 | - | - | - | - | -2.5 | - |
| Oil | 0.33 | 0.10 | 0.01 | - | - | - | - | -20.1 | - |
| Gas | 0.12 | 0.22 | 0.03 | 0.23 | 0.44 | 0.36 | 0.38 | -7.6 | 14.3 |
| Comb. renew. & waste | - | - | - | 0.00 | 0.03 | 0.04 | 0.04 | - | - |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|-------------|------------|------------|------------|------------|------------|------------|---|
| Total | 1096 | 752 | 489 | 225 | 496 | 426 | 448 | -0.5 |
| Total energy | - | - | 3 | - | - | - | - | - |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | - | - | - | - | - |
| Energy non specified/other | - | - | 3 | - | - | - | - | - |
| Total industry | 1096 | 752 | 486 | 142 | 167 | 127 | 134 | -6.9 |
| Iron and steel | 1096 | 670 | 464 | - | - | - | - | - |
| Chemical and petrochemical | - | 55 | 22 | 142 | 167 | 127 | 134 | 10.6 |
| Non-ferrous metals | - | - | - | - | - | - | - | - |
| Non-metallic minerals | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | - | 27 | - | - | - | - | - | - |
| Mining and quarrying | - | - | - | - | - | - | - | - |
| Food and tobacco | - | - | - | - | - | - | - | - |
| Pulp and printing | - | - | - | - | - | - | - | - |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | - | - | - | - | - | - | - | - |
| Non specified/other industries | - | - | - | - | - | - | - | - |
| Total transport | - | - | - | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | - | - | - | - |
| Other | - | - | - | 83 | 329 | 299 | 314 | - |
| Commerce and pub. services | - | - | - | - | - | - | - | - |
| Residential | - | - | - | 6 | 26 | 27 | 27 | - |
| Agriculture and fishing | - | - | - | 5 | 33 | 37 | 43 | - |
| Sector non specified | - | - | - | 72 | 270 | 235 | 244 | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|------|------|------|------|------|------|-------|---|
| Total | - | - | 1127 | 2544 | 2280 | 2366 | 2504 | - |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - |
| Oil | - | - | - | - | - | - | - | - |
| Gas | - | - | 1121 | 2388 | 2071 | 2115 | 2153 | - |
| Comb. renew. & waste | - | - | 6 | 156 | 209 | 251 | 351 | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | - | - | - | - | - | - | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | - | - | - | - | - | .. | - |
| Gas | - | - | - | - | - | - | .. | - |
| Comb. renew. & waste | - | - | - | - | - | - | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | - | 1127 | 2544 | 2280 | 2366 | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | - | - | - | - | - | .. | - |
| Gas | - | - | 1121 | 2388 | 2071 | 2115 | .. | - |
| Comb. renew. & waste | - | - | 6 | 156 | 209 | 251 | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 0.44 | 0.27 | 0.19 | 0.08 | 0.60 | 0.54 | 0.46 | -4.8 | 5.0 |
| Coal | 0.29 | 0.16 | 0.15 | - | - | - | - | -3.7 | - |
| Oil | 0.11 | 0.02 | 0.00 | - | - | - | - | -19.2 | - |
| Gas | 0.04 | 0.07 | 0.01 | 0.05 | 0.55 | 0.49 | 0.41 | -8.2 | 23.2 |
| Comb. renew. & waste | - | 0.02 | 0.02 | 0.03 | 0.05 | 0.05 | 0.05 | - | 4.0 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 0.02 | 0.02 | 0.03 | 0.48 | 0.44 | 0.36 | .. | 16.0 |
| Coal | .. | - | - | - | - | - | - | .. | - |
| Oil | .. | - | - | - | - | - | - | .. | - |
| Gas | .. | - | - | - | 0.44 | 0.40 | 0.32 | .. | - |
| Comb. renew. & waste | .. | 0.02 | 0.02 | 0.03 | 0.04 | 0.04 | 0.04 | .. | 2.4 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 2.4 | 5.8 |
| Hydro | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 2.4 | 3.6 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.00 | 0.00 | 0.01 | 0.01 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

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8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|------|-------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 15 | - | - | - | - | - | - |
| Fuel input (TJ) | 440 | - | - | - | - | - | - |
| Electricity production (GWh) | 27 | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 6167 | 6378 | - | - | - | - | - |
| Electricity production (GWh) | 447 | 477 | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 24 | 3 | - | - | - | - | - |
| Fuel input (TJ) | 1005 | 117 | - | - | - | - | - |
| Electricity production (GWh) | 100 | 9 | - | - | - | - | - |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 3107 | 448 | - | 20557 | 18601 | 14792 | 21.4 |
| Electricity production (GWh) | 216 | 34 | - | 2809 | 2533 | 2024 | 25.5 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 858 | 1036 | 1151 | 1598 | 1629 | 1588 | 2.4 |
| Electricity production (GWh) | 30 | 34 | 52 | 57 | 66 | 65 | 3.7 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 820 | 554 | 52 | 2866 | 2599 | 2089 | 7.7 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|--------|------|------|------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 2216 e | 5007 | 4141 | 4231 | - |
| Electricity production (GWh) | - | - | 230 | 438 | 362 | 378 | - |
| CHP Heat production (TJ) | - | - | 1121 | 2503 | 2071 | 2115 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 23 | 373 | 418 | 501 | - |
| Electricity production (GWh) | - | - | 4 | 33 | 37 | 44 | - |
| CHP Heat production (TJ) | - | - | 6 | 186 | 209 | 251 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | - | - | 234 | 471 | 399 | 422 | - |
| CHP Heat production (TJ) | - | - | 1127 | 2689 | 2280 | 2366 | - |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 2.87 | 2.71 | 2.80 | 3.25 | 4.01 | 3.96 | 3.90 | -0.2 | 1.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Coal | 0.98 | 1.04 | 0.55 | 0.13 | 0.11 | 0.08 | 0.07 | -3.4 | -10.6 |
| Oil | 1.46 | 1.01 | 1.48 | 1.97 | 2.58 | 2.48 | 2.47 | 0.1 | 2.9 |
| Gas | 0.18 | 0.36 | 0.42 | 0.62 | 0.68 | 0.71 | 0.68 | 5.2 | 2.7 |
| Comb. renew. & waste | - | - | - | 0.02 | 0.02 | 0.05 | 0.05 | - | - |
| Electricity | 0.26 | 0.31 | 0.36 | 0.49 | 0.56 | 0.58 | 0.56 | 2.0 | 2.6 |
| Heat | - | - | - | 0.03 | 0.06 | 0.05 | 0.06 | - | - |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 2.06 | 1.64 | 1.33 | 0.96 | 1.02 | 1.03 | 0.94 | -2.5 | -1.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.94 | 1.02 | 0.54 | 0.12 | 0.11 | 0.08 | 0.07 | -3.2 | -10.6 |
| Oil | 0.77 | 0.17 | 0.27 | 0.07 | 0.08 | 0.08 | 0.07 | -5.9 | -6.9 |
| Gas | 0.14 | 0.25 | 0.28 | 0.41 | 0.44 | 0.48 | 0.41 | 4.2 | 2.2 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.20 | 0.21 | 0.24 | 0.33 | 0.37 | 0.38 | 0.37 | 1.0 | 2.3 |
| Heat | - | - | - | 0.02 | 0.03 | 0.02 | 0.02 | - | - |
| Transport | 0.23 | 0.43 | 0.88 | 1.56 | 2.23 | 2.19 | 2.17 | 8.1 | 5.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.23 | 0.43 | 0.87 | 1.56 | 2.22 | 2.14 | 2.12 | 8.2 | 5.1 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | 0.00 | 0.04 | 0.04 | - | - |
| Electricity | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 3.1 | 4.1 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | - | 0.04 | 0.05 | 0.09 | 0.11 | 0.11 | 0.12 | - | 4.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | - | - | - | - | - | - | - | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | 0.04 | 0.05 | 0.09 | 0.11 e | 0.11 e | 0.12 | - | 4.4 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|--------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 0.51 | 0.53 | 0.50 | 0.60 | 0.60 | 0.58 | 0.62 | -0.1 | 1.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Coal | 0.03 | 0.02 | 0.01 | 0.00 | 0.00 | - | - | -9.7 | - |
| Oil | 0.42 | 0.36 | 0.30 | 0.30 | 0.24 | 0.23 | 0.23 | -1.9 | -1.5 |
| Gas | 0.04 | 0.11 | 0.14 | 0.21 | 0.25 | 0.24 | 0.27 | 8.0 | 3.7 |
| Comb. renew. & waste | - | - | - | 0.02 | 0.02 | 0.02 | 0.02 | - | - |
| Electricity | 0.02 | 0.04 | 0.05 | 0.06 | 0.06 e | 0.06 e | 0.07 | 5.9 | 1.6 |
| Heat | - | - | - | 0.01 | 0.03 | 0.03 | 0.03 | - | - |
| Agriculture & fishing | 0.01 | 0.02 | 0.01 | 0.01 | 0.03 | 0.03 | 0.03 | -0.9 | 5.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | -5.5 | 8.0 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | 0.01 | 0.01 | 0.01 | 0.01 e | 0.01 e | 0.01 | - | -0.7 |
| Heat | - | - | - | - | 0.00 | 0.00 | 0.01 | - | - |
| Other | 0.03 | 0.00 | - | 0.02 | 0.00 | 0.00 | 0.00 | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.00 | 0.00 | - | 0.02 | 0.00 | 0.00 | 0.00 | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.03 | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 0.03 | 0.04 | 0.02 | 0.01 | 0.02 | 0.01 | 0.01 | -1.93 | -3.04 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

LUXEMBOURG

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| TFC (Mtoe) | 2.87 | 2.71 | 2.80 | 3.25 | 4.01 | 4.01 | 3.96 | 3.90 |
| Total industry (Mtoe) | 2.06 | 1.64 | 1.33 | 0.96 | 0.95 | 1.02 | 1.03 | 0.94 |
| Iron and steel | 1.84 | 1.37 | 0.90 | 0.35 | 0.34 | 0.39 | 0.42 | 0.38 |
| Chem. and petrochemical | 0.08 | 0.09 | 0.04 | 0.02 | 0.03 | 0.03 | 0.02 | 0.02 |
| Non-ferrous metals | 0.00 | - | - | - | - | - | - | - |
| Non-metallic minerals | 0.00 | 0.07 | 0.11 | 0.10 | 0.06 | 0.08 | 0.05 | 0.05 |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | 0.00 | 0.01 | - | - | - | - | - | - |
| Mining and quarrying | 0.00 | 0.00 | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Food and tobacco | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 |
| Paper, pulp and printing | - | - | - | - | - | - | - | - |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | 0.04 | 0.04 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| Textile and leather | 0.00 | 0.01 | - | - | - | - | - | - |
| Non specified/other | 0.08 | 0.04 | 0.27 | 0.46 | 0.48 | 0.48 | 0.50 | 0.46 |
| Electricity consumption (Mtoe) | 0.26 | 0.31 | 0.36 | 0.49 | 0.53 | 0.56 | 0.58 | 0.56 |
| Total industry (Mtoe) | 0.20 | 0.21 | 0.24 | 0.33 | 0.34 | 0.37 | 0.38 | 0.37 |
| Iron and steel | 0.16 | 0.14 | 0.10 | 0.17 | 0.15 | 0.16 | 0.18 | 0.16 |
| Chem. and petrochemical | 0.02 | 0.04 | - | - | - | - | - | - |
| Non-ferrous metals | 0.00 | - | - | - | - | - | - | - |
| Non-metallic minerals | 0.00 | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | 0.00 | 0.01 | - | - | - | - | - | - |
| Mining and quarrying | 0.00 | 0.00 | - | - | - | - | - | - |
| Food and tobacco | 0.00 | 0.00 | - | - | - | - | - | - |
| Paper, pulp and printing | - | - | - | - | - | - | - | - |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | 0.00 | 0.01 | - | - | - | - | - | - |
| Non specified/other | 0.01 | 0.01 | 0.14 | 0.17 | 0.20 | 0.20 | 0.20 | 0.20 |
| Total industry (TWh) | 2.37 | 2.47 | 2.81 | 3.84 | 3.98 | 4.26 | 4.43 | 4.25 |
| Iron and steel | 1.89 | 1.57 | 1.19 | 1.92 | 1.71 | 1.90 | 2.05 | 1.87 |
| Chem. and petrochemical | 0.20 | 0.47 | - | - | - | - | - | - |
| Non-ferrous metals | 0.00 | - | - | - | - | - | - | - |
| Non-metallic minerals | 0.05 | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | 0.04 | 0.10 | - | - | - | - | - | - |
| Mining and quarrying | 0.04 | 0.03 | - | - | - | - | - | - |
| Food and tobacco | 0.03 | 0.05 | - | - | - | - | - | - |
| Paper, pulp and printing | - | - | - | - | - | - | - | - |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | 0.02 | 0.16 | - | - | - | - | - | - |
| Non specified/other | 0.09 | 0.09 | 1.62 | 1.92 | 2.27 | 2.36 | 2.38 | 2.38 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

LUXEMBOURG

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Total imports⁽¹⁾ | 2827 | 3034 | 4678 | 5746 | 6457 | 6392 | 6824 | 6847 | 6830 |
| Imports from: | | | | | | | | | |
| Total OECD | - | - | 4678 | 5746 | 6457 | 6392 | 6824 | 6847 | 6830 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | 821 | 1428 | 2017 | 1359 | 1688 | 1631 | 1524 |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | 3857 | 4318 | 4440 | 5033 | 5136 | 5216 | 5306 |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 2827 | 3034 | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

LUXEMBOURG

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|
| Total exports⁽¹⁾ | 791 | 192 | 746 | 743 | 735 | 3131 | 3267 | 2887 | 2484 |
| Exports to: | | | | | | | | | |
| Total OECD | - | - | 746 | 743 | 735 | 3131 | 3267 | 2887 | 2484 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | 2346 | 2460 | 2084 | 1649 |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | 746 | 743 | 735 | 785 | 807 | 803 | 835 |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 791 | 192 | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

LUXEMBOURG

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 0.91 | 1.14 | 1.14 | 1.14 | 1.14 | 1.49 | 1.49 | 1.49 | 1.49 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.91 | 1.13 | 1.13 | 1.13 | 1.13 | 1.13 | 1.13 | 1.13 | 1.13 |
| <i>of which: pumped storage</i> | - | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.36 | 0.36 | 0.36 | 0.36 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | - | - | - | - | - | - | - |
| Liquid fuels | - | - | - | - | - | - | - | - | - |
| Natural gas | - | - | - | - | - | 0.35 | 0.35 | 0.35 | 0.35 |
| Comb. renew. & waste | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | - | - | - |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Internal combustion | - | - | - | - | - | - | - | - | - |
| Gas turbine | - | - | - | - | - | 0.35 | 0.35 | 0.35 | 0.35 |
| Combined cycle | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | .. | .. | 0.59 | 1.04 | 1.05 | 1.09 | 1.07 |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 0.17 | 0.17 | 0.10 | 0.11 | 0.08 | 0.16 | 0.17 | 0.17 | 0.18 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | 0.02 | 0.02 | 0.02 | 0.03 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 0.01 | 0.04 | 0.04 | 0.04 | 0.04 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 0.17 | 0.17 | 0.10 | 0.11 | 0.07 | 0.10 | 0.10 | 0.10 | 0.11 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 0.05 | 0.05 | 0.03 | - | - | - | - | - | - |
| Liquid fuels | 0.02 | 0.02 | 0.01 | - | - | - | - | - | - |
| Natural gas | - | - | - | 0.02 | 0.07 | 0.10 | 0.10 | 0.10 | 0.10 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | - | - | - |
| Solid / liquid / gas | 0.10 | 0.10 | 0.06 | 0.09 | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | - | 0.09 | - | - | - | - | - |
| Internal combustion | - | - | - | 0.01 | 0.04 | 0.07 | 0.08 | 0.08 | 0.08 |
| Gas turbine | - | - | - | 0.01 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| Combined cycle | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

LUXEMBOURG

16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Euro/ unit | | | | | | | | |
| Steam coal (t) | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil (t) | .. | 131.73 | .. | .. | .. | .. | .. | .. | .. |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Euro/ toe | | | | | | | | |
| Steam coal | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil | .. | 136.51 | .. | .. | .. | .. | .. | .. | .. |
| Natural gas ⁽²⁾ | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| End-user prices of electricity | | | | | | | | | |
| | Euro/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0273 | 0.0341 | .. | .. | .. | .. | .. | 0.0838 | 0.0981 |
| <i>of which: tax</i> | - | - | .. | .. | .. | .. | .. | 0.0082 | 0.0097 |
| Household | | | | | | | | | |
| Price | 0.0535 | 0.0620 | 0.1026 | 0.1077 | 0.1502 | 0.1461 | 0.1684 | 0.1474 | 0.1707 |
| <i>of which: tax</i> | 0.0026 | 0.0029 | 0.0058 | 0.0061 | 0.0191 | 0.0204 | 0.0175 | 0.0181 | 0.0219 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

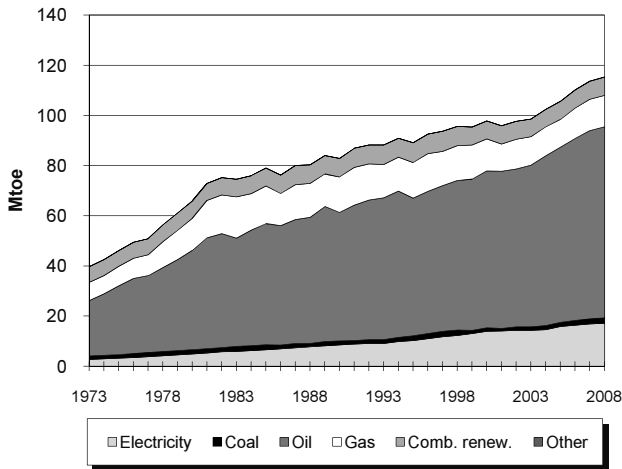


Figure 2. Electricity generation by fuel

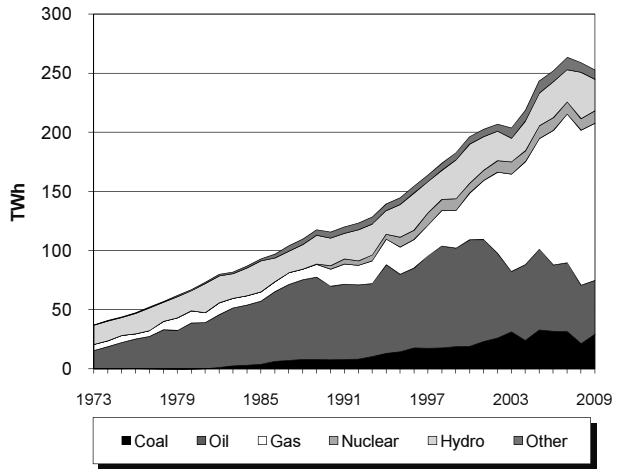


Figure 3. Electricity consumption by sector

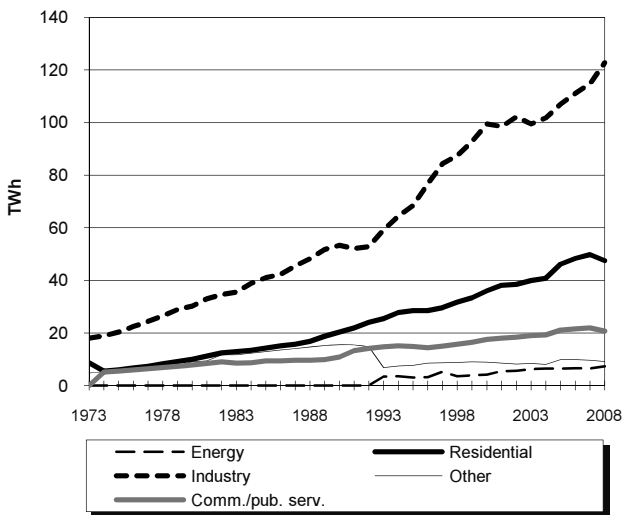


Figure 4. Electricity indicators

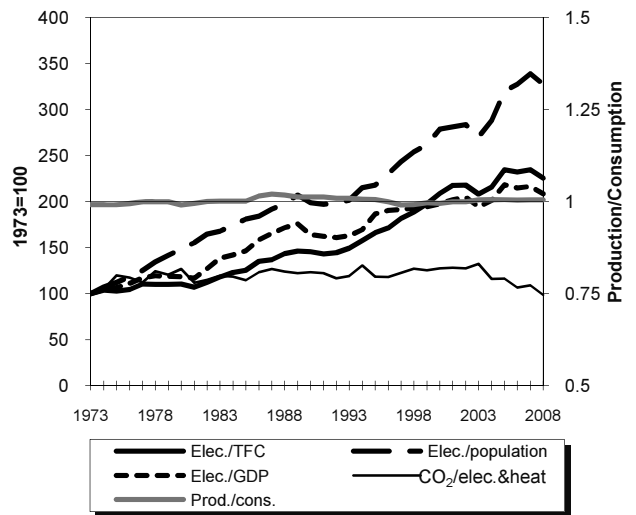
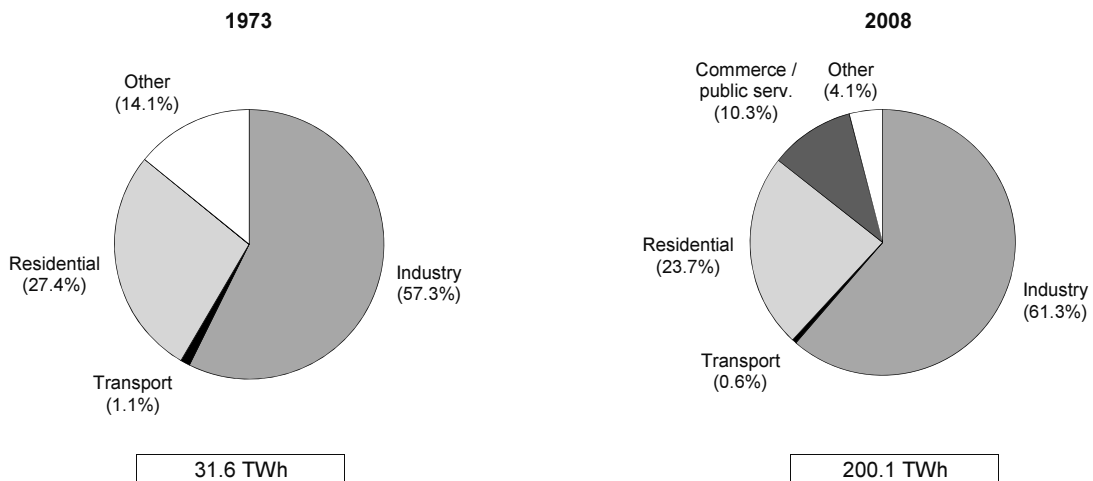


Figure 5. Total final electricity consumption by sector



MEXICO

1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 52.57 | 95.12 | 121.27 | 144.79 | 176.29 | 180.61 | 176.79 | 5.0 | 2.0 |
| GDP (billion 2000 USD) | 244.63 | 378.36 | 452.56 | 636.73 | 759.03 | 769.26 | 713.02 | 3.7 | 2.4 |
| TPES/GDP ⁽¹⁾ | 0.21 | 0.25 | 0.27 | 0.23 | 0.23 | 0.23 | 0.25 | 1.3 | -0.4 |
| Population (millions) | 53.27 | 65.70 | 81.25 | 98.26 | 105.68 | 106.57 | 107.47 | 2.5 | 1.5 |
| TPES/population ⁽²⁾ | 0.99 | 1.45 | 1.49 | 1.47 | 1.67 | 1.69 | 1.65 | 2.5 | 0.5 |
| TPES/GDP (2000 = 100) | 94 | 111 | 118 | 100 | 102 | 103 | 109 | 1.3 | -0.4 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 51 | 59 | 87 | 100 | 102 | 102 | .. | 3.2 | .. |
| Ele.TFC/population ⁽⁴⁾ | 593 | 870 | 1234 | 1651 | 1859 | 1879 | .. | 4.4 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 37.10 | 66.96 | 115.84 | 196.52 | 263.47 | 258.91 | 252.77 | 6.9 | 4.2 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|--------------|--------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 52.57 | 95.12 | 121.27 | 144.79 | 176.29 | 180.61 | 176.79 | 5.0 | 2.0 |
| Coal | 1.84 | 2.37 | 3.47 | 6.85 | 9.10 | 7.52 | 8.88 | 3.8 | 5.1 |
| Oil | 32.47 | 64.45 | 80.26 | 90.23 | 100.37 | 103.71 | 99.49 | 5.5 | 1.1 |
| Gas | 10.49 | 19.13 | 23.12 | 29.58 | 47.11 | 49.08 | 48.94 | 4.8 | 4.0 |
| Comb. renew & waste | 6.21 | 6.88 | 7.34 | 7.95 | 8.25 | 8.24 | 8.56 | 1.0 | 0.8 |
| Nuclear | - | - | 0.77 | 2.14 | 2.72 | 2.55 | 2.74 | - | 6.9 |
| Geothermal | 0.14 | 0.79 | 4.41 | 5.07 | 6.37 | 6.07 | 5.79 | 22.6 | 1.5 |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.00 | 0.05 | 0.13 | 0.16 | 0.18 | - | 44.2 |
| Hydro | 1.39 | 1.45 | 2.02 | 2.85 | 2.35 | 3.37 | 2.29 | 2.2 | 0.7 |
| Net electricity imports ⁽²⁾ | 0.03 | 0.05 | -0.12 | 0.08 | -0.10 | -0.09 | -0.08 | - | -2.2 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

MEXICO

3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 37.1 | 67.0 | 115.8 | 196.5 | 243.6 | 263.5 | 258.9 | 252.8 |
| Nuclear | - | - | 2.9 | 8.2 | 10.8 | 10.4 | 9.8 | 10.5 |
| Hydro | 16.2 | 16.9 | 23.5 | 33.1 | 27.7 | 27.3 | 39.2 | 26.7 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | - | - | - | - | - | - | - | - |
| Geothermal | 0.2 | 0.9 | 5.1 | 5.9 | 7.3 | 7.4 | 7.1 | 6.7 |
| Solar | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.0 | 0.0 | 0.0 | 0.3 | 0.3 | 0.2 |
| Combustible fuels | 20.8 | 49.2 | 84.3 | 149.2 | 197.8 | 218.1 | 202.6 | 208.6 |
| <i>Coal</i> | 0.2 | - | 7.8 | 19.1 | 32.9 | 31.6 | 21.4 | 29.4 |
| <i>Oil</i> | 15.3 | 38.8 | 62.1 | 90.0 | 68.4 | 58.3 | 49.3 | 45.5 |
| <i>Gas</i> | 5.3 | 10.4 | 14.5 | 39.7 | 93.5 | 125.6 | 131.1 | 132.8 |
| <i>Comb. renew. & waste</i> | - | - | - | 0.4 | 3.1 | 2.7 | 0.8 | 0.9 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - |
| - Own use by power plant | 1.2 | 3.0 | 5.8 | 9.7 | 13.8 | 17.5 | 7.3 | .. |
| Net production | 35.9 | 64.0 | 110.0 | 186.8 | 229.8 | 245.9 | 251.6 | .. |
| Nuclear | .. | - | 2.8 | 7.9 | 10.3 | 9.9 | 9.7 | .. |
| Hydro | .. | 16.8 | 23.4 | 32.7 | 27.3 | 27.0 | 37.3 | .. |
| Geothermal | .. | 0.9 | 4.9 | 5.6 | 7.0 | 7.1 | 6.7 | .. |
| Solar | .. | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | 0.0 | 0.0 | 0.0 | 0.3 | 0.3 | .. |
| Combustible fuels | .. | 46.3 | 78.9 | 140.6 | 185.2 | 201.7 | 197.6 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | - | - | - | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | - | - | - | - | - | - | - | - |
| + Imports | 0.3 | 0.6 | 0.6 | 1.1 | 0.1 | 0.3 | 0.4 | 0.3 |
| - Exports | - | - | 1.9 | 0.2 | 1.3 | 1.5 | 1.5 | 1.2 |
| Electrical energy supplied | 36.2 | 64.6 | 108.6 | 187.7 | 228.6 | 244.8 | 250.5 | .. |
| - Transmission & distr. losses | 4.6 | 7.5 | 15.0 | 28.7 | 38.0 | 41.9 | 43.0 | .. |
| - Statistical difference | - | - | -6.5 | -7.4 | - | - | - | .. |
| Total consumption | 31.6 | 57.2 | 100.2 | 166.3 | 190.7 | 202.8 | 207.5 | .. |
| - Energy industry consumption ⁽²⁾ | - | - | - | 4.2 | 6.5 | 6.4 | 7.4 | .. |
| Final consumption | 31.6 | 57.2 | 100.2 | 162.1 | 184.2 | 196.4 | 200.1 | .. |
| Industry | 18.1 | 30.2 | 53.4 | 99.4 | 107.0 | 114.8 | 122.8 | .. |
| Transport | 0.4 | 0.4 | 0.8 | 1.1 | 1.2 | 1.2 | 1.1 | .. |
| Commercial & publ. serv. | - | 7.9 | 10.9 | 17.6 | 21.1 | 22.0 | 20.7 | .. |
| Residential | 8.7 | 10.0 | 20.4 | 36.1 | 46.1 | 49.9 | 47.5 | .. |
| Agriculture & fishing | 1.7 | 3.7 | 6.7 | 7.9 | 8.8 | 8.5 | 8.1 | .. |
| Sector non specified | 2.7 | 4.9 | 8.0 | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

MEXICO

4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 40.98 | 66.96 | 115.84 | 196.52 | 252.01 | 263.47 | 258.91 | 6.7 | 4.6 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation⁽¹⁾ | 40.98 | 66.96 | 115.84 | 196.52 | 252.01 | 263.47 | 258.91 | 6.7 | 4.6 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 38.01 | 61.87 | 115.70 | 192.58 | 225.07 | 232.48 | 235.87 | 7.2 | 4.0 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 38.01 | 61.87 | 115.70 | 192.58 | 225.07 | 232.48 | 235.87 | 7.2 | 4.0 |
| Nuclear | - | - | 2.94 | 8.22 | 10.87 | 10.42 | 9.80 | - | 6.9 |
| Hydro | 16.60 | 16.74 | 23.34 | 33.08 | 30.31 | 27.04 | 38.89 | 2.2 | 2.9 |
| Geothermal | 0.46 | 0.92 | 5.12 | 5.90 | 6.69 | 7.40 | 7.06 | 16.2 | 1.8 |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.01 | 0.05 | 0.25 | 0.26 | - | - |
| Coal | 0.22 | - | 7.77 | 18.55 | 31.50 | 31.33 | 20.91 | 24.9 | 5.7 |
| Oil | 15.80 | 33.85 | 62.06 | 90.05 | 49.72 | 47.35 | 43.90 | 8.9 | -1.9 |
| Gas | 4.92 | 10.37 | 14.46 | 36.78 | 95.95 | 108.69 | 115.05 | 7.0 | 12.2 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 2.98 | 5.09 | 0.14 | 3.94 | 26.95 | 30.99 | 23.04 | -17.3 | 32.7 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 2.98 | 5.09 | 0.14 | 3.94 | 26.95 | 30.99 | 23.04 | -17.3 | 32.7 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.11 | 0.15 | 0.14 | 0.06 | 0.09 | 0.23 | 0.29 | 1.7 | 4.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 0.00 | 0.02 | 0.02 | 0.02 | 0.02 | - | 14.5 |
| Coal | - | - | - | 0.54 | 0.24 | 0.23 | 0.50 | - | - |
| Oil | 2.87 | 4.95 | - | - | 6.49 | 10.90 | 5.41 | - | - |
| Gas | - | - | - | 2.88 | 17.66 | 16.92 | 16.02 | - | - |
| Comb. renew. & waste | - | - | - | 0.44 | 2.45 | 2.67 | 0.80 | - | - |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

MEXICO

5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|-------------|-------------|------------|-------------|--------------|--------------|--------------|---|
| Total | 2834 | 4851 | 135 | 3716 | 23020 | 23210 | 22716 | 32.9 |
| Total energy | - | - | - | 1330 | 6708 | 6613 | 7064 | - |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | 3778 | 3900 | 4186 | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | - | 2930 | 2713 | 2878 | - |
| Energy non specified/other | - | - | - | 1330 | - | - | - | - |
| Total industry | - | - | - | 2386 | 16178 | 16448 | 15543 | - |
| Iron and steel | - | - | - | 295 | 563 | 484 | 626 | - |
| Chemical and petrochemical | - | - | - | 585 | 2413 | 1869 | 662 | - |
| Non-ferrous metals | - | - | - | - | - | - | - | - |
| Non-metallic minerals | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | - | - | - | - | - | - | - | - |
| Mining and quarrying | - | - | - | 57 | 115 | 127 | 237 | - |
| Food and tobacco | - | - | - | 280 | 1169 | 1133 | 1483 | - |
| Pulp and printing | - | - | - | 263 | 685 | 691 | 577 | - |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | - | - | - | - | 17 | 15 | 49 | - |
| Non specified/other industries | - | - | - | 906 | 11216 | 12129 | 11909 | - |
| Total transport | - | - | - | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | - | - | - | - |
| Other | 2834 | 4851 | 135 | - | 134 | 149 | 109 | -1.2 |
| Commerce and pub. services | - | - | - | - | 110 | 126 | 109 | - |
| Residential | - | - | - | - | 24 | 23 | - | - |
| Agriculture and fishing | - | - | - | - | - | - | - | - |
| Sector non specified | 2834 | 4851 | 135 | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

MEXICO

7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 5.60 | 12.60 | 20.37 | 36.35 | 41.92 | 45.06 | 41.34 | 7.9 | 4.0 |
| Coal | 0.05 | - | 1.82 | 4.78 | 7.10 | 7.61 | 5.31 | 23.5 | 6.1 |
| Oil | 3.95 | 9.77 | 15.12 | 21.94 | 13.32 | 13.94 | 11.42 | 8.2 | -1.5 |
| Gas | 1.61 | 2.84 | 3.43 | 8.81 | 20.50 | 22.39 | 23.57 | 4.6 | 11.3 |
| Comb. renew. & waste | - | - | - | 0.82 | 1.00 | 1.13 | 1.04 | - | - |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 12.60 | 20.37 | 34.13 | 36.14 | 38.20 | 35.73 | .. | 3.2 |
| Coal | .. | - | 1.82 | 4.37 | 6.99 | 7.51 | 5.17 | .. | 6.0 |
| Oil | .. | 9.77 | 15.12 | 21.94 | 11.48 | 11.05 | 9.91 | .. | -2.3 |
| Gas | .. | 2.84 | 3.43 | 7.81 | 17.66 | 19.64 | 20.64 | .. | 10.5 |
| Comb. renew. & waste | .. | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 0.14 | 0.79 | 5.17 | 7.22 | 8.58 | 9.08 | 8.62 | 23.7 | 2.9 |
| Nuclear | - | - | 0.77 | 2.14 | 2.83 | 2.72 | 2.55 | - | 6.9 |
| Geothermal | 0.14 | 0.79 | 4.41 | 5.07 | 5.75 | 6.37 | 6.07 | 22.6 | 1.8 |
| Solar | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 13.0 |
| Non-Thermal | | | | | | | | | |
| Total | 1.39 | 1.45 | 2.02 | 2.85 | 2.62 | 2.37 | 3.39 | 2.2 | 2.9 |
| Hydro | 1.39 | 1.45 | 2.02 | 2.85 | 2.61 | 2.35 | 3.37 | 2.2 | 2.9 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.00 | 0.00 | 0.01 | 0.02 | 0.02 | - | 36.5 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

MEXICO

8. Electricity production from combustible fuels In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|--------|--------|---------|--------|---------|---------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | 3970 | 9566 | 14697 | 14661 | 10837 | 5.7 |
| Fuel input (TJ) | - | 76044 | 183055 | 317097 | 314264 | 216597 | 6.0 |
| Electricity production (GWh) | - | 7774 | 18547 | 31500 | 31329 | 20908 | 5.7 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 17461 | 4566 | 4488 | 5648 | - |
| Electricity production (GWh) | - | - | 541 | 237 | 229 | 502 | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 10531 | 15732 | 22817 | 14065 | 14717 | 12079 | -1.5 |
| Fuel input (TJ) | 426631 | 687823 | 1029724 | 599506 | 588251 | 520182 | -1.5 |
| Electricity production (GWh) | 38795 | 62062 | 90048 | 56204 | 58252 | 49311 | -1.3 |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 132000 | 159666 | 417724 | 918080 | 1061626 | 1124566 | 11.5 |
| Electricity production (GWh) | 10366 | 14460 | 39659 | 113608 | 125611 | 131076 | 13.0 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | 33897 | 41195 | 46109 | 42159 | - |
| Electricity production (GWh) | - | - | 433 | 2430 | 2622 | 733 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 257 | 639 | 1048 | 1184 | - |
| Electricity production (GWh) | - | - | 9 | 21 | 50 | 67 | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | 49161 | 84296 | 149237 | 204000 | 218093 | 202597 | 5.0 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

MEXICO

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 39.74 | 65.92 | 82.89 | 97.88 | 110.27 | 113.79 | 115.40 | 4.4 | 1.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | 0.04 | 0.09 | 0.11 | 0.13 | - | - |
| Coal | 1.37 | 1.61 | 1.56 | 1.38 | 1.93 | 1.98 | 2.10 | 0.7 | 1.7 |
| Oil | 22.18 | 39.69 | 51.21 | 62.56 | 72.53 | 75.15 | 76.25 | 5.0 | 2.2 |
| Gas | 7.26 | 12.84 | 14.16 | 12.82 | 12.14 | 12.53 | 12.50 | 4.0 | -0.7 |
| Comb. renew. & waste | 6.21 | 6.88 | 7.34 | 7.13 | 7.17 | 7.12 | 7.20 | 1.0 | -0.1 |
| Electricity | 2.71 | 4.92 | 8.62 | 13.94 | 16.41 | 16.89 | 17.21 | 7.0 | 3.9 |
| Heat | - | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 14.12 | 22.23 | 26.13 | 27.14 | 28.81 | 29.61 | 29.47 | 3.7 | 0.7 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 1.37 | 1.61 | 1.53 | 1.38 | 1.93 | 1.98 | 2.10 | 0.7 | 1.8 |
| Oil | 3.50 | 6.03 | 7.45 | 7.18 | 7.50 | 7.75 | 6.82 | 4.5 | -0.5 |
| Gas | 6.37 | 10.45 | 10.82 | 8.88 | 8.70 | 8.82 | 8.63 | 3.2 | -1.2 |
| Comb. renew. & waste | 1.32 | 1.54 | 1.74 | 1.16 | 1.13 | 1.18 | 1.36 | 1.6 | -1.4 |
| Electricity | 1.56 | 2.60 | 4.59 | 8.55 | 9.55 | 9.88 | 10.56 | 6.6 | 4.7 |
| Heat | - | - | - | - | - | - | - | - | - |
| Transport | 12.41 | 22.80 | 28.53 | 36.16 | 46.94 | 49.61 | 51.82 | 5.0 | 3.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 12.38 | 22.76 | 28.46 | 36.06 | 46.82 | 49.50 | 51.71 | 5.0 | 3.4 |
| Gas | - | - | - | 0.01 | 0.02 | 0.02 | 0.01 | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.03 | 0.04 | 0.07 | 0.09 | 0.10 | 0.10 | 0.10 | 4.9 | 1.8 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 0.70 | 1.96 | 1.47 | 3.46 | 3.83 | 3.77 | 3.63 | 4.5 | 5.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | 0.04 | 0.09 | 0.11 | 0.13 | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.70 | 1.29 | 0.54 | 1.73 | 1.68 | 1.57 | 1.50 | -1.5 | 5.8 |
| Gas | - | - | - | 0.17 | 0.20 | 0.20 | 0.21 | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | 0.68 | 0.93 | 1.51 | 1.85 | 1.89 | 1.78 | - | 3.6 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

MEXICO

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 8.59 | 11.16 | 14.74 | 17.23 | 17.81 | 17.80 | 17.38 | 3.2 | 0.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 2.58 | 4.49 | 6.57 | 7.64 | 6.89 | 6.82 | 6.72 | 5.7 | 0.1 |
| Gas | 0.39 | 0.47 | 0.81 | 0.52 | 0.72 | 0.75 | 0.74 | 4.4 | -0.5 |
| Comb. renew. & waste | 4.88 | 5.34 | 5.60 | 5.97 | 6.03 | 5.95 | 5.84 | 0.8 | 0.2 |
| Electricity | 0.74 | 0.86 | 1.75 | 3.11 | 4.16 | 4.29 | 4.08 | 5.2 | 4.8 |
| Heat | - | - | - | - | - | - | - | - | - |
| Agriculture & fishing | 1.34 | 2.37 | 2.24 | 2.84 | 3.29 | 3.37 | 3.43 | 3.1 | 2.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 1.19 | 2.05 | 1.66 | 2.16 | 2.55 | 2.64 | 2.73 | 2.0 | 2.8 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.15 | 0.32 | 0.58 | 0.68 | 0.74 | 0.73 | 0.70 | 8.3 | 1.1 |
| Heat | - | - | - | - | - | - | - | - | - |
| Other | 0.23 | 0.42 | 0.69 | - | - | - | - | 6.6 | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | - | - | - | - | - | - | - | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.23 | 0.42 | 0.69 | - | - | - | - | 6.6 | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 2.35 | 4.98 | 9.08 | 11.05 | 9.59 | 9.63 | 9.67 | 8.27 | 0.35 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

MEXICO

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|
| TFC (Mtoe) | 39.74 | 65.92 | 82.89 | 97.88 | 105.70 | 110.27 | 113.79 | 115.40 |
| Total industry (Mtoe) | 14.12 | 22.23 | 26.13 | 27.14 | 27.32 | 28.81 | 29.61 | 29.47 |
| Iron and steel | 2.43 | 3.20 | 4.62 | 5.05 | 4.84 | 5.09 | 5.20 | 5.54 |
| Chem. and petrochemical | 1.76 | 3.99 | 7.16 | 4.76 | 3.27 | 2.83 | 3.00 | 2.85 |
| Non-ferrous metals | 0.01 | 0.02 | 0.14 | 0.24 | 0.19 | 0.25 | 0.25 | 0.27 |
| Non-metallic minerals | 0.60 | 0.97 | 2.92 | 3.27 | 4.41 | 4.85 | 5.25 | 4.52 |
| Transport equipment | 0.07 | 0.11 | 0.11 | 0.17 | 0.21 | 0.22 | 0.23 | 0.23 |
| Machinery | - | - | 0.03 | 0.07 | 0.01 | 0.06 | 0.04 | 0.05 |
| Mining and quarrying | 0.29 | 0.32 | 1.28 | 1.65 | 1.60 | 1.63 | 1.73 | 1.69 |
| Food and tobacco | 1.35 | 1.59 | 3.19 | 2.47 | 2.38 | 2.16 | 2.22 | 2.22 |
| Paper, pulp and printing | 0.18 | 0.31 | 1.28 | 1.29 | 1.14 | 1.11 | 1.15 | 1.10 |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | - | - | 0.14 | 0.19 | 0.21 | 0.28 | 0.29 | 0.29 |
| Textile and leather | - | - | - | - | - | - | - | - |
| Non specified/other | 7.43 | 11.72 | 5.26 | 7.99 | 9.05 | 10.33 | 10.25 | 10.71 |
| Electricity consumption (Mtoe) | 2.71 | 4.92 | 8.62 | 13.94 | 15.84 | 16.41 | 16.89 | 17.21 |
| Total industry (Mtoe) | 1.56 | 2.60 | 4.59 | 8.55 | 9.20 | 9.55 | 9.88 | 10.56 |
| Iron and steel | - | - | 0.70 | 0.88 | 0.68 | 0.69 | 0.72 | 0.73 |
| Chem. and petrochemical | - | - | 0.76 | 0.71 | 0.48 | 0.50 | 0.51 | 0.45 |
| Non-ferrous metals | - | - | 0.10 | 0.03 | 0.08 | 0.08 | 0.08 | 0.07 |
| Non-metallic minerals | - | - | 0.29 | 0.44 | 0.57 | 0.61 | 0.59 | 0.49 |
| Transport equipment | - | - | 0.06 | 0.11 | 0.16 | 0.17 | 0.18 | 0.17 |
| Machinery | - | - | - | - | - | - | - | - |
| Mining and quarrying | - | - | 0.41 | 0.51 | 0.50 | 0.52 | 0.54 | 0.50 |
| Food and tobacco | - | - | 0.05 | 0.20 | 0.16 | 0.17 | 0.18 | 0.16 |
| Paper, pulp and printing | - | - | 0.22 | 0.33 | 0.25 | 0.26 | 0.26 | 0.24 |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | - | - | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 |
| Textile and leather | - | - | - | - | - | - | - | - |
| Non specified/other | 1.56 | 2.60 | 1.96 | 5.30 | 6.28 | 6.51 | 6.79 | 7.71 |
| Total industry (TWh) | 18.09 | 30.20 | 53.39 | 99.43 | 107.00 | 111.06 | 114.85 | 122.77 |
| Iron and steel | - | - | 8.19 | 10.26 | 7.94 | 8.06 | 8.33 | 8.46 |
| Chem. and petrochemical | - | - | 8.89 | 8.22 | 5.59 | 5.76 | 5.96 | 5.22 |
| Non-ferrous metals | - | - | 1.20 | 0.31 | 0.89 | 0.92 | 0.96 | 0.87 |
| Non-metallic minerals | - | - | 3.41 | 5.11 | 6.59 | 7.06 | 6.84 | 5.72 |
| Transport equipment | - | - | 0.74 | 1.32 | 1.89 | 1.98 | 2.04 | 1.96 |
| Machinery | - | - | - | - | - | - | - | - |
| Mining and quarrying | - | - | 4.74 | 5.98 | 5.81 | 6.03 | 6.23 | 5.81 |
| Food and tobacco | - | - | 0.55 | 2.37 | 1.87 | 1.97 | 2.04 | 1.90 |
| Paper, pulp and printing | - | - | 2.57 | 3.80 | 2.91 | 3.04 | 3.00 | 2.75 |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | - | - | 0.30 | 0.40 | 0.47 | 0.50 | 0.52 | 0.47 |
| Textile and leather | - | - | - | - | - | - | - | - |
| Non specified/other | 18.09 | 30.20 | 22.82 | 61.66 | 73.04 | 75.75 | 78.93 | 89.61 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

Note: Please refer to notes in the introductory information for data coverage.

MEXICO

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|------|------|------|------|------|------|------|------|------|
| Total imports ⁽¹⁾ | 317 | 618 | 576 | 1164 | 1069 | 87 | 523 | 277 | 351 |
| Imports from: | | | | | | | | | |
| Total OECD | 317 | 618 | 576 | 1164 | 1069 | 87 | 523 | 277 | 351 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | 317 | 618 | 576 | 1164 | 1069 | 87 | 523 | 277 | 351 |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

MEXICO

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|------|------|------|------|------|------|------|------|------|
| Total exports ⁽¹⁾ | - | - | 1945 | 1944 | 195 | 1291 | 1299 | 1451 | 1452 |
| Exports to: | | | | | | | | | |
| Total OECD | - | - | 1945 | 1920 | 70 | 181 | 1088 | 1224 | 1201 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | 1945 | 1920 | 70 | 181 | 1088 | 1224 | 1201 |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | 24 | 125 | 1110 | 211 | 227 | 251 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

MEXICO

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 8.37 | 14.63 | 25.30 | 33.04 | 36.70 | 46.53 | 49.11 | 51.16 | 51.11 |
| Nuclear | - | - | 0.68 | 1.31 | 1.37 | 1.37 | 1.37 | 1.37 | 1.37 |
| Hydro | 3.52 | 5.99 | 7.81 | 9.33 | 9.62 | 10.54 | 10.70 | 11.48 | 11.34 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | 0.08 | 0.15 | 0.70 | 0.75 | 0.86 | 0.96 | 0.96 | 0.96 | 0.97 |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | 0.09 | 0.09 | 0.09 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 4.78 | 8.48 | 16.12 | 21.64 | 24.86 | 33.67 | 36.00 | 37.28 | 37.35 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | 1.20 | 2.25 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| Liquid fuels | - | - | 11.47 | 11.76 | 10.53 | 6.62 | 7.15 | 7.46 | 7.51 |
| Natural gas | - | - | 3.45 | 1.59 | 3.40 | 13.26 | 14.32 | 14.95 | 15.02 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | 6.04 | 6.23 | 9.10 | 9.83 | 10.17 | 10.12 |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | 3.26 | 6.62 | 12.57 | 17.94 | 18.98 | 17.63 | 17.60 | 17.57 | 17.57 |
| Internal combustion | 0.39 | 0.14 | 0.09 | 0.13 | 0.12 | 0.18 | 0.18 | 0.22 | 0.22 |
| Gas turbine | 0.97 | 1.19 | 1.78 | 1.68 | 2.36 | 2.60 | 2.64 | 2.62 | 2.65 |
| Combined cycle | 0.13 | 0.54 | 1.69 | 1.89 | 3.40 | 13.26 | 15.59 | 16.87 | 16.91 |
| Other | 0.03 | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | .. | 24.48 | 27.38 | 31.68 | 32.32 | 34.35 | 35.66 |
| Available capacity | .. | .. | .. | 33.04 | 36.70 | 46.53 | 48.90 | 51.03 | 51.11 |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

MEXICO

15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 1.55 | 2.24 | 2.97 | 2.82 | 3.82 | 4.54 | 4.68 | 5.07 | 6.13 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.03 | 0.07 | 0.08 | - | 0.02 | 0.04 | 0.04 | 0.04 | 0.05 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 1.52 | 2.17 | 2.89 | 2.81 | 3.79 | 4.49 | 4.63 | 5.01 | 6.06 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | - | - | 0.21 | 0.21 | 0.21 | 0.23 | 0.27 |
| Liquid fuels | 1.52 | 2.17 | 2.89 | 2.81 | 0.33 | 0.39 | 0.39 | 0.42 | 0.51 |
| Natural gas | - | - | - | - | 1.94 | 2.32 | 2.46 | 2.62 | 3.41 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | 0.40 | 0.47 | 0.47 | 0.51 | 0.62 |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | 0.93 | 1.10 | 1.10 | 1.24 | 1.26 |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | 1.09 | 1.41 | 1.73 | 2.53 | 1.79 | 2.51 | 2.51 | 2.71 | 3.28 |
| Internal combustion | 0.42 | 0.54 | 0.11 | - | 0.12 | 0.28 | 0.28 | 0.30 | 0.36 |
| Gas turbine | - | 0.22 | 0.93 | 0.28 | 1.86 | 1.23 | 1.27 | 1.37 | 1.66 |
| Combined cycle | - | - | 0.13 | - | 0.02 | 0.47 | 0.58 | 0.63 | 0.76 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|--------------------------------|--------|--------|---------|---------|---------|---------|---------|---------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Mexican New Pesos/ unit | | | | | | | | |
| Steam coal (t) | .. | 0.50 | 89.48 | 300.80 | 446.18 | 461.72 | 501.85 | 584.57 | 690.19 |
| Heavy fuel oil (t) | 0.26 | 0.35 | 156.54 | 1180.30 | 1937.60 | 2760.51 | 2759.54 | 4951.42 | 4089.97 |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | 0.31 | 0.41 | 249.77 | 1418.28 | 3961.39 | 3702.49 | 3456.47 | 4716.55 | 2675.03 |
| | Mexican New Pesos/ toe | | | | | | | | |
| Steam coal | .. | 1 | 196 | 657 | 975 | 1009 | 1097 | 1278 | 1509 |
| Heavy fuel oil | - | - | 154 | 1164 | 1911 | 2723 | 2722 | 4884 | 4034 |
| Natural gas ⁽²⁾ | - | - | 278 | 1576 | 4402 | 4114 | 3841 | 5241 | 2972 |
| End-user prices of electricity | | | | | | | | | |
| | Mexican New Pesos/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0005 | 0.0007 | 0.1136 | 0.4808 | 0.9561 | 1.0790 | 1.1156 | 1.4053 | 1.1425 |
| <i>of which: tax</i> | - | - | - | - | - | - | - | - | - |
| Household | | | | | | | | | |
| Price | 0.0008 | 0.0012 | 0.1302 | 0.6455 | 1.0581 | 1.0981 | 1.0165 | 1.0713 | 1.0614 |
| <i>of which: tax</i> | - | 0.0001 | 0.0170 | 0.0842 | 0.1380 | 0.1432 | 0.1326 | 0.1397 | 0.1384 |

Source: IEA/OECD Energy Prices & Taxes.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

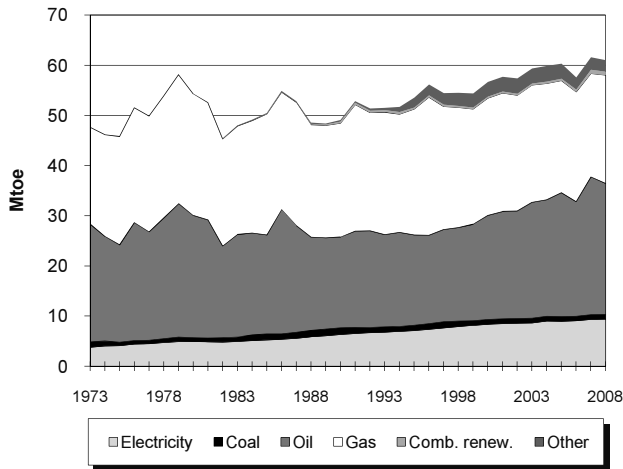


Figure 2. Electricity generation by fuel

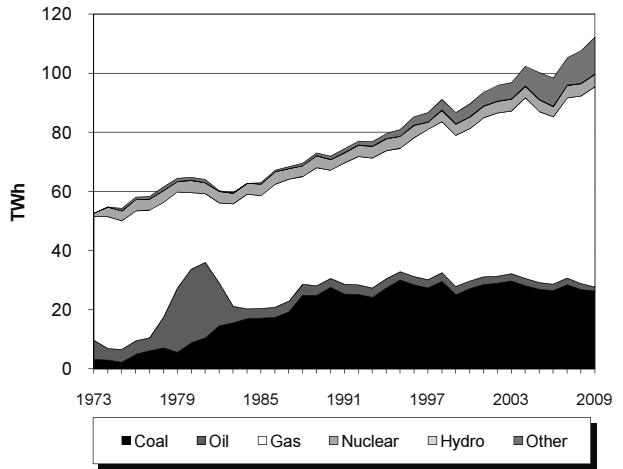


Figure 3. Electricity consumption by sector

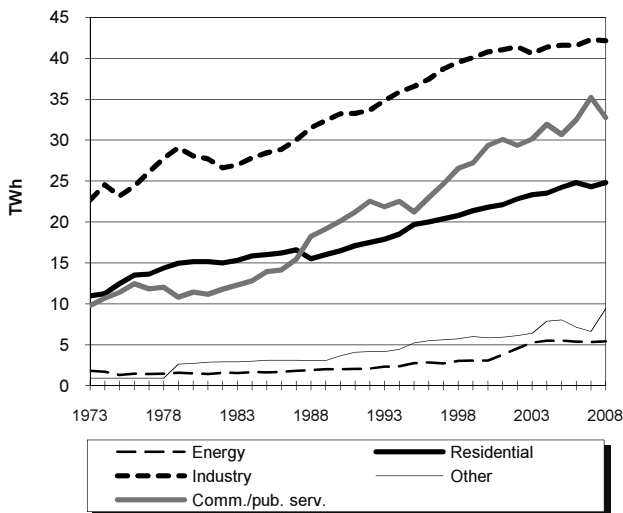


Figure 4. Electricity indicators

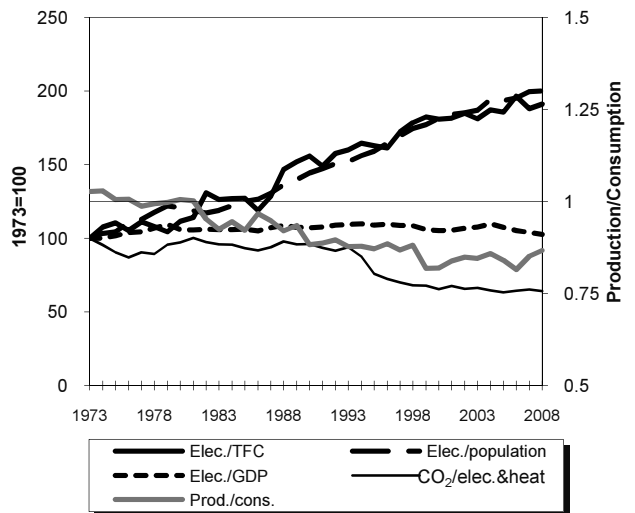
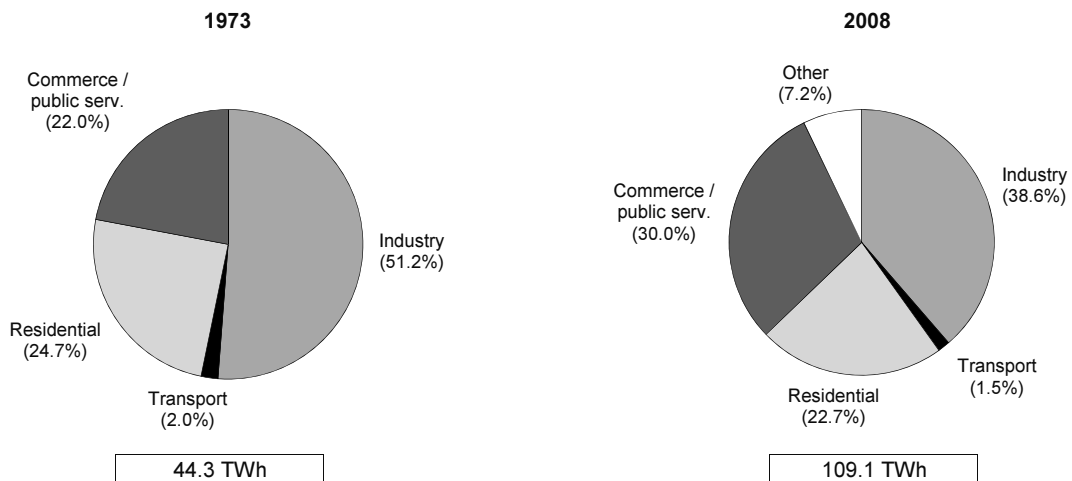


Figure 5. Total final electricity consumption by sector



NETHERLANDS

1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 62.00 | 64.36 | 65.67 | 73.23 | 80.24 | 79.68 | 77.23 | 0.3 | 0.9 |
| GDP (billion 2000 USD) | 188.21 | 226.17 | 281.96 | 385.08 | 440.49 | 449.28 | 436.70 | 2.4 | 2.3 |
| TPES/GDP ⁽¹⁾ | 0.33 | 0.28 | 0.23 | 0.19 | 0.18 | 0.18 | 0.18 | -2.0 | -1.4 |
| Population (millions) | 13.44 | 14.15 | 14.95 | 15.92 | 16.38 | 16.44 | 16.56 | 0.6 | 0.5 |
| TPES/population ⁽²⁾ | 4.61 | 4.55 | 4.39 | 4.60 | 4.90 | 4.85 | 4.66 | -0.3 | 0.3 |
| TPES/GDP (2000 = 100) | 173 | 150 | 122 | 100 | 96 | 93 | 93 | -2.0 | -1.4 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 93 | 100 | 103 | 100 | 97 | 96 | .. | 0.6 | .. |
| Ele.TFC/population ⁽⁴⁾ | 3301 | 4059 | 4920 | 6144 | 6624 | 6641 | .. | 2.4 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 52.63 | 64.81 | 71.94 | 89.63 | 105.16 | 107.65 | 112.23 | 1.9 | 2.4 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 62.00 | 64.36 | 65.67 | 73.23 | 80.24 | 79.68 | 77.23 | 0.3 | 0.9 |
| Coal | 2.87 | 3.79 | 8.93 | 7.85 | 8.51 | 8.08 | 7.48 | 6.9 | -0.9 |
| Oil | 30.46 | 28.86 | 23.28 | 25.89 | 32.79 | 31.01 | 29.43 | -1.6 | 1.2 |
| Gas | 28.50 | 30.42 | 30.80 | 34.98 | 33.26 | 34.65 | 34.96 | 0.5 | 0.7 |
| Comb. renew & waste | - | 0.23 | 0.94 | 1.74 | 2.73 | 3.08 | 3.40 | - | 7.0 |
| Nuclear | 0.29 | 1.09 | 0.91 | 1.02 | 1.09 | 1.09 | 1.10 | 7.0 | 1.0 |
| Geothermal | - | - | - | - | - | 0.00 | 0.00 | - | - |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.01 | 0.10 | 0.33 | 0.40 | 0.43 | - | 24.3 |
| Hydro | - | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | - | 0.8 |
| Net electricity imports ⁽²⁾ | -0.12 | -0.03 | 0.79 | 1.63 | 1.51 | 1.36 | 0.42 | - | -3.3 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 52.6 | 64.8 | 71.9 | 89.6 | 100.2 | 105.2 | 107.6 | 112.2 |
| Nuclear | 1.1 | 4.2 | 3.5 | 3.9 | 4.0 | 4.2 | 4.2 | 4.2 |
| Hydro | - | - | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.1 | 0.8 | 2.1 | 3.4 | 4.3 | 4.6 |
| Combustible fuels | 51.5 | 60.6 | 68.3 | 84.5 | 93.8 | 97.2 | 98.9 | 103.2 |
| <i>Coal</i> | 3.2 | 8.9 | 27.5 | 27.1 | 26.9 | 28.5 | 26.8 | 26.3 |
| <i>Oil</i> | 6.5 | 24.9 | 3.1 | 2.6 | 2.3 | 2.2 | 2.1 | 1.3 |
| <i>Gas</i> | 41.9 | 25.8 | 36.6 | 51.5 | 57.9 | 61.0 | 63.4 | 67.8 |
| <i>Comb. renew. & waste</i> | - | 1.0 | 1.1 | 3.2 | 6.7 | 5.6 | 6.6 | 7.7 |
| Other (e.g. fuel cells) | - | - | - | 0.2 | 0.3 | 0.2 | 0.1 | 0.1 |
| - Own use by power plant | 2.4 | 2.8 | 2.5 | 3.6 | 4.0 | 4.3 | 4.3 | .. |
| Net production | 50.2 | 62.0 | 69.4 | 86.0 | 96.2 | 100.9 | 103.4 | .. |
| Nuclear | .. | 3.9 | 3.3 | 3.7 | 3.8 | 4.0 | 3.9 | .. |
| Hydro | .. | - | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | - | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | 0.1 | 0.8 | 2.1 | 3.4 | 4.3 | .. |
| Combustible fuels | .. | 58.0 | 66.0 | 81.1 | 90.0 | 93.1 | 94.9 | .. |
| Other (e.g. fuel cells) | .. | - | - | 0.2 | 0.3 | 0.2 | 0.1 | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | - | - | - | - | - | - | - | - |
| + Imports | 0.0 | 0.5 | 9.7 | 22.9 | 23.7 | 23.1 | 25.0 | 15.5 |
| - Exports | 1.4 | 0.8 | 0.5 | 4.0 | 5.4 | 5.6 | 9.1 | 10.6 |
| Electrical energy supplied | 48.9 | 61.7 | 78.6 | 104.9 | 114.5 | 118.4 | 119.2 | .. |
| - Transmission & distr. losses | 2.7 | 2.7 | 3.1 | 4.1 | 4.5 | 4.6 | 4.7 | .. |
| - Statistical difference | - | - | - | - | - | -0.0 | - | .. |
| Total consumption | 46.1 | 58.9 | 75.5 | 100.9 | 110.0 | 113.8 | 114.6 | .. |
| - Energy industry consumption ⁽²⁾ | 1.8 | 1.5 | 2.0 | 3.1 | 5.5 | 5.3 | 5.4 | .. |
| Final consumption | 44.3 | 57.4 | 73.5 | 97.8 | 104.5 | 108.5 | 109.1 | .. |
| Industry | 22.7 | 28.1 | 33.2 | 40.8 | 41.6 | 42.3 | 42.2 | .. |
| Transport | 0.9 | 1.0 | 1.3 | 1.6 | 1.6 | 1.6 | 1.6 | .. |
| Commercial & publ. serv. | 9.8 | 11.5 | 20.1 | 29.3 | 30.7 | 35.2 | 32.8 | .. |
| Residential | 11.0 | 15.1 | 16.5 | 21.8 | 24.2 | 24.3 | 24.8 | .. |
| Agriculture & fishing | - | 1.8 | 2.4 | 4.2 | 6.4 | 5.1 | 7.8 | .. |
| Sector non specified | - | - | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 54.76 | 64.81 | 71.94 | 89.63 | 98.39 | 105.16 | 107.65 | 1.7 | 2.3 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation⁽¹⁾ | 54.76 | 64.81 | 71.94 | 89.63 | 98.39 | 105.16 | 107.65 | 1.7 | 2.3 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 48.59 | 58.17 | 59.70 | 75.80 | 82.63 | 88.56 | 84.81 | 1.3 | 2.0 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 48.59 | 58.17 | 59.70 | 75.80 | 82.63 | 88.56 | 84.81 | 1.3 | 2.0 |
| Nuclear | 3.28 | 4.20 | 3.50 | 3.93 | 3.47 | 4.20 | 4.17 | 0.4 | 1.0 |
| Hydro | - | - | 0.09 | 0.14 | 0.11 | 0.11 | 0.10 | - | 1.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 0.06 | 0.80 | 2.32 | 2.79 | 3.44 | - | 25.8 |
| Coal | 2.23 | 8.30 | 27.15 | 27.00 | 26.40 | 28.38 | 26.70 | 16.9 | -0.1 |
| Oil | 2.97 | 23.68 | 0.22 | 0.25 | 0.42 | 0.54 | 0.47 | -15.1 | 4.5 |
| Gas | 40.12 | 22.00 | 28.63 | 43.13 | 46.35 | 50.40 | 47.24 | -2.1 | 2.8 |
| Comb. renew. & waste | - | - | 0.05 | 0.56 | 3.56 | 2.14 | 2.69 | - | 24.6 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 6.18 | 6.63 | 12.24 | 13.83 | 15.77 | 16.60 | 22.84 | 4.4 | 3.5 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 6.18 | 6.63 | 12.24 | 13.83 | 15.77 | 16.60 | 22.84 | 4.4 | 3.5 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 0.00 | 0.29 | 0.60 | 0.86 | 1.01 | - | 46.9 |
| Coal | 0.74 | 0.58 | 0.37 | 0.11 | 0.11 | 0.08 | 0.10 | -4.3 | -6.9 |
| Oil | 0.96 | 1.22 | 2.90 | 2.39 | 1.67 | 1.68 | 1.59 | 7.2 | -3.3 |
| Gas | 4.48 | 3.81 | 7.98 | 8.36 | 10.31 | 10.56 | 16.18 | 3.7 | 4.0 |
| Comb. renew. & waste | - | 1.02 | 1.00 | 2.68 | 3.08 | 3.42 | 3.95 | - | 7.9 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|---|
| Total | 6765 | 6234 | 11738 | 13135 | 15059 | 15884 | 22006 | 3.6 |
| Total energy | - | - | - | 2888 | 2435 | 2391 | 2330 | - |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | 85 | 10 | 23 | 32 | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | 2803 | 2425 | 2368 | 2298 | - |
| Energy non specified/other | - | - | - | - | - | - | - | - |
| Total industry | 6249 | 5721 | 10094 | 6082 | 5263 | 4740 | 4920 | -3.9 |
| Iron and steel | 175 | 129 | 206 | 272 | 249 | 232 | 256 | 1.2 |
| Chemical and petrochemical | 3000 | 4096 | 7213 | 3070 | 1951 | 1838 | 2037 | -6.8 |
| Non-ferrous metals | 9 | 17 | 17 | 29 | - | - | - | - |
| Non-metallic minerals | 1 | - | 95 | 70 | 45 | 58 | 63 | -2.3 |
| Transport equipment | 64 | 354 | - | - | - | - | - | - |
| Machinery | - | - | 20 | 1 | 1 | - | - | - |
| Mining and quarrying | 1689 | - | 62 | - | 114 | 100 | 99 | 2.6 |
| Food and tobacco | 321 | 295 | 1157 | 1494 | 1433 | 1432 | 1485 | 1.4 |
| Pulp and printing | 872 | 800 | 1281 | 1129 | 1456 | 1063 | 968 | -1.5 |
| Wood and wood products | 1 | - | 10 | 8 | 9 | 8 | 6 | -2.8 |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | 40 | 30 | 33 | 9 | 5 | 5 | 6 | -9.0 |
| Non specified/other industries | 77 | - | - | - | - | 4 | - | - |
| Total transport | - | - | - | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | - | - | - | - |
| Other | 516 | 513 | 1644 | 4165 | 7361 | 8753 | 14756 | 13.0 |
| Commerce and pub. services | - | - | 1 | 3177 | 3176 | 3231 | 3205 | 56.6 |
| Residential | - | - | - | 8 | 33 | 34 | 34 | - |
| Agriculture and fishing | - | - | - | 980 | 4152 | 5488 | 11517 | - |
| Sector non specified | 516 | 513 | 1643 | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|------|-------|--------|--------|--------|--------|--------|---|
| Total | - | 15058 | 15063 | 170863 | 139549 | 137235 | 129643 | 13.1 |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | - | 5606 | 13711 | 18399 | 18721 | 17642 | 17443 | 6.6 |
| Oil | - | 48 | 2854 | 7636 | 7844 | 8224 | 5816 | 33.1 |
| Gas | - | 6027 | 132056 | 135975 | 103319 | 101345 | 95804 | 17.0 |
| Comb. renew. & waste | - | 3377 | 6442 | 8853 | 9665 | 10024 | 10580 | 6.2 |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | - | 11934 | 129300 | 135507 | 108752 | 106086 | .. | 12.9 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | 5606 | 13711 | 18399 | 18721 | 17642 | .. | 6.6 |
| Oil | - | 48 | 1655 | 1545 | 1942 | 1546 | .. | 21.3 |
| Gas | - | 6027 | 113699 | 114329 | 86573 | 85313 | .. | 15.9 |
| Comb. renew. & waste | - | 253 | 235 | 1234 | 1516 | 1585 | .. | 10.7 |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | 3124 | 25763 | 35356 | 30797 | 31149 | .. | 13.6 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | - | 1199 | 6091 | 5902 | 6678 | .. | - |
| Gas | - | - | 18357 | 21646 | 16746 | 16032 | .. | - |
| Comb. renew. & waste | - | 3124 | 6207 | 7619 | 8149 | 8439 | .. | 5.7 |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 11.71 | 12.90 | 14.21 | 17.91 | 19.17 | 19.67 | 20.14 | 1.1 | 2.0 |
| Coal | 0.79 | 1.81 | 5.81 | 5.55 | 5.41 | 5.79 | 5.48 | 12.5 | -0.3 |
| Oil | 1.55 | 5.14 | 0.73 | 0.67 | 0.58 | 0.58 | 0.59 | -4.4 | -1.2 |
| Gas | 9.37 | 5.72 | 7.11 | 10.32 | 10.99 | 11.33 | 11.73 | -1.6 | 2.8 |
| Comb. renew. & waste | - | 0.23 | 0.57 | 1.36 | 2.19 | 1.96 | 2.35 | - | 8.2 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 11.38 | 11.34 | 14.71 | 15.85 | 16.28 | 15.94 | .. | 1.9 |
| Coal | .. | 1.69 | 5.73 | 5.54 | 5.40 | 5.78 | 5.47 | .. | -0.3 |
| Oil | .. | 4.96 | 0.05 | 0.09 | 0.12 | 0.14 | 0.12 | .. | 5.6 |
| Gas | .. | 4.73 | 5.54 | 8.93 | 9.53 | 9.88 | 9.74 | .. | 3.2 |
| Comb. renew. & waste | .. | - | 0.02 | 0.15 | 0.81 | 0.48 | 0.61 | .. | 22.5 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|------|------|------|------|------|------|------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 0.29 | 1.09 | 0.91 | 1.02 | 0.91 | 1.10 | 1.09 | 7.0 | 1.0 |
| Nuclear | 0.29 | 1.09 | 0.91 | 1.02 | 0.90 | 1.09 | 1.09 | 7.0 | 1.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Non-Thermal | | | | | | | | | |
| Total | - | - | 0.01 | 0.10 | 0.26 | 0.32 | 0.39 | - | 21.2 |
| Hydro | - | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | - | 1.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.00 | 0.07 | 0.24 | 0.30 | 0.37 | - | 27.2 |
| Other (e.g. fuel cells) | - | - | - | 0.02 | 0.01 | 0.02 | 0.01 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

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8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|--------|--------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | 4928 | 4559 | 4806 | 4553 | - |
| Fuel input (TJ) | - | - | 120058 | 113397 | 118892 | 112376 | - |
| Electricity production (GWh) | - | - | 13927 | 13151 | 13804 | 13002 | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 3417 | 16447 | 14254 | 18713 | 17668 | 9.6 |
| Electricity production (GWh) | - | 369 | 1928 | 1769 | 2324 | 2165 | 10.3 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 141784 | 139841 | 144351 | 142484 | - |
| Electricity production (GWh) | - | - | 19657 | 18606 | 20188 | 19599 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | 3579 | 6979 | 7486 | 13476 | - |
| Electricity production (GWh) | - | - | 291 | 699 | 735 | 1228 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | 27176 | 13904 | 14283 | 12677 | - |
| Electricity production (GWh) | - | - | 1652 | 772 | 787 | 741 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 1279 | 16487 | 2432 | 4924 | - |
| Electricity production (GWh) | - | - | 114 | 1747 | 225 | 508 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | - | 369 | 37569 | 36744 | 38063 | 37243 | 29.2 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|--------|--------|--------|--------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 2202 | 8721 | 3662 | 3670 | 3869 | 3666 | -4.7 |
| Fuel input (TJ) | 64163 | 220393 | 89212 | 91285 | 95709 | 90464 | -4.8 |
| Electricity production (GWh) | 7230 | 25014 | 10349 | 10586 | 11113 | 10467 | -4.7 |
| CHP Heat production (TJ) | - | 5606 | 12973 | 16722 | 17202 | 15772 | 5.9 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 15843 | 19772 | 7155 | 7592 | 9421 | 8990 | -4.3 |
| Electricity production (GWh) | 1644 | 2137 | 906 | 1000 | 1221 | 1163 | -3.3 |
| CHP Heat production (TJ) | - | - | 738 | 1430 | 1519 | 1870 | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 5359 | 694 | 387 | 532 | 536 | 521 | -1.6 |
| Fuel input (TJ) | 220862 | 30420 | 17157 | 23587 | 23891 | 23187 | -1.5 |
| Electricity production (GWh) | 24899 | 3112 | 2641 | 2095 | 2219 | 2065 | -2.3 |
| CHP Heat production (TJ) | - | 48 | 2854 | 7138 | 7844 | 8224 | 33.1 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 249332 | 330704 | 327228 | 361280 | 371630 | 392148 | 1.0 |
| Electricity production (GWh) | 25809 | 36609 | 31828 | 38058 | 40772 | 43824 | 1.0 |
| CHP Heat production (TJ) | - | 6027 | 122322 | 97993 | 93566 | 91745 | 16.3 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 440 | 1509 | 10716 | 11065 | 12358 | 20.4 |
| Electricity production (GWh) | - | 34 | 144 | 1141 | 1235 | 1335 | 22.6 |
| CHP Heat production (TJ) | - | 233 | 203 | 1128 | 1447 | 1484 | 10.8 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 9504 | 22840 | 16172 | 34433 | 36584 | 41950 | 3.4 |
| Electricity production (GWh) | 1024 | 933 | 868 | 2004 | 2173 | 2181 | 4.8 |
| CHP Heat production (TJ) | - | 3124 | 1385 | 2836 | 2809 | 2736 | -0.7 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 599 | 1022 | 2087 | 3236 | 5234 | 12.8 |
| Electricity production (GWh) | - | 87 | 174 | 275 | 411 | 650 | 11.8 |
| CHP Heat production (TJ) | - | 20 | 44 | 41 | 72 | 106 | 9.7 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 60606 | 67926 | 46910 | 55159 | 59144 | 61685 | -0.5 |
| CHP Heat production (TJ) | - | 15058 | 140519 | 127288 | 124459 | 121937 | 12.3 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|-------|-------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | .. | - | - | - | - | - | - |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Heat production (TJ) | .. | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | .. | - | - | - | - | - | - |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Heat production (TJ) | .. | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | .. | - | - | - | - | - | - |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Heat production (TJ) | .. | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Heat production (TJ) | .. | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | .. | - | - | - | - | - | - |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Heat production (TJ) | .. | - | - | - | - | - | - |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | .. | - | 11386 | 10461 | 11408 | 11229 | - |
| Heat production (TJ) | .. | - | 9734 | 8944 | 9753 | 9600 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Heat production (TJ) | .. | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Heat production (TJ) | .. | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | .. | - | 6419 | 7113 | 7143 | 7719 | - |
| Heat production (TJ) | .. | - | 4810 | 5351 | 5337 | 5698 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Heat production (TJ) | .. | - | - | - | - | - | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | .. | - | 14544 | 14295 | 15090 | 15298 | - |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 47.65 | 54.31 | 49.13 | 56.70 | 57.60 | 61.63 | 61.04 | 0.2 | 1.2 |
| Geothermal | - | - | - | - | - | - | 0.00 | - | - |
| Solar thermal | - | - | 0.00 | 0.01 | 0.02 | 0.02 | 0.02 | - | 13.6 |
| Coal | 1.08 | 0.78 | 1.38 | 0.91 | 0.87 | 0.98 | 0.95 | 1.4 | -2.0 |
| Oil | 23.47 | 24.35 | 18.07 | 20.79 | 22.86 | 27.47 | 26.11 | -1.5 | 2.1 |
| Gas | 19.29 | 24.25 | 22.68 | 23.34 | 21.86 | 20.60 | 21.57 | 1.0 | -0.3 |
| Comb. renew. & waste | - | - | 0.36 | 0.35 | 0.45 | 0.75 | 0.72 | - | 3.9 |
| Electricity | 3.81 | 4.94 | 6.32 | 8.41 | 9.12 | 9.33 | 9.39 | 3.0 | 2.2 |
| Heat | - | - | 0.31 | 2.89 | 2.42 | 2.48 | 2.28 | - | 11.8 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 13.51 | 12.31 | 11.30 | 13.81 | 12.32 | 12.90 | 11.92 | -1.0 | 0.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.76 | 0.69 | 1.11 | 0.61 | 0.60 | 0.63 | 0.58 | 2.2 | -3.5 |
| Oil | 2.65 | 2.54 | 0.79 | 1.60 | 0.98 | 1.58 | 0.99 | -6.9 | 1.3 |
| Gas | 8.14 | 6.66 | 6.51 | 6.26 | 5.53 | 5.38 | 5.28 | -1.3 | -1.2 |
| Comb. renew. & waste | - | - | 0.04 | 0.06 | 0.13 | 0.13 | 0.14 | - | 7.2 |
| Electricity | 1.95 | 2.41 | 2.86 | 3.51 | 3.57 | 3.64 | 3.62 | 2.3 | 1.3 |
| Heat | - | - | - | 1.77 | 1.50 | 1.54 | 1.32 | - | - |
| Transport | 6.53 | 7.59 | 8.89 | 10.97 | 11.97 | 11.98 | 12.11 | 1.8 | 1.7 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 6.46 | 7.51 | 8.78 | 10.83 | 11.79 | 11.52 | 11.68 | 1.8 | 1.6 |
| Gas | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Comb. renew. & waste | - | - | - | - | 0.04 | 0.33 | 0.29 | - | - |
| Electricity | 0.08 | 0.08 | 0.11 | 0.14 | 0.14 | 0.14 | 0.14 | 2.1 | 1.3 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 1.91 | 1.76 | 5.78 | 7.23 | 8.60 | 8.52 | 9.66 | 6.7 | 2.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 3.4 |
| Coal | - | - | 0.03 | 0.02 | 0.02 | 0.03 | 0.01 | - | -6.0 |
| Oil | 1.07 | 0.75 | 0.63 | 0.29 | 0.34 | 0.51 | 0.56 | -3.1 | -0.7 |
| Gas | - | 0.03 | 3.26 | 3.72 | 4.84 | 4.35 | 5.68 | - | 3.1 |
| Comb. renew. & waste | - | - | 0.04 | 0.05 | 0.04 | 0.04 | 0.04 | - | -0.2 |
| Electricity | 0.84 | 0.99 | 1.73 | 2.52 | 2.79 | 3.03 | 2.82 | 4.3 | 2.7 |
| Heat | - | - | 0.09 | 0.62 | 0.56 | 0.56 | 0.55 | - | 10.5 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 13.06 | 14.17 | 9.93 | 10.30 | 10.01 | 9.23 | 9.79 | -1.6 | -0.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | 0.00 | 0.01 | 0.02 | 0.02 | 0.02 | - | 19.6 |
| Coal | 0.24 | 0.05 | 0.02 | 0.00 | 0.00 | 0.00 | 0.01 | -12.8 | -4.7 |
| Oil | 4.74 | 1.41 | 0.24 | 0.06 | 0.09 | 0.06 | 0.06 | -16.0 | -7.3 |
| Gas | 7.14 | 11.41 | 7.86 | 7.97 | 7.37 | 6.63 | 7.10 | 0.6 | -0.6 |
| Comb. renew. & waste | - | - | 0.28 | 0.24 | 0.23 | 0.23 | 0.23 | - | -1.1 |
| Electricity | 0.94 | 1.30 | 1.42 | 1.88 | 2.14 | 2.09 | 2.13 | 2.4 | 2.3 |
| Heat | - | - | 0.11 | 0.15 | 0.16 | 0.20 | 0.24 | - | 4.5 |
| Agriculture & fishing | 0.32 | 0.56 | 3.33 | 3.88 | 3.17 | 3.24 | 2.94 | 14.7 | -0.7 |
| Geothermal | - | - | - | - | - | - | 0.00 | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.32 | 0.40 | 0.31 | 0.50 | 0.50 | 0.56 | 0.54 | -0.3 | 3.2 |
| Gas | - | - | 2.77 | 2.66 | 1.98 | 2.05 | 1.52 | - | -3.3 |
| Comb. renew. & waste | - | - | 0.00 | 0.00 | 0.01 | 0.02 | 0.03 | - | 19.2 |
| Electricity | - | 0.15 | 0.20 | 0.36 | 0.48 | 0.44 | 0.67 | - | 6.8 |
| Heat | - | - | 0.05 | 0.35 | 0.20 | 0.18 | 0.18 | - | 8.0 |
| Other | 4.75 | 4.75 | 0.07 | - | - | - | - | -22.1 | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.08 | 0.04 | 0.00 | - | - | - | - | -18.0 | - |
| Oil | 0.66 | 0.31 | - | - | - | - | - | - | - |
| Gas | 4.00 | 4.40 | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | - | - | - | - | - | - | - | - |
| Heat | - | - | 0.06 | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 7.56 | 13.17 | 9.82 | 10.51 | 11.54 | 15.75 | 14.62 | 1.55 | 2.24 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

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12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 47.65 | 54.31 | 49.13 | 56.70 | 60.32 | 57.60 | 61.63 | 61.04 |
| Total industry (Mtoe) | 13.51 | 12.31 | 11.30 | 13.81 | 14.18 | 12.32 | 12.90 | 11.92 |
| Iron and steel | 1.71 | 1.32 | 1.14 | 1.07 | 1.10 | 1.07 | 1.06 | 1.01 |
| Chem. and petrochemical | 5.77 | 5.27 | 4.94 | 5.72 | 5.86 | 4.71 | 5.41 | 4.57 |
| Non-ferrous metals | 0.40 | 0.52 | 0.54 | 0.64 | 0.68 | 0.62 | 0.65 | 0.68 |
| Non-metallic minerals | 1.11 | 1.06 | 0.91 | 0.86 | 0.73 | 0.73 | 0.78 | 0.76 |
| Transport equipment | 0.06 | 0.12 | 0.15 | 0.13 | 0.12 | 0.11 | 0.11 | 0.14 |
| Machinery | 0.23 | 0.37 | 0.73 | 0.70 | 1.20 | 0.62 | 0.55 | 0.59 |
| Mining and quarrying | 0.00 | 0.01 | 0.03 | 0.35 | 0.36 | 0.35 | 0.34 | 0.22 |
| Food and tobacco | 1.61 | 1.84 | 1.61 | 2.36 | 2.20 | 2.14 | 2.10 | 2.05 |
| Paper, pulp and printing | 0.84 | 0.71 | 0.67 | 1.00 | 0.98 | 0.97 | 0.93 | 0.91 |
| Wood and wood products | 0.04 | 0.07 | 0.07 | 0.09 | 0.08 | 0.08 | 0.07 | 0.06 |
| Construction | 0.02 | 0.04 | 0.30 | 0.25 | 0.24 | 0.25 | 0.24 | 0.26 |
| Textile and leather | 0.24 | 0.29 | 0.14 | 0.20 | 0.12 | 0.11 | 0.12 | 0.11 |
| Non specified/other | 1.48 | 0.70 | 0.07 | 0.44 | 0.51 | 0.57 | 0.54 | 0.55 |
| Electricity consumption (Mtoe) | 3.81 | 4.94 | 6.32 | 8.41 | 8.99 | 9.12 | 9.33 | 9.39 |
| Total industry (Mtoe) | 1.95 | 2.41 | 2.86 | 3.51 | 3.58 | 3.57 | 3.64 | 3.62 |
| Iron and steel | 0.19 | 0.16 | 0.20 | 0.23 | 0.23 | 0.23 | 0.24 | 0.23 |
| Chem. and petrochemical | 0.76 | 0.88 | 1.00 | 1.01 | 1.06 | 1.09 | 1.12 | 1.09 |
| Non-ferrous metals | 0.27 | 0.43 | 0.45 | 0.51 | 0.54 | 0.49 | 0.52 | 0.55 |
| Non-metallic minerals | 0.09 | 0.10 | 0.13 | 0.15 | 0.12 | 0.12 | 0.13 | 0.13 |
| Transport equipment | - | - | 0.04 | 0.06 | 0.05 | 0.05 | 0.05 | 0.06 |
| Machinery | 0.18 | 0.23 | 0.27 | 0.29 | 0.29 | 0.29 | 0.25 | 0.29 |
| Mining and quarrying | 0.00 | 0.01 | 0.01 | 0.05 | 0.05 | 0.05 | 0.04 | 0.03 |
| Food and tobacco | 0.19 | 0.28 | 0.40 | 0.55 | 0.57 | 0.59 | 0.62 | 0.59 |
| Paper, pulp and printing | 0.15 | 0.20 | 0.25 | 0.33 | 0.32 | 0.32 | 0.32 | 0.32 |
| Wood and wood products | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| Construction | 0.02 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| Textile and leather | 0.06 | 0.06 | 0.04 | 0.05 | 0.04 | 0.03 | 0.03 | 0.03 |
| Non specified/other | 0.03 | 0.01 | 0.01 | 0.22 | 0.24 | 0.24 | 0.24 | 0.24 |
| Total industry (TWh) | 22.71 | 28.08 | 33.24 | 40.78 | 41.59 | 41.56 | 42.29 | 42.15 |
| Iron and steel | 2.15 | 1.85 | 2.27 | 2.63 | 2.72 | 2.69 | 2.76 | 2.66 |
| Chem. and petrochemical | 8.80 | 10.26 | 11.63 | 11.79 | 12.35 | 12.62 | 13.08 | 12.63 |
| Non-ferrous metals | 3.15 | 5.02 | 5.29 | 5.95 | 6.33 | 5.72 | 6.01 | 6.39 |
| Non-metallic minerals | 1.02 | 1.11 | 1.50 | 1.69 | 1.44 | 1.45 | 1.51 | 1.56 |
| Transport equipment | - | - | 0.51 | 0.64 | 0.58 | 0.58 | 0.61 | 0.72 |
| Machinery | 2.15 | 2.66 | 3.08 | 3.39 | 3.42 | 3.37 | 2.95 | 3.34 |
| Mining and quarrying | 0.00 | 0.13 | 0.11 | 0.62 | 0.61 | 0.60 | 0.49 | 0.34 |
| Food and tobacco | 2.24 | 3.24 | 4.64 | 6.41 | 6.60 | 6.89 | 7.21 | 6.86 |
| Paper, pulp and printing | 1.77 | 2.35 | 2.90 | 3.83 | 3.66 | 3.69 | 3.71 | 3.71 |
| Wood and wood products | 0.20 | 0.28 | 0.25 | 0.29 | 0.24 | 0.26 | 0.28 | 0.29 |
| Construction | 0.23 | 0.44 | 0.43 | 0.48 | 0.48 | 0.48 | 0.48 | 0.49 |
| Textile and leather | 0.69 | 0.64 | 0.52 | 0.55 | 0.41 | 0.40 | 0.39 | 0.36 |
| Non specified/other | 0.32 | 0.09 | 0.11 | 2.52 | 2.75 | 2.83 | 2.83 | 2.82 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

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13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|----------|------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total imports⁽¹⁾ | 7 | 511 | 9679 | 11979 | 22946 | 23691 | 27346 | 23139 | 24967 |
| Imports from: | | | | | | | | | |
| Total OECD | - | - | 9679 | 11979 | 22946 | 23691 | 27346 | 23139 | 24967 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | 123 | 878 | 2283 | 4430 | 5019 | 5088 | 2984 |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | 4516 | 5148 | 5258 | - | - | - | - |
| Germany | - | - | 5040 | 5816 | 14326 | 19261 | 22327 | 18051 | 18896 |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | 3087 |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | 13 | - | - | - | - |
| Switzerland | - | - | - | 137 | 1 | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | 1065 | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 7 | 511 | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

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14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|-------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|
| Total exports ⁽¹⁾ | 1352 | 818 | 471 | 586 | 4031 | 5398 | 5887 | 5565 | 9116 |
| Exports to: | | | | | | | | | |
| Total OECD | - | - | 471 | 586 | 4031 | 5398 | 5887 | 5565 | 9116 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | 10 | 351 | 3045 | 5074 | 5604 | 5268 | 8086 |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | 157 | 27 | - | - | - | - | - |
| Germany | - | - | 271 | 208 | 975 | 324 | 283 | 297 | 809 |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | 221 |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | 9 | - | - | - | - |
| Switzerland | - | - | 33 | - | 2 | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 1352 | 818 | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 12.00 | 15.71 | 15.31 | 16.47 | 18.22 | 18.80 | 19.16 | 19.11 | 19.77 |
| Nuclear | 0.50 | 0.50 | 0.51 | 0.51 | 0.45 | 0.45 | 0.51 | 0.51 | 0.51 |
| Hydro | - | - | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | 0.01 | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.05 | 0.22 | 0.39 | 1.06 | 1.30 | 1.40 | 1.72 |
| Other (e.g. fuel cells) | - | - | - | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| Combustible fuels | 11.50 | 15.21 | 14.72 | 15.70 | 17.32 | 17.24 | 17.29 | 17.14 | 17.48 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 0.79 | - | - | - | - | - | - | - | - |
| Liquid fuels | 1.11 | 0.88 | 0.04 | 0.01 | 0.02 e | 0.02 | .. | .. | .. |
| Natural gas | 1.45 | 1.73 | 3.19 | 3.80 | 9.43 e | 9.43 | .. | .. | .. |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 0.52 | 1.49 | 1.71 | 1.25 | 0.60 e | 0.60 | .. | .. | .. |
| Solid / natural gas | 0.56 | 0.67 | 2.06 | 2.90 | 3.57 e | 3.57 | .. | .. | .. |
| Liquid / natural gas | 6.73 | 10.19 | 7.73 | 7.74 | 3.69 e | 3.69 | .. | .. | .. |
| Solid / liquid / gas | 0.34 | 0.25 | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 13.11 | 12.80 | 10.08 | 8.99 | 8.69 | 8.61 | 8.77 |
| Internal combustion | - | - | 0.02 | 0.60 | 0.80 | 0.70 | 0.70 | 0.70 | 0.65 |
| Gas turbine | - | - | 0.54 | 0.85 | 0.80 | 0.67 | 0.76 | 0.75 | 0.75 |
| Combined cycle | - | - | 1.04 | 1.45 | 5.64 | 6.89 | 7.14 | 7.08 | 7.30 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | 10.76 | 11.16 | .. | 15.22 | 14.85 | 14.83 | 13.96 |
| Available capacity | .. | .. | 15.10 | 1.59 | .. | 15.60 | 15.60 | 18.20 | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)

(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|------|------|--------|------|------|------|------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 1.56 | 1.59 | 2.24 | 2.56 | 2.84 | 3.00 | 3.82 | 4.69 | 5.11 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | 0.01 | 0.05 | 0.05 | 0.05 | 0.05 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.03 | 0.06 | 0.17 | 0.26 | 0.35 | 0.43 |
| Other (e.g. fuel cells) | - | - | - | 0.03 | 0.03 | 0.05 | 0.05 | 0.05 | 0.05 |
| Combustible fuels | 1.56 | 1.59 | 2.24 | 2.50 | 2.75 | 2.73 | 3.46 | 4.24 | 4.57 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | - | - | - | - | - | - | - |
| Liquid fuels | - | - | - | - | 0.01 e | .. | .. | .. | .. |
| Natural gas | - | - | - | - | 2.53 e | .. | .. | .. | .. |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | 1.56 | 1.59 | 2.24 | 2.50 | 0.22 e | .. | .. | .. | .. |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 0.74 | 0.75 | 0.86 | 0.77 | 0.78 | 0.94 | 0.77 |
| Internal combustion | - | - | 0.24 | 0.46 | 0.73 | 0.98 | 1.69 | 2.33 | 2.84 |
| Gas turbine | - | - | 0.56 | 0.48 | 0.53 | 0.53 | 0.53 | 0.53 | 0.53 |
| Combined cycle | - | - | 0.67 | 0.81 | 0.63 | 0.45 | 0.46 | 0.44 | 0.44 |
| Other | - | - | 0.03 | - | - | - | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Euro/ unit | | | | | | | | |
| Steam coal (t) | 40.25 | 57.72 | 58.95 | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil (t) | 89.46 | 173.60 | .. | .. | .. | .. | .. | .. | .. |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | 77.63 | 147.20 | 109.63 | .. | .. | .. | .. | .. | .. |
| | Euro/ toe | | | | | | | | |
| Steam coal | 57.50 | 82.46 | 84.21 | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil | 91.66 | 177.87 | .. | .. | .. | .. | .. | .. | .. |
| Natural gas ⁽²⁾ | 86.26 | 163.56 | 121.81 | .. | .. | .. | .. | .. | .. |
| End-user prices of electricity | | | | | | | | | |
| | Euro/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0306 | 0.0534 | 0.0432 | 0.0619 | c | c | 0.0890 | 0.0955 | 0.1015 |
| <i>of which: tax</i> | - | - | - | 0.0024 | c | c | 0.0095 | 0.0100 | 0.0135 |
| Household | | | | | | | | | |
| Price | 0.0809 | 0.1033 | 0.0968 | 0.1422 | 0.1900 | 0.2056 | 0.2080 | 0.1660 | 0.1857 |
| <i>of which: tax</i> | 0.0123 | 0.0157 | 0.0151 | 0.0484 | 0.0800 | 0.0842 | 0.0712 | 0.0341 | 0.0319 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

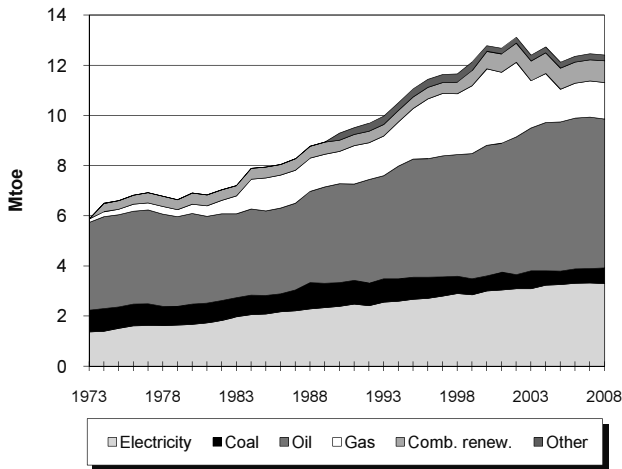


Figure 2. Electricity generation by fuel

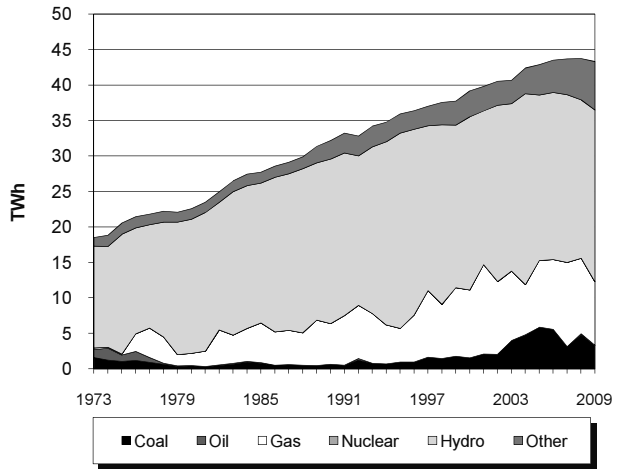


Figure 3. Electricity consumption by sector

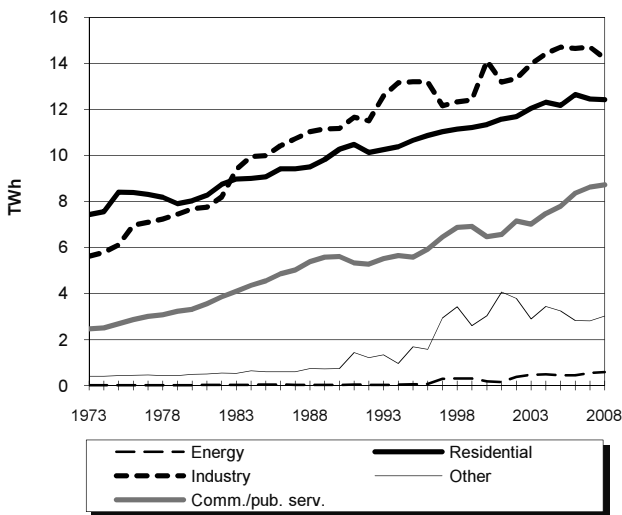


Figure 4. Electricity indicators

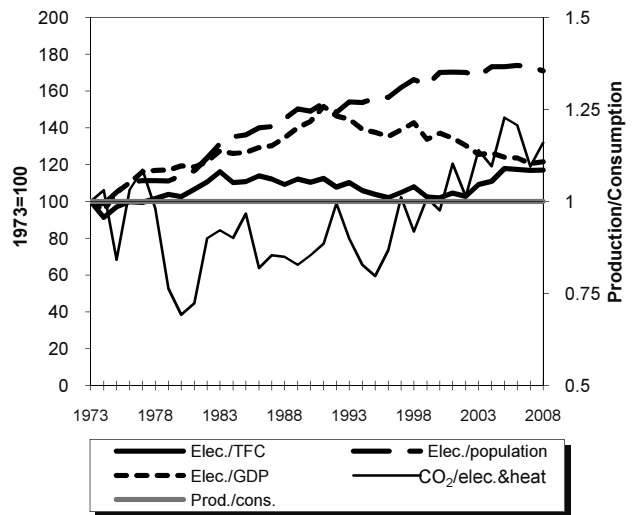
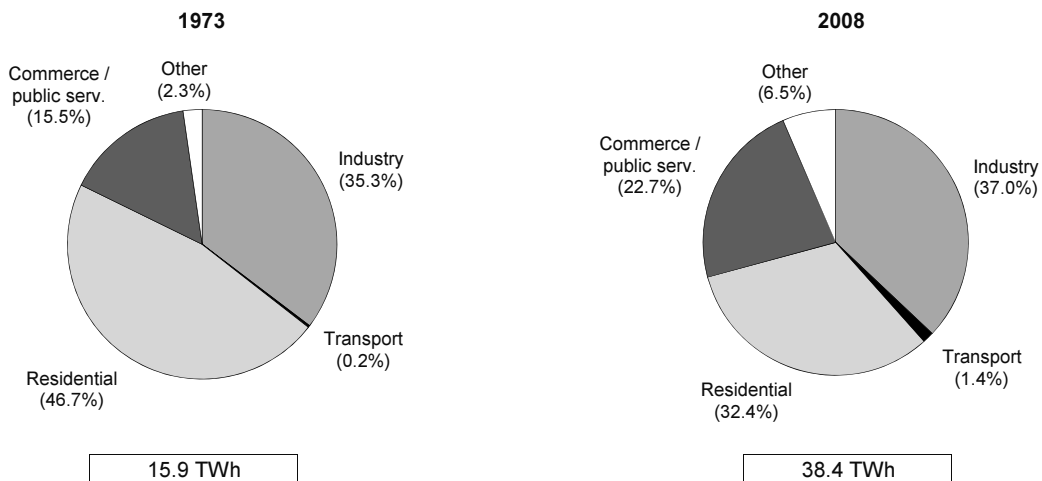


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 8.02 | 8.98 | 12.70 | 16.68 | 16.69 | 16.93 | 18.08 | 2.7 | 1.9 |
| GDP (billion 2000 USD) | 32.51 | 32.89 | 39.62 | 52.66 | 66.97 | 66.24 | 66.12 | 1.2 | 2.7 |
| TPES/GDP ⁽¹⁾ | 0.25 | 0.27 | 0.32 | 0.32 | 0.25 | 0.26 | 0.27 | 1.6 | -0.8 |
| Population (millions) | 2.97 | 3.14 | 3.49 | 3.88 | 4.26 | 4.31 | 4.34 | 0.9 | 1.2 |
| TPES/population ⁽²⁾ | 2.70 | 2.86 | 3.64 | 4.30 | 3.91 | 3.93 | 4.17 | 1.8 | 0.7 |
| TPES/GDP (2000 = 100) | 78 | 86 | 101 | 100 | 79 | 81 | 86 | 1.6 | -0.8 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 74 | 89 | 106 | 100 | 87 | 87 | .. | 2.1 | .. |
| Ele.TFC/population ⁽⁴⁾ | 5363 | 6209 | 7970 | 9019 | 9056 | 8923 | .. | 2.4 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 18.53 | 22.60 | 32.26 | 39.25 | 43.75 | 43.78 | 43.38 | 3.3 | 1.6 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|-------------|-------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 8.02 | 8.98 | 12.70 | 16.68 | 16.69 | 16.93 | 18.08 | 2.7 | 1.9 |
| Coal | 1.26 | 1.02 | 1.13 | 1.04 | 1.54 | 1.69 | 1.62 | -0.6 | 1.9 |
| Oil | 4.17 | 4.01 | 3.51 | 5.71 | 6.16 | 6.17 | 6.29 | -1.0 | 3.1 |
| Gas | 0.28 | 0.79 | 3.90 | 5.06 | 3.65 | 3.44 | 3.55 | 16.7 | -0.5 |
| Comb. renew & waste | - | 0.52 | 0.55 | 0.86 | 1.02 | 1.03 | 1.39 | - | 5.0 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | 1.07 | 1.02 | 1.58 | 1.86 | 2.17 | 2.56 | 2.99 | 2.3 | 3.4 |
| Solar, wind, tide ⁽¹⁾ | - | - | - | 0.01 | 0.09 | 0.10 | 0.13 | - | - |
| Hydro | 1.23 | 1.63 | 1.99 | 2.10 | 2.03 | 1.92 | 2.08 | 2.9 | 0.2 |
| Net electricity imports ⁽²⁾ | - | - | - | - | - | - | - | - | - |
| Heat | - | - | 0.04 | 0.04 | 0.03 | 0.03 | 0.03 | - | -1.3 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 18.5 | 22.6 | 32.3 | 39.2 | 43.0 | 43.7 | 43.8 | 43.4 |
| Nuclear | - | - | - | - | - | - | - | - |
| Hydro | 14.3 | 18.9 | 23.2 | 24.4 | 23.3 | 23.6 | 22.3 | 24.2 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | - | - | - | - | - | - | - | - |
| Geothermal | 1.2 | 1.2 | 2.1 | 2.9 | 3.2 | 3.6 | 4.2 | 4.8 |
| Solar | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.1 | 0.6 | 0.9 | 1.1 | 1.5 |
| Combustible fuels | 3.0 | 2.5 | 6.9 | 11.7 | 15.8 | 15.6 | 16.2 | 12.8 |
| <i>Coal</i> | 1.6 | 0.4 | 0.7 | 1.5 | 5.9 | 3.2 | 4.8 | 3.3 |
| <i>Oil</i> | 1.1 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.1 | 0.0 |
| <i>Gas</i> | 0.3 | 1.7 | 5.7 e | 9.6 | 9.4 | 11.8 | 10.6 | 9.0 |
| <i>Comb. renew. & waste</i> | - | 0.3 | 0.5 | 0.6 | 0.5 | 0.6 | 0.6 | 0.6 |
| Other (e.g. fuel cells) | - | - | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| - Own use by power plant | 0.4 | 0.2 | 0.8 | 1.2 | 1.5 | 1.5 | 1.5 | .. |
| Net production | 18.1 | 22.4 | 31.5 | 38.1 | 41.5 | 42.3 | 42.2 | .. |
| Nuclear | .. | - | - | - | - | - | - | .. |
| Hydro | .. | 18.9 | 23.0 | 24.2 | 23.1 | 23.4 | 22.1 | .. |
| Geothermal | .. | 1.2 | 2.0 | 2.8 | 3.0 | 3.4 | 4.0 | .. |
| Solar | .. | - | - | - | - | - | - | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | - | 0.1 | 0.6 | 0.9 | 1.0 | .. |
| Combustible fuels | .. | 2.3 | 6.4 | 10.9 | 14.8 | 14.5 | 15.1 | .. |
| Other (e.g. fuel cells) | .. | - | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | - | - | - | - | - | - | - | - |
| + Imports | - | - | - | - | - | - | - | - |
| - Exports | - | - | - | - | - | - | - | - |
| Electrical energy supplied | 18.1 | 22.4 | 31.5 | 38.1 | 41.5 | 42.3 | 42.2 | .. |
| - Transmission & distr. losses | 2.2 | 2.8 | 3.6 | 2.9 | 3.1 | 3.1 | 3.3 | .. |
| - Statistical difference | - | -0.0 | - | - | - | - | - | .. |
| Total consumption | 15.9 | 19.5 | 27.8 | 35.1 | 38.4 | 39.2 | 39.0 | .. |
| - Energy industry consumption ⁽²⁾ | 0.0 | 0.0 | 0.0 | 0.2 | 0.5 | 0.6 | 0.6 | .. |
| Final consumption | 15.9 | 19.5 | 27.8 | 35.0 | 37.9 | 38.6 | 38.4 | .. |
| Industry | 5.6 | 7.7 | 11.2 | 14.1 | 14.7 | 14.7 | 14.2 | .. |
| Transport | 0.0 | 0.0 | 0.1 | 0.4 | 0.5 | 0.5 | 0.5 | .. |
| Commercial & publ. serv. | 2.5 | 3.3 | 5.6 | 6.5 | 7.8 | 8.6 | 8.7 | .. |
| Residential | 7.4 | 8.0 | 10.3 | 11.3 | 12.2 | 12.4 | 12.4 | .. |
| Agriculture & fishing | 0.4 | 0.5 | 0.7 | 1.3 | 1.5 | 1.8 | 1.9 | .. |
| Sector non specified | - | - | - | 1.3 | 1.3 | 0.5 | 0.6 | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 18.83 | 22.60 | 32.26 | 39.25 | 43.60 | 43.75 | 43.78 | 3.4 | 1.7 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation⁽¹⁾ | 18.83 | 22.60 | 32.26 | 39.25 | 43.60 | 43.75 | 43.78 | 3.4 | 1.7 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 18.55 | 22.29 | 31.41 | 37.57 | 41.83 | 42.05 | 42.12 | 3.3 | 1.6 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 18.55 | 22.29 | 31.41 | 37.57 | 41.83 | 42.05 | 42.12 | 3.3 | 1.6 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 14.20 | 18.93 | 23.18 | 24.43 | 23.56 | 23.63 | 22.30 | 3.1 | -0.2 |
| Geothermal | 1.29 | 1.19 | 2.07 | 2.88 | 3.31 | 3.50 | 4.15 | 3.0 | 3.9 |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.12 | 0.62 | 0.93 | 1.06 | - | - |
| Coal | 1.23 | 0.43 | 0.47 | 0.95 | 4.85 | 2.52 | 4.22 | -5.9 | 13.0 |
| Oil | 1.70 | 0.04 | 0.01 | - | 0.02 | 0.00 | 0.13 | -28.5 | 16.9 |
| Gas | 0.12 | 1.67 | 5.65 | 9.11 | 9.34 | 11.35 | 10.15 | 27.1 | 3.3 |
| Comb. renew. & waste | 0.01 | 0.03 | 0.03 | 0.08 | 0.12 | 0.12 | 0.12 | 7.9 | 8.5 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 0.28 | 0.31 | 0.85 | 1.68 | 1.77 | 1.70 | 1.65 | 7.2 | 3.7 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 0.28 | 0.31 | 0.85 | 1.68 | 1.77 | 1.70 | 1.65 | 7.2 | 3.7 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | 0.01 | 0.01 | 0.01 | - | - |
| Geothermal | - | - | 0.06 | 0.04 | 0.06 | 0.05 | 0.05 | - | -0.5 |
| Solar, wind, tide ⁽²⁾ | - | - | 0.07 | 0.07 | 0.07 | 0.06 | 0.05 | - | -1.6 |
| Coal | - | - | 0.20 | 0.59 | 0.68 | 0.64 | 0.60 | - | 6.4 |
| Oil | - | - | - | - | - | - | - | - | - |
| Gas | - | 0.03 e | 0.06 e | 0.46 | 0.52 | 0.50 | 0.50 | - | 12.5 |
| Comb. renew. & waste | 0.28 | 0.28 | 0.47 | 0.51 | 0.43 | 0.44 | 0.44 | 3.3 | -0.4 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|--------------|--------------|------------|-------------|-------------|-------------|-------------|---|
| Total | 262 | 289 | 799 | 1568 | 1653 | 1585 | 1547 | 3.7 |
| Total energy | - | - | - | - | - | - | - | - |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | - | - | - | - | - |
| Energy non specified/other | - | - | - | - | - | - | - | - |
| Total industry | - | - | 573 | 1498 | 1534 | 1473 | 1437 | 5.2 |
| Iron and steel | - | - | 120 | 506 | 595 | 574 | 559 | 8.9 |
| Chemical and petrochemical | - | - | 63 | 63 | 68 | 53 | 47 | -1.6 |
| Non-ferrous metals | - | - | - | - | - | - | - | - |
| Non-metallic minerals | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | - | - | - | - | - | - | - | - |
| Mining and quarrying | - | - | - | - | - | - | - | - |
| Food and tobacco | - | - | - | 287 | 408 | 385 | 377 | - |
| Pulp and printing | - | - | - | - | - | - | - | - |
| Wood and wood products | - | - | 390 | 642 | 463 | 461 | 454 | 0.8 |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | - | - | - | - | - | - | - | - |
| Non specified/other industries | - | - | - | - | - | - | - | - |
| Total transport | - | - | - | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | - | - | - | - |
| Other | 262 e | 289 e | 226 | 70 | 119 | 112 | 110 | -3.9 |
| Commerce and pub. services | - | - | 106 | 70 | 119 | 112 | 110 | 0.2 |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | - | - | - | - | - | - | - | - |
| Sector non specified | 262 e | 289 e | 120 | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|------|------|------|------|------|------|-------|---|
| Total | - | 1608 | 1608 | 1584 | 1368 | 1200 | 1260 | -1.6 |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - |
| Oil | - | - | - | - | - | - | - | - |
| Gas | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | 1608 | 1608 | 1584 | 1368 | 1200 | 1260 | -1.6 |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | - | - | - | - | - | - | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | - | - | - | - | - | .. | - |
| Gas | - | - | - | - | - | - | .. | - |
| Comb. renew. & waste | - | - | - | - | - | - | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | 1608 | 1608 | 1584 | 1368 | 1200 | .. | -1.6 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | - | - | - | - | - | .. | - |
| Gas | - | - | - | - | - | - | .. | - |
| Comb. renew. & waste | - | - | - | - | - | - | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | 1608 | 1608 | 1584 | 1368 | 1200 | .. | -1.6 |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 0.88 | 0.57 | 1.62 | 2.49 | 3.29 | 3.05 | 3.18 | 3.6 | 3.8 |
| Coal | 0.37 | 0.15 | 0.21 | 0.46 | 1.37 | 0.78 | 1.17 | -3.2 | 10.0 |
| Oil | 0.43 | 0.02 | 0.01 | - | 0.01 | - | 0.03 | -22.2 | 9.6 |
| Gas | 0.08 | 0.33 | 1.24 | 1.84 | 1.75 | 2.10 | 1.81 | 17.4 | 2.1 |
| Comb. renew. & waste | - | 0.08 | 0.16 | 0.19 | 0.16 | 0.17 | 0.17 | - | 0.1 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 0.50 | 1.36 | 1.98 | 2.87 | 2.63 | 2.77 | .. | 4.0 |
| Coal | .. | 0.15 | 0.12 | 0.23 | 1.22 | 0.62 | 1.03 | .. | 12.5 |
| Oil | .. | 0.02 | 0.01 | - | 0.01 | - | 0.03 | .. | 9.6 |
| Gas | .. | 0.33 | 1.22 | 1.72 | 1.62 | 1.98 | 1.68 | .. | 1.8 |
| Comb. renew. & waste | .. | 0.01 | 0.01 | 0.02 | 0.03 | 0.03 | 0.03 | .. | 8.6 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 1.07 | 1.02 | 1.31 | 1.64 | 1.84 | 1.94 | 2.33 | 1.2 | 3.3 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | 1.07 | 1.02 | 1.31 | 1.64 | 1.84 | 1.94 | 2.33 | 1.2 | 3.3 |
| Solar | - | - | - | - | - | - | - | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 1.23 | 1.63 | 1.99 | 2.11 | 2.08 | 2.11 | 2.01 | 2.9 | 0.0 |
| Hydro | 1.23 | 1.63 | 1.99 | 2.10 | 2.03 | 2.03 | 1.92 | 2.9 | -0.2 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.01 | 0.05 | 0.08 | 0.09 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

NEW ZEALAND

8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|-------|-------|-------|-------|-------|-------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | 288 | 232 | 430 | 2276 | 1166 | 1961 | 12.6 |
| Fuel input (TJ) | 5841 | 5206 | 9687 | 50986 | 26067 | 43094 | 12.5 |
| Electricity production (GWh) | 428 | 467 | 951 | 4853 | 2519 | 4219 | 13.0 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 15 | 6 | - | 5 | - | 31 | 9.6 |
| Fuel input (TJ) | 664 | 249 | - | 232 | 6 | 1425 | 10.2 |
| Electricity production (GWh) | 39 | 8 | - | 23 | 1 | 132 | 16.9 |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 15164 | 56974 | 69189 | 60104 | 75348 | 60761 | 0.4 |
| Electricity production (GWh) | 1674 | 5649 | 7953 | 8011 | 9812 | 8557 | 2.3 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | 379 | 319 | 918 | 1871 | 1875 | 1829 | 10.2 |
| Electricity production (GWh) | 32 | 27 | 76 | 156 | 157 | 152 | 10.1 |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | 2173 | 6151 | 8980 | 13043 | 12489 | 13060 | 4.3 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

NEW ZEALAND

9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|-------|-------|-------|-------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | 156 | 417 | - | - | - | - |
| Fuel input (TJ) | - | 3501 | 9393 | - | - | - | - |
| Electricity production (GWh) | - | 180 | 577 | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | 13 | 13 | 14 | 17 | 19 | 2.1 |
| Fuel input (TJ) | - | 205 | 205 | 217 | 267 | 283 | 1.8 |
| Electricity production (GWh) | - | 17 | 17 | 18 | 22 | 24 | 1.9 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | 6524 | 6384 | 5878 | - |
| Electricity production (GWh) | - | - | - | 665 | 621 | 577 | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 272 | 714 | 16492 | 21344 | 22592 | 23422 | 21.4 |
| Electricity production (GWh) | 30 e | 60 e | 1619 | 1842 | 2031 | 2092 | 21.8 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 2876 | 5184 | 6593 | 4152 | 4377 | 4422 | -0.9 |
| Electricity production (GWh) | 280 | 360 | 478 | 320 | 336 | 340 | -0.3 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 1360 | 402 | 886 | 797 | 759 | -3.2 |
| Electricity production (GWh) | - | 113 | 33 | 74 | 66 | 63 | -3.2 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | 310 | 730 | 2724 | 2919 | 3076 | 3096 | 8.4 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

NEW ZEALAND

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 5.87 | 6.91 | 9.29 | 12.79 | 12.37 | 12.47 | 12.42 | 2.7 | 1.6 |
| Geothermal | - | - | 0.27 | 0.23 | 0.23 | 0.23 | 0.23 | - | -0.9 |
| Solar thermal | - | - | - | - | 0.01 | 0.01 | 0.01 | - | - |
| Coal | 0.87 | 0.80 | 0.95 | 0.60 | 0.58 | 0.58 | 0.62 | 0.5 | -2.3 |
| Oil | 3.49 | 3.62 | 3.94 | 5.21 | 6.01 | 6.03 | 5.94 | 0.7 | 2.3 |
| Gas | 0.14 | 0.37 | 1.29 | 3.05 | 1.40 | 1.44 | 1.45 | 13.8 | 0.6 |
| Comb. renew. & waste | - | 0.44 | 0.45 | 0.70 | 0.84 | 0.85 | 0.87 | - | 3.7 |
| Electricity | 1.37 | 1.68 | 2.39 | 3.01 | 3.31 | 3.32 | 3.30 | 3.3 | 1.8 |
| Heat | - | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 1.97 | 2.41 | 3.19 | 3.15 | 3.46 | 3.61 | 3.62 | 2.9 | 0.7 |
| Geothermal | - | - | 0.22 | 0.13 | 0.14 | 0.14 | 0.14 | - | -2.5 |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.69 | 0.55 | 0.82 | 0.49 | 0.43 | 0.45 | 0.47 | 1.0 | -3.1 |
| Oil | 0.74 | 0.61 | 0.27 | 0.31 | 0.38 | 0.43 | 0.49 | -5.7 | 3.3 |
| Gas | 0.05 | 0.27 | 0.53 | 0.50 | 0.61 | 0.67 | 0.63 | 14.7 | 1.0 |
| Comb. renew. & waste | - | 0.32 | 0.39 | 0.50 | 0.64 | 0.66 | 0.67 | - | 3.2 |
| Electricity | 0.48 | 0.66 | 0.96 | 1.21 | 1.26 | 1.26 | 1.22 | 4.1 | 1.3 |
| Heat | - | - | - | - | - | - | - | - | - |
| Transport | 1.94 | 2.29 | 2.96 | 4.18 | 4.95 | 4.98 | 4.75 | 2.5 | 2.7 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | 0.00 | - | - | - | - | - | - | - |
| Oil | 1.94 | 2.28 | 2.90 | 4.14 | 4.90 | 4.93 | 4.70 | 2.4 | 2.7 |
| Gas | - | 0.01 | 0.06 | 0.00 | 0.00 | 0.01 | 0.00 | - | -13.6 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.00 | 0.00 | 0.01 | 0.04 | 0.04 | 0.05 | 0.05 | 2.7 | 12.8 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 0.51 | 0.71 | 0.81 | 1.13 | 1.09 | 1.12 | 1.17 | 2.7 | 2.1 |
| Geothermal | - | - | - | 0.09 | 0.09 | 0.09 | 0.09 | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | 0.12 | 0.06 | 0.08 | 0.09 | 0.09 | 0.10 | - | 3.1 |
| Oil | 0.24 | 0.25 | 0.16 | 0.10 | 0.09 | 0.09 | 0.15 | -2.3 | -0.4 |
| Gas | 0.06 | 0.05 | 0.11 | 0.31 | 0.10 | 0.10 | 0.07 | 3.1 | -2.1 |
| Comb. renew. & waste | - | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | - | 11.1 |
| Electricity | 0.21 | 0.29 | 0.48 | 0.56 | 0.72 | 0.74 | 0.75 | 5.0 | 2.5 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD *Energy Balances of OECD Countries*.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

NEW ZEALAND

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 0.90 | 1.01 | 1.12 | 1.34 | 1.50 | 1.46 | 1.42 | 1.3 | 1.3 |
| Geothermal | - | - | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | - | -15.8 |
| Solar thermal | - | - | - | - | 0.01 | 0.01 | 0.01 | - | - |
| Coal | 0.16 | 0.14 | 0.04 | 0.02 | 0.01 | 0.01 | 0.01 | -8.2 | -8.5 |
| Oil | 0.08 | 0.02 | 0.01 | 0.04 | 0.06 | 0.06 | 0.06 | -10.9 | 9.6 |
| Gas | 0.03 | 0.04 | 0.08 | 0.11 | 0.14 | 0.12 | 0.09 | 5.9 | 1.1 |
| Comb. renew. & waste | - | 0.12 e | 0.06 e | 0.19 | 0.19 | 0.19 | 0.18 | - | 6.1 |
| Electricity | 0.64 | 0.69 | 0.88 | 0.97 | 1.09 | 1.07 | 1.07 | 1.9 | 1.1 |
| Heat | - | - | - | - | - | - | - | - | - |
| Agriculture & fishing | 0.28 | 0.27 | 0.35 | 0.44 | 0.50 | 0.47 | 0.46 | 1.3 | 1.5 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | 0.01 | 0.01 | 0.04 | 0.03 | 0.04 | - | 7.8 |
| Oil | 0.25 | 0.23 | 0.28 | 0.30 | 0.27 | 0.24 | 0.23 | 0.7 | -1.2 |
| Gas | - | - | - | 0.01 | 0.04 | 0.04 | 0.03 | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.03 | 0.04 | 0.06 | 0.11 | 0.14 | 0.16 | 0.16 | 3.8 | 5.8 |
| Heat | - | - | - | - | - | - | - | - | - |
| Other | 0.03 | - | 0.02 | 0.11 | 0.06 | 0.04 | 0.05 | -2.0 | 5.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.03 | - | 0.02 | - | - | - | - | -2.0 | - |
| Oil | - | - | - | - | - | - | - | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | - | - | 0.11 | 0.06 | 0.04 | 0.05 | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 0.24 | 0.22 | 0.84 | 2.42 | 0.82 | 0.79 | 0.94 | 7.63 | 0.62 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

NEW ZEALAND

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 5.87 | 6.91 | 9.29 | 12.79 | 12.13 | 12.37 | 12.47 | 12.42 |
| Total industry (Mtoe) | 1.97 | 2.41 | 3.19 | 3.15 | 3.37 | 3.46 | 3.61 | 3.62 |
| Iron and steel | 0.23 | 0.33 | 0.47 | 0.07 | 0.11 | 0.12 | 0.12 | 0.12 |
| Chem. and petrochemical | 0.02 | 0.02 | 0.04 | 0.02 | 0.04 | 0.04 | 0.04 | 0.04 |
| Non-ferrous metals | - | - | - | 0.43 | 0.46 | 0.45 | 0.47 | 0.43 |
| Non-metallic minerals | 0.02 | 0.09 | 0.02 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 |
| Transport equipment | - | 0.01 | - | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| Machinery | 0.02 | 0.04 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| Mining and quarrying | 0.01 | 0.06 | 0.05 | 0.09 | 0.09 | 0.10 | 0.12 | 0.11 |
| Food and tobacco | 0.13 | 0.46 | 0.16 | 0.14 | 0.20 | 0.19 | 0.19 | 0.19 |
| Paper, pulp and printing | - | 0.04 | 0.22 | 0.37 | 0.31 | 0.28 | 0.30 | 0.31 |
| Wood and wood products | 0.13 | 0.52 | 0.62 | 0.64 | 0.78 | 0.81 | 0.80 | 0.80 |
| Construction | 0.01 | 0.08 | 0.08 | 0.07 | 0.08 | 0.08 | 0.06 | 0.07 |
| Textile and leather | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 |
| Non specified/other | 1.38 | 0.74 | 1.48 | 1.26 | 1.21 | 1.33 | 1.45 | 1.50 |
| Electricity consumption (Mtoe) | 1.37 | 1.68 | 2.39 | 3.01 | 3.26 | 3.31 | 3.32 | 3.30 |
| Total industry (Mtoe) | 0.48 | 0.66 | 0.96 | 1.21 | 1.27 | 1.26 | 1.26 | 1.22 |
| Iron and steel | 0.18 | 0.25 | 0.46 | 0.07 | 0.11 | 0.12 | 0.12 | 0.12 |
| Chem. and petrochemical | 0.02 | 0.02 | 0.04 | 0.02 | 0.04 | 0.04 | 0.04 | 0.04 |
| Non-ferrous metals | - | - | - | 0.43 | 0.46 | 0.45 | 0.47 | 0.43 |
| Non-metallic minerals | 0.02 | 0.02 | 0.02 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 |
| Transport equipment | - | - | - | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| Machinery | 0.02 | 0.03 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| Mining and quarrying | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 |
| Food and tobacco | 0.07 | 0.10 | 0.13 | 0.13 | 0.20 | 0.19 | 0.19 | 0.19 |
| Paper, pulp and printing | - | - | - | 0.23 | 0.17 | 0.14 | 0.16 | 0.17 |
| Wood and wood products | 0.13 | 0.20 | 0.24 | 0.14 | 0.13 | 0.17 | 0.14 | 0.13 |
| Construction | 0.01 | 0.01 | 0.00 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| Textile and leather | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 |
| Non specified/other | 0.01 | 0.01 | 0.01 | 0.08 | 0.04 | 0.04 | 0.05 | 0.05 |
| Total industry (TWh) | 5.62 | 7.68 | 11.17 | 14.10 | 14.71 | 14.66 | 14.71 | 14.22 |
| Iron and steel | 2.08 | 2.93 | 5.32 | 0.82 | 1.34 | 1.36 | 1.39 | 1.40 |
| Chem. and petrochemical | 0.19 | 0.20 | 0.51 | 0.21 | 0.48 | 0.52 | 0.48 | 0.47 |
| Non-ferrous metals | - | - | - | 5.04 | 5.39 | 5.25 | 5.48 | 4.97 |
| Non-metallic minerals | 0.23 | 0.24 | 0.20 | 0.30 | 0.25 | 0.25 | 0.26 | 0.26 |
| Transport equipment | - | - | - | 0.07 | 0.06 | 0.04 | 0.03 | 0.03 |
| Machinery | 0.27 | 0.33 | 0.31 | 0.20 | 0.27 | 0.24 | 0.22 | 0.22 |
| Mining and quarrying | 0.08 | 0.12 | 0.17 | 0.24 | 0.27 | 0.27 | 0.31 | 0.32 |
| Food and tobacco | 0.84 | 1.16 | 1.52 | 1.52 | 2.29 | 2.21 | 2.16 | 2.18 |
| Paper, pulp and printing | - | - | - | 2.72 | 1.99 | 1.67 | 1.86 | 1.96 |
| Wood and wood products | 1.50 | 2.27 | 2.78 | 1.66 | 1.52 | 1.96 | 1.61 | 1.48 |
| Construction | 0.06 | 0.08 | 0.02 | 0.20 | 0.24 | 0.23 | 0.22 | 0.22 |
| Textile and leather | 0.22 | 0.24 | 0.24 | 0.19 | 0.18 | 0.17 | 0.15 | 0.15 |
| Non specified/other | 0.15 | 0.13 | 0.12 | 0.95 | 0.45 | 0.51 | 0.54 | 0.55 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

NEW ZEALAND

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 4.60 | 5.82 | 7.18 | 7.68 | 8.15 | 8.45 | 8.46 | 9.06 | 9.05 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 3.48 | 3.95 | 4.62 | 5.26 | 5.19 | 5.35 | 5.34 | 5.35 | 5.37 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | 0.16 | 0.14 | 0.26 | 0.27 | 0.41 | 0.43 | 0.43 | 0.44 | 0.58 |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 0.04 | 0.17 | 0.17 | 0.32 | 0.32 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 0.96 | 1.73 | 2.30 | 2.16 | 2.51 | 2.51 | 2.52 | 2.96 | 2.78 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 0.20 | 0.18 | 0.11 | - | - | - | - | - | - |
| Liquid fuels | 0.24 | 0.47 | 0.34 | 0.28 | - | 0.16 | 0.16 | 0.16 | 0.16 |
| Natural gas | 0.18 | 0.22 | 0.20 | 0.87 | 1.50 | 1.00 | 1.00 | 1.43 | 1.45 |
| Comb. renew. & waste | - | - | - | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | 0.35 | 0.86 | 0.67 | - | - | 0.34 | 0.35 | 0.35 | 0.15 |
| Solid / liquid / gas | - | - | 0.98 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 1.78 | 1.70 | 1.68 | 1.56 | 1.56 | 1.60 | 1.41 |
| Internal combustion | - | - | 0.01 | - | - | 0.01 | 0.01 | 0.01 | 0.01 |
| Gas turbine | - | - | 0.50 | 0.46 | 0.48 | 0.21 | 0.22 | 0.22 | 0.22 |
| Combined cycle | - | - | - | - | 0.35 | 0.74 | 0.74 | 1.12 | 1.14 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | 5.12 | 5.24 | 5.57 | 6.08 | 6.39 | 6.46 | 6.22 |
| Available capacity | .. | .. | 6.18 | 6.98 | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

NEW ZEALAND

15. Net maximum electricity generating capacity on 31 December (continued)

(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|------|------|------|------|------|------|------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | - | - | - | 0.24 | 0.31 | 0.34 | 0.35 | 0.33 | 0.33 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | 0.02 | 0.02 | 0.02 | 0.02 |
| Combustible fuels | - | - | - | 0.23 | 0.30 | 0.31 | 0.32 | 0.30 | 0.30 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | - | 0.02 | 0.11 | 0.12 | 0.11 | 0.12 | 0.12 |
| Liquid fuels | - | - | - | - | - | - | - | - | - |
| Natural gas | - | - | - | 0.08 | 0.10 | 0.11 | 0.12 | 0.08 | 0.08 |
| Comb. renew. & waste | - | - | - | 0.13 | 0.09 | 0.08 | 0.09 | 0.09 | 0.09 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | - | - | - |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | - | 0.06 | 0.26 | 0.30 | 0.30 | 0.29 | 0.29 |
| Internal combustion | - | - | - | - | - | - | - | - | - |
| Gas turbine | - | - | - | 0.17 | 0.04 | 0.01 | 0.01 | 0.01 | 0.01 |
| Combined cycle | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | New Zealand Dollars/ unit | | | | | | | | |
| Steam coal (t) | c | c | c | c | c | c | c | c | c |
| Heavy fuel oil (t) | c | c | c | c | c | c | c | c | c |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | c | c | c | c | c | c | c | c | c |
| | New Zealand Dollars/ toe | | | | | | | | |
| Steam coal | c | c | c | c | c | c | c | c | c |
| Heavy fuel oil | c | c | c | c | c | c | c | c | c |
| Natural gas ⁽²⁾ | c | c | c | c | c | c | c | c | c |
| End-user prices of electricity | | | | | | | | | |
| | New Zealand Dollars/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0178 | 0.0283 | 0.0572 | 0.0617 | 0.0872 | 0.0919 | 0.0931 | 0.1018 | .. |
| <i>of which: tax</i> | - | - | - | - | - | - | - | - | .. |
| Household | | | | | | | | | |
| Price | 0.0230 | 0.0344 | 0.0917 | 0.1324 | 0.1932 | 0.2050 | 0.2197 | 0.2343 | 0.2431 |
| <i>of which: tax</i> | - | - | 0.0102 | 0.0147 | 0.0218 | 0.0228 | 0.0244 | 0.0260 | 0.0270 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

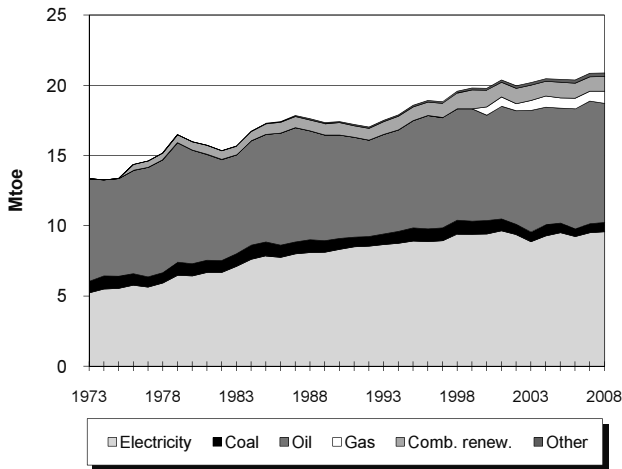


Figure 2. Electricity generation by fuel

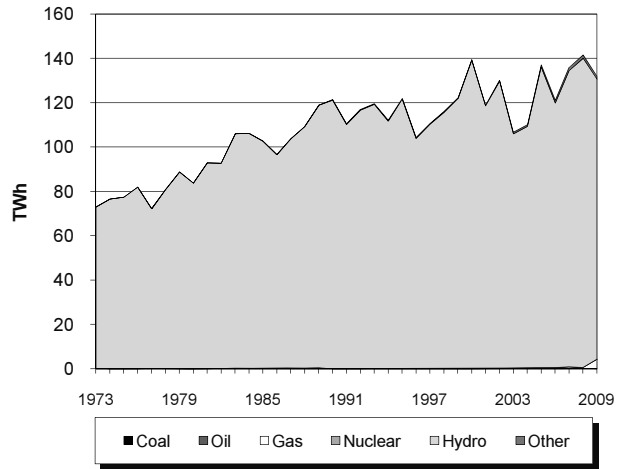


Figure 3. Electricity consumption by sector

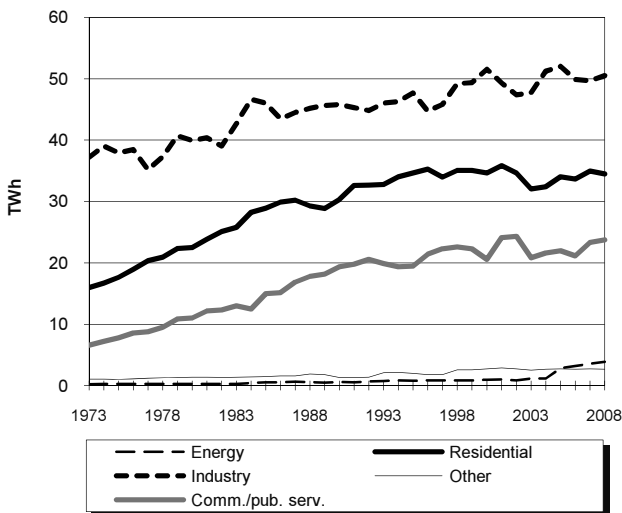


Figure 4. Electricity indicators

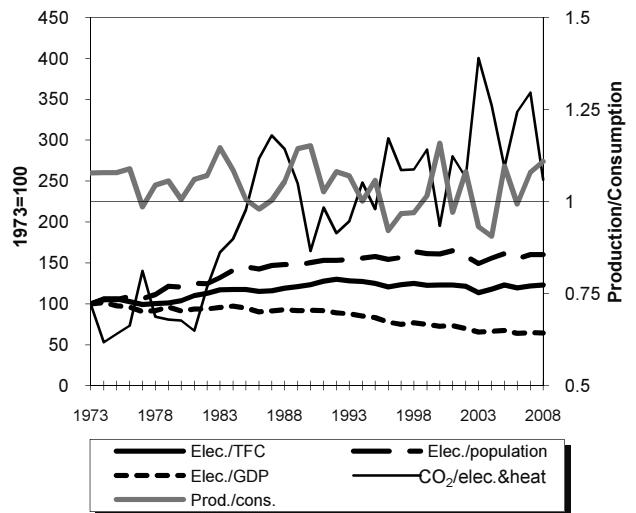
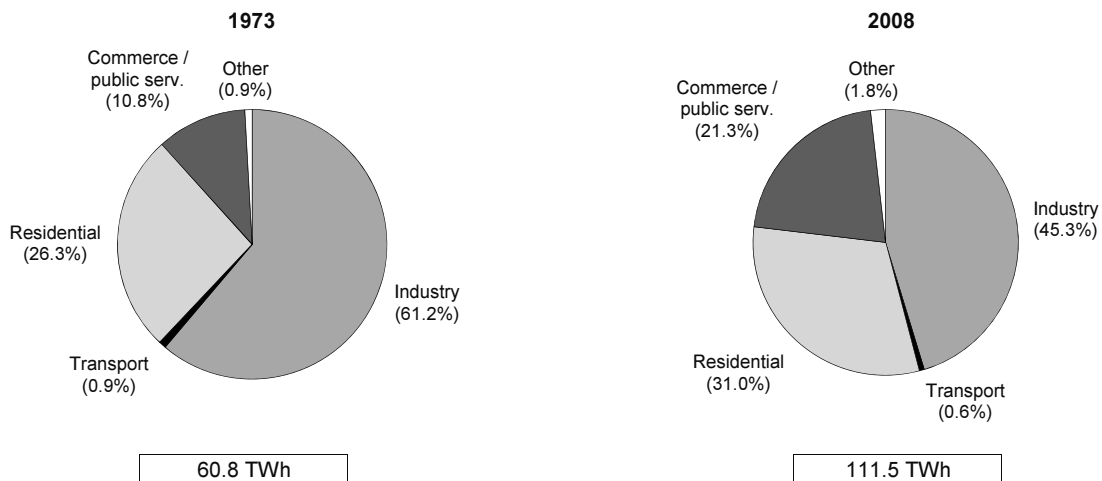


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--------------------------------------|-------|-------|--------|--------|--------|--------|--------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 14.26 | 18.32 | 21.00 | 25.87 | 27.45 | 29.67 | 26.51 | 2.3 | 1.2 |
| GDP (billion 2000 USD) | 67.05 | 91.23 | 116.97 | 168.29 | 197.32 | 200.90 | 199.32 | 3.3 | 2.8 |
| TPES/GDP ⁽¹⁾ | 0.21 | 0.20 | 0.18 | 0.15 | 0.14 | 0.15 | 0.13 | -1.0 | -1.6 |
| Population (millions) | 3.96 | 4.09 | 4.24 | 4.49 | 4.71 | 4.77 | 4.79 | 0.4 | 0.6 |
| TPES/population ⁽²⁾ | 3.60 | 4.48 | 4.95 | 5.76 | 5.83 | 6.22 | 5.54 | 1.9 | 0.6 |
| TPES/GDP (2000 = 100) | 138 | 131 | 117 | 100 | 91 | 96 | 87 | -1.0 | -1.6 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 139 | 126 | 127 | 100 | 86 | 85 | .. | -0.5 | .. |
| Ele.TFC/population ⁽⁴⁾ | 15353 | 18318 | 22835 | 24398 | 23521 | 23387 | .. | 2.4 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 73.03 | 83.75 | 121.61 | 139.61 | 136.11 | 141.70 | 131.96 | 3.0 | 0.4 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 14.26 | 18.32 | 21.00 | 25.87 | 27.45 | 29.67 | 26.51 | 2.3 | 1.2 |
| Coal | 0.91 | 1.01 | 0.86 | 1.08 | 0.75 | 0.77 | 0.56 | -0.3 | -2.2 |
| Oil | 7.53 | 8.71 | 8.06 | 8.95 | 9.76 | 11.74 | 8.92 | 0.4 | 0.5 |
| Gas | - | 0.87 | 1.98 | 4.14 | 4.87 | 4.86 | 5.50 | - | 5.5 |
| Comb. renew & waste | - | 0.58 | 1.03 | 1.36 | 1.32 | 1.36 | 1.32 | - | 1.3 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽¹⁾ | - | - | - | 0.00 | 0.08 | 0.08 | 0.08 | - | - |
| Hydro | 6.27 | 7.19 | 10.42 | 11.95 | 11.49 | 12.00 | 10.86 | 3.0 | 0.2 |
| Net electricity imports ⁽²⁾ | -0.45 | -0.04 | -1.37 | -1.64 | -0.86 | -1.19 | -0.77 | 6.8 | -3.0 |
| Heat | - | - | 0.02 | 0.02 | 0.04 | 0.05 | 0.05 | - | 5.2 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 73.1 | 84.1 | 121.8 | 140.1 | 138.0 | 137.2 | 142.7 | 132.8 |
| Nuclear | - | - | - | - | - | - | - | - |
| Hydro | 72.9 | 84.0 | 121.4 | 139.4 | 136.4 | 134.7 | 140.5 | 127.1 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 0.0 | 0.3 | 0.2 | 0.5 | 0.8 | 1.1 | 1.0 | 0.8 |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.0 | 0.5 | 0.9 | 0.9 | 1.0 |
| Combustible fuels | 0.2 | 0.1 | 0.3 | 0.6 | 0.9 | 1.4 | 1.1 | 4.7 |
| <i>Coal</i> | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 |
| <i>Oil</i> | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| <i>Gas</i> | - | - | - | 0.2 | 0.4 | 0.8 | 0.4 | 4.2 |
| <i>Comb. renew. & waste</i> | - | - | 0.2 | 0.3 | 0.4 | 0.5 | 0.5 | 0.3 |
| Other (e.g. fuel cells) | - | - | 0.1 e | 0.1 e | 0.1 | 0.2 | 0.2 | 0.1 |
| - Own use by power plant | 0.5 | 0.9 | 1.0 | 0.7 | 0.6 | 0.6 | 1.1 | .. |
| Net production | 72.5 | 83.2 | 120.8 | 139.4 | 137.4 | 136.6 | 141.5 | .. |
| Nuclear | .. | - | - | - | - | - | - | .. |
| Hydro | .. | 83.1 | 120.4 | 138.7 | 135.8 | 134.2 | 139.4 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | - | - | - | - | - | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | - | 0.0 | 0.5 | 0.9 | 0.9 | .. |
| Combustible fuels | .. | 0.1 | 0.3 | 0.6 | 0.9 | 1.4 | 1.1 | .. |
| Other (e.g. fuel cells) | .. | - | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | .. |
| - Used for heat pumps | - | - | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| - Used for electric boilers | - | - | 0.3 | 0.4 | 0.6 | 0.6 | 0.5 | 0.5 |
| - Used for pumped storage | 0.0 | 0.5 | 0.3 | 0.7 e | 1.1 | 1.5 | 1.4 | 1.2 |
| + Imports | 0.1 | 2.0 | 0.3 | 1.5 | 3.7 | 5.3 | 3.4 | 5.7 |
| - Exports | 5.3 | 2.5 | 16.2 | 20.5 | 15.7 | 15.3 | 17.3 | 14.6 |
| Electrical energy supplied | 67.3 | 82.2 | 104.3 | 119.3 | 123.5 | 124.3 | 125.6 | .. |
| - Transmission & distr. losses | 6.3 | 7.1 | 6.9 | 8.8 e | 10.0 | 10.1 | 10.2 | .. |
| - Statistical difference | - | - | - | - | - | - | - | .. |
| Total consumption | 61.0 | 75.1 | 97.4 | 110.5 | 113.5 | 114.2 | 115.4 | .. |
| - Energy industry consumption ⁽²⁾ | 0.2 | 0.3 | 0.6 | 1.0 | 2.8 | 3.6 | 3.9 | .. |
| Final consumption | 60.8 | 74.8 | 96.8 | 109.5 | 110.7 | 110.7 | 111.5 | .. |
| Industry | 37.2 | 39.9 | 45.8 | 51.6 | 52.0 | 49.7 | 50.5 | .. |
| Transport | 0.5 | 0.7 | 0.7 | 0.6 | 0.6 | 0.6 | 0.7 | .. |
| Commercial & publ. serv. | 6.6 | 11.0 | 19.4 | 20.6 | 22.0 | 23.3 | 23.8 | .. |
| Residential | 16.0 | 22.5 | 30.3 | 34.6 | 34.0 | 34.9 | 34.5 | .. |
| Agriculture & fishing | 0.5 | 0.7 | 0.7 | 2.1 | 2.1 | 2.1 | 2.0 | .. |
| Sector non specified | - | - | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 76.70 | 84.10 | 121.85 | 140.08 | 121.58 | 137.19 | 142.67 | 2.9 | 0.9 |
| - Hydro pumped storage | 0.05 | 0.35 | 0.24 | 0.47 | 0.38 | 1.08 | 0.97 | 10.6 | 8.1 |
| Total generation⁽¹⁾ | 76.65 | 83.75 | 121.61 | 139.61 | 121.21 | 136.11 | 141.70 | 2.9 | 0.9 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 65.66 | 72.53 | 109.00 | 124.92 | 116.06 | 130.88 | 137.24 | 3.2 | 1.3 |
| - Hydro pumped storage | 0.05 | 0.35 | 0.23 | 0.40 | 0.36 | 1.07 | 0.96 | 10.3 | 8.3 |
| Total generation ⁽¹⁾ | 65.61 | 72.18 | 108.77 | 124.52 | 115.70 | 129.81 | 136.28 | 3.2 | 1.3 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 65.58 | 72.15 | 108.56 | 124.34 | 114.77 | 128.24 | 134.98 | 3.2 | 1.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 0.07 e | 0.05 e | 0.68 | 0.94 | 0.96 | - | 16.1 |
| Coal | 0.03 | 0.01 | 0.08 e | 0.07 e | 0.14 | 0.14 | 0.16 | 7.7 | 3.7 |
| Oil | 0.01 | 0.02 | 0.01 | - | - | - | - | 1.1 | - |
| Gas | - | - | - | - | - | 0.36 | 0.07 | - | - |
| Comb. renew. & waste | - | - | 0.06 | 0.06 | 0.11 | 0.13 | 0.12 | - | 4.0 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 11.04 | 11.57 | 12.85 | 15.16 | 5.52 | 6.31 | 5.43 | 1.0 | -4.7 |
| - Hydro pumped storage | - | - | 0.01 | 0.07 | 0.01 | 0.01 | 0.01 | - | 0.9 |
| Total generation ⁽¹⁾ | 11.04 | 11.57 | 12.84 | 15.08 | 5.51 | 6.30 | 5.42 | 0.9 | -4.7 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 11.01 | 11.47 | 12.59 | 14.57 | 4.58 | 5.41 | 4.58 | 0.8 | -5.5 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 0.07 | 0.06 | 0.09 | 0.12 | 0.13 | - | 3.3 |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.03 | 0.10 | - | 0.01 | 0.03 | 0.04 | 0.02 | - | - |
| Gas | - | - | - | 0.21 | 0.47 | 0.40 | 0.37 | - | - |
| Comb. renew. & waste | - | - | 0.18 | 0.23 | 0.34 | 0.33 | 0.34 | - | 3.4 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|---|
| Total | 10972 | 11473 | 12756 | 15081 | 5490 | 6297 | 5433 | -4.6 |
| Total energy | 10947 | 11370 | 12448 | 211 | 264 | 264 | 175 | -21.1 |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | - | - | - | - | - |
| Energy non specified/other | 10947 | 11370 | 12448 | 211 | 264 | 264 | 175 | -21.1 |
| Total industry | 25 | 103 | 308 | 13149 | 5213 | 6019 | 5244 | 17.1 |
| Iron and steel | 9 | 36 | 108 | 707 | 1194 | 865 | 776 | 11.6 |
| Chemical and petrochemical | - | - | - | 2410 | 957 | 1251 | 1113 | - |
| Non-ferrous metals | - | - | - | 8945 | 2677 | 3532 | 3022 | - |
| Non-metallic minerals | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | - | - | - | - | 1 | 1 | 1 | - |
| Mining and quarrying | - | - | - | - | 29 | 35 | 31 | - |
| Food and tobacco | - | - | - | - | 4 | 3 | 3 | - |
| Pulp and printing | 16 | 67 | 200 | 964 | 333 | 314 | 282 | 1.9 |
| Wood and wood products | - | - | - | - | 5 | 4 | 4 | - |
| Construction | - | - | - | - | 4 | 5 | 4 | - |
| Textile and leather | - | - | - | - | - | - | - | - |
| Non specified/other industries | - | - | - | 123 | 9 | 9 | 8 | - |
| Total transport | - | - | - | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | - | - | - | - |
| Other | - | - | - | 1721 | 13 | 14 | 14 | - |
| Commerce and pub. services | - | - | - | 646 | 13 | 14 | 14 | - |
| Residential | - | - | - | 18 | - | - | - | - |
| Agriculture and fishing | - | - | - | - | - | - | - | - |
| Sector non specified | - | - | - | 1057 e | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

NORWAY

6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|------|--------|--------|---------|-------|-------|-------|---|
| Total | - | 6471 e | 8222 e | 12727 e | 14518 | 15070 | 15070 | 4.8 |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | - | 162 | 466 | 370 | 385 | 216 | 216 | 1.6 |
| Oil | - | 60 | 529 | 447 | 747 | 644 | 644 | 14.1 |
| Gas | - | - | 102 | 316 | 498 | 631 | 631 | - |
| Comb. renew. & waste | - | 3669 e | 4518 | 7209 | 7870 | 8585 | 8585 | 4.8 |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | 776 e | 697 e | 1048 e | 1342 | 1396 | 1396 | 3.3 |
| Heat pumps | - | 56 | 309 | 529 | 872 | 1185 | 1185 | 18.5 |
| Electric boilers | - | 1039 | 1383 | 2263 | 2237 | 1955 | 1955 | 3.6 |
| Other sources ⁽¹⁾ | - | 709 e | 218 e | 545 e | 567 | 458 | 458 | -2.4 |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | - | 4922 | 7269 | 11093 | 12567 | 13173 | .. | 5.6 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | 162 | 466 | 370 | 385 | 216 | .. | 1.6 |
| Oil | - | 60 | 526 | 443 | 744 | 641 | .. | 14.1 |
| Gas | - | - | 102 | 316 | 498 | 631 | .. | - |
| Comb. renew. & waste | - | 3605 | 4491 | 7180 | 7839 | 8552 | .. | 4.9 |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | 56 | 309 | 524 | 866 | 1179 | .. | 18.4 |
| Electric boilers | - | 1039 | 1375 | 2260 | 2235 | 1954 | .. | 3.6 |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | 1549 e | 953 e | 1634 e | 1951 | 1897 | .. | 1.1 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | - | 3 | 4 | 3 | 3 | .. | - |
| Gas | - | - | - | - | - | - | .. | - |
| Comb. renew. & waste | - | 64 e | 27 | 29 | 31 | 33 | .. | -3.6 |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | 776 e | 697 e | 1048 e | 1342 | 1396 | .. | 3.3 |
| Heat pumps | - | - | - | 5 | 6 | 6 | .. | - |
| Electric boilers | - | - | 8 | 3 | 2 | 1 | .. | - |
| Other sources ⁽¹⁾ | - | 709 e | 218 e | 545 e | 567 | 458 | .. | -2.4 |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 0.05 | 0.04 | 0.16 | 0.23 | 0.39 | 0.45 | 0.41 | 7.6 | 5.4 |
| Coal | 0.01 | 0.01 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 3.5 | 0.9 |
| Oil | 0.03 | 0.03 | 0.00 | 0.02 | 0.02 | 0.03 | 0.02 | -11.7 | 9.4 |
| Gas | - | - | - | 0.03 e | 0.07 | 0.12 | 0.07 | - | - |
| Comb. renew. & waste | - | - | 0.13 e | 0.17 | 0.26 | 0.27 | 0.29 | - | 4.5 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 0.01 | 0.14 | 0.18 | 0.29 | 0.37 | 0.33 | .. | 5.0 |
| Coal | .. | 0.01 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | .. | 0.9 |
| Oil | .. | 0.00 | 0.00 | 0.02 | 0.02 | 0.02 | 0.02 | .. | 8.8 |
| Gas | .. | - | - | 0.00 e | 0.01 | 0.08 | 0.03 | .. | - |
| Comb. renew. & waste | .. | - | 0.11 e | 0.14 | 0.23 | 0.24 | 0.26 | .. | 4.9 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | - | - | - | - | - | - | - | - | - |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 6.27 | 7.19 | 10.42 | 11.95 | 10.32 | 11.57 | 12.08 | 3.0 | 0.8 |
| Hydro | 6.27 | 7.19 | 10.42 | 11.95 | 10.26 | 11.49 | 12.00 | 3.0 | 0.8 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.00 | 0.05 | 0.08 | 0.08 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

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8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|-------|-------|------|------|------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 309 e | 255 e | 483 | 483 | 484 | 2.5 |
| Electricity production (GWh) | - | 39 e | 32 e | 94 | 94 | 94 | 5.0 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 27 | 2 | 1 | 3 | 4 | 2 | - |
| Fuel input (TJ) | 1164 | 72 | 39 | 131 | 158 | 72 | - |
| Electricity production (GWh) | 124 | 6 | 9 | 29 | 35 | 16 | 5.6 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 1269 | 2826 | 5194 | 2728 | - |
| Electricity production (GWh) | - | - | 211 | 471 | 764 | 432 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 946 | 1163 | 1395 | 1314 | 1356 | 2.0 |
| Electricity production (GWh) | - | 184 | 226 | 333 | 314 | 325 | 3.2 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 51 | 113 | 103 | - |
| Electricity production (GWh) | - | - | - | 5 | 11 | 10 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 61 | - | - | - |
| Electricity production (GWh) | - | - | - | 11 | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | - | 86 | 30 | - |
| Electricity production (GWh) | - | - | - | - | 13 | 6 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 124 | 229 | 478 | 943 | 1231 | 883 | 7.8 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|------|------|------|------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 4 | 21 | 23 | 25 | 27 | 22 | 0.3 |
| Fuel input (TJ) | 121 | 578 | 652 | 693 | 748 | 626 | 0.4 |
| Electricity production (GWh) | 13 | 43 | 40 | 43 | 43 | 65 | 2.3 |
| CHP Heat production (TJ) | - | 108 | 456 | 330 | 369 | 205 | 3.6 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | 16 | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | 14 | - | - | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 1988 | 2390 | 3906 | 3780 | 4140 | 4.2 |
| Electricity production (GWh) | - | 58 | 60 | 100 | 115 | 112 | 3.7 |
| CHP Heat production (TJ) | - | 1421 | 1777 | 3116 | 2988 | 3302 | 4.8 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 13 | 101 | 100 | 143 | 158 | 177 | 3.2 |
| CHP Heat production (TJ) | - | 1529 | 2233 | 3460 | 3357 | 3507 | 4.7 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|-------|------|------|------|------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 54 | 10 | 16 | 16 | 11 | -8.5 |
| Heat production (TJ) | - | 54 | 10 | 16 | 16 | 11 | -8.5 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | 2 | 16 | 21 | 21 | 18 | 13.0 |
| Fuel input (TJ) | - | 76 | 681 | 945 | 937 | 789 | 13.9 |
| Heat production (TJ) | - | 60 | 529 | 817 | 747 | 644 | 14.1 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 126 | 477 | 589 | 719 | - |
| Heat production (TJ) | - | - | 102 | 413 | 498 | 631 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 126 e | 296 | 2194 | 2155 | 2543 | 18.2 |
| Heat production (TJ) | - | 73 e | 160 | 1529 | 1468 | 1553 | 18.5 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | 467 | 537 | 538 | 546 | - |
| Heat production (TJ) | - | - | 467 | 537 | 538 | 546 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 2527 | 2588 | 2878 | 3409 | 3534 | 1.9 |
| Heat production (TJ) | - | 2175 | 2102 | 2344 | 2874 | 3177 | 2.1 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 14 | 9 | 3 | 8 | - |
| Heat production (TJ) | - | - | 12 | 8 | 2 | 7 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | - | 2362 | 3382 | 5664 | 6143 | 6569 | 5.8 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 13.36 | 15.98 | 17.44 | 19.80 | 20.38 | 20.87 | 20.90 | 1.6 | 1.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.81 | 0.87 | 0.78 | 0.95 | 0.56 | 0.64 | 0.66 | -0.3 | -0.9 |
| Oil | 7.31 | 8.09 | 7.36 | 7.51 | 8.53 | 8.74 | 8.48 | 0.0 | 0.8 |
| Gas | 0.01 | 0.00 | - | 0.59 | 0.77 | 0.69 | 0.85 | - | - |
| Comb. renew. & waste | - | 0.58 | 0.90 | 1.20 | 1.06 | 1.04 | 1.05 | - | 0.9 |
| Electricity | 5.23 | 6.43 | 8.33 | 9.42 | 9.24 | 9.52 | 9.59 | 2.8 | 0.8 |
| Heat | - | - | 0.07 | 0.13 | 0.23 | 0.25 | 0.26 | - | 7.3 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 5.84 | 6.43 | 6.03 | 6.94 | 6.61 | 6.57 | 6.68 | 0.2 | 0.6 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.76 | 0.84 | 0.77 | 0.95 | 0.56 | 0.64 | 0.66 | 0.1 | -0.8 |
| Oil | 1.88 | 1.98 | 0.93 | 0.77 | 1.14 | 1.03 | 1.01 | -4.1 | 0.5 |
| Gas | 0.00 | 0.00 | - | 0.17 | 0.20 | 0.18 | 0.21 | - | - |
| Comb. renew. & waste | - | 0.18 | 0.38 | 0.60 | 0.40 | 0.43 | 0.43 | - | 0.7 |
| Electricity | 3.20 | 3.43 | 3.94 | 4.43 | 4.29 | 4.27 | 4.34 | 1.2 | 0.5 |
| Heat | - | - | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | - | 3.0 |
| Transport | 2.30 | 2.89 | 3.41 | 4.06 | 4.58 | 4.80 | 4.75 | 2.4 | 1.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 2.25 | 2.83 | 3.35 | 4.00 | 4.51 | 4.70 | 4.63 | 2.4 | 1.8 |
| Gas | - | - | - | 0.00 | 0.01 | 0.04 | 0.05 | - | - |
| Comb. renew. & waste | - | - | - | - | 0.00 | 0.00 | 0.01 | - | - |
| Electricity | 0.04 | 0.06 | 0.06 | 0.05 | 0.06 | 0.05 | 0.06 | 1.3 | 0.3 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 0.58 | 1.63 | 2.04 | 2.12 | 2.25 | 2.44 | 2.47 | 7.7 | 1.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.01 | 0.69 | 0.34 | 0.24 | 0.23 | 0.22 | 0.21 | 23.0 | -2.7 |
| Gas | 0.00 | - | - | 0.00 | 0.01 | 0.02 | 0.02 | - | - |
| Comb. renew. & waste | - | - | - | 0.03 | 0.02 | 0.02 | 0.02 | - | - |
| Electricity | 0.57 | 0.95 | 1.67 | 1.77 | 1.82 | 2.01 | 2.04 | 6.6 | 1.1 |
| Heat | - | - | 0.03 | 0.09 | 0.16 | 0.17 | 0.17 | - | 9.6 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 1.87 | 3.19 | 3.60 | 3.82 | 3.81 | 3.84 | 3.79 | 3.9 | 0.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.06 | 0.03 | 0.01 | 0.00 | 0.00 | - | - | -12.2 | - |
| Oil | 0.44 | 0.82 | 0.45 | 0.25 | 0.24 | 0.20 | 0.17 | 0.2 | -5.4 |
| Gas | 0.01 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Comb. renew. & waste | - | 0.40 | 0.52 | 0.58 | 0.63 | 0.58 | 0.59 | - | 0.8 |
| Electricity | 1.37 | 1.94 | 2.61 | 2.98 | 2.89 | 3.01 | 2.97 | 3.8 | 0.7 |
| Heat | - | - | 0.02 | 0.02 | 0.04 | 0.05 | 0.06 | - | 5.2 |
| Agriculture & fishing | 0.06 | 0.27 | 0.51 | 0.77 | 0.76 | 0.75 | 0.73 | 12.9 | 2.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | 0.00 | - | - | - | - | - | - |
| Oil | 0.02 | 0.21 | 0.45 | 0.58 | 0.57 | 0.55 | 0.54 | 20.4 | 1.1 |
| Gas | - | - | - | - | 0.02 | 0.01 | 0.02 | - | - |
| Comb. renew. & waste | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Electricity | 0.05 | 0.06 | 0.06 | 0.18 | 0.18 | 0.18 | 0.17 | 1.5 | 6.2 |
| Heat | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | -3.8 |
| Other | 1.60 | - | - | - | 0.09 | 0.07 | 0.04 | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 1.60 | - | - | - | 0.09 | 0.07 | 0.04 | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 1.11 | 1.57 | 1.84 | 2.08 | 2.28 | 2.40 | 2.44 | 3.03 | 1.57 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

NORWAY

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 13.36 | 15.98 | 17.44 | 19.80 | 20.44 | 20.38 | 20.87 | 20.90 |
| Total industry (Mtoe) | 5.84 | 6.43 | 6.03 | 6.94 | 6.80 | 6.61 | 6.57 | 6.68 |
| Iron and steel | 1.30 | 1.36 | 1.27 | 1.25 | 0.87 | 0.68 | 0.72 | 0.76 |
| Chem. and petrochemical | 0.68 | 0.88 | 0.76 | 1.17 | 1.34 | 1.35 | 1.32 | 1.42 |
| Non-ferrous metals | 1.18 | 1.43 | 1.54 | 1.75 | 2.13 | 2.12 | 2.06 | 2.07 |
| Non-metallic minerals | 0.15 | 0.41 | 0.23 | 0.36 | 0.34 | 0.35 | 0.37 | 0.39 |
| Transport equipment | 0.03 | 0.11 | 0.07 | 0.08 | 0.08 | 0.10 | 0.08 | 0.08 |
| Machinery | 0.08 | 0.22 | 0.19 | 0.15 | 0.14 | 0.14 | 0.15 | 0.14 |
| Mining and quarrying | 0.06 | 0.15 | 0.12 | 0.08 | 0.09 | 0.09 | 0.10 | 0.10 |
| Food and tobacco | 0.11 | 0.44 | 0.40 | 0.40 | 0.37 | 0.38 | 0.37 | 0.38 |
| Paper, pulp and printing | 0.39 | 0.80 | 0.97 | 1.17 | 1.00 | 0.96 | 0.92 | 0.91 |
| Wood and wood products | 0.04 | 0.21 | 0.18 | 0.26 | 0.15 | 0.15 | 0.17 | 0.14 |
| Construction | 0.03 | 0.36 | 0.26 | 0.18 | 0.19 | 0.20 | 0.22 | 0.22 |
| Textile and leather | 0.02 | 0.05 | 0.03 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 |
| Non specified/other | 1.76 | 0.01 | 0.03 | 0.07 | 0.06 | 0.06 | 0.06 | 0.05 |
| Electricity consumption (Mtoe) | 5.23 | 6.43 | 8.33 | 9.42 | 9.52 | 9.24 | 9.52 | 9.59 |
| Total industry (Mtoe) | 3.20 | 3.43 | 3.94 | 4.43 | 4.47 | 4.29 | 4.27 | 4.34 |
| Iron and steel | 0.72 | 0.72 | 0.71 | 0.68 | 0.49 | 0.37 | 0.43 | 0.45 |
| Chem. and petrochemical | 0.49 | 0.52 | 0.52 | 0.67 | 0.66 | 0.64 | 0.62 | 0.69 |
| Non-ferrous metals | 1.16 | 1.26 | 1.45 | 1.65 | 2.04 | 2.03 | 1.97 | 1.98 |
| Non-metallic minerals | 0.07 | 0.06 | 0.07 | 0.08 | 0.08 | 0.08 | 0.08 | 0.09 |
| Transport equipment | 0.03 | 0.05 | 0.05 | 0.07 | 0.06 | 0.07 | 0.06 | 0.06 |
| Machinery | 0.08 | 0.13 | 0.15 | 0.12 | 0.11 | 0.11 | 0.11 | 0.11 |
| Mining and quarrying | 0.06 | 0.07 | 0.06 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| Food and tobacco | 0.11 | 0.15 | 0.20 | 0.27 | 0.24 | 0.24 | 0.24 | 0.25 |
| Paper, pulp and printing | 0.39 | 0.32 | 0.62 | 0.66 | 0.58 | 0.53 | 0.52 | 0.50 |
| Wood and wood products | 0.04 | 0.06 | 0.05 | 0.07 | 0.06 | 0.06 | 0.07 | 0.06 |
| Construction | 0.03 | 0.06 | 0.05 | 0.05 | 0.06 | 0.06 | 0.07 | 0.07 |
| Textile and leather | 0.02 | 0.02 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| Non specified/other | 0.00 | 0.00 | 0.01 | 0.06 | 0.05 | 0.05 | 0.05 | 0.05 |
| Total industry (TWh) | 37.19 | 39.93 | 45.81 | 51.57 | 52.03 | 49.90 | 49.66 | 50.50 |
| Iron and steel | 8.33 | 8.42 | 8.26 | 7.88 | 5.65 | 4.26 | 4.96 | 5.20 |
| Chem. and petrochemical | 5.69 | 6.06 | 6.09 | 7.76 | 7.62 | 7.48 | 7.23 | 8.06 |
| Non-ferrous metals | 13.51 | 14.62 | 16.83 | 19.21 | 23.76 | 23.59 | 22.87 | 22.99 |
| Non-metallic minerals | 0.79 | 0.69 | 0.76 | 0.90 | 0.89 | 0.93 | 0.94 | 1.01 |
| Transport equipment | 0.39 | 0.57 | 0.56 | 0.79 | 0.72 | 0.85 | 0.66 | 0.67 |
| Machinery | 0.94 | 1.54 | 1.69 | 1.39 | 1.22 | 1.25 | 1.32 | 1.28 |
| Mining and quarrying | 0.67 | 0.85 | 0.71 | 0.51 | 0.46 | 0.45 | 0.47 | 0.47 |
| Food and tobacco | 1.27 | 1.69 | 2.29 | 3.13 | 2.81 | 2.81 | 2.80 | 2.90 |
| Paper, pulp and printing | 4.50 | 3.77 | 7.21 | 7.71 | 6.75 | 6.16 | 6.06 | 5.79 |
| Wood and wood products | 0.46 | 0.70 | 0.57 | 0.84 | 0.72 | 0.71 | 0.81 | 0.68 |
| Construction | 0.37 | 0.72 | 0.53 | 0.59 | 0.71 | 0.71 | 0.76 | 0.78 |
| Textile and leather | 0.24 | 0.25 | 0.16 | 0.21 | 0.17 | 0.17 | 0.16 | 0.14 |
| Non specified/other | 0.03 | 0.04 | 0.16 | 0.65 | 0.56 | 0.54 | 0.64 | 0.54 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

Note: Please refer to notes in the introductory information for data coverage.

NORWAY

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-----------|-------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Total imports⁽¹⁾ | 66 | 2039 | 334 | 2301 | 1474 | 3653 | 9801 | 5285 | 3412 |
| Imports from: | | | | | | | | | |
| Total OECD | 20 | 1990 | 334 | 2221 | 1238 | 3438 | 9586 | 5095 | 3236 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | 669 | - | 499 | 146 | 470 | 2324 | 1159 | 427 |
| Finland | - | - | 2 | 63 | 174 | 131 | 84 | 110 | 59 |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | 326 |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | 20 | 1321 | 332 | 1659 | 918 | 2837 | 7178 | 3826 | 2424 |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | 46 | 49 | - | 80 | 236 | 215 | 215 | 190 | 176 |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | 46 | 49 | - | 80 | 236 | 215 | 215 | 190 | 176 |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

NORWAY

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|-------------|-------------|--------------|-------------|--------------|--------------|-------------|--------------|--------------|
| Total exports ⁽¹⁾ | 5259 | 2501 | 16241 | 8966 | 20529 | 15695 | 8947 | 15320 | 17275 |
| Exports to: | | | | | | | | | |
| Total OECD | 5259 | 2501 | 16241 | 8966 | 20529 | 15695 | 8947 | 15320 | 17275 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | 667 | 3950 | 1525 | 4634 | 4713 | 1130 | 3974 | 4806 |
| Finland | 3 | 9 | 125 | 53 | 131 | 164 | 150 | 202 | 159 |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | 3369 |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | 5256 | 1825 | 12166 | 7388 | 15764 | 10818 | 7667 | 11144 | 8941 |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

NORWAY

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 14.22 | 17.49 | 24.72 | 25.65 | 26.08 | 27.46 | 28.51 | 29.29 | 29.75 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 14.16 | 17.41 | 24.63 | 25.58 | 25.96 | 27.04 | 28.08 | 28.43 | 28.85 e |
| <i>of which: pumped storage</i> | <i>0.13</i> | <i>0.33</i> | <i>1.07</i> | <i>0.64</i> | <i>1.15</i> | <i>1.36</i> | <i>1.32</i> | <i>1.39</i> | <i>1.41 e</i> |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 0.01 | 0.27 | 0.28 | 0.32 | 0.36 e |
| Other (e.g. fuel cells) | - | - | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 e |
| Combustible fuels | 0.06 | 0.08 | 0.09 | 0.07 | 0.11 | 0.14 | 0.13 | 0.53 | 0.53 e |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | 0.01 | 0.02 | 0.05 | 0.06 | 0.06 | 0.05 | 0.05 | 0.05 e |
| Liquid fuels | 0.06 | 0.08 | 0.05 | 0.01 | 0.01 | - | - | - | - |
| Natural gas | - | - | - | - | - | - | - | 0.40 | 0.40 e |
| Comb. renew. & waste | - | - | 0.01 | 0.01 | 0.04 | 0.06 | 0.05 | 0.05 | 0.05 e |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | 0.02 | 0.02 | 0.02 | 0.02 e |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | - | - | - |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 0.07 | .. | 0.10 | 0.13 | 0.12 | 0.12 | 0.12 e |
| Internal combustion | - | - | 0.02 | .. | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 e |
| Gas turbine | - | - | 0.01 | .. | - | - | - | 0.40 | 0.40 e |
| Combined cycle | - | - | - | .. | - | - | - | - | - |
| Other | - | - | - | 0.07 | - | - | - | - | - |
| Peak load | 10.88 | 14.23 | 17.23 | 20.37 | 20.40 | .. | 21.58 | 21.59 | 21.59 |
| Available capacity | .. | .. | .. | 24.10 | 23.00 | .. | 24.50 | 25.70 | 25.81 |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 2.02 | 2.52 | 2.42 | 2.67 | 2.34 | 0.97 | 1.02 | 1.03 | 1.04 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 1.92 | 2.37 | 2.25 | 2.47 | 2.17 | 0.81 | 0.86 | 0.87 | 0.88 e |
| <i>of which: pumped storage</i> | - | - | - | 0.04 | 0.21 | 0.08 | 0.07 | 0.08 | 0.08 e |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 e |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | 0.02 | 0.02 | 0.02 | 0.02 e |
| Combustible fuels | 0.11 | 0.15 | 0.16 | 0.19 | 0.16 | 0.14 | 0.13 | 0.13 | 0.13 e |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 0.01 | - | 0.02 | 0.05 | 0.02 | - | - | - | - |
| Liquid fuels | 0.10 | 0.15 | 0.08 | - | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 e |
| Natural gas | - | - | - | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 e |
| Comb. renew. & waste | - | - | 0.06 | 0.11 | 0.10 | 0.08 | 0.08 | 0.08 | 0.08 e |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | - | - | - |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 0.16 | .. | 0.12 | 0.08 | 0.08 | 0.08 | 0.08 e |
| Internal combustion | - | - | - | - | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 e |
| Gas turbine | - | - | - | .. | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 e |
| Combined cycle | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | 0.19 | - | - | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Norwegian Crowns/ unit | | | | | | | | |
| Steam coal (t) | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil (t) | x | x | x | x | x | x | x | x | x |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Norwegian Crowns/ toe | | | | | | | | |
| Steam coal | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil | x | x | x | x | x | x | x | x | x |
| Natural gas ⁽²⁾ | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| End-user prices of electricity | | | | | | | | | |
| | Norwegian Crowns/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0610 | 0.0900 | 0.2200 | 0.1710 | 0.2798 | 0.3550 | 0.2819 | 0.3590 | 0.3691 |
| <i>of which: tax</i> | 0.0150 | 0.0200 | 0.0390 | 0.0320 | 0.0560 | 0.0710 | 0.0564 | 0.0720 | 0.0739 |
| Household | | | | | | | | | |
| Price | 0.1490 | 0.1750 | 0.4590 | 0.5086 | 0.7859 | 0.9995 | 0.7714 | 0.9257 | 0.8639 |
| <i>of which: tax</i> | 0.0420 | 0.0430 | 0.1150 | 0.1807 | 0.2560 | 0.3004 | 0.2566 | 0.2901 | 0.2810 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

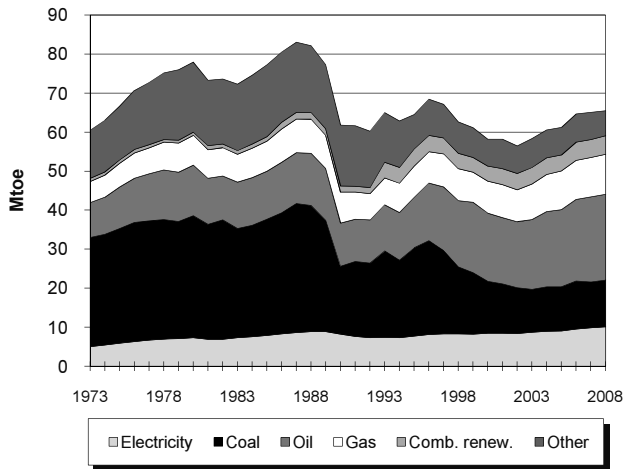


Figure 2. Electricity generation by fuel

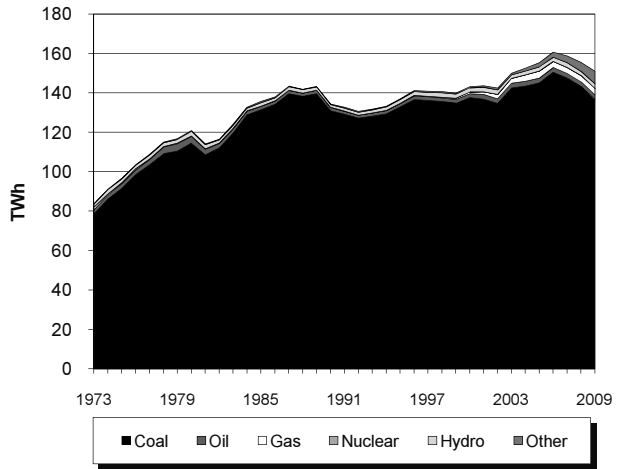


Figure 3. Electricity consumption by sector

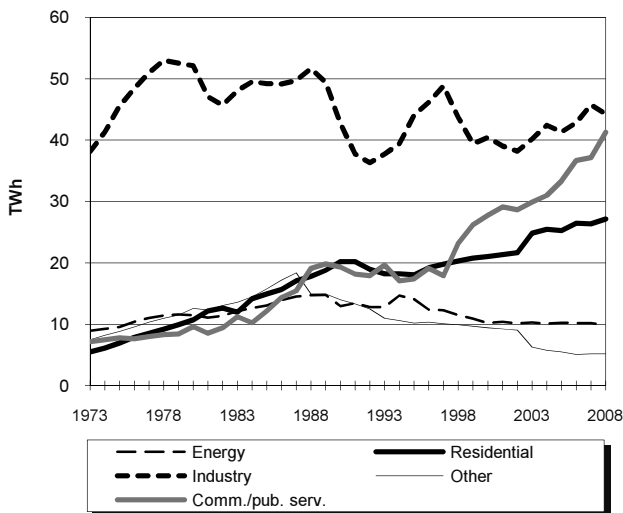


Figure 4. Electricity indicators

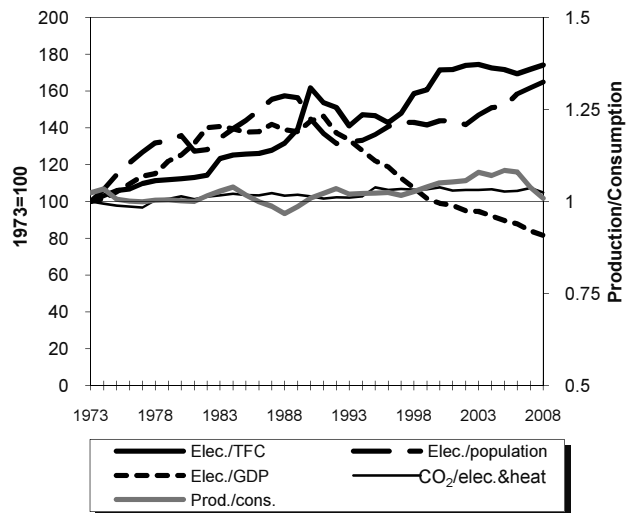
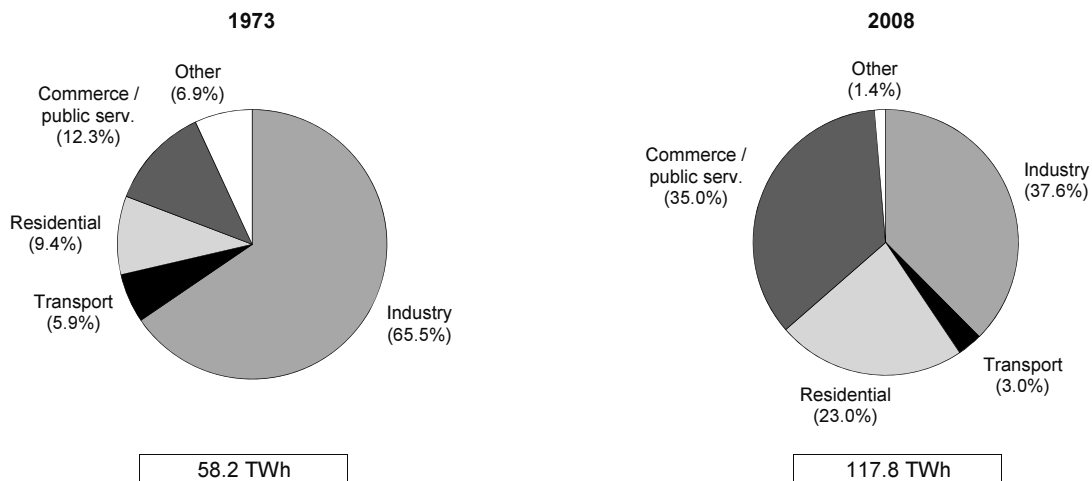


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 92.88 | 126.62 | 103.10 | 89.12 | 97.00 | 97.88 | 93.56 | 0.6 | -0.5 |
| GDP (billion 2000 USD) | 102.82 | 118.99 | 118.17 | 171.28 | 226.15 | 237.47 | 245.10 | 0.8 | 3.9 |
| TPES/GDP ⁽¹⁾ | 0.90 | 1.06 | 0.87 | 0.52 | 0.43 | 0.41 | 0.38 | -0.2 | -4.3 |
| Population (millions) | 33.37 | 35.58 | 38.03 | 38.26 | 38.12 | 38.12 | 38.09 | 0.8 | 0.0 |
| TPES/population ⁽²⁾ | 2.78 | 3.56 | 2.71 | 2.33 | 2.54 | 2.57 | 2.46 | -0.2 | -0.5 |
| TPES/GDP (2000 = 100) | 174 | 205 | 168 | 100 | 82 | 79 | 73 | -0.2 | -4.3 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 98 | 124 | 141 | 100 | 88 | 86 | .. | 2.2 | .. |
| Ele.TFC/population ⁽⁴⁾ | 1746 | 2391 | 2531 | 2579 | 3006 | 3093 | .. | 2.2 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 83.91 | 120.94 | 134.42 | 143.17 | 158.76 | 155.58 | 151.02 | 2.8 | 0.6 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|--------------|---------------|---------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 92.88 | 126.62 | 103.10 | 89.12 | 97.00 | 97.88 | 93.56 | 0.6 | -0.5 |
| Coal | 74.70 | 99.80 | 78.87 | 56.30 | 55.73 | 54.75 | 51.34 | 0.3 | -2.2 |
| Oil | 10.68 | 16.65 | 13.04 | 19.16 | 23.69 | 24.54 | 23.85 | 1.2 | 3.2 |
| Gas | 6.25 | 8.77 | 8.94 | 9.96 | 12.37 | 12.54 | 12.27 | 2.1 | 1.7 |
| Comb. renew & waste | 1.27 | 1.21 | 2.23 | 4.06 | 5.40 | 5.89 | 5.97 | 3.4 | 5.3 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | 0.00 | 0.01 | 0.01 | 0.01 | - | - |
| Solar, wind, tide ⁽¹⁾ | - | - | - | 0.00 | 0.05 | 0.07 | 0.10 | - | - |
| Hydro | 0.13 | 0.20 | 0.12 | 0.18 | 0.20 | 0.19 | 0.21 | -0.2 | 2.8 |
| Net electricity imports ⁽²⁾ | -0.15 | -0.02 | -0.09 | -0.55 | -0.46 | -0.11 | -0.19 | -3.0 | 4.0 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

(TWh)

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
|--|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Gross production | 84.3 | 121.9 | 136.3 | 145.2 | 156.9 | 159.3 | 156.2 | 151.6 |
| Nuclear | - | - | - | - | - | - | - | - |
| Hydro | 1.9 | 3.3 | 3.3 | 4.1 | 3.8 | 2.9 | 2.7 | 3.0 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 0.4 | 0.9 | 1.9 | 2.0 | 1.6 | 0.6 | 0.6 | 0.6 |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.0 | 0.1 | 0.5 | 0.8 | 1.1 |
| Combustible fuels | 82.5 | 118.6 | 133.0 | 141.1 | 153.0 | 155.9 | 152.6 | 147.5 |
| <i>Coal</i> | 78.8 | 114.5 | 131.0 | 137.7 | 145.2 | 147.6 | 143.4 | 136.7 |
| <i>Oil</i> | 2.0 | 3.5 | 1.6 | 1.9 | 2.4 | 2.3 | 2.3 | 2.3 |
| <i>Gas</i> | 1.4 | 0.1 | 0.1 | 0.9 | 3.6 | 3.1 | 3.2 | 3.2 |
| <i>Comb. renew. & waste</i> | 0.3 | 0.4 | 0.3 | 0.6 | 1.9 | 2.9 | 3.7 | 5.2 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - |
| - Own use by power plant | 7.8 | 11.7 | 12.9 | 13.0 | 13.3 | 14.0 | 13.6 | .. |
| Net production | 76.5 | 110.2 | 123.4 | 132.2 | 143.6 | 145.4 | 142.6 | .. |
| Nuclear | .. | - | - | - | - | - | - | .. |
| Hydro | .. | 3.3 | 3.3 | 4.1 | 3.7 | 2.9 | 2.7 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | - | - | - | - | - | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | - | 0.0 | 0.1 | 0.5 | 0.8 | .. |
| Combustible fuels | .. | 106.9 | 120.1 | 128.1 | 139.7 | 142.0 | 139.0 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | - | - | - | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | 0.6 | 1.2 | 2.6 | 2.8 | 2.2 | 0.9 | 0.9 | 0.9 |
| + Imports | 2.0 | 4.2 | 10.4 | 3.3 | 5.0 | 7.8 | 8.5 | 7.4 |
| - Exports | 3.8 | 4.4 | 11.5 | 9.7 | 16.2 | 13.1 | 9.7 | 9.6 |
| Electrical energy supplied | 74.2 | 108.7 | 119.8 | 123.1 | 130.2 | 139.1 | 140.4 | .. |
| - Transmission & distr. losses | 7.0 | 12.2 | 10.6 | 14.2 | 14.6 | 14.4 | 12.7 | .. |
| - Statistical difference | - | - | - | - | - | - | - | .. |
| Total consumption | 67.2 | 96.5 | 109.2 | 108.8 | 115.6 | 124.7 | 127.8 | .. |
| - Energy industry consumption ⁽²⁾ | 8.9 | 11.5 | 13.0 | 10.2 | 10.2 | 10.2 | 9.9 | .. |
| Final consumption | 58.2 | 85.0 | 96.2 | 98.6 | 105.4 | 114.5 | 117.8 | .. |
| Industry | 38.1 | 52.1 | 42.7 | 40.5 | 41.3 | 45.8 | 44.3 | .. |
| Transport | 3.5 | 4.8 | 5.5 | 4.7 | 4.0 | 3.7 | 3.6 | .. |
| Commercial & publ. serv. | 7.2 | 9.6 | 19.3 | 27.8 | 33.4 | 37.2 | 41.3 | .. |
| Residential | 5.5 | 10.7 | 20.2 | 21.0 | 25.3 | 26.4 | 27.1 | .. |
| Agriculture & fishing | 2.2 | 5.4 | 8.5 | 4.8 | 1.5 | 1.5 | 1.6 | .. |
| Sector non specified | 1.8 | 2.4 | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 91.60 | 121.87 | 136.31 | 145.18 | 161.74 | 159.35 | 156.18 | 2.5 | 0.8 |
| - Hydro pumped storage | 0.33 | 0.93 | 1.90 | 2.01 | 0.98 | 0.59 | 0.60 | 11.5 | -6.2 |
| Total generation⁽¹⁾ | 91.27 | 120.94 | 134.42 | 143.17 | 160.76 | 158.76 | 155.58 | 2.4 | 0.8 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 81.92 | 111.53 | 128.21 | 137.95 | 153.52 | 151.48 | 149.31 | 2.8 | 0.8 |
| - Hydro pumped storage | 0.33 | 0.93 | 1.90 | 2.01 | 0.98 | 0.59 | 0.60 | 11.5 | -6.2 |
| Total generation ⁽¹⁾ | 81.59 | 110.60 | 126.31 | 135.94 | 152.54 | 150.90 | 148.71 | 2.8 | 0.9 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 2.12 | 2.35 | 1.42 | 2.10 | 2.04 | 2.35 | 2.15 | -2.5 | 2.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.01 | 0.26 | 0.52 | 0.84 | - | - |
| Coal | 77.48 | 105.81 | 124.29 | 132.28 | 145.59 | 142.97 | 139.30 | 3.0 | 0.6 |
| Oil | 1.63 | 2.42 | 0.59 | 0.66 | 0.60 | 0.55 | 0.65 | -6.1 | 0.5 |
| Gas | 0.36 | 0.02 | 0.01 | 0.82 | 2.90 | 2.86 | 2.86 | -20.1 | 36.9 |
| Comb. renew. & waste | - | - | 0.01 | 0.07 | 1.16 | 1.64 | 2.92 | - | 35.7 |
| <u>Autoproductors</u> | | | | | | | | | |
| Gross production | 9.68 | 10.34 | 8.10 | 7.24 | 8.22 | 7.87 | 6.87 | -1.1 | -0.9 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 9.68 | 10.34 | 8.10 | 7.24 | 8.22 | 7.87 | 6.87 | -1.1 | -0.9 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | - | - | - | - | - |
| Coal | 8.71 | 8.74 | 6.76 | 5.38 | 4.93 | 4.66 | 4.07 | -1.6 | -2.8 |
| Oil | 0.52 | 1.07 | 0.98 | 1.25 | 1.85 | 1.75 | 1.67 | 4.0 | 3.0 |
| Gas | 0.13 | 0.12 | 0.12 | 0.11 | 0.21 | 0.20 | 0.31 | -0.6 | 5.6 |
| Comb. renew. & waste | 0.33 | 0.41 | 0.25 | 0.48 | 1.24 | 1.25 | 0.81 | -1.7 | 6.9 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---|
| Total | 8094 | 8247 | 6070 | 6586 | 7502 | 7212 | 6432 | 0.3 |
| Total energy | - | - | 1795 | 2107 | 3952 | 3567 | 2549 | 2.0 |
| Coal mines | - | - | - | 97 | 3 | 3 | 3 | - |
| Oil and gas extraction | - | - | - | - | 11 | 12 | 13 | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | 412 | 468 | 484 | 548 | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | 1393 | 2086 | 2047 | 1974 | - |
| Energy non specified/other | - | - | 1795 | 205 | 1384 | 1021 | 11 | -24.7 |
| Total industry | - | - | 4275 | 4448 | 3406 | 3461 | 3624 | -0.9 |
| Iron and steel | - | - | 814 | 917 | 410 | 398 | 531 | -2.3 |
| Chemical and petrochemical | - | - | 2105 | 1849 | 1623 | 1505 | 1706 | -1.2 |
| Non-ferrous metals | - | - | 188 | 303 | - | - | - | - |
| Non-metallic minerals | - | - | 2 | 4 | - | - | - | - |
| Transport equipment | - | - | 66 | 59 | - | - | - | - |
| Machinery | - | - | 54 | 17 | 4 | 3 | 3 | -14.8 |
| Mining and quarrying | - | - | 24 | 7 | - | - | - | - |
| Food and tobacco | - | - | 436 | 413 | 306 | 337 | 267 | -2.7 |
| Pulp and printing | - | - | 465 | 747 | 980 | 1128 | 1047 | 4.6 |
| Wood and wood products | - | - | 10 | 10 | 6 | 6 | 5 | -3.8 |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | - | - | 111 | 41 | 3 | 1 | - | - |
| Non specified/other industries | - | - | - | 81 | 74 | 83 | 65 | - |
| Total transport | - | - | - | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | - | - | - | - |
| Other | 8094 | 8247 | - | 31 | 144 | 184 | 259 | - |
| Commerce and pub. services | - | - | - | 31 | 144 | 184 | 259 | - |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | - | - | - | - | - | - | - | - |
| Sector non specified | 8094 | 8247 | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---|
| Total | 837323 | 739569 | 340684 | 340716 | 321014 | 312650 | 300000 | -4.7 |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | 748961 | 668367 | 319134 | 308298 | 291094 | 279081 | 266412 | -4.7 |
| Oil | 54491 | 42499 | 7937 | 5162 | 4501 | 4391 | 4233 | -11.8 |
| Gas | 23839 | 14723 | 10985 | 21584 | 18825 | 20291 | 19700 | 1.8 |
| Comb. renew. & waste | 10032 | 13980 | 2628 | 5672 | 6594 | 8887 | 9655 | -2.5 |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 351256 | 332290 | 295329 | 294265 | 281764 | 290453 | .. | -0.7 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | 337931 | 324013 | 280490 | 272942 | 260075 | 263613 | .. | -1.1 |
| Oil | 11641 | 7874 | 5099 | 2108 | 1645 | 1884 | .. | -7.6 |
| Gas | 1684 | 354 | 8547 | 17256 | 16664 | 18616 | .. | 24.6 |
| Comb. renew. & waste | - | 49 | 1193 | 1959 | 3380 | 6340 | .. | 31.0 |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | 486067 | 407279 | 45355 | 46451 | 39250 | 22197 | .. | -14.9 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | 411030 | 344354 | 38644 | 35356 | 31019 | 15468 | .. | -15.8 |
| Oil | 42850 | 34625 | 2838 | 3054 | 2856 | 2507 | .. | -13.6 |
| Gas | 22155 | 14369 | 2438 | 4328 | 2161 | 1675 | .. | -11.3 |
| Comb. renew. & waste | 10032 | 13931 | 1435 | 3713 | 3214 | 2547 | .. | -9.0 |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 39.54 | 57.52 | 55.04 | 40.61 | 43.40 | 42.40 | 41.32 | 2.0 | -1.6 |
| Coal | 37.02 e | 53.89 | 52.45 | 39.34 | 40.86 | 39.88 | 38.44 | 2.1 | -1.7 |
| Oil | 1.16 | 2.47 | 1.60 | 0.58 | 0.60 | 0.56 | 0.54 | 1.9 | -5.9 |
| Gas | 0.96 | 0.77 | 0.52 | 0.52 | 1.26 | 1.19 | 1.23 | -3.6 | 4.9 |
| Comb. renew. & waste | 0.40 | 0.39 | 0.47 | 0.17 | 0.68 | 0.78 | 1.11 | 1.1 | 4.8 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 38.54 | 39.80 | 38.13 | 40.45 | 39.89 | 39.55 | .. | -0.0 |
| Coal | .. | 37.53 | 39.40 | 37.35 | 38.78 | 38.18 | 37.35 | .. | -0.3 |
| Oil | .. | 0.95 | 0.39 | 0.30 | 0.19 | 0.17 | 0.19 | .. | -3.8 |
| Gas | .. | 0.06 | 0.01 | 0.43 | 1.12 | 1.09 | 1.14 | .. | 28.1 |
| Comb. renew. & waste | .. | - | 0.00 | 0.05 | 0.36 | 0.45 | 0.86 | .. | 34.2 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | - | - | - | - | - | - | - | - | - |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 0.13 | 0.20 | 0.12 | 0.18 | 0.20 | 0.25 | 0.26 | -0.2 | 4.2 |
| Hydro | 0.13 | 0.20 | 0.12 | 0.18 | 0.18 | 0.20 | 0.19 | -0.2 | 2.3 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.00 | 0.02 | 0.04 | 0.07 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

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8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|------|------|------|------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 396 | - | - | - | - |
| Electricity production (GWh) | - | - | 31 | - | - | - | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | - | - | 31 | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|---------|---------|--------|---------|---------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 77529 | 59361 | 44514 | 47362 | 47539 | 43619 | -1.7 |
| Fuel input (TJ) | 1480962 | 1211894 | 962652 | 1024453 | 1016910 | 935095 | -1.4 |
| Electricity production (GWh) | 89226 | 75774 | 82419 | 90910 | 90807 | 83914 | 0.6 |
| CHP Heat production (TJ) | 440954 | 358447 | 174179 | 187173 | 176917 | 161850 | -4.3 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 33839 | 66565 | 59066 | 60198 | 56865 | 58613 | -0.7 |
| Fuel input (TJ) | 264768 | 552146 | 505127 | 525425 | 500787 | 520815 | -0.3 |
| Electricity production (GWh) | 24442 | 54587 | 53469 | 57699 | 54762 | 57262 | 0.3 |
| CHP Heat production (TJ) | 4668 | 5442 | 8575 | 6047 | 5931 | 5413 | -0.0 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 29821 | 25805 | 22064 | 27411 | 27311 | 33336 | 1.4 |
| Electricity production (GWh) | 879 | 684 | 1779 | 1913 | 2062 | 2193 | 6.7 |
| CHP Heat production (TJ) | 17492 | 16178 | 5373 | 9049 | 7260 | 11665 | -1.8 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 2350 | 1288 | 451 | 576 | 545 | 524 | -4.9 |
| Fuel input (TJ) | 95287 | 51947 | 18126 | 23242 | 22136 | 21289 | -4.8 |
| Electricity production (GWh) | 3492 | 1570 | 1916 | 2441 | 2304 | 2323 | 2.2 |
| CHP Heat production (TJ) | 48006 | 31434 | 2856 | 3311 | 3467 | 3246 | -11.9 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 4976 | 3295 | 13914 | 44859 | 43709 | 45632 | 15.7 |
| Electricity production (GWh) | 144 | 125 | 928 | 3111 | 3062 | 3166 | 19.7 |
| CHP Heat production (TJ) | 2889 | 1607 | 3696 | 11035 | 10498 | 11456 | 11.5 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 9867 | 10408 | 2926 | 19384 | 23737 | 36154 | 7.2 |
| Electricity production (GWh) | 248 | 55 | 190 | 1851 | 2360 | 3200 | 25.3 |
| CHP Heat production (TJ) | 6094 | 8109 | 1347 | 1707 | 2656 | 3951 | -3.9 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 5289 | 5172 | 3233 | 5173 | 4748 | 4685 | -0.5 |
| Electricity production (GWh) | 161 | 203 | 331 | 381 | 335 | 277 | 1.7 |
| CHP Heat production (TJ) | 3077 | 2902 | 754 | 1838 | 1847 | 1978 | -2.1 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | 384 | - |
| Electricity production (GWh) | - | - | - | - | - | 7 | - |
| CHP Heat production (TJ) | - | - | - | - | - | 283 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | 2019 | 2301 | 3017 | - |
| Electricity production (GWh) | - | - | - | 160 | 195 | 251 | - |
| CHP Heat production (TJ) | - | - | - | 701 | 697 | 909 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 118592 | 132998 | 141032 | 158466 | 155887 | 152593 | 0.8 |
| CHP Heat production (TJ) | 523180 | 424119 | 196780 | 220861 | 209273 | 200751 | -4.1 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|--------|--------|--------|--------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 18452 | 18722 | 7234 | 5761 | 5418 | 5315 | -6.8 |
| Fuel input (TJ) | 415793 | 398909 | 157362 | 133675 | 125840 | 121565 | -6.4 |
| Heat production (TJ) | 280200 | 282920 | 129698 | 105830 | 100043 | 99349 | -5.6 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 318 | 357 | 39 | 33 | 31 | 32 | -12.5 |
| Fuel input (TJ) | 3042 | 3427 | 439 | 374 | 345 | 371 | -11.6 |
| Heat production (TJ) | 2063 | 2399 | 349 | 294 | 272 | 301 | -10.9 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 5287 | 4489 | 1246 | 1270 | 773 | 585 | -10.7 |
| Heat production (TJ) | 3584 | 2981 | 960 | 1093 | 671 | 503 | -9.4 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 234 | 380 | 154 | 50 | 32 | 34 | -12.5 |
| Fuel input (TJ) | 9566 | 15299 | 6344 | 2094 | 1296 | 1398 | -12.4 |
| Heat production (TJ) | 6485 | 11065 | 5081 | 1665 | 1034 | 1145 | -11.8 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 30925 | 20937 | 10115 | 13817 | 11461 | 11824 | -3.1 |
| Heat production (TJ) | 20950 | 13116 | 7289 | 9998 | 8327 | 8835 | -2.2 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 793 | 4163 | 535 | 1796 | 1697 | 2097 | -3.7 |
| Heat production (TJ) | 538 | 2895 | 455 | 1439 | 1361 | 1725 | -2.8 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | 476 | 93 | 40 | 32 | 35 | 26 | -6.8 |
| Heat production (TJ) | 323 | 64 | 35 | 25 | 30 | 24 | -5.3 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 14 | 47 | 2 | 4 | 21 | 2.3 |
| Heat production (TJ) | - | 10 | 37 | 1 | 3 | 17 | 3.0 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | 314143 | 315450 | 143904 | 120345 | 111741 | 111899 | -5.6 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 60.55 | 78.01 | 61.83 | 58.21 | 64.68 | 65.09 | 65.52 | 0.1 | 0.3 |
| Geothermal | - | - | - | 0.00 | 0.01 | 0.01 | 0.01 | - | - |
| Solar thermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Coal | 27.99 | 31.26 | 17.39 | 13.30 | 12.27 | 11.76 | 12.00 | -2.8 | -2.0 |
| Oil | 8.96 | 13.00 | 11.07 | 17.51 | 20.94 | 21.85 | 22.00 | 1.3 | 3.9 |
| Gas | 5.45 | 7.66 | 7.90 | 8.15 | 10.04 | 10.05 | 10.21 | 2.2 | 1.4 |
| Comb. renew. & waste | 0.81 | 0.76 | 1.63 | 3.89 | 4.68 | 4.62 | 4.78 | 4.2 | 6.2 |
| Electricity | 5.01 | 7.31 | 8.28 | 8.48 | 9.55 | 9.85 | 10.13 | 3.0 | 1.1 |
| Heat | 12.33 | 18.01 | 15.56 | 6.88 | 7.18 | 6.94 | 6.39 | 1.4 | -4.8 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 26.24 | 32.20 | 23.26 | 17.54 | 16.26 | 16.72 | 15.52 | -0.7 | -2.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 9.43 | 9.96 | 6.69 | 7.53 | 4.60 | 4.82 | 4.57 | -2.0 | -2.1 |
| Oil | 1.45 | 2.07 | 0.94 | 1.82 | 1.55 | 1.41 | 1.28 | -2.5 | 1.7 |
| Gas | 3.62 | 4.28 | 2.64 | 2.27 | 2.94 | 3.08 | 3.03 | -1.8 | 0.8 |
| Comb. renew. & waste | 0.16 | 0.31 | 0.68 | 0.99 | 1.49 | 1.49 | 1.26 | 8.7 | 3.5 |
| Electricity | 3.28 | 4.48 | 3.68 | 3.48 | 3.68 | 3.94 | 3.81 | 0.7 | 0.2 |
| Heat | 8.30 | 11.09 | 8.64 | 1.45 | 2.00 | 2.00 | 1.58 | 0.2 | -9.0 |
| Transport | 8.97 | 9.17 | 7.27 | 9.51 | 13.37 | 14.71 | 15.67 | -1.2 | 4.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 3.66 | 1.80 | 0.17 | - | - | - | - | -16.4 | - |
| Oil | 5.01 | 6.96 | 6.62 | 9.05 | 12.65 | 13.99 | 14.59 | 1.7 | 4.5 |
| Gas | - | - | - | 0.06 | 0.32 | 0.30 | 0.33 | - | - |
| Comb. renew. & waste | - | - | - | - | 0.10 | 0.11 | 0.44 | - | - |
| Electricity | 0.30 | 0.41 | 0.47 | 0.40 | 0.31 | 0.32 | 0.31 | 2.7 | -2.4 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 5.53 | 7.65 | 5.61 | 4.96 | 6.85 | 6.74 | 7.31 | 0.1 | 1.5 |
| Geothermal | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Solar thermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Coal | 4.20 e | 5.57 e | 2.80 e | 0.52 | 0.77 | 0.66 | 0.72 | -2.4 | -7.2 |
| Oil | - | - | - | 0.39 | 0.68 | 0.56 | 0.56 | - | - |
| Gas | 0.15 | 0.34 | 0.34 | 0.92 | 1.50 | 1.55 | 1.69 | 4.8 | 9.4 |
| Comb. renew. & waste | 0.06 | 0.04 | 0.02 | 0.22 | 0.12 | 0.14 | 0.18 | -6.3 | 12.6 |
| Electricity | 0.61 | 0.83 | 1.66 | 2.39 | 3.16 | 3.20 | 3.55 | 6.0 | 4.3 |
| Heat | 0.50 | 0.87 | 0.79 | 0.52 | 0.62 | 0.62 | 0.61 | 2.8 | -1.5 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|--------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 13.80 | 20.17 | 18.01 | 17.19 | 19.37 | 18.39 | 18.50 | 1.6 | 0.1 |
| Geothermal | - | - | - | 0.00 | 0.01 | 0.01 | 0.01 | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 9.20 e | 12.31 e | 6.62 e | 4.27 | 5.78 | 5.25 | 5.59 | -1.9 | -0.9 |
| Oil | 0.12 | 0.17 | 0.04 | 0.89 | 0.95 | 0.96 | 0.80 | -6.2 | 18.0 |
| Gas | 0.62 | 1.44 | 2.99 | 3.05 | 3.31 | 3.17 | 3.14 | 9.7 | 0.3 |
| Comb. renew. & waste | 0.57 | 0.39 | 0.82 | 2.27 | 2.50 | 2.44 | 2.45 | 2.2 | 6.3 |
| Electricity | 0.47 | 0.92 | 1.74 | 1.81 | 2.28 | 2.27 | 2.33 | 8.0 | 1.6 |
| Heat | 2.82 | 4.93 | 5.80 | 4.90 | 4.54 | 4.30 | 4.18 | 4.3 | -1.8 |
| Agriculture & fishing | 2.15 | 3.22 | 3.36 | 4.62 | 3.80 | 3.49 | 3.60 | 2.7 | 0.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.74 | 1.08 | 0.92 | 0.90 | 1.10 | 0.97 | 1.07 | 1.3 | 0.8 |
| Oil | 0.91 | 1.26 | 1.37 | 2.87 | 2.04 | 1.87 | 1.87 | 2.4 | 1.8 |
| Gas | 0.03 | 0.01 | 0.01 | 0.01 | 0.04 | 0.04 | 0.05 | -5.3 | 8.3 |
| Comb. renew. & waste | 0.01 | 0.02 | 0.00 | 0.41 | 0.48 | 0.46 | 0.45 | -14.4 | 41.0 |
| Electricity | 0.19 | 0.46 | 0.73 | 0.41 | 0.13 | 0.13 | 0.14 | 8.2 | -8.8 |
| Heat | 0.26 | 0.40 | 0.33 | 0.02 | 0.02 | 0.02 | 0.02 | 1.4 | -13.6 |
| Other | 0.65 | 1.04 | 0.11 | 0.04 | - | - | 0.00 | -10.1 | -22.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.05 | 0.12 | - | - | - | - | - | - | - |
| Oil | - | - | - | 0.04 | - | - | 0.00 | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | 0.11 | - | - | - | - | - | - |
| Electricity | 0.15 | 0.21 | - | - | - | - | - | - | - |
| Heat | 0.45 | 0.72 | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 3.22 | 4.55 | 4.21 | 4.35 | 5.03 | 5.03 | 4.91 | 1.60 | 0.86 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

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12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 60.55 | 78.01 | 61.83 | 58.21 | 61.27 | 64.68 | 65.09 | 65.52 |
| Total industry (Mtoe) | 26.24 | 32.20 | 23.26 | 17.54 | 15.54 | 16.26 | 16.72 | 15.52 |
| Iron and steel | 5.81 | 7.09 | 5.07 | 3.48 | 2.31 | 2.51 | 2.55 | 2.19 |
| Chem. and petrochemical | 4.08 | 4.79 | 4.21 | 4.11 | 3.53 | 3.82 | 3.80 | 3.67 |
| Non-ferrous metals | 0.83 | 1.01 | 0.56 | 0.76 | 0.70 | 0.72 | 0.73 | 0.67 |
| Non-metallic minerals | 5.02 | 5.37 | 3.47 | 2.59 | 2.53 | 2.57 | 2.93 | 2.67 |
| Transport equipment | 0.77 | 1.12 | 0.61 | 0.42 | 0.43 | 0.43 | 0.44 | 0.45 |
| Machinery | 2.36 | 3.30 | 2.07 | 0.89 | 0.77 | 0.77 | 0.77 | 0.74 |
| Mining and quarrying | 1.48 | 1.82 | 1.47 | 0.47 | 0.29 | 0.30 | 0.32 | 0.32 |
| Food and tobacco | 2.44 | 2.87 | 2.37 | 1.98 | 1.99 | 1.86 | 1.95 | 1.90 |
| Paper, pulp and printing | 0.84 | 1.07 | 0.97 | 1.12 | 1.20 | 1.47 | 1.49 | 1.18 |
| Wood and wood products | 0.54 | 0.72 | 0.64 | 0.60 | 0.70 | 0.68 | 0.63 | 0.71 |
| Construction | 0.96 | 1.35 | 0.79 | 0.19 | 0.20 | 0.21 | 0.22 | 0.22 |
| Textile and leather | 1.05 | 1.54 | 0.98 | 0.41 | 0.27 | 0.23 | 0.21 | 0.17 |
| Non specified/other | 0.06 | 0.15 | 0.06 | 0.52 | 0.63 | 0.68 | 0.69 | 0.64 |
| Electricity consumption (Mtoe) | 5.01 | 7.31 | 8.28 | 8.48 | 9.07 | 9.55 | 9.85 | 10.13 |
| Total industry (Mtoe) | 3.28 | 4.48 | 3.68 | 3.48 | 3.55 | 3.68 | 3.94 | 3.81 |
| Iron and steel | 0.50 | 0.73 | 0.64 | 0.62 | 0.51 | 0.54 | 0.60 | 0.58 |
| Chem. and petrochemical | 0.84 | 0.97 | 0.90 | 0.73 | 0.71 | 0.76 | 0.76 | 0.73 |
| Non-ferrous metals | 0.18 | 0.23 | 0.19 | 0.31 | 0.30 | 0.31 | 0.30 | 0.25 |
| Non-metallic minerals | 0.23 | 0.36 | 0.27 | 0.28 | 0.30 | 0.32 | 0.36 | 0.35 |
| Transport equipment | 0.14 | 0.18 | 0.11 | 0.13 | 0.17 | 0.18 | 0.20 | 0.21 |
| Machinery | 0.43 | 0.62 | 0.46 | 0.30 | 0.30 | 0.32 | 0.34 | 0.33 |
| Mining and quarrying | 0.27 | 0.35 | 0.27 | 0.13 | 0.11 | 0.12 | 0.12 | 0.12 |
| Food and tobacco | 0.18 | 0.25 | 0.25 | 0.32 | 0.38 | 0.39 | 0.44 | 0.44 |
| Paper, pulp and printing | 0.14 | 0.16 | 0.17 | 0.23 | 0.27 | 0.27 | 0.28 | 0.27 |
| Wood and wood products | 0.07 | 0.10 | 0.11 | 0.12 | 0.14 | 0.12 | 0.13 | 0.16 |
| Construction | 0.09 | 0.22 | 0.11 | 0.05 | 0.04 | 0.05 | 0.07 | 0.06 |
| Textile and leather | 0.21 | 0.29 | 0.18 | 0.11 | 0.09 | 0.08 | 0.08 | 0.07 |
| Non specified/other | 0.01 | 0.02 | 0.01 | 0.16 | 0.23 | 0.23 | 0.25 | 0.24 |
| Total industry (TWh) | 38.12 | 52.13 | 42.74 | 40.45 | 41.32 | 42.82 | 45.79 | 44.26 |
| Iron and steel | 5.87 | 8.50 | 7.48 | 7.19 | 5.93 | 6.27 | 7.02 | 6.74 |
| Chem. and petrochemical | 9.75 | 11.32 | 10.45 | 8.50 | 8.31 | 8.86 | 8.87 | 8.47 |
| Non-ferrous metals | 2.05 | 2.72 | 2.16 | 3.65 | 3.48 | 3.57 | 3.53 | 2.96 |
| Non-metallic minerals | 2.66 | 4.23 | 3.17 | 3.29 | 3.48 | 3.70 | 4.20 | 4.09 |
| Transport equipment | 1.65 | 2.07 | 1.29 | 1.51 | 1.94 | 2.05 | 2.31 | 2.39 |
| Machinery | 5.04 | 7.17 | 5.41 | 3.45 | 3.53 | 3.76 | 3.99 | 3.85 |
| Mining and quarrying | 3.09 | 4.07 | 3.19 | 1.46 | 1.31 | 1.38 | 1.44 | 1.42 |
| Food and tobacco | 2.05 | 2.96 | 2.86 | 3.76 | 4.44 | 4.49 | 5.07 | 5.06 |
| Paper, pulp and printing | 1.64 | 1.81 | 1.96 | 2.67 | 3.12 | 3.17 | 3.27 | 3.19 |
| Wood and wood products | 0.79 | 1.19 | 1.27 | 1.34 | 1.58 | 1.40 | 1.54 | 1.82 |
| Construction | 1.02 | 2.52 | 1.27 | 0.55 | 0.52 | 0.57 | 0.78 | 0.67 |
| Textile and leather | 2.45 | 3.39 | 2.14 | 1.25 | 1.03 | 0.91 | 0.92 | 0.78 |
| Non specified/other | 0.07 | 0.18 | 0.11 | 1.83 | 2.64 | 2.70 | 2.85 | 2.80 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

POLAND

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Total imports⁽¹⁾ | 2011 | 4161 | 10437 | 4356 | 3290 | 5002 | 4789 | 7761 | 8480 |
| Imports from: | | | | | | | | | |
| Total OECD | - | - | - | 4020 | 2498 | 3145 | 2860 | 7120 | 7701 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | 119 | 64 | 63 | 45 | 20 | 29 |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | 3901 | 2006 | 2265 | 2547 | 4889 | 5576 |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | 3 | - | 4 | - | 31 |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | 425 | 817 | 264 | 2211 | 2065 |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | 336 | 792 | 1857 | 1929 | 641 | 779 |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | 163 | 874 | 1045 | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | 336 | 629 | 983 | 884 | 641 | 779 |
| Non-specified/others | 2011 | 4161 | 10437 | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

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14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|-------------|-------------|--------------|-------------|-------------|--------------|--------------|--------------|-------------|
| Total exports ⁽¹⁾ | 3765 | 4396 | 11478 | 7157 | 9663 | 16188 | 15775 | 13109 | 9703 |
| Exports to: | | | | | | | | | |
| Total OECD | - | - | - | 7157 | 9663 | 16188 | 15775 | 13109 | 9703 |
| Austria | - | - | - | 1663 | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | 2765 | 7219 | 11167 | 10183 | 9232 | 6912 |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | 2729 | 688 | 1046 | 720 | 48 | 95 |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | 1702 | 2792 | 3373 | 3599 | 2551 |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | 54 | 1183 | 1499 | 230 | 145 |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 3765 | 4396 | 11478 | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 16.17 | 21.77 | 25.61 | 27.23 | 28.67 | 30.20 | 30.32 | 30.55 | 31.09 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.79 | 1.30 | 1.98 | 2.05 | 2.18 | 2.32 | 2.33 | 2.33 | 2.33 |
| <i>of which: pumped storage</i> | <i>0.15</i> | <i>0.65</i> | <i>1.21</i> | <i>1.37</i> | <i>1.37</i> | <i>1.41</i> | <i>1.41</i> | <i>1.41</i> | <i>1.41</i> |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | 0.12 | 0.17 | 0.31 | 0.53 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 15.38 | 20.48 | 23.63 | 25.18 | 26.49 | 27.76 | 27.82 | 27.92 | 28.23 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 15.38 | 20.48 | 23.63 | 25.18 | 26.28 | 27.71 | 27.06 | 27.14 | 27.41 |
| Liquid fuels | - | - | - | - | - | - | - | - | - |
| Natural gas | - | - | - | - | 0.20 | 0.77 | 0.76 | 0.78 | 0.81 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | - | - | - |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | 15.38 | 20.48 | 23.63 | 25.18 | 26.29 | 26.99 | 27.06 | 27.14 | 27.43 |
| Internal combustion | - | - | - | - | 0.01 | 0.01 | 0.01 | 0.02 | 0.03 |
| Gas turbine | - | - | - | - | - | 0.05 | 0.04 | 0.03 | 0.04 |
| Combined cycle | - | - | - | - | 0.19 | 0.71 | 0.71 | 0.73 | 0.73 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | 13.45 | 17.09 | 22.90 | 22.69 | 22.80 | 23.76 | 24.90 | 24.71 | 23.95 |
| Available capacity | 14.15 | 17.69 | 23.25 | 26.12 | 27.78 | 29.85 | 28.12 | 26.33 | 27.44 |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|------|------|------|------|------|------|------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 2.45 | 2.95 | 2.36 | 2.24 | 1.89 | 2.05 | 2.04 | 1.94 | 1.58 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | - | - | - | - |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 2.45 | 2.95 | 2.36 | 2.24 | 1.89 | 2.05 | 2.04 | 1.94 | 1.58 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 2.45 | 2.95 | 2.36 | 2.23 | 1.52 | 1.45 | 1.42 | 1.31 | 0.96 |
| Liquid fuels | - | - | - | - | 0.35 | 0.49 | 0.49 | 0.49 | 0.49 |
| Natural gas | - | - | - | - | 0.01 | 0.05 | 0.06 | 0.06 | 0.04 |
| Comb. renew. & waste | - | - | - | - | 0.01 | 0.06 | 0.06 | 0.08 | 0.10 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | 0.01 | 0.01 | 0.01 | - |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | 2.45 | 2.95 | 2.36 | 2.24 | 1.87 | 2.00 | 1.98 | 1.88 | 1.49 |
| Internal combustion | - | - | - | - | - | 0.02 | 0.02 | 0.02 | 0.06 |
| Gas turbine | - | - | - | - | 0.01 | 0.03 | 0.04 | 0.02 | 0.01 |
| Combined cycle | - | - | - | - | - | - | - | 0.02 | 0.02 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | 1.59 | 1.62 | 1.37 | 1.52 | 1.22 | 1.20 | 1.22 | 1.16 | 1.22 |
| Available capacity | 1.59 | 1.62 | 1.37 | 1.52 | 1.22 | 1.20 | 1.22 | 1.16 | 1.22 |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Polish Zlotys/ unit | | | | | | | | |
| Steam coal (t) | .. | 0.01 | 10.82 | 122.66 | 153.77 | 159.57 | 159.66 | 190.95 | 252.58 |
| Heavy fuel oil (t) | .. | .. | 81.9 | 489.7 | 822.9 | 957.0 | 979.2 | 1173.3 | 1111.0 |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Polish Zlotys/ toe | | | | | | | | |
| Steam coal | .. | - | 23.1 | 241.2 | 301.2 | 309.2 | 312.9 | 379.4 | 501.8 |
| Heavy fuel oil | .. | .. | 83.6 | 500.1 | 840.2 | 977.2 | 999.8 | 1198.1 | 1134.4 |
| Natural gas ⁽²⁾ | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| End-user prices of electricity | | | | | | | | | |
| | Polish Zlotys/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | .. | .. | 0.0241 | 0.1603 | 0.2261 | 0.2278 | 0.2280 | 0.2874 | 0.3735 |
| <i>of which: tax</i> | .. | .. | - | - | 0.0200 | 0.0200 | 0.0200 | 0.0200 | 0.0200 |
| Household | | | | | | | | | |
| Price | 0.0001 | 0.0001 | 0.0098 | 0.2845 | 0.3910 | 0.4101 | 0.4173 | 0.4650 | 0.5205 |
| <i>of which: tax</i> | - | - | - | 0.0513 | 0.0905 | 0.0939 | 0.0953 | 0.1039 | 0.1139 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

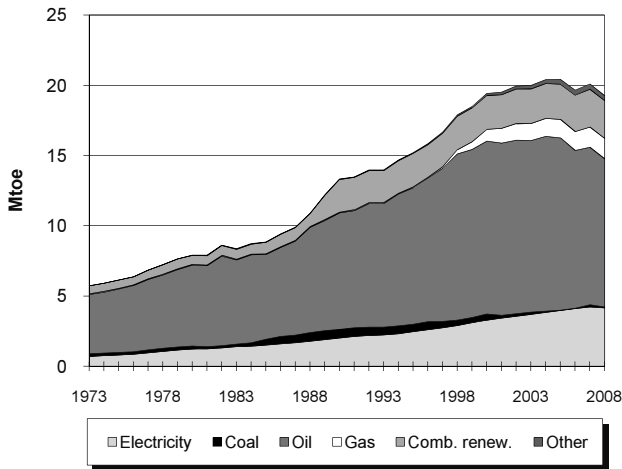


Figure 2. Electricity generation by fuel

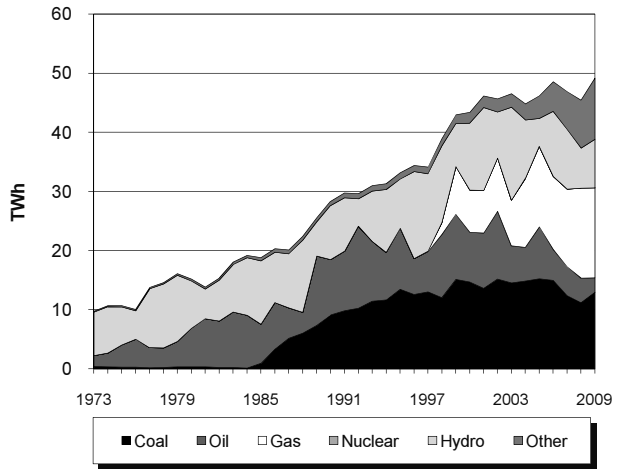


Figure 3. Electricity consumption by sector

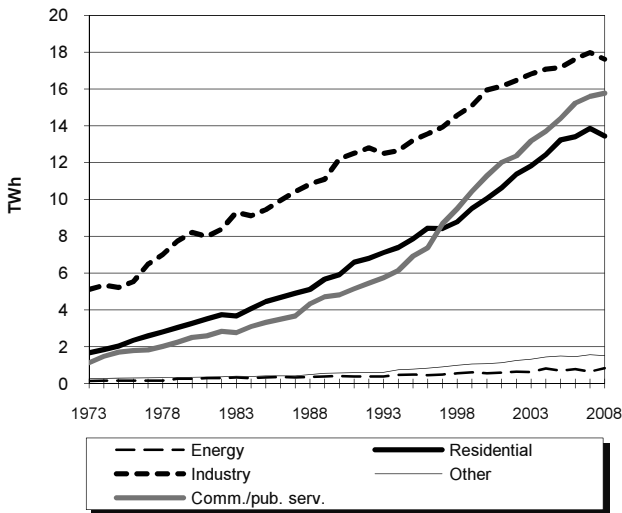


Figure 4. Electricity indicators

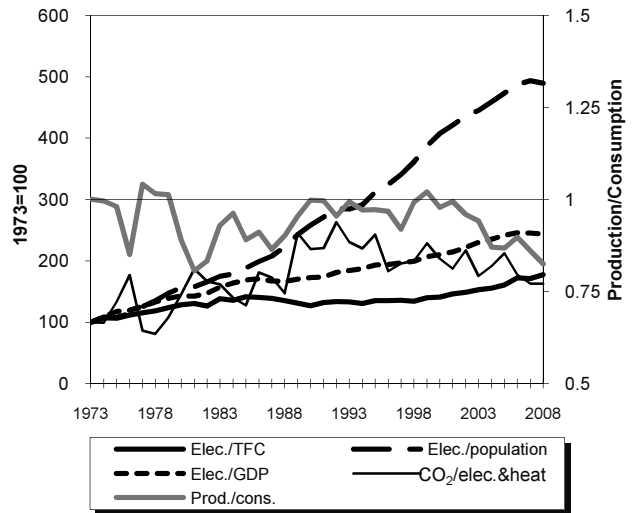
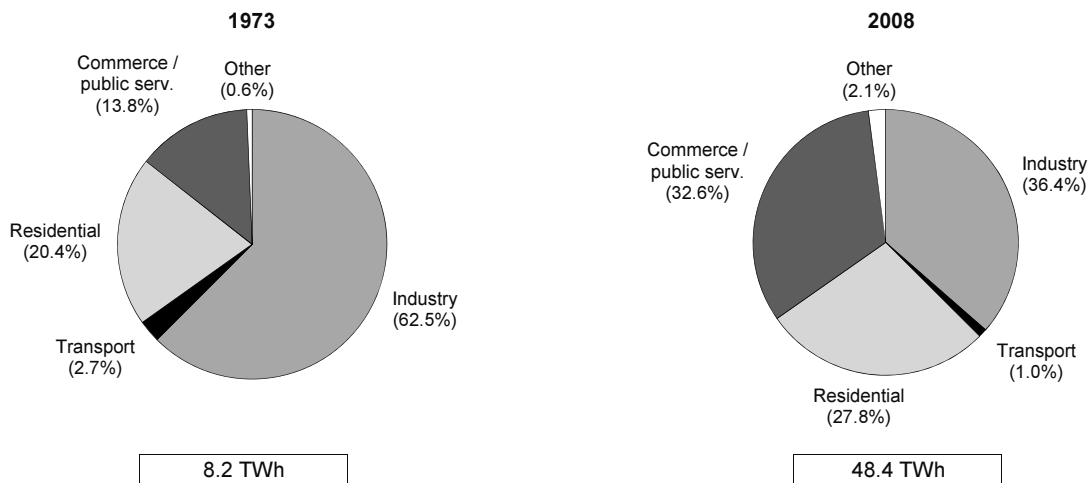


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|-------|-------|-------|--------|--------|--------|--------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 6.90 | 9.99 | 16.74 | 24.67 | 25.07 | 24.16 | 23.85 | 5.4 | 1.9 |
| GDP (billion 2000 USD) | 49.60 | 61.54 | 84.75 | 112.65 | 121.51 | 121.46 | 120.23 | 3.2 | 1.9 |
| TPES/GDP ⁽¹⁾ | 0.14 | 0.16 | 0.20 | 0.22 | 0.21 | 0.20 | 0.20 | 2.1 | 0.0 |
| Population (millions) | 8.72 | 9.86 | 10.00 | 10.23 | 10.61 | 10.62 | 10.61 | 0.8 | 0.3 |
| TPES/population ⁽²⁾ | 0.79 | 1.01 | 1.67 | 2.41 | 2.36 | 2.27 | 2.25 | 4.5 | 1.6 |
| TPES/GDP (2000 = 100) | 63 | 74 | 90 | 100 | 94 | 91 | 91 | 2.1 | 0.0 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 48 | 68 | 82 | 100 | 118 | 117 | .. | 3.1 | .. |
| Ele.TFC/population ⁽⁴⁾ | 938 | 1455 | 2356 | 3754 | 4623 | 4554 | .. | 5.6 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 9.79 | 15.21 | 28.36 | 43.37 | 46.90 | 45.47 | 49.17 | 6.5 | 2.9 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|-------------|-------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 6.90 | 9.99 | 16.74 | 24.67 | 25.07 | 24.16 | 23.85 | 5.4 | 1.9 |
| Coal | 0.51 | 0.43 | 2.76 | 3.81 | 2.89 | 2.53 | 2.84 | 10.5 | 0.1 |
| Oil | 5.12 | 8.00 | 10.70 | 14.91 | 13.14 | 12.25 | 11.33 | 4.4 | 0.3 |
| Gas | - | - | - | 2.03 | 3.81 | 4.14 | 4.22 | - | - |
| Comb. renew & waste | 0.64 | 0.72 | 2.48 | 2.77 | 3.15 | 3.13 | 3.49 | 8.3 | 1.8 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | 0.00 | 0.00 | 0.07 | 0.19 | 0.19 | 0.17 | - | 23.1 |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.01 | 0.03 | 0.37 | 0.53 | 0.70 | - | 24.4 |
| Hydro | 0.63 | 0.69 | 0.79 | 0.97 | 0.87 | 0.58 | 0.70 | 1.3 | -0.6 |
| Net electricity imports ⁽²⁾ | -0.00 | 0.16 | 0.00 | 0.08 | 0.64 | 0.81 | 0.41 | - | 29.2 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 9.8 | 15.3 | 28.5 | 43.8 | 46.6 | 47.3 | 46.0 | 49.9 |
| Nuclear | - | - | - | - | - | - | - | - |
| Hydro | 7.4 | 8.1 | 9.3 | 11.7 | 5.1 | 10.4 | 7.3 | 8.9 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 0.0 | 0.1 | 0.1 | 0.4 | 0.4 | 0.4 | 0.5 | 0.7 |
| Geothermal | - | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 |
| Solar | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.0 | 0.2 | 1.8 | 4.0 | 5.8 | 7.6 |
| Combustible fuels | 2.5 | 7.2 | 19.2 | 31.8 | 39.6 | 32.5 | 32.7 | 33.1 |
| <i>Coal</i> | 0.4 | 0.3 | 9.1 | 14.7 | 15.2 | 12.4 | 11.2 | 13.0 |
| <i>Oil</i> | 1.9 | 6.5 | 9.4 | 8.4 | 8.8 | 4.9 | 4.1 | 2.4 |
| <i>Gas</i> | - | - | - | 7.1 | 13.6 | 13.1 | 15.2 | 15.2 |
| <i>Comb. renew. & waste</i> | 0.2 | 0.3 | 0.7 | 1.6 | 2.0 | 2.2 | 2.1 | 2.4 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - |
| - Own use by power plant | 0.2 | 0.5 | 1.2 | 1.5 | 1.6 | 1.3 | 1.4 | .. |
| Net production | 9.6 | 14.7 | 27.3 | 42.2 | 45.0 | 45.9 | 44.6 | .. |
| Nuclear | .. | - | - | - | - | - | - | .. |
| Hydro | .. | 7.9 | 9.1 | 11.6 | 5.0 | 10.3 | 7.2 | .. |
| Geothermal | .. | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | .. |
| Solar | .. | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | 0.0 | 0.2 | 1.8 | 4.0 | 5.7 | .. |
| Combustible fuels | .. | 6.8 | 18.1 | 30.4 | 38.1 | 31.4 | 31.4 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | - | - | - | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | 0.0 | 0.1 | 0.2 | 0.6 | 0.6 | 0.5 | 0.6 | 0.9 |
| + Imports | 0.1 | 2.3 | 1.7 | 4.7 | 9.6 | 9.6 | 10.7 | 7.6 |
| - Exports | 0.1 | 0.5 | 1.7 | 3.8 | 2.8 | 2.2 | 1.3 | 2.8 |
| Electrical energy supplied | 9.5 | 16.5 | 27.1 | 42.6 | 51.2 | 52.9 | 53.4 | .. |
| - Transmission & distr. losses | 1.2 | 1.9 | 3.2 | 3.6 | 4.2 | 3.2 | 4.2 | .. |
| - Statistical difference | - | - | - | - | - | - | - | .. |
| Total consumption | 8.3 | 14.6 | 24.0 | 38.9 | 47.0 | 49.7 | 49.2 | .. |
| - Energy industry consumption ⁽²⁾ | 0.1 | 0.3 | 0.4 | 0.6 | 0.7 | 0.7 | 0.8 | .. |
| Final consumption | 8.2 | 14.3 | 23.5 | 38.4 | 46.3 | 49.0 | 48.4 | .. |
| Industry | 5.1 | 8.2 | 12.2 | 16.0 | 17.2 | 18.0 | 17.6 | .. |
| Transport | 0.2 | 0.2 | 0.3 | 0.4 | 0.5 | 0.5 | 0.5 | .. |
| Commercial & publ. serv. | 1.1 | 2.5 | 4.8 | 11.3 | 14.4 | 15.6 | 15.8 | .. |
| Residential | 1.7 | 3.3 | 5.9 | 10.1 | 13.2 | 13.9 | 13.4 | .. |
| Agriculture & fishing | 0.1 | 0.1 | 0.3 | 0.7 | 1.0 | 1.1 | 1.0 | .. |
| Sector non specified | - | - | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 10.75 | 15.26 | 28.50 | 43.76 | 49.04 | 47.25 | 45.97 | 6.3 | 2.7 |
| - Hydro pumped storage | 0.06 | 0.06 | 0.15 | 0.39 | 0.47 | 0.36 | 0.50 | 5.7 | 7.1 |
| Total generation⁽¹⁾ | 10.69 | 15.21 | 28.36 | 43.37 | 48.58 | 46.90 | 45.47 | 6.3 | 2.7 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 10.22 | 14.38 | 27.06 | 38.97 | 43.29 | 40.87 | 39.93 | 6.3 | 2.2 |
| - Hydro pumped storage | 0.06 | 0.06 | 0.15 | 0.39 | 0.47 | 0.36 | 0.50 | 5.7 | 7.1 |
| Total generation ⁽¹⁾ | 10.16 | 14.32 | 26.92 | 38.58 | 42.83 | 40.51 | 39.43 | 6.3 | 2.1 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 7.79 | 7.98 | 9.13 | 11.31 | 10.99 | 10.08 | 6.78 | 1.0 | -1.6 |
| Geothermal | - | 0.00 | 0.00 | 0.08 | 0.09 | 0.20 | 0.19 | - | 24.0 |
| Solar, wind, tide ⁽²⁾ | - | - | 0.00 | 0.17 | 2.93 | 4.06 | 5.80 | - | 55.7 |
| Coal | 0.31 | 0.31 | 9.06 | 14.60 | 14.96 | 12.40 | 11.20 | 23.5 | 1.2 |
| Oil | 2.06 | 6.03 | 8.73 | 5.72 | 3.33 | 2.82 | 2.45 | 9.4 | -6.8 |
| Gas | - | - | - | 6.70 | 10.48 | 10.81 | 12.87 | - | - |
| Comb. renew. & waste | - | - | - | 0.01 | 0.06 | 0.15 | 0.15 | - | - |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 0.53 | 0.88 | 1.44 | 4.79 | 5.75 | 6.39 | 6.04 | 6.5 | 8.3 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 0.53 | 0.88 | 1.44 | 4.79 | 5.75 | 6.39 | 6.04 | 6.5 | 8.3 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.04 | 0.04 | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | -1.5 | -4.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | - | - | - | - | - |
| Coal | 0.03 | 0.04 | 0.05 | 0.09 | - | - | - | 1.8 | - |
| Oil | 0.28 | 0.49 | 0.67 | 2.70 | 1.92 | 2.05 | 1.70 | 5.7 | 5.3 |
| Gas | - | - | - | 0.44 | 1.87 | 2.32 | 2.33 | - | - |
| Comb. renew. & waste | 0.18 | 0.32 | 0.69 | 1.55 | 1.95 | 2.00 | 2.00 | 8.8 | 6.1 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

PORTUGAL

5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|------------|------------|-------------|-------------|-------------|-------------|-------------|---|
| Total | 491 | 846 | 1437 | 4791 | 5748 | 6385 | 6042 | 8.3 |
| Total energy | - | - | 326 | 507 | 545 | 495 | 488 | 2.3 |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | 13 | 9 | 2 | 3 | 3 | -7.8 |
| Oil refineries | - | - | 313 | 498 | 543 | 492 | 485 | 2.5 |
| Energy non specified/other | - | - | - | - | - | - | - | - |
| Total industry | 483 | 839 | 1098 | 3661 | 4432 | 5043 | 4710 | 8.4 |
| Iron and steel | 53 | 50 | 45 | 93 | - | - | - | - |
| Chemical and petrochemical | 139 | 240 | 145 | 408 | 683 | 707 | 536 | 7.5 |
| Non-ferrous metals | 5 | - | - | - | - | - | - | - |
| Non-metallic minerals | - | - | - | 125 | 148 | 196 | 197 | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | 3 | - | - | 37 | 18 | 15 | - | - |
| Mining and quarrying | - | - | - | - | 48 | 276 | 250 | - |
| Food and tobacco | 2 | 3 | 19 | 228 | 260 | 404 | 407 | 18.6 |
| Pulp and printing | 259 | 520 | 852 | 1588 | 2218 | 2263 | 2224 | 5.5 |
| Wood and wood products | - | - | 2 | 284 | 244 | 242 | 201 | 29.2 |
| Construction | - | - | - | 8 | - | - | 10 | - |
| Textile and leather | 22 | 3 | 35 | 890 | 800 | 929 | 876 | 19.6 |
| Non specified/other industries | - | 23 | - | - | 13 | 11 | 9 | - |
| Total transport | - | - | - | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | - | - | - | - |
| Other | 8 | 7 | 13 | 623 | 771 | 847 | 844 | 26.1 |
| Commerce and pub. services | - | - | 12 | 571 | 721 | 781 | 808 | 26.3 |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | - | - | 1 | 52 | 50 | 66 | 36 | 22.0 |
| Sector non specified | 8 | 7 | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

PORTUGAL

6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|------------|-------------|-------------|--------------|--------------|--------------|--------------|---|
| Total | 892 | 1188 | 5626 | 13712 | 14132 | 13251 | 16005 | 14.3 |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - |
| Oil | 892 | 1188 | 4274 | 5015 | 4067 | 3993 | 3677 | 7.0 |
| Gas | - | - | 1352 | 8697 | 10065 | 9258 | 12328 | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 892 | 1188 | 2130 | 3835 | 1590 | 1686 | .. | 2.0 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | 892 | 1188 | 1981 | 2037 | 1590 | 1686 | .. | 2.0 |
| Gas | - | - | 149 | 1798 | - | - | .. | - |
| Comb. renew. & waste | - | - | - | - | - | - | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | - | 3496 | 9877 | 12542 | 11565 | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | - | 2293 | 2978 | 2477 | 2307 | .. | - |
| Gas | - | - | 1203 | 6899 | 10065 | 9258 | .. | - |
| Comb. renew. & waste | - | - | - | - | - | - | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

PORTUGAL

7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 0.70 | 1.68 | 4.30 | 6.55 | 6.99 | 6.45 | 6.37 | 11.3 | 2.2 |
| Coal | 0.22 | 0.10 | 2.05 | 3.24 | 3.31 | 2.71 | 2.44 | 14.1 | 1.0 |
| Oil | 0.42 | 1.50 | 2.10 | 1.78 | 1.14 | 1.05 | 0.93 | 9.9 | -4.4 |
| Gas | - | - | - | 1.17 | 2.12 | 2.24 | 2.55 | - | - |
| Comb. renew. & waste | 0.06 | 0.08 | 0.15 | 0.36 | 0.43 | 0.45 | 0.44 | 5.6 | 6.2 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 1.49 | 4.01 | 5.59 | 5.75 | 5.07 | 5.03 | .. | 1.3 |
| Coal | .. | 0.09 | 2.03 | 3.20 | 3.31 | 2.71 | 2.44 | .. | 1.0 |
| Oil | .. | 1.40 | 1.98 | 1.31 | 0.77 | 0.66 | 0.58 | .. | -6.6 |
| Gas | .. | - | - | 1.08 | 1.65 | 1.65 | 1.95 | .. | - |
| Comb. renew. & waste | .. | - | - | 0.00 | 0.02 | 0.05 | 0.05 | .. | - |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | - | 0.00 | 0.00 | 0.07 | 0.08 | 0.19 | 0.18 | - | 24.8 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | 0.00 | 0.00 | 0.07 | 0.08 | 0.18 | 0.17 | - | 24.9 |
| Solar | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 22.4 |
| Non-Thermal | | | | | | | | | |
| Total | 0.63 | 0.69 | 0.79 | 0.99 | 1.20 | 1.22 | 1.08 | 1.3 | 1.8 |
| Hydro | 0.63 | 0.69 | 0.79 | 0.97 | 0.95 | 0.87 | 0.58 | 1.3 | -1.6 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.00 | 0.01 | 0.25 | 0.35 | 0.50 | - | 61.8 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

PORTUGAL

8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|-------|-------|--------|--------|--------|--------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | 212 | 3259 | 5171 | 5420 | 4443 | 4032 | 1.2 |
| Fuel input (TJ) | 3584 | 84866 | 133879 | 138566 | 113568 | 102419 | 1.0 |
| Electricity production (GWh) | 311 | 9059 | 14595 | 14958 | 12398 | 11196 | 1.2 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 1277 | 1976 | 1197 | 635 | 565 | 497 | -7.4 |
| Fuel input (TJ) | 49115 | 79414 | 48181 | 25582 | 22750 | 20014 | -7.4 |
| Electricity production (GWh) | 5656 | 8534 | 5191 | 2792 | 2480 | 2164 | -7.3 |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 49183 | 72486 | 77063 | 91255 | - |
| Electricity production (GWh) | - | - | 6620 | 10144 | 10824 | 12887 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | 169 | 1369 | 2597 | 2594 | - |
| Electricity production (GWh) | - | - | 7 | 78 | 164 | 163 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 243 | - | - | - |
| Electricity production (GWh) | - | - | - | 13 | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | 7295 | 8402 | 7870 | 7652 | - |
| Electricity production (GWh) | - | - | 514 | 586 | 552 | 562 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | 295 | 582 | 863 | - |
| Electricity production (GWh) | - | - | - | 25 | 51 | 63 | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | 5967 | 17593 | 26927 | 28596 | 26469 | 27035 | 2.4 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

PORTUGAL

**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|-------|-------|-------|-------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 601 | 833 | 1922 | - | - | - | - |
| Electricity production (GWh) | 38 | 45 | 93 | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 241 | 226 | 680 | 549 | 523 | 467 | 4.1 |
| Fuel input (TJ) | 9706 | 9071 | 27577 | 22335 | 21177 | 19058 | 4.2 |
| Electricity production (GWh) | 866 | 865 | 3230 | 2455 | 2390 | 1984 | 4.7 |
| CHP Heat production (TJ) | 892 | 1188 | 4274 | 4308 | 4067 | 3993 | 7.0 |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 5299 | 26031 | 27301 | 27586 | - |
| Electricity production (GWh) | - | - | 518 | 2199 | 2300 | 2312 | - |
| CHP Heat production (TJ) | - | - | 1352 | 9532 | 10065 | 9258 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 3450 | 6253 | 7382 | 7410 | 7682 | 7143 | 0.7 |
| Electricity production (GWh) | 319 | 689 | 1030 | 1302 | 1366 | 1338 | 3.8 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | 240 | 179 | - |
| Electricity production (GWh) | - | - | - | - | 10 | 9 | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 48 | 90 | 78 | 99 | - |
| Electricity production (GWh) | - | - | 2 | 7 | 7 | 8 | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | 1223 | 1599 | 4873 | 5963 | 6073 | 5651 | 7.3 |
| CHP Heat production (TJ) | 892 | 1188 | 5626 | 13840 | 14132 | 13251 | 14.3 |

Source: IEA/OECD Electricity Statistics.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

PORTUGAL

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 5.74 | 7.91 | 13.35 | 19.44 | 19.67 | 20.10 | 19.27 | 5.1 | 2.1 |
| Geothermal | - | - | - | 0.00 | 0.01 | 0.01 | 0.01 | - | - |
| Solar thermal | - | - | 0.01 | 0.02 | 0.02 | 0.03 | 0.03 | - | 5.8 |
| Coal | 0.19 | 0.20 | 0.59 | 0.43 | 0.03 | 0.17 | 0.07 | 6.9 | -11.1 |
| Oil | 4.21 | 5.77 | 8.31 | 12.30 | 11.24 | 11.21 | 10.55 | 4.1 | 1.3 |
| Gas | 0.05 | 0.05 | 0.05 | 0.83 | 1.34 | 1.44 | 1.44 | 0.5 | 20.3 |
| Comb. renew. & waste | 0.58 | 0.64 | 2.33 | 2.41 | 2.59 | 2.70 | 2.69 | 8.5 | 0.8 |
| Electricity | 0.70 | 1.23 | 2.02 | 3.30 | 4.11 | 4.22 | 4.16 | 6.4 | 4.1 |
| Heat | - | 0.02 | 0.03 | 0.13 | 0.33 | 0.34 | 0.32 | - | 14.3 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 2.32 | 3.33 | 4.65 | 6.22 | 5.62 | 5.78 | 5.53 | 4.2 | 1.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.14 | 0.19 | 0.59 | 0.43 | 0.03 | 0.17 | 0.07 | 9.0 | -11.1 |
| Oil | 1.42 | 2.10 | 1.80 | 2.36 | 1.44 | 1.31 | 1.23 | 1.4 | -2.1 |
| Gas | 0.00 | 0.00 | - | 0.66 | 0.96 | 1.03 | 1.02 | - | - |
| Comb. renew. & waste | 0.32 | 0.31 | 1.18 | 1.26 | 1.36 | 1.40 | 1.39 | 8.0 | 0.9 |
| Electricity | 0.44 | 0.71 | 1.05 | 1.37 | 1.52 | 1.55 | 1.52 | 5.3 | 2.1 |
| Heat | - | 0.02 | 0.03 | 0.13 | 0.32 | 0.32 | 0.30 | - | 14.1 |
| Transport | 1.60 | 2.26 | 3.24 | 5.97 | 6.39 | 6.36 | 6.35 | 4.3 | 3.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.02 | 0.00 | - | - | - | - | - | - | - |
| Oil | 1.56 | 2.24 | 3.22 | 5.94 | 6.27 | 6.18 | 6.16 | 4.4 | 3.7 |
| Gas | - | - | - | 0.00 | 0.01 | 0.01 | 0.01 | - | - |
| Comb. renew. & waste | - | - | - | - | 0.07 | 0.13 | 0.13 | - | - |
| Electricity | 0.02 | 0.02 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 2.1 | 2.7 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 0.25 | 0.43 | 0.60 | 1.39 | 2.17 | 2.20 | 1.95 | 5.3 | 6.8 |
| Geothermal | - | - | - | 0.00 | 0.01 | 0.01 | 0.01 | - | - |
| Solar thermal | - | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | - | 2.8 |
| Coal | - | 0.00 | 0.00 | - | - | - | - | - | - |
| Oil | 0.14 | 0.20 | 0.17 | 0.34 | 0.67 | 0.67 | 0.39 | 0.9 | 4.8 |
| Gas | 0.01 | 0.01 | 0.01 | 0.07 | 0.15 | 0.17 | 0.18 | -0.7 | 16.9 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.10 | 0.22 | 0.42 | 0.97 | 1.31 | 1.34 | 1.36 | 8.9 | 6.8 |
| Heat | - | - | - | 0.00 | 0.01 | 0.01 | 0.01 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

PORTUGAL

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|--------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 0.81 | 1.03 | 2.29 | 2.80 | 3.20 | 3.22 | 3.12 | 6.3 | 1.7 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | 0.00 | 0.01 | 0.01 | 0.02 | 0.02 | - | 9.4 |
| Coal | 0.04 | 0.00 | 0.00 | - | - | - | - | -21.0 | - |
| Oil | 0.35 | 0.39 | 0.58 | 0.68 | 0.66 | 0.62 | 0.55 | 3.1 | -0.3 |
| Gas | 0.02 | 0.02 | 0.04 | 0.10 | 0.20 | 0.22 | 0.23 | 3.7 | 10.0 |
| Comb. renew. & waste | 0.26 | 0.33 | 1.15 | 1.15 | 1.16 | 1.16 | 1.16 | 9.1 | 0.1 |
| Electricity | 0.14 | 0.28 | 0.51 | 0.86 | 1.15 | 1.19 | 1.16 | 7.7 | 4.7 |
| Heat | - | - | - | 0.00 | 0.01 | 0.01 | 0.01 | - | - |
| Agriculture & fishing | 0.37 | 0.32 | 0.46 | 0.71 | 0.32 | 0.26 | 0.37 | 1.3 | -1.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.36 | 0.31 | 0.44 | 0.65 | 0.23 | 0.16 | 0.28 | 1.1 | -2.5 |
| Gas | - | - | - | 0.00 | 0.00 | 0.01 | 0.01 | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.00 | 0.01 | 0.02 | 0.06 | 0.08 | 0.09 | 0.09 | 10.2 | 7.7 |
| Heat | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Other | 0.01 | 0.01 | - | - | - | 0.00 | 0.00 | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | 0.00 | - | - | - | - | - | - | - |
| Oil | - | - | - | - | - | - | - | - | - |
| Gas | 0.01 | 0.01 | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | 0.00 | 0.00 | - | - |
| Electricity | - | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 0.38 | 0.52 | 2.10 | 2.33 | 1.97 | 2.28 | 1.94 | 10.64 | -0.44 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

PORTUGAL

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 5.74 | 7.91 | 13.35 | 19.44 | 20.43 | 19.67 | 20.10 | 19.27 |
| Total industry (Mtoe) | 2.32 | 3.33 | 4.65 | 6.22 | 5.66 | 5.62 | 5.78 | 5.53 |
| Iron and steel | 0.12 | 0.21 | 0.19 | 0.22 | 0.19 | 0.20 | 0.21 | 0.19 |
| Chem. and petrochemical | 0.23 | 0.33 | 0.46 | 0.47 | 0.56 | 0.54 | 0.57 | 0.55 |
| Non-ferrous metals | 0.02 | 0.13 | 0.04 | 0.04 | 0.02 | 0.02 | 0.03 | 0.04 |
| Non-metallic minerals | 0.83 | 1.15 | 1.35 | 2.11 | 1.82 | 1.77 | 1.84 | 1.72 |
| Transport equipment | 0.02 | 0.04 | 0.04 | 0.09 | 0.07 | 0.07 | 0.07 | 0.07 |
| Machinery | 0.03 | 0.06 | 0.10 | 0.11 | 0.16 | 0.17 | 0.17 | 0.17 |
| Mining and quarrying | 0.02 | 0.02 | 0.05 | 0.10 | 0.13 | 0.12 | 0.14 | 0.13 |
| Food and tobacco | 0.30 | 0.34 | 0.42 | 0.51 | 0.50 | 0.55 | 0.55 | 0.51 |
| Paper, pulp and printing | 0.18 | 0.33 | 0.95 | 1.24 | 1.18 | 1.18 | 1.19 | 1.23 |
| Wood and wood products | 0.05 | 0.08 | 0.13 | 0.22 | 0.14 | 0.14 | 0.14 | 0.13 |
| Construction | 0.06 | 0.07 | 0.18 | 0.35 | 0.33 | 0.28 | 0.25 | 0.24 |
| Textile and leather | 0.26 | 0.38 | 0.58 | 0.62 | 0.42 | 0.41 | 0.46 | 0.41 |
| Non specified/other | 0.21 | 0.19 | 0.15 | 0.14 | 0.14 | 0.18 | 0.15 | 0.15 |
| Electricity consumption (Mtoe) | 0.70 | 1.23 | 2.02 | 3.30 | 3.98 | 4.11 | 4.22 | 4.16 |
| Total industry (Mtoe) | 0.44 | 0.71 | 1.05 | 1.37 | 1.48 | 1.52 | 1.55 | 1.52 |
| Iron and steel | 0.02 | 0.04 | 0.05 | 0.07 | 0.11 | 0.12 | 0.13 | 0.13 |
| Chem. and petrochemical | 0.08 | 0.11 | 0.17 | 0.20 | 0.22 | 0.23 | 0.23 | 0.22 |
| Non-ferrous metals | 0.02 | 0.07 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Non-metallic minerals | 0.06 | 0.10 | 0.15 | 0.19 | 0.20 | 0.21 | 0.22 | 0.21 |
| Transport equipment | 0.01 | 0.01 | 0.02 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| Machinery | 0.02 | 0.05 | 0.08 | 0.09 | 0.10 | 0.11 | 0.11 | 0.11 |
| Mining and quarrying | 0.01 | 0.01 | 0.03 | 0.04 | 0.04 | 0.05 | 0.05 | 0.05 |
| Food and tobacco | 0.03 | 0.06 | 0.09 | 0.13 | 0.15 | 0.15 | 0.16 | 0.15 |
| Paper, pulp and printing | 0.04 | 0.07 | 0.13 | 0.18 | 0.21 | 0.22 | 0.22 | 0.22 |
| Wood and wood products | 0.02 | 0.03 | 0.05 | 0.08 | 0.06 | 0.06 | 0.06 | 0.06 |
| Construction | 0.00 | 0.00 | 0.02 | 0.05 | 0.06 | 0.06 | 0.05 | 0.05 |
| Textile and leather | 0.08 | 0.11 | 0.21 | 0.20 | 0.15 | 0.14 | 0.15 | 0.13 |
| Non specified/other | 0.05 | 0.04 | 0.03 | 0.10 | 0.12 | 0.12 | 0.12 | 0.13 |
| Total industry (TWh) | 5.11 | 8.21 | 12.22 | 15.95 | 17.17 | 17.64 | 17.99 | 17.62 |
| Iron and steel | 0.26 | 0.49 | 0.61 | 0.82 | 1.28 | 1.39 | 1.47 | 1.49 |
| Chem. and petrochemical | 0.89 | 1.30 | 2.00 | 2.31 | 2.56 | 2.64 | 2.68 | 2.51 |
| Non-ferrous metals | 0.26 | 0.86 | 0.15 | 0.11 | 0.12 | 0.13 | 0.14 | 0.14 |
| Non-metallic minerals | 0.73 | 1.16 | 1.76 | 2.25 | 2.34 | 2.42 | 2.58 | 2.44 |
| Transport equipment | 0.10 | 0.16 | 0.24 | 0.49 | 0.48 | 0.48 | 0.49 | 0.48 |
| Machinery | 0.27 | 0.56 | 0.88 | 1.02 | 1.20 | 1.25 | 1.27 | 1.27 |
| Mining and quarrying | 0.07 | 0.10 | 0.32 | 0.42 | 0.48 | 0.53 | 0.53 | 0.56 |
| Food and tobacco | 0.40 | 0.70 | 1.10 | 1.56 | 1.70 | 1.77 | 1.83 | 1.77 |
| Paper, pulp and printing | 0.46 | 0.82 | 1.47 | 2.05 | 2.47 | 2.50 | 2.57 | 2.58 |
| Wood and wood products | 0.19 | 0.33 | 0.62 | 0.92 | 0.72 | 0.72 | 0.73 | 0.67 |
| Construction | 0.04 | 0.06 | 0.21 | 0.56 | 0.65 | 0.69 | 0.64 | 0.62 |
| Textile and leather | 0.89 | 1.27 | 2.46 | 2.33 | 1.79 | 1.69 | 1.70 | 1.54 |
| Non specified/other | 0.56 | 0.41 | 0.40 | 1.11 | 1.40 | 1.45 | 1.38 | 1.55 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

PORTUGAL

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Total imports⁽¹⁾ | 68 | 2346 | 1733 | 2655 | 4698 | 9626 | 8624 | 9641 | 10744 |
| Imports from: | | | | | | | | | |
| Total OECD | 68 | 2346 | 1733 | 2655 | 4698 | 9626 | 8624 | 9641 | 10744 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | 68 | 2346 | 1733 | 2655 | 4698 | 9626 | 8624 | 9641 | 10744 |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

PORTUGAL

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|------|------|------|------|------|------|------|------|------|
| Total exports ⁽¹⁾ | 78 | 518 | 1696 | 1741 | 3767 | 2802 | 3183 | 2153 | 1313 |
| Exports to: | | | | | | | | | |
| Total OECD | 78 | 518 | 1696 | 1741 | 3767 | 2802 | 3183 | 2153 | 1313 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | 78 | 518 | 1696 | 1741 | 3767 | 2802 | 3183 | 2153 | 1313 |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

PORTUGAL

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 2.72 | 4.11 | 6.86 | 8.63 | 9.78 | 12.08 | 13.14 | 13.55 | 14.26 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 2.11 | 2.50 | 3.33 | 4.40 | 4.52 | 5.03 | 5.06 | 5.05 | 5.05 |
| <i>of which: pumped storage</i> | - | - | 0.56 | 0.56 | 0.60 | 0.54 | 1.05 | 1.03 | 1.03 |
| Geothermal | - | - | - | 0.01 | 0.01 | 0.01 | 0.03 | 0.03 | 0.03 |
| Solar | - | - | - | - | - | - | - | 0.02 | 0.06 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.01 | 0.08 | 1.06 | 1.68 | 2.20 | 2.86 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 0.62 | 1.61 | 3.53 | 4.22 | 5.16 | 5.97 | 6.37 | 6.25 | 6.27 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | 1.17 | 1.78 | 1.78 | 1.78 | 1.78 | 1.78 | 1.76 |
| Liquid fuels | 0.48 | 1.47 | 2.23 | 2.30 | 1.67 | 1.66 | 1.66 | 1.59 | 2.33 |
| Natural gas | - | - | - | - | 1.00 | 1.82 | 2.22 | 2.17 | 2.17 |
| Comb. renew. & waste | - | - | - | - | 0.01 | 0.01 | 0.01 | - | - |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 0.14 | 0.14 | 0.14 | 0.14 | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | 0.01 | 0.01 |
| Liquid / natural gas | - | - | - | - | 0.71 | 0.71 | 0.71 | 0.71 | - |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 3.02 | 3.68 | 3.55 | 3.49 | 3.50 | 3.49 | 3.51 |
| Internal combustion | - | - | 0.18 | 0.20 | 0.29 | 0.47 | 0.47 | 0.40 | 0.40 |
| Gas turbine | - | - | 0.33 | 0.33 | 0.33 | 0.24 | 0.24 | 0.20 | 0.20 |
| Combined cycle | - | - | - | - | 0.99 | 1.77 | 2.17 | 2.17 | 2.17 |
| Other | 0.62 | 1.61 | - | - | - | - | - | - | - |
| Peak load | .. | .. | 5.03 | 5.25 | 6.56 | 8.53 | 8.80 | 9.11 | 8.97 |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 0.19 | 0.33 | 0.53 | 0.68 | 1.12 | 1.31 | 1.32 | 1.44 | 1.51 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 0.17 | 0.32 | 0.52 | 0.68 | 1.11 | 1.31 | 1.32 | 1.44 | 1.50 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | - | - | - | - | - | - | - |
| Liquid fuels | 0.04 | 0.18 | 0.34 | 0.46 | 0.67 | 0.65 | 0.66 | 0.72 | 0.64 |
| Natural gas | - | - | - | - | 0.15 | 0.28 | 0.27 | 0.33 | 0.36 |
| Comb. renew. & waste | - | - | 0.01 | - | 0.07 | 0.09 | 0.08 | 0.03 | 0.04 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 0.13 | 0.13 | 0.17 | 0.22 | 0.21 | 0.20 | 0.21 | 0.19 | 0.20 |
| Solid / natural gas | - | - | - | - | - | - | - | 0.04 | 0.07 |
| Liquid / natural gas | - | - | - | - | 0.01 | 0.03 | 0.03 | 0.03 | 0.11 |
| Solid / liquid / gas | - | - | - | - | - | 0.06 | 0.06 | 0.09 | 0.09 |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 0.41 | 0.43 | 0.53 | 0.59 | 0.60 | 0.56 | 0.58 |
| Internal combustion | - | - | 0.11 | 0.25 | 0.51 | 0.54 | 0.53 | 0.64 | 0.67 |
| Gas turbine | - | - | - | - | 0.07 | 0.18 | 0.19 | 0.24 | 0.25 |
| Combined cycle | - | - | - | - | - | - | - | - | - |
| Other | 0.17 | 0.32 | - | - | - | - | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Euro/ unit | | | | | | | | |
| Steam coal (t) | 5.97 | 9.64 | 36.47 | 32.81 | 54.42 | 46.46 | 55.78 | 96.65 | 58.58 |
| Heavy fuel oil (t) | 14.47 | 32.42 | 74.30 | 161.32 | 175.35 | 247.84 | 257.09 | 327.20 | 242.12 |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | x | x | x | .. | 234.93 | 282.98 | 271.14 | 355.18 | 273.07 |
| | Euro/ toe | | | | | | | | |
| Steam coal | 10 | 16 | 60 | 54 | 89 | 76 | 91 | 158 | 96 |
| Heavy fuel oil | 15 | 34 | 77 | 168 | 183 | 258 | 268 | 341 | 252 |
| Natural gas ⁽²⁾ | x | x | x | .. | 261 | 314 | 301 | 395 | 303 |
| End-user prices of electricity | | | | | | | | | |
| | Euro/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0059 | 0.0113 | 0.0697 | 0.0727 | 0.0789 | 0.0880 | 0.0940 | 0.0898 | 0.0917 |
| <i>of which: tax</i> | - | - | - | - | - | - | - | - | - |
| Household | | | | | | | | | |
| Price | 0.0102 | 0.0177 | 0.1046 | 0.1297 | 0.1445 | 0.1470 | 0.1560 | 0.1503 | 0.1549 |
| <i>of which: tax</i> | - | - | 0.0157 | 0.0062 | 0.0069 | 0.0070 | 0.0074 | 0.0072 | 0.0074 |

Source: IEA/OECD Energy Prices & Taxes.

(1) Gross calorific value basis.

(2) Net calorific value basis.

SLOVAK REPUBLIC

Figure 1. Total final consumption by fuel

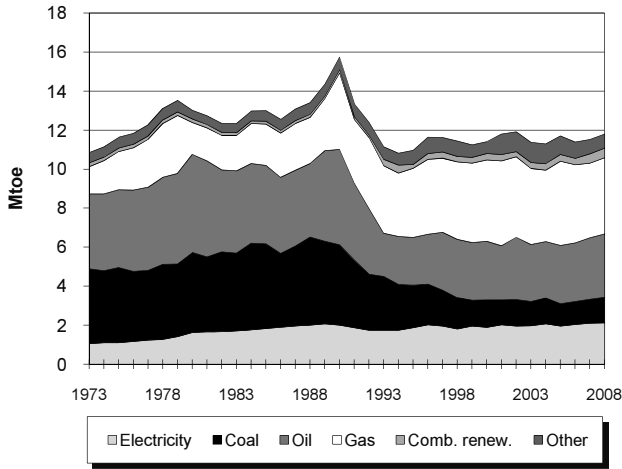


Figure 2. Electricity generation by fuel

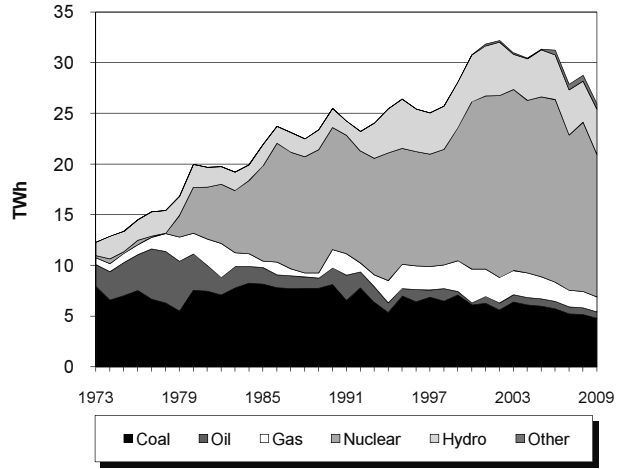


Figure 3. Electricity consumption by sector

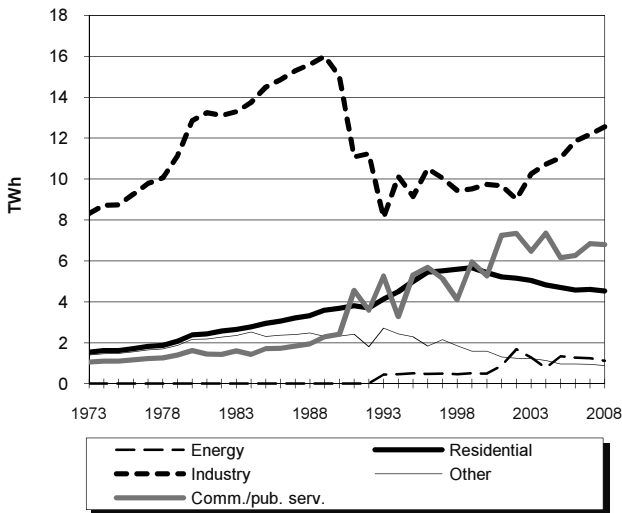


Figure 4. Electricity indicators

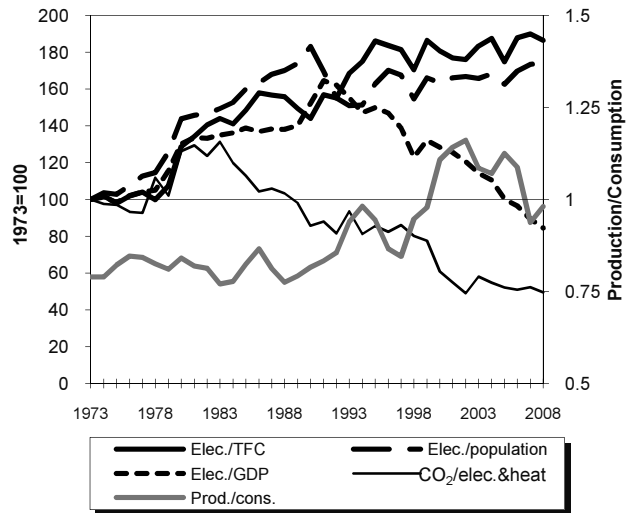
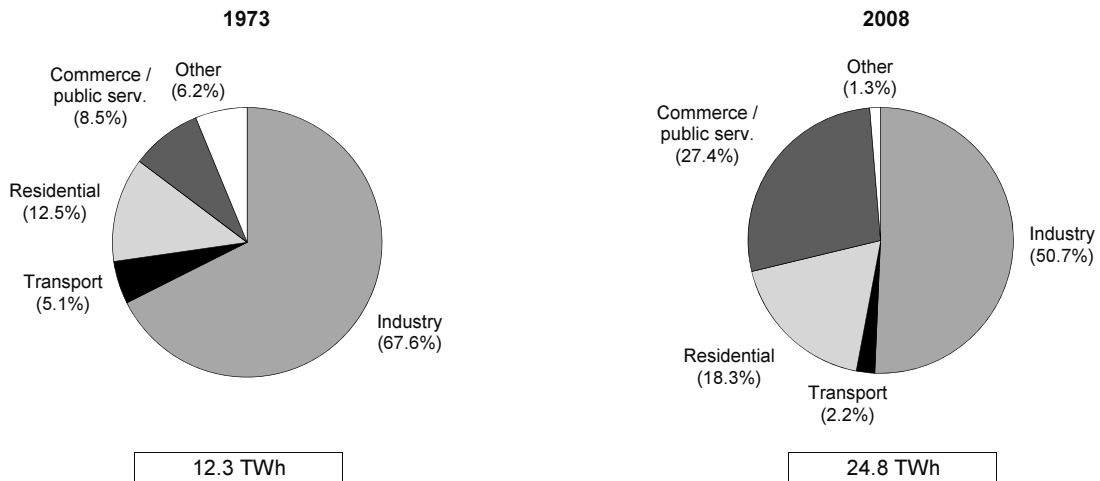


Figure 5. Total final electricity consumption by sector



SLOVAK REPUBLIC

1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 15.52 | 19.85 | 21.33 | 17.74 | 17.85 | 18.30 | 17.05 | 1.9 | -1.2 |
| GDP (billion 2000 USD) | 13.76 | 16.33 | 18.91 | 20.39 | 31.08 | 32.99 | 31.67 | 1.9 | 2.8 |
| TPES/GDP ⁽¹⁾ | 1.13 | 1.22 | 1.13 | 0.87 | 0.57 | 0.55 | 0.54 | 0.0 | -3.8 |
| Population (millions) | 4.64 | 4.98 | 5.30 | 5.40 | 5.40 | 5.41 | 5.40 | 0.8 | 0.1 |
| TPES/population ⁽²⁾ | 3.34 | 3.98 | 4.03 | 3.29 | 3.31 | 3.39 | 3.16 | 1.1 | -1.3 |
| TPES/GDP (2000 = 100) | 130 | 140 | 130 | 100 | 66 | 64 | 62 | 0.0 | -3.8 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 83 | 108 | 115 | 100 | 73 | 70 | .. | 1.9 | .. |
| Ele.TFC/population ⁽⁴⁾ | 2653 | 3818 | 4421 | 4077 | 4555 | 4583 | .. | 3.0 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 12.30 | 19.97 | 25.50 | 30.80 | 27.89 | 28.76 | 25.98 | 4.4 | 0.1 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|
| | | | | | | | | percent change | percent change |
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 15.52 | 19.85 | 21.33 | 17.74 | 17.85 | 18.30 | 17.05 | 1.9 | -1.2 |
| Coal | 7.96 | 8.20 | 7.83 | 4.27 | 4.00 | 4.01 | 3.78 | -0.1 | -3.8 |
| Oil | 5.39 | 7.49 | 4.49 | 2.82 | 3.54 | 3.64 | 3.38 | -1.1 | -1.5 |
| Gas | 1.56 | 2.32 | 5.09 | 5.77 | 5.09 | 5.16 | 5.05 | 7.2 | -0.0 |
| Comb. renew & waste | 0.19 | 0.18 | 0.17 | 0.41 | 0.63 | 0.68 | 0.60 | -0.5 | 6.7 |
| Nuclear | 0.06 | 1.18 | 3.14 | 4.30 | 4.04 | 4.40 | 3.73 | 26.1 | 0.9 |
| Geothermal | - | - | - | - | 0.01 | 0.01 | 0.01 | - | - |
| Solar, wind, tide ⁽¹⁾ | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Hydro | 0.11 | 0.19 | 0.16 | 0.40 | 0.38 | 0.35 | 0.38 | 2.1 | 4.7 |
| Net electricity imports ⁽²⁾ | 0.24 | 0.29 | 0.45 | -0.23 | 0.15 | 0.04 | 0.11 | 3.6 | -7.0 |
| Heat | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|-------------|-------------|---------------|---------------|-------------|-------------|-------------|-------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 12.3 | 20.1 | 26.1 e | 31.2 e | 31.5 | 28.1 | 29.0 | 26.2 |
| Nuclear | 0.2 | 4.5 | 12.0 | 16.5 | 17.7 | 15.3 | 16.7 | 14.1 |
| Hydro | 1.3 | 2.4 | 2.5 | 5.0 | 4.7 | 4.6 | 4.2 | 4.7 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | - | 0.1 | 0.6 | 0.4 | 0.1 | 0.2 | 0.2 | 0.2 |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 |
| Combustible fuels | 10.7 | 13.2 | 11.6 e | 9.7 e | 9.0 | 8.0 | 8.0 | 7.4 |
| <i>Coal</i> | 7.9 | 7.6 | 8.1 | 6.1 e | 6.0 | 5.2 | 5.1 | 4.8 |
| <i>Oil</i> | 2.2 | 3.6 | 1.6 | 0.2 e | 0.7 | 0.7 | 0.7 | 0.6 |
| <i>Gas</i> | 0.6 | 2.0 | 1.8 e | 3.3 e | 2.2 | 1.6 | 1.6 | 1.5 |
| <i>Comb. renew. & waste</i> | - | - | - | 0.0 | 0.1 | 0.5 | 0.5 | 0.5 |
| Other (e.g. fuel cells) | - | - | - | - | 0.0 | 0.1 | 0.0 | 0.0 |
| - Own use by power plant | 1.6 | 2.5 | 3.1 e | 3.4 e | 2.2 | 2.3 | 2.3 | .. |
| Net production | 10.7 | 17.6 | 23.0 e | 27.7 e | 29.3 | 25.8 | 26.6 | .. |
| Nuclear | .. | - | 10.6 e | 14.6 e | 16.4 | 14.1 | 15.4 | .. |
| Hydro | .. | - | 2.4 e | 4.7 e | 4.7 | 4.3 | 3.9 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | - | - | - | - | - | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | - | - | 0.0 | 0.0 | 0.0 | .. |
| Combustible fuels | .. | - | 10.1 e | 8.5 e | 8.2 | 7.3 | 7.3 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | 0.0 | 0.1 | 0.0 | .. |
| - Used for heat pumps | - | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 |
| - Used for electric boilers | - | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 |
| - Used for pumped storage | 0.1 | 0.2 | 1.2 | 0.4 | 0.2 | 0.2 | 0.3 | 0.3 |
| + Imports | 3.0 | 3.5 | 7.3 | 6.0 | 8.0 | 13.6 | 9.4 | 9.0 |
| - Exports | 0.2 | 0.2 | 2.1 | 8.6 | 11.3 | 11.9 | 8.9 | 7.7 |
| Electrical energy supplied | 13.4 | 20.7 | 27.1 e | 24.6 e | 25.9 | 27.3 | 26.9 | .. |
| - Transmission & distr. losses | 1.1 | 1.7 | 2.0 e | 1.8 e | 1.7 | 1.4 | 1.0 | .. |
| - Statistical difference | - | - | 1.7 | 0.4 | - | - | - | .. |
| Total consumption | 12.3 | 19.0 | 23.4 | 22.5 | 24.2 | 25.8 | 25.9 | .. |
| - Energy industry consumption ⁽²⁾ | - | - | - | 0.5 | 1.3 | 1.2 | 1.1 | .. |
| Final consumption | 12.3 | 19.0 | 23.4 | 22.0 | 22.9 | 24.6 | 24.8 | .. |
| Industry | 8.3 | 12.9 | 15.0 | 9.7 | 11.0 | 12.2 | 12.6 | .. |
| Transport | 0.6 | 1.0 | 1.2 | 1.0 | 0.6 | 0.6 | 0.6 | .. |
| Commercial & publ. serv. | 1.0 | 1.6 | 2.4 | 5.3 | 6.2 | 6.8 | 6.8 | .. |
| Residential | 1.5 | 2.4 | 3.7 | 5.4 | 4.7 | 4.6 | 4.5 | .. |
| Agriculture & fishing | 0.8 | 1.2 | 1.2 | 0.6 | 0.4 | 0.4 | 0.3 | .. |
| Sector non specified | - | - | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 12.89 | 20.08 | 26.13 | 31.16 | 31.42 | 28.06 | 28.96 | 4.5 | 0.6 |
| - Hydro pumped storage | - | 0.11 | 0.64 | 0.36 | 0.17 | 0.16 | 0.20 | - | -6.2 |
| Total generation⁽¹⁾ | 12.89 | 19.97 | 25.50 | 30.80 | 31.25 | 27.89 | 28.76 | 4.4 | 0.7 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 12.89 | 20.08 | 23.54 | 29.59 | 28.62 | 25.31 | 26.21 | 3.8 | 0.6 |
| - Hydro pumped storage | - | 0.11 | 0.64 | 0.36 | 0.17 | 0.16 | 0.20 | - | -6.2 |
| Total generation ⁽¹⁾ | 12.89 | 19.97 | 22.90 | 29.23 | 28.45 | 25.15 | 26.01 | 3.7 | 0.7 |
| Nuclear | 0.49 | 4.52 | 12.04 | 16.49 | 18.01 | 15.33 | 16.70 | 22.2 | 1.8 |
| Hydro | 2.22 | 2.26 | 1.88 | 4.62 | 4.31 | 4.36 | 3.95 | -1.0 | 4.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | - | - | - | - | - |
| Coal | 6.58 | 7.56 | 6.43 e | 4.78 e | 4.51 | 4.12 | 4.00 | -0.1 | -2.6 |
| Oil | 2.81 | 3.58 | 0.81 | 0.20 | 0.02 | 0.02 | 0.02 | -7.5 | -18.8 |
| Gas | 0.79 | 2.04 | 1.75 e | 3.11 e | 1.59 | 1.30 | 1.30 | 5.1 | -1.6 |
| Comb. renew. & waste | - | - | - | 0.03 e | 0.00 | 0.01 | 0.03 | - | - |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | - | - | 2.59 | 1.57 | 2.80 | 2.75 | 2.75 | - | 0.3 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | - | - | 2.59 | 1.57 | 2.80 | 2.75 | 2.75 | - | 0.3 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | 0.09 | 0.09 | 0.09 | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | 0.06 | 0.06 | 0.05 | - | - |
| Coal | - | - | 1.69 e | 1.33 e | 1.22 | 1.10 | 1.15 | - | -2.1 |
| Oil | - | - | 0.83 | - | 0.70 | 0.69 | 0.66 | - | -1.2 |
| Gas | - | - | 0.07 e | 0.24 e | 0.32 | 0.32 | 0.31 | - | 8.4 |
| Comb. renew. & waste | - | - | - | - | 0.42 | 0.49 | 0.50 | - | - |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|------|------|------|------|------|------|------|---|
| Total | - | - | 2347 | 1432 | 2684 | 2564 | 2631 | 0.6 |
| Total energy | - | - | - | - | 9 | - | - | - |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | - | - | - | - | - |
| Energy non specified/other | - | - | - | - | 9 | - | - | - |
| Total industry | - | - | - | - | 2583 | 2470 | 2533 | - |
| Iron and steel | - | - | - | - | 1111 | 1042 | 1056 | - |
| Chemical and petrochemical | - | - | - | - | 730 | 697 | 705 | - |
| Non-ferrous metals | - | - | - | - | 52 | 66 | 40 | - |
| Non-metallic minerals | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | 4 | - |
| Machinery | - | - | - | - | 13 | 13 | 2 | - |
| Mining and quarrying | - | - | - | - | 9 | 10 | 8 | - |
| Food and tobacco | - | - | - | - | 82 | 60 | 57 | - |
| Pulp and printing | - | - | - | - | 578 | 532 | 601 | - |
| Wood and wood products | - | - | - | - | 2 | 44 | 49 | - |
| Construction | - | - | - | - | 2 | 4 | 3 | - |
| Textile and leather | - | - | - | - | - | - | - | - |
| Non specified/other industries | - | - | - | - | 4 | 2 | 8 | - |
| Total transport | - | - | - | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | - | - | - | - |
| Other | - | - | 2347 | 1432 | 92 | 94 | 98 | -16.2 |
| Commerce and pub. services | - | - | - | - | 90 | 92 | 97 | - |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | - | - | - | - | 2 | 2 | 1 | - |
| Sector non specified | - | - | 2347 | 1432 | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|--------------|----------------|----------------|--------------|--------------|--------------|--------------|---|
| Total | 27226 | 33552 e | 36824 e | 52544 | 42640 | 39798 | 54221 | 1.0 |
| Nuclear | - | - | - | 2233 | 2035 | 2004 | 2730 | - |
| Geothermal | - | - | - | 140 | 185 | 146 | 199 | - |
| Coal | - | 18300 e | 11578 e | 10937 | 11164 | 9870 | 13447 | -3.4 |
| Oil | - | 3424 e | 861 e | 257 | 650 | 617 | 841 | -9.1 |
| Gas | 9986 | 11828 e | 21493 e | 36585 | 26260 | 24397 | 33239 | 4.1 |
| Comb. renew. & waste | - | - | 2892 e | 2336 | 2065 | 2521 | 3434 | - |
| Non-spec. comb. fuels | 17240 | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | - | 6 | 5 | 4 | 5 | - |
| Electric boilers | - | - | - | 2 | 2 | 2 | 3 | - |
| Other sources ⁽¹⁾ | - | - | - | 48 | 274 | 237 | 323 | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 27226 | 27785 e | 29041 e | 43447 | 36428 | 34938 | .. | 1.3 |
| Nuclear | - | - | - | 2233 | 2035 | 2004 | .. | - |
| Geothermal | - | - | - | 80 | 74 | 77 | .. | - |
| Coal | - | 15237 e | 9990 e | 10038 | 10499 | 9214 | .. | -2.8 |
| Oil | - | 3340 e | 861 e | 125 | 64 | 69 | .. | -19.4 |
| Gas | 9986 | 9208 e | 15298 e | 30764 | 22956 | 22439 | .. | 5.1 |
| Comb. renew. & waste | - | - | 2892 e | 207 | 800 | 1135 | .. | - |
| Non-spec. comb. fuels | 17240 | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | 5767 e | 7783 e | 9097 | 6212 | 4860 | .. | -0.9 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | 60 | 111 | 69 | .. | - |
| Coal | - | 3063 e | 1588 e | 899 | 665 | 656 | .. | -8.2 |
| Oil | - | 84 e | - | 132 | 586 | 548 | .. | 11.0 |
| Gas | - | 2620 e | 6195 e | 5821 | 3304 | 1958 | .. | -1.6 |
| Comb. renew. & waste | - | - | - | 2129 | 1265 | 1386 | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | 6 | 5 | 4 | .. | - |
| Electric boilers | - | - | - | 2 | 2 | 2 | .. | - |
| Other sources ⁽¹⁾ | - | - | - | 48 | 274 | 237 | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 2.46 | 4.08 | 3.61 | 3.23 | 3.00 | 2.74 | 2.63 | 2.3 | -1.7 |
| Coal | 1.92 | 2.89 | 2.33 | 1.71 | 1.68 | 1.57 | 1.48 | 1.2 | -2.5 |
| Oil | 0.42 | 0.64 | 0.31 | 0.10 | 0.11 | 0.11 | 0.11 | -1.8 | -5.6 |
| Gas | 0.12 | 0.55 | 0.97 | 1.33 | 1.06 | 0.91 | 0.86 | 13.0 | -0.7 |
| Comb. renew. & waste | - | - | - | 0.09 | 0.15 | 0.15 | 0.18 | - | - |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 3.41 | 3.09 | 2.78 | 2.44 | 2.24 | 2.14 | .. | -2.0 |
| Coal | .. | 2.47 | 2.01 | 1.48 | 1.50 | 1.41 | 1.31 | .. | -2.3 |
| Oil | .. | 0.42 | 0.20 | 0.10 | 0.01 | 0.01 | 0.01 | .. | -17.3 |
| Gas | .. | 0.52 | 0.88 | 1.10 | 0.91 | 0.79 | 0.78 | .. | -0.7 |
| Comb. renew. & waste | .. | - | - | 0.09 | 0.02 | 0.03 | 0.05 | .. | - |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 0.06 | 1.18 | 3.14 | 4.30 | 4.75 | 4.04 | 4.40 | 26.1 | 1.9 |
| Nuclear | 0.06 | 1.18 | 3.14 | 4.30 | 4.75 | 4.04 | 4.40 | 26.1 | 1.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 0.11 | 0.19 | 0.16 | 0.40 | 0.38 | 0.38 | 0.35 | 2.1 | 4.4 |
| Hydro | 0.11 | 0.19 | 0.16 | 0.40 | 0.38 | 0.38 | 0.35 | 2.1 | 4.3 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

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8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|-------|---------|---------|------|------|------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 1850 | - e | - | - | - | - | - |
| Fuel input (TJ) | 37120 | - e | - | - | - | - | - |
| Electricity production (GWh) | 4119 | - | - e | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 3817 | 2036 e | 1704 e | 836 | 652 | 775 | -5.2 |
| Fuel input (TJ) | 46570 | 24840 e | 19990 e | 8407 | 6634 | 7915 | -6.2 |
| Electricity production (GWh) | 3384 | 2306 e | 1683 e | 693 | 551 | 655 | -6.8 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - e | - | - | - | - |
| Electricity production (GWh) | 57 | - | - e | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 1 | 3 | 31 e | 3 | 2 | 2 | -2.2 |
| Fuel input (TJ) | 40 | 120 | 1681 e | 119 | 93 | 76 | -2.5 |
| Electricity production (GWh) | - | 8 e | 202 e | 10 | 8 | 6 | -1.6 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 11454 e | 9563 e | - | - | - | - |
| Electricity production (GWh) | - | 669 e | 552 e | - | - | - | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | 180 e | - | - | - | - |
| Electricity production (GWh) | - | - | 32 e | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | 4 | 5 | 5 | - |
| Electricity production (GWh) | - | - | - | 1 | 1 | 1 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 7560 | 2983 e | 2469 e | 704 | 560 | 662 | -8.0 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|-------|---------|---------|-------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | 1976 e | 1329 e | 1536 | 1285 | 1083 | -3.3 |
| Fuel input (TJ) | - | 48809 e | 33011 e | 38647 | 33919 | 27540 | -3.1 |
| Electricity production (GWh) | - | 4472 e | 3369 e | 3365 | 2894 | 2458 | -3.3 |
| CHP Heat production (TJ) | - | 8988 e | 4498 e | 4445 | 4047 | 2989 | -5.9 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | 1590 e | 1256 e | 1800 | 1850 | 2055 | 1.4 |
| Fuel input (TJ) | - | 19158 e | 14686 e | 20465 | 22479 | 23417 | 1.1 |
| Electricity production (GWh) | - | 728 e | 532 e | 1251 | 1357 | 1559 | 4.3 |
| CHP Heat production (TJ) | - | 7917 e | 6228 e | 6249 | 6704 | 6469 | -1.1 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 3501 e | 2998 e | 2568 | 2551 | 3023 | -0.8 |
| Electricity production (GWh) | - | 617 e | 527 e | 420 | 421 | 477 | -1.4 |
| CHP Heat production (TJ) | - | 175 e | 170 e | 101 | 96 | 127 | -1.8 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 578 | 254 | - | 108 | 110 | 110 | -4.5 |
| Fuel input (TJ) | 23230 | 10210 | - | 4217 | 4459 | 4472 | -4.5 |
| Electricity production (GWh) | 3583 | 1627 e | - | 712 | 702 | 675 | -4.8 |
| CHP Heat production (TJ) | - | 1974 e | - | 421 | 647 | 610 | -6.3 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 13874 | 25758 e | 29340 e | 23441 | 20152 | 19397 | -1.6 |
| Electricity production (GWh) | 2044 | 1154 e | 2792 e | 1910 | 1617 | 1607 | 1.9 |
| CHP Heat production (TJ) | 9986 | 6235 e | 5098 e | 9899 | 8366 | 7672 | 1.2 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 2422 | 2923 | 4356 | - |
| Electricity production (GWh) | - | - | - | 367 | 441 | 480 | - |
| CHP Heat production (TJ) | - | - | - | 532 | 766 | 974 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 35 | 17 | 18 | - |
| Electricity production (GWh) | - | - | - | 1 | 1 | 1 | - |
| CHP Heat production (TJ) | - | - | - | 24 | 10 | 10 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 1541 | 1462 | 1264 | - |
| Electricity production (GWh) | - | - | - | 47 | 45 | 39 | - |
| CHP Heat production (TJ) | - | - | - | 38 | 42 | 42 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | 79 | 197 | 256 | - |
| Electricity production (GWh) | - | - | - | 7 | 11 | 14 | - |
| CHP Heat production (TJ) | - | - | - | 31 | 101 | 138 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 5627 | 8598 e | 7220 e | 8080 | 7489 | 7310 | -0.9 |
| CHP Heat production (TJ) | 27226 | 25289 e | 15994 e | 21740 | 20779 | 19031 | -1.6 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|--------|---------|-------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | 2 e | 3 e | 2 | 3 | 1 | -3.8 |
| Fuel input (TJ) | - | 45 e | 73 e | 43 | 72 | 22 | -3.9 |
| Heat production (TJ) | - | 34 e | 53 e | 28 | 51 | 15 | -4.4 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | 114 e | 68 e | 22 | 21 | 24 | -8.3 |
| Fuel input (TJ) | - | 1371 e | 790 e | 344 | 327 | 338 | -7.5 |
| Heat production (TJ) | - | 1160 e | 592 e | 255 | 243 | 254 | -8.1 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 42 e | 58 e | 43 | 37 | 24 | -3.1 |
| Heat production (TJ) | - | 26 e | 37 e | 29 | 23 | 16 | -2.7 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 93 | 63 e | 77 e | 1 | - | - | - |
| Fuel input (TJ) | 3740 | 2620 e | 3101 e | 58 | 3 | 8 | -27.5 |
| Heat production (TJ) | - | 1450 e | 861 e | 50 | 3 | 7 | -25.6 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 7768 e | 22771 e | 25888 | 22306 | 20531 | 5.5 |
| Heat production (TJ) | - | 5593 e | 16395 e | 21010 | 17894 | 16725 | 6.3 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 1979 | 1123 | 1263 | - |
| Heat production (TJ) | - | - | - | 936 | 824 | 936 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | 3708 e | 23 | 272 | 277 | - |
| Heat production (TJ) | - | - | 2892 e | 12 | 195 | 195 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 219 | 148 | 253 | - |
| Heat production (TJ) | - | - | - | 174 | 118 | 202 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | 24 | 9 | 24 | - |
| Heat production (TJ) | - | - | - | 23 | 9 | 24 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | - | 8263 e | 20830 e | 22517 | 19360 | 18374 | 4.5 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 10.86 | 13.03 | 15.75 | 11.42 | 11.39 | 11.53 | 11.81 | 2.2 | -1.6 |
| Geothermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Solar thermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Coal | 3.84 | 4.09 | 4.11 | 1.41 | 1.18 | 1.23 | 1.31 | 0.4 | -6.2 |
| Oil | 3.83 | 5.04 | 4.89 | 3.01 | 3.01 | 3.15 | 3.25 | 1.4 | -2.2 |
| Gas | 1.40 | 1.63 | 3.91 | 4.17 | 4.00 | 3.82 | 3.90 | 6.2 | -0.0 |
| Comb. renew. & waste | 0.19 | 0.18 | 0.17 | 0.32 | 0.33 | 0.48 | 0.50 | -0.5 | 6.0 |
| Electricity | 1.06 | 1.64 | 2.01 | 1.89 | 2.03 | 2.11 | 2.13 | 3.9 | 0.3 |
| Heat | 0.53 | 0.45 | 0.65 | 0.62 | 0.83 | 0.74 | 0.71 | 1.2 | 0.5 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 5.64 | 6.34 | 6.09 | 3.63 | 3.56 | 3.66 | 3.65 | 0.4 | -2.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 2.66 | 1.75 | 1.90 | 1.12 | 1.02 | 0.98 | 0.97 | -2.0 | -3.7 |
| Oil | 1.45 | 2.82 | 1.37 | 0.22 | 0.25 | 0.25 | 0.27 | -0.3 | -8.7 |
| Gas | 0.61 | 0.46 | 1.33 | 1.12 | 0.95 | 0.98 | 0.95 | 4.7 | -1.9 |
| Comb. renew. & waste | 0.19 | 0.18 | 0.17 | 0.32 | 0.26 | 0.34 | 0.32 | -0.5 | 3.4 |
| Electricity | 0.72 | 1.11 | 1.29 | 0.84 | 1.02 | 1.05 | 1.08 | 3.5 | -1.0 |
| Heat | 0.02 | 0.02 | 0.02 | 0.02 | 0.07 | 0.06 | 0.07 | -0.8 | 7.9 |
| Transport | 1.68 | 1.50 | 1.45 | 1.43 | 2.21 | 2.42 | 2.64 | -0.9 | 3.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 1.62 | 1.21 | 1.35 | 1.35 | 1.70 | 1.82 | 1.92 | -1.1 | 2.0 |
| Gas | - | 0.21 | - | - | 0.42 | 0.46 | 0.55 | - | - |
| Comb. renew. & waste | - | - | - | - | 0.04 | 0.09 | 0.13 | - | - |
| Electricity | 0.05 | 0.08 | 0.10 | 0.08 | 0.05 | 0.05 | 0.05 | 3.6 | -4.1 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 0.54 | 2.77 | 3.66 | 2.20 | 1.88 | 1.87 | 1.94 | 11.9 | -3.5 |
| Geothermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Solar thermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Coal | - | 1.86 | 1.65 | 0.19 | 0.08 | 0.15 | 0.23 | - | -10.4 |
| Oil | - | 0.29 | 0.24 | 0.01 | 0.04 | 0.01 | 0.01 | - | -18.3 |
| Gas | 0.33 | 0.38 | 1.33 | 1.36 | 1.00 | 0.92 | 0.91 | 8.5 | -2.1 |
| Comb. renew. & waste | - | - | - | 0.00 | 0.01 | 0.00 | 0.01 | - | - |
| Electricity | 0.09 | 0.14 | 0.21 | 0.45 | 0.54 | 0.59 | 0.58 | 5.0 | 5.9 |
| Heat | 0.12 | 0.10 | 0.23 | 0.18 e | 0.22 | 0.19 | 0.20 | 3.9 | -0.9 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|--------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 0.72 | 1.15 | 2.25 | 2.59 | 2.31 | 2.08 | 2.13 | 6.9 | -0.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | 0.20 | 0.44 | 0.06 | 0.05 | 0.04 | 0.06 | - | -10.2 |
| Oil | 0.02 | 0.02 | 0.04 | 0.01 | 0.02 | 0.01 | 0.02 | 5.0 | -3.8 |
| Gas | 0.21 | 0.41 | 1.09 | 1.64 | 1.28 | 1.11 | 1.18 | 10.1 | 0.4 |
| Comb. renew. & waste | - | - | - | 0.00 e | 0.03 | 0.04 | 0.04 | - | - |
| Electricity | 0.13 | 0.21 | 0.32 | 0.47 | 0.39 | 0.40 | 0.39 | 5.2 | 1.2 |
| Heat | 0.36 | 0.31 | 0.37 | 0.41 e | 0.54 | 0.48 | 0.44 | 0.1 | 1.0 |
| Agriculture & fishing | 0.12 | 0.83 | 0.71 | 0.21 | 0.14 | 0.14 | 0.14 | 10.7 | -8.6 |
| Geothermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | 0.07 | 0.09 | 0.01 | 0.00 | 0.00 | 0.00 | - | -21.9 |
| Oil | - | 0.61 | 0.32 | 0.09 | 0.07 | 0.07 | 0.07 | - | -7.9 |
| Gas | 0.04 | 0.03 | 0.16 | 0.05 | 0.03 | 0.03 | 0.03 | 9.1 | -9.0 |
| Comb. renew. & waste | - | - | - | 0.00 e | 0.00 | 0.00 | 0.00 | - | - |
| Electricity | 0.07 | 0.10 | 0.10 | 0.05 | 0.03 | 0.03 | 0.03 | 2.4 | -6.7 |
| Heat | 0.02 | 0.02 | 0.03 | 0.01 e | 0.00 | 0.00 | 0.00 | 2.0 | -9.7 |
| Other | 1.65 | 0.18 | 0.01 | - | - | - | - | -28.8 | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 1.19 | 0.18 | - | - | - | - | - | - | - |
| Oil | 0.47 | 0.00 | 0.01 | - | - | - | - | -23.3 | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 0.49 | 0.25 | 1.61 | 1.36 | 1.29 | 1.36 | 1.31 | 7.20 | -1.14 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

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12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 10.86 | 13.03 | 15.75 | 11.42 | 11.71 | 11.39 | 11.53 | 11.81 |
| Total industry (Mtoe) | 5.64 | 6.34 | 6.09 | 3.63 | 3.63 | 3.56 | 3.66 | 3.65 |
| Iron and steel | 1.06 | 0.78 | 1.11 | 1.15 | 1.08 | 1.14 | 1.13 | 1.06 |
| Chem. and petrochemical | - | 0.33 | 0.65 | 0.61 | 0.50 | 0.41 | 0.44 | 0.51 |
| Non-ferrous metals | - | 0.05 | 0.07 | 0.03 | 0.24 | 0.24 | 0.22 | 0.26 |
| Non-metallic minerals | - | 0.23 | 0.40 | 0.72 | 0.50 | 0.46 | 0.50 | 0.46 |
| Transport equipment | - | - | 0.13 | 0.08 | 0.08 | 0.11 | 0.13 | 0.13 |
| Machinery | - | 0.22 | 0.17 | 0.17 | 0.15 | 0.16 | 0.18 | 0.21 |
| Mining and quarrying | - | 0.02 | 0.04 | 0.05 | 0.04 | 0.05 | 0.05 | 0.04 |
| Food and tobacco | - | 0.15 | 0.22 | 0.20 | 0.21 | 0.19 | 0.18 | 0.16 |
| Paper, pulp and printing | - | 0.16 | 0.27 | 0.23 | 0.49 | 0.51 | 0.57 | 0.55 |
| Wood and wood products | - | 0.00 | 0.04 | 0.03 | 0.05 | 0.05 | 0.05 | 0.07 |
| Construction | - | 0.01 | 0.10 | 0.06 | 0.04 | 0.04 | 0.05 | 0.05 |
| Textile and leather | - | 0.14 | 0.18 | 0.09 | 0.07 | 0.05 | 0.04 | 0.04 |
| Non specified/other | 4.58 | 4.25 | 2.72 | 0.22 | 0.19 | 0.14 | 0.14 | 0.13 |
| Electricity consumption (Mtoe) | 1.06 | 1.64 | 2.01 | 1.89 | 1.97 | 2.03 | 2.11 | 2.13 |
| Total industry (Mtoe) | 0.72 | 1.11 | 1.29 | 0.84 | 0.95 | 1.02 | 1.05 | 1.08 |
| Iron and steel | - | - | - | 0.28 | 0.20 | 0.22 | 0.23 | 0.21 |
| Chem. and petrochemical | - | - | - | 0.12 | 0.15 | 0.15 | 0.15 | 0.13 |
| Non-ferrous metals | - | - | - | - | 0.20 | 0.21 | 0.18 | 0.22 |
| Non-metallic minerals | - | - | - | 0.09 | 0.07 | 0.07 | 0.08 | 0.07 |
| Transport equipment | - | - | - | 0.02 | 0.02 | 0.05 | 0.06 | 0.06 |
| Machinery | - | - | - | 0.07 | 0.07 | 0.08 | 0.09 | 0.12 |
| Mining and quarrying | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Food and tobacco | - | - | - | 0.10 | 0.05 | 0.04 | 0.04 | 0.05 |
| Paper, pulp and printing | - | - | - | 0.06 | 0.09 | 0.11 | 0.10 | 0.11 |
| Wood and wood products | - | - | - | 0.02 | 0.01 | 0.01 | 0.02 | 0.02 |
| Construction | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Textile and leather | - | - | - | 0.03 | 0.02 | 0.02 | 0.02 | 0.01 |
| Non specified/other | 0.72 | 1.11 | 1.29 | 0.03 | 0.06 | 0.05 | 0.05 | 0.06 |
| Total industry (TWh) | 8.32 | 12.86 | 15.01 | 9.74 | 11.03 | 11.85 | 12.19 | 12.56 |
| Iron and steel | - | - | - | 3.25 | 2.29 | 2.56 | 2.73 | 2.42 |
| Chem. and petrochemical | - | - | - | 1.45 | 1.70 | 1.80 | 1.77 | 1.56 |
| Non-ferrous metals | - | - | - | - | 2.38 | 2.40 | 2.12 | 2.50 |
| Non-metallic minerals | - | - | - | 1.02 | 0.80 | 0.79 | 0.95 | 0.83 |
| Transport equipment | - | - | - | 0.25 | 0.23 | 0.56 | 0.72 | 0.75 |
| Machinery | - | - | - | 0.84 | 0.77 | 0.88 | 1.06 | 1.39 |
| Mining and quarrying | - | - | - | 0.13 | 0.10 | 0.11 | 0.11 | 0.10 |
| Food and tobacco | - | - | - | 1.12 | 0.54 | 0.51 | 0.52 | 0.54 |
| Paper, pulp and printing | - | - | - | 0.68 | 1.02 | 1.26 | 1.14 | 1.26 |
| Wood and wood products | - | - | - | 0.21 | 0.17 | 0.16 | 0.22 | 0.23 |
| Construction | - | - | - | 0.13 | 0.08 | 0.07 | 0.09 | 0.12 |
| Textile and leather | - | - | - | 0.33 | 0.23 | 0.19 | 0.18 | 0.15 |
| Non specified/other | 8.32 | 12.86 | 15.01 | 0.34 | 0.73 | 0.56 | 0.58 | 0.72 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

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13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|
| Total imports⁽¹⁾ | 3024 | 3502 | 7255 | 3448 | 5951 | 8005 | 8590 | 13580 | 9412 |
| Imports from: | | | | | | | | | |
| Total OECD | - | - | - | 1874 | 5951 | 8000 | 8551 | 13522 | 9234 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | 1566 | 4254 | 5208 | 5178 | 9922 | 6683 |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | 308 | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | 1697 | 2792 | 3373 | 3600 | 2551 |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | 1574 | - | 5 | 39 | 58 | 178 |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | 1574 | - | 5 | 39 | 58 | 178 |
| Non-specified/others | 3024 | 3502 | 7255 | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

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14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|------------|------------|-------------|-------------|-------------|--------------|--------------|--------------|-------------|
| Total exports ⁽¹⁾ | 184 | 184 | 2059 | 2065 | 8647 | 11270 | 10921 | 11855 | 8891 |
| Exports to: | | | | | | | | | |
| Total OECD | - | - | - | 2065 | 8647 | 9547 | 9204 | 9110 | 7719 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | 1357 | 1247 | 740 | 609 | 52 | 232 |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | 708 | 7400 | 8807 | 8591 | 9058 | 7456 |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | 4 | - | 31 |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | 1723 | 1717 | 2745 | 1172 |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | 1723 | 1717 | 2745 | 1172 |
| Non-specified/others | 184 | 184 | 2059 | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|------|------|--------|------|------|------|------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | - | - | - | 7.24 | 7.45 | 7.69 | 7.60 | 6.71 | 6.72 |
| Nuclear | - | - | - | 1.76 | 2.64 | 2.64 | 2.64 | 2.20 | 2.20 |
| Hydro | - | - | - | 2.26 | 2.42 | 2.49 | 2.49 | 2.49 | 2.52 |
| <i>of which: pumped storage</i> | - | - | - | 0.74 | 0.74 e | 0.92 | 0.92 | 0.92 | 0.92 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | - | - | - | 3.22 | 2.39 | 2.57 | 2.47 | 2.02 | 2.00 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | - | .. | .. | 1.21 | 1.21 | 0.97 | 0.96 |
| Liquid fuels | - | - | - | .. | .. | - | - | - | - |
| Natural gas | - | - | - | .. | .. | 0.33 | 0.26 | 0.25 | 0.27 |
| Comb. renew. & waste | - | - | - | .. | .. | 0.05 | - | 0.06 | 0.06 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | .. | .. | - | - | - | - |
| Solid / natural gas | - | - | - | .. | .. | 0.26 | 0.26 | 0.21 | 0.22 |
| Liquid / natural gas | - | - | - | .. | .. | 0.72 | 0.72 | 0.50 | 0.47 |
| Solid / liquid / gas | - | - | - | .. | .. | - | 0.02 | 0.02 | 0.02 |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | - | .. | .. | 2.28 | 2.24 | 1.79 | 1.76 |
| Internal combustion | - | - | - | .. | .. | 0.01 | 0.01 | 0.01 | 0.01 |
| Gas turbine | - | - | - | .. | .. | 0.01 | 0.01 | 0.01 | 0.01 |
| Combined cycle | - | - | - | .. | .. | 0.25 | 0.22 | 0.22 | 0.22 |
| Other | - | - | - | .. | .. | 0.02 | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

SLOVAK REPUBLIC

15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|------|------|------|------|------|------|------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | - | - | - | - | - | 0.56 | 0.62 | 0.63 | 0.64 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | - | - | - | 0.02 | 0.03 | 0.03 | 0.03 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 |
| Other (e.g. fuel cells) | - | - | - | - | - | 0.01 | 0.01 | 0.02 | 0.02 |
| Combustible fuels | - | - | - | - | - | 0.53 | 0.58 | 0.59 | 0.59 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | - | - | - | 0.03 | 0.01 | - | - |
| Liquid fuels | - | - | - | - | - | 0.01 | 0.01 | 0.03 | 0.03 |
| Natural gas | - | - | - | - | - | 0.08 | 0.08 | 0.08 | 0.07 |
| Comb. renew. & waste | - | - | - | - | - | 0.01 | 0.07 | 0.09 | 0.10 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | 0.28 | 0.28 | 0.25 | 0.23 |
| Liquid / natural gas | - | - | - | - | - | 0.12 | 0.12 | 0.09 | 0.09 |
| Solid / liquid / gas | - | - | - | - | - | - | - | 0.05 | 0.07 |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | - | - | - | 0.49 | 0.52 | 0.52 | 0.53 |
| Internal combustion | - | - | - | - | - | 0.01 | 0.01 | 0.01 | - |
| Gas turbine | - | - | - | - | - | 0.01 | 0.02 | 0.02 | 0.02 |
| Combined cycle | - | - | - | - | - | 0.01 | 0.04 | 0.04 | 0.04 |
| Other | - | - | - | - | - | 0.01 | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-------------------|------|------|-------|-------|-------|-------|-------|-------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Euro/ unit | | | | | | | | |
| Steam coal (t) | 2 | 2 | 4 | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil (t) | 34 | 34 | 73 | .. | x | x | x | x | x |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | 27.6 | 32.4 | 59.0 | 155.7 | 296.1 | 372.9 | 344.2 | 441.5 | 367.3 |
| | Euro/ toe | | | | | | | | |
| Steam coal | 3 | 3 | 7 | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil | 35 | 35 | 75 | .. | x | x | x | x | x |
| Natural gas ⁽²⁾ | 31 | 36 | 66 | 173 | 329 | 414 | 382 | 491 | 408 |
| End-user prices of electricity | | | | | | | | | |
| | Euro/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.01 | 0.01 | 0.02 | 0.06 | 0.09 | 0.10 | 0.11 | 0.12 | 0.14 |
| <i>of which: tax</i> | - | - | .. | 0.00 | - | - | - | - | - |
| Household | | | | | | | | | |
| Price | 0.02 | 0.02 | 0.02 | 0.08 | 0.15 | 0.15 | 0.15 | 0.16 | 0.17 |
| <i>of which: tax</i> | - | - | .. | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

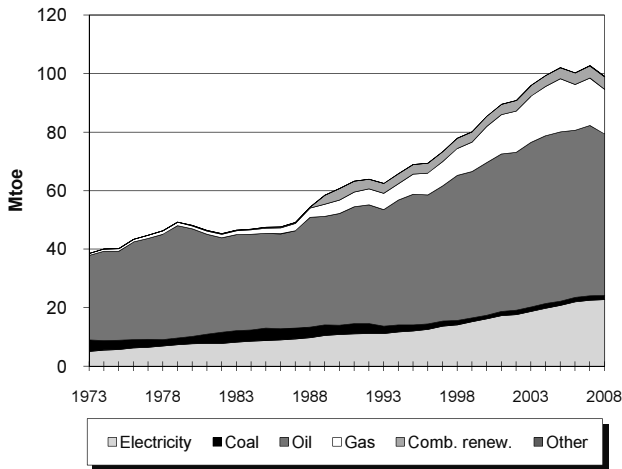


Figure 2. Electricity generation by fuel

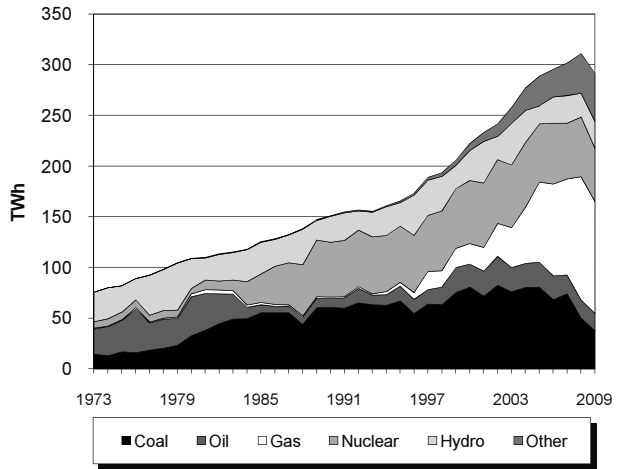


Figure 3. Electricity consumption by sector

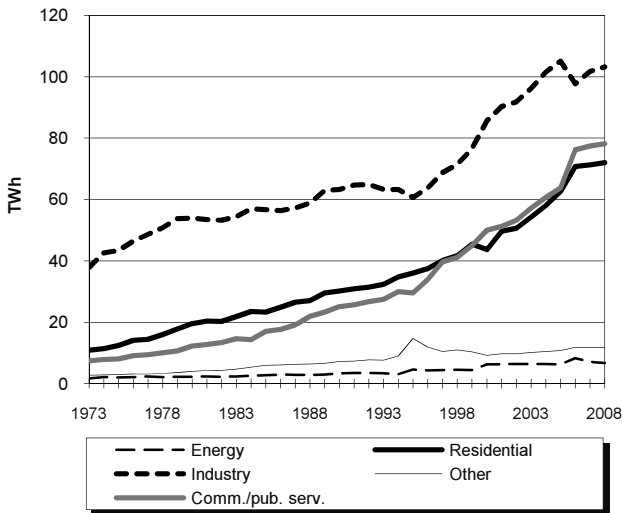


Figure 4. Electricity indicators

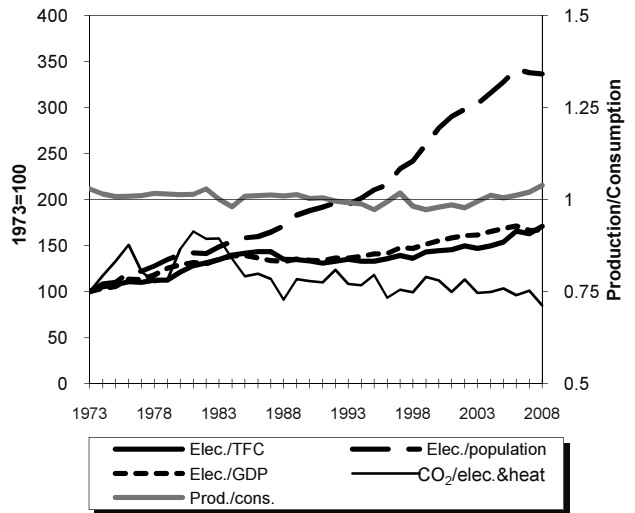
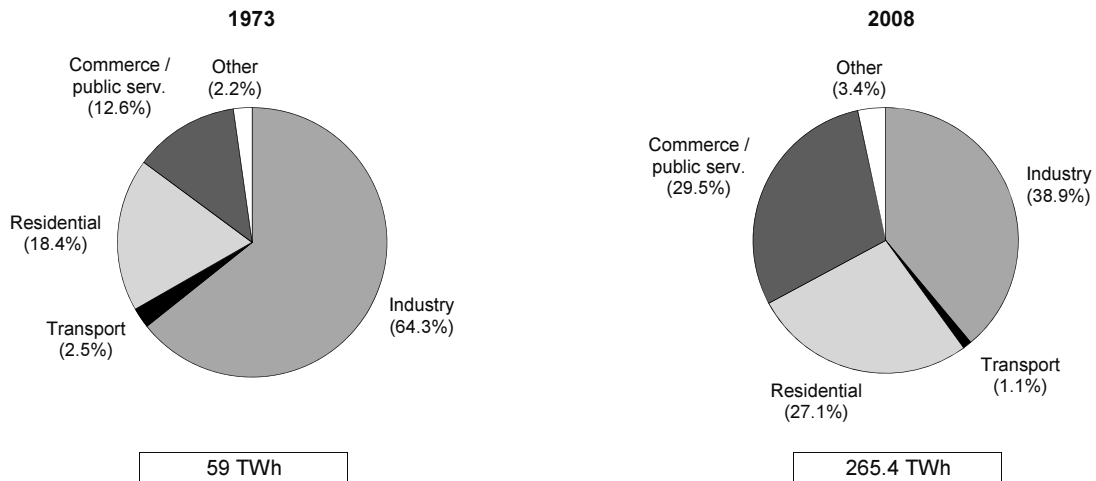


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 51.61 | 67.69 | 90.09 | 121.95 | 143.87 | 138.79 | 128.19 | 3.3 | 1.9 |
| GDP (billion 2000 USD) | 281.94 | 329.98 | 440.64 | 580.67 | 734.55 | 740.85 | 722.41 | 2.7 | 2.6 |
| TPES/GDP ⁽¹⁾ | 0.18 | 0.21 | 0.20 | 0.21 | 0.20 | 0.19 | 0.18 | 0.7 | -0.7 |
| Population (millions) | 34.96 | 37.67 | 39.01 | 40.26 | 44.87 | 45.59 | 46.12 | 0.6 | 0.9 |
| TPES/population ⁽²⁾ | 1.48 | 1.80 | 2.31 | 3.03 | 3.21 | 3.04 | 2.78 | 2.7 | 1.0 |
| TPES/GDP (2000 = 100) | 87 | 98 | 97 | 100 | 93 | 89 | 84 | 0.7 | -0.7 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 65 | 84 | 88 | 100 | 110 | 110 | .. | 1.8 | .. |
| Ele.TFC/population ⁽⁴⁾ | 1689 | 2384 | 3226 | 4682 | 5846 | 5822 | .. | 3.9 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 75.66 | 109.23 | 151.15 | 222.24 | 301.76 | 311.13 | 291.49 | 4.2 | 3.5 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|--------------|--------------|--------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 51.61 | 67.69 | 90.09 | 121.95 | 143.87 | 138.79 | 128.19 | 3.3 | 1.9 |
| Coal | 9.03 | 12.43 | 19.29 | 20.92 | 20.01 | 13.48 | 11.00 | 4.6 | -2.9 |
| Oil | 37.60 | 49.77 | 45.47 | 62.10 | 67.94 | 65.05 | 60.79 | 1.1 | 1.5 |
| Gas | 0.94 | 1.45 | 4.97 | 15.21 | 31.77 | 34.90 | 31.23 | 10.3 | 10.2 |
| Comb. renew & waste | 0.01 | 0.27 | 4.07 | 4.13 | 5.43 | 5.80 | 6.03 | 40.2 | 2.1 |
| Nuclear | 1.71 | 1.35 | 14.14 | 16.21 | 14.36 | 15.37 | 13.74 | 13.2 | -0.2 |
| Geothermal | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | - | - |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.00 | 0.44 | 2.51 | 3.12 | 3.84 | - | 50.1 |
| Hydro | 2.49 | 2.54 | 2.19 | 2.54 e | 2.34 | 2.02 | 2.26 | -0.8 | 0.2 |
| Net electricity imports ⁽²⁾ | -0.17 | -0.12 | -0.04 | 0.38 | -0.49 | -0.95 | -0.70 | -8.8 | 16.9 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

(TWh)

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
|--|-------------|--------------|--------------|--------------|----------------|--------------|--------------|--------------|
| Gross production | 76.3 | 110.5 | 151.9 | 224.5 | 294.1 | 305.1 | 313.7 | 294.3 |
| Nuclear | 6.5 | 5.2 | 54.3 | 62.2 | 57.5 | 55.1 | 59.0 | 52.7 |
| Hydro | 29.5 | 30.8 | 26.2 | 31.8 e | 23.0 e | 30.5 | 26.1 | 29.0 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 0.6 | 1.3 | 0.8 | 2.2 e | 5.2 | 3.3 | 2.6 | 2.8 |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | 0.0 | 0.0 | 0.0 e | 0.5 | 2.6 | 6.1 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.0 | 4.7 | 21.2 e | 27.6 | 32.2 | 36.6 |
| Combustible fuels | 40.2 | 74.5 | 71.4 | 125.7 e | 187.3 e | 191.0 | 193.6 | 169.4 |
| <i>Coal</i> | 14.3 | 32.8 | 60.7 | 80.9 | 80.8 | 74.1 | 50.0 | 37.4 |
| <i>Oil</i> | 25.1 | 38.4 | 8.6 | 22.6 | 24.4 | 18.5 | 18.0 | 17.4 |
| <i>Gas</i> | 0.8 | 2.9 | 1.5 | 20.2 | 79.0 | 94.8 | 121.6 | 110.4 |
| <i>Comb. renew. & waste</i> | 0.1 | 0.4 | 0.7 | 2.1 | 3.1 e | 3.6 | 4.0 | 4.2 |
| Other (e.g. fuel cells) | - | - | - | - | 5.0 | 0.3 | 0.3 | 0.3 |
| - Own use by power plant | 3.3 | 5.3 | 7.3 | 10.0 | 11.9 | 11.8 | 12.1 | .. |
| Net production | 72.9 | 105.2 | 144.6 | 214.4 | 282.1 | 293.2 | 301.6 | .. |
| Nuclear | .. | 4.9 | 51.9 | 59.8 | 55.4 | 52.6 | 56.3 | .. |
| Hydro | .. | 30.4 | 25.8 | 31.5 e | 22.7 | 30.1 | 25.7 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | 0.0 | 0.0 | 0.0 e | 0.5 | 2.5 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | 0.0 | 4.7 | 21.1 | 27.3 | 31.9 | .. |
| Combustible fuels | .. | 69.9 | 66.9 | 118.4 e | 178.4 | 182.5 | 184.9 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | 4.5 | 0.3 | 0.3 | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | 1.5 | 1.9 | 1.0 | 4.9 | 6.4 | 4.3 | 3.7 | 3.7 |
| + Imports | 0.3 | 2.3 | 3.2 | 12.3 | 10.2 | 8.8 | 5.9 | 6.8 |
| - Exports | 2.3 | 3.7 | 3.6 | 7.8 | 11.6 | 14.5 | 16.9 | 14.9 |
| Electrical energy supplied | 69.4 | 102.0 | 143.2 | 214.0 | 274.4 | 283.1 | 286.9 | .. |
| - Transmission & distr. losses | 8.7 | 10.0 | 14.0 | 19.3 | 26.0 | 15.0 | 15.0 | .. |
| - Statistical difference | - | - | - | - | - | -1.3 | -0.2 | .. |
| Total consumption | 60.7 | 92.0 | 129.2 | 194.7 | 248.5 e | 269.4 | 272.1 | .. |
| - Energy industry consumption ⁽²⁾ | 1.7 | 2.2 | 3.4 | 6.3 | 6.2 e | 7.2 | 6.7 | .. |
| Final consumption | 59.0 | 89.8 | 125.8 | 188.5 | 242.2 e | 262.2 | 265.4 | .. |
| Industry | 37.9 | 53.9 | 63.3 | 85.6 | 105.0 e | 101.7 | 103.3 | .. |
| Transport | 1.5 | 1.9 | 3.7 | 4.2 | 5.4 e | 2.9 | 2.9 | .. |
| Commercial & publ. serv. | 7.5 | 12.2 | 25.1 | 50.0 | 63.8 e | 77.4 | 78.2 | .. |
| Residential | 10.9 | 19.6 | 30.2 | 43.6 | 62.6 e | 71.3 | 72.0 | .. |
| Agriculture & fishing | 1.3 | 2.1 | 3.5 | 5.0 | 5.3 e | 6.0 | 6.1 | .. |
| Sector non specified | - | - | - | - | 0.1 e | 2.8 | 2.9 | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

SPAIN

4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|---------------|---------------|-----------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 80.86 | 110.48 | 151.92 | 224.47 e | 299.45 | 305.05 | 313.75 | 4.0 | 4.1 |
| - Hydro pumped storage | 0.78 | 1.26 | 0.77 | 2.24 e | 3.94 | 3.29 | 2.61 | -0.1 | 7.0 |
| Total generation⁽¹⁾ | 80.08 | 109.23 | 151.15 | 222.24 e | 295.51 | 301.76 | 311.13 | 4.1 | 4.1 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 77.36 | 107.16 | 147.45 | 196.02 e | 264.32 | 270.72 | 276.21 | 4.1 | 3.5 |
| - Hydro pumped storage | 0.78 | 1.26 | 0.77 | 2.24 e | 3.94 | 3.29 | 2.61 | -0.1 | 7.0 |
| Total generation ⁽¹⁾ | 76.58 | 105.90 | 146.68 | 193.78 e | 260.38 | 267.43 | 273.60 | 4.1 | 3.5 |
| Nuclear | 7.22 | 5.19 | 54.27 | 62.21 | 60.13 | 55.10 | 58.97 | 13.4 | 0.5 |
| Hydro | 29.16 | 28.15 | 24.09 | 28.74 e | 25.14 | 26.65 | 23.00 | -1.2 | -0.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 0.02 | 4.73 | 23.39 | 28.04 | 34.73 | - | 51.3 |
| Coal | 12.19 | 32.59 | 59.99 e | 79.57 | 66.70 | 73.23 | 49.23 | 10.5 | -1.1 |
| Oil | 27.58 | 37.10 | 7.51 | 13.98 | 17.27 | 14.64 | 13.58 | -7.8 | 3.3 |
| Gas | 0.43 | 2.87 | 0.75 | 3.62 | 67.30 | 69.20 | 93.27 | 3.6 | 30.7 |
| Comb. renew. & waste | - | 0.01 | 0.05 | 0.94 | 0.47 | 0.56 | 0.82 | - | 16.8 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 3.49 | 3.32 | 4.47 | 28.45 | 35.13 | 34.34 | 37.54 | 1.6 | 12.6 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 3.49 | 3.32 | 4.47 | 28.45 | 35.13 | 34.34 | 37.54 | 1.6 | 12.6 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 1.41 | 1.40 | 1.32 | 0.83 e | 0.75 | 0.58 | 0.50 | -0.4 | -5.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.02 | 0.35 | 0.36 | 0.36 | - | - |
| Coal | 0.75 | 0.19 | 0.68 | 1.29 | 1.28 | 0.85 | 0.74 | -0.6 | 0.5 |
| Oil | 1.27 | 1.34 | 1.09 | 8.60 | 6.56 | 3.87 | 4.42 | -0.9 | 8.1 |
| Gas | 0.02 | 0.05 | 0.76 | 16.56 | 23.27 | 25.60 | 28.29 | 26.8 | 22.3 |
| Comb. renew. & waste | 0.05 | 0.35 | 0.62 | 1.16 e | 2.91 | 3.08 | 3.22 | 16.9 | 9.6 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

SPAIN

5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|-------------|-------------|---------------|---------------|--------------|--------------|--------------|---|
| Total | 1905 | 1704 | 4227 e | 27383 | 33582 | 32811 | 35866 | 12.6 |
| Total energy | - | - | 922 e | 3328 | 4042 | 3784 | 3833 | 8.2 |
| Coal mines | - | - | - | 24 e | 6 | 14 | 15 | - |
| Oil and gas extraction | - | - | - | 120 | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | 69 e | - | 37 | 28 | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | 3115 e | 4036 | 3733 | 3790 | - |
| Energy non specified/other | - | - | 922 e | - | - | - | - | - |
| Total industry | 1905 | 1704 | 3305 e | 20507 | 24724 | 23642 | 24570 | 11.8 |
| Iron and steel | 625 | 534 | 331 e | - | 273 | 233 | 216 | -2.3 |
| Chemical and petrochemical | 247 | 51 | 1565 e | 3901 | 5842 | 5538 | 5349 | 7.1 |
| Non-ferrous metals | 253 | 298 | 274 e | 229 | 828 | 297 | 316 | 0.8 |
| Non-metallic minerals | - | - | - | 2650 | 2620 | 2417 | 2259 | - |
| Transport equipment | 4 | - | - | 482 | 230 | 247 | 215 | - |
| Machinery | 4 | - | - | 293 | 192 | 247 | 219 | - |
| Mining and quarrying | 25 | - | - | 1440 | 562 | 636 | 620 | - |
| Food and tobacco | 135 | 217 | 279 e | 3545 e | 4134 | 4580 | 5109 | 17.5 |
| Pulp and printing | 387 | 604 | 856 e | 4078 | 6086 | 5907 | 6299 | 11.7 |
| Wood and wood products | - | - | - | 1629 | 1093 | 1025 | 1065 | - |
| Construction | - | - | - | 63 | - | - | 8 | - |
| Textile and leather | 225 | - | - | 2002 | 1350 | 1084 | 1023 | - |
| Non specified/other industries | - | - | - | 195 | 1514 | 1431 | 1872 | - |
| Total transport | - | - | - | 86 | 2 | 5 | 4 | - |
| Rail and pipeline | - | - | - | - | 2 | 5 | 4 | - |
| Transport non specified | - | - | - | 86 | - | - | - | - |
| Other | - | - | - | 3462 e | 4814 | 5380 | 7459 | - |
| Commerce and pub. services | - | - | - | 974 e | 2219 | 4870 | 6392 | - |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | - | - | - | 275 | - | - | 234 | - |
| Sector non specified | - | - | - | 2213 e | 2595 | 510 | 833 | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

SPAIN

6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|------|-------|------|------|------|------|-------|---|
| Total | - | 181 e | - | - | - | - | - | - |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - |
| Oil | - | 181 e | - | - | - | - | - | - |
| Gas | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | - | 181 e | - | - | - | - | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | 181 e | - | - | - | - | .. | - |
| Gas | - | - | - | - | - | - | .. | - |
| Comb. renew. & waste | - | - | - | - | - | - | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | - | - | - | - | - | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | - | - | - | - | - | .. | - |
| Gas | - | - | - | - | - | - | .. | - |
| Comb. renew. & waste | - | - | - | - | - | - | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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**7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)**

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 8.37 | 17.27 | 16.79 | 26.51 | 34.80 | 36.72 | 34.59 | 4.2 | 4.1 |
| Coal | 3.01 | 7.83 | 14.20 | 18.68 | 15.37 | 17.55 | 11.24 | 9.5 | -1.3 |
| Oil | 5.21 | 8.75 | 2.17 | 4.45 | 4.49 | 4.16 | 3.98 | -5.0 | 3.4 |
| Gas | 0.13 | 0.59 | 0.27 | 2.68 e | 13.79 | 13.76 | 17.94 | 4.4 | 26.2 |
| Comb. renew. & waste | 0.01 | 0.10 | 0.14 e | 0.69 e | 1.14 | 1.25 | 1.42 | 15.2 | 13.6 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 16.90 | 16.13 | 22.88 | 29.70 | 31.73 | 28.95 | .. | 3.3 |
| Coal | .. | 7.79 | 14.07 | 18.48 | 15.18 | 17.41 | 11.14 | .. | -1.3 |
| Oil | .. | 8.53 | 1.87 | 3.38 | 3.66 | 3.58 | 3.35 | .. | 3.3 |
| Gas | .. | 0.58 | 0.17 | 0.71 | 10.68 | 10.51 | 14.16 | .. | 27.7 |
| Comb. renew. & waste | .. | 0.00 | 0.01 e | 0.30 e | 0.19 | 0.23 | 0.30 | .. | 22.1 |

Source: IEA/OECD Energy Balances of OECD Countries.

**7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)**

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 1.71 | 1.35 | 14.14 | 16.21 | 15.68 | 14.40 | 15.59 | 13.3 | 0.5 |
| Nuclear | 1.71 | 1.35 | 14.14 | 16.21 | 15.67 | 14.36 | 15.37 | 13.2 | 0.5 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | 0.00 | 0.00 | 0.01 | 0.04 | 0.22 | - | 40.1 |
| Non-Thermal | | | | | | | | | |
| Total | 2.49 | 2.54 | 2.19 | 2.95 | 4.23 | 4.71 | 4.79 | -0.8 | 4.5 |
| Hydro | 2.49 | 2.54 | 2.19 | 2.54 e | 2.23 | 2.34 | 2.02 | -0.8 | -0.4 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.00 | 0.41 | 2.00 | 2.37 | 2.77 | - | 53.7 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

SPAIN

8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|--------|----------|----------|----------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 9434 | 18829 | 27981 | 24438 e | 27187 | 18852 | 0.0 |
| Fuel input (TJ) | 191609 | 402388 | 644102 | 538788 | 634106 | 427493 | 0.3 |
| Electricity production (GWh) | 18650 | 42248 | 67155 | 58077 | 64187 | 45223 | 0.4 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 16176 | 20947 e | 12914 | 10252 | 9571 | 2470 | -11.2 |
| Fuel input (TJ) | 144101 | 181818 e | 118785 | 91720 | 86733 | 31301 | -9.3 |
| Electricity production (GWh) | 13269 | 17108 e | 11482 | 8496 | 8373 | 3333 | -8.7 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 6644 | 5984 e | 16429 e | 10578 | 10905 | 10148 | 3.0 |
| Electricity production (GWh) | 673 | 632 | 1704 | 1049 | 1100 | 1103 | 3.1 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 9201 | 1566 e | 3562 e | 3807 e | 3729 | 3539 | 4.6 |
| Fuel input (TJ) | 372843 | 63627 e | 143924 e | 156739 e | 138790 | 117382 | 3.5 |
| Electricity production (GWh) | 38439 | 6196 e | 14147 e | 17268 e | 14640 | 13584 | 4.5 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 29655 | 8246 | 34058 | 497704 | 493589 | 684788 | 27.8 |
| Electricity production (GWh) | 2913 | 774 | 3660 | 67369 | 69637 | 95909 | 30.7 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 180 | 2622 | 2984 | 2951 | 7334 | 22.9 |
| Electricity production (GWh) | - | 17 | 176 | 275 | 272 | 676 | 22.7 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | 353 | 3134 e | .. | .. | .. | .. |
| Electricity production (GWh) | - | 50 | 274 | .. | .. | .. | .. |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | 9605 | 21112 | 25890 | 27470 | - |
| Electricity production (GWh) | - | - | 667 | 1202 | 1474 | 1564 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 4344 | 3628 | 3642 | 7177 | - |
| Electricity production (GWh) | - | - | 304 e | 273 | 274 | 541 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 74306 | 67025 | 99569 e | 154009 | 159957 | 161933 | 5.0 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

SPAIN

**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|---------|---------|---------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 62 | 83 | 127 | 43 e | 61 | 36 | -4.5 |
| Fuel input (TJ) | 1210 | 2175 | 2771 | 965 | 1369 | 890 | -4.8 |
| Electricity production (GWh) | 137 | 381 | 457 | 166 | 235 | 158 | -4.8 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 548 | 3152 | 598 | 1935 | 1931 | 1012 | -6.1 |
| Electricity production (GWh) | 47 | 294 | 60 | 190 | 190 | 156 | -3.5 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | 709 e | 1069 e | 840 e | 590 | 626 | -0.7 |
| Fuel input (TJ) | - | 28612 e | 43249 e | 35385 e | 22574 | 25528 | -0.6 |
| Electricity production (GWh) | - | 2408 e | 8431 e | 6561 e | 3868 | 4418 | 3.4 |
| CHP Heat production (TJ) | - | 181 e | - | - | - | - | - |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 4476 | 90833 | 144153 | 146814 | 150078 | 21.5 |
| Electricity production (GWh) | - | 735 | 16518 | 23201 | 25162 | 25652 | 21.8 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 2165 | 9260 | 18695 | 18449 | 17456 | 12.3 |
| Electricity production (GWh) | - | 445 | 665 | 1298 | 1281 | 1212 | 5.7 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 3325 | .. | .. | - | - | - |
| Electricity production (GWh) | - | 160 | .. | .. | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 98 | 1346 | 1374 | 181 | - |
| Electricity production (GWh) | - | - | 14 | 327 | 334 | 44 | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 184 | 4423 | 26145 e | 31743 | 31070 | 31640 | 11.6 |
| CHP Heat production (TJ) | - | 181 | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

SPAIN

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|--------------|--------------|--------------|---------------|---------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 38.59 | 48.16 | 60.74 | 85.48 | 100.31 | 102.79 | 99.07 | 2.7 | 2.8 |
| Geothermal | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | - | - |
| Solar thermal | - | - | - | 0.03 | 0.07 | 0.09 | 0.13 | - | - |
| Coal | 3.96 | 2.48 | 3.25 | 1.26 | 1.49 | 1.59 | 1.43 | -1.2 | -4.5 |
| Oil | 28.86 | 36.73 | 38.15 | 52.16 | 57.12 | 58.16 | 55.17 | 1.7 | 2.1 |
| Gas | 0.70 | 1.05 | 4.60 | 12.38 | 15.63 | 16.22 | 15.23 | 11.7 | 6.9 |
| Comb. renew. & waste | - | 0.17 | 3.92 | 3.43 | 3.92 | 4.18 | 4.29 | - | 0.5 |
| Electricity | 5.08 | 7.72 | 10.82 | 16.21 | 22.06 | 22.55 | 22.82 | 4.6 | 4.2 |
| Heat | - | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 17.26 | 18.85 | 19.39 | 24.72 | 25.27 | 27.30 | 26.12 | 0.7 | 1.7 |
| Geothermal | - | - | - | - | - | - | 0.00 | - | - |
| Solar thermal | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Coal | 3.63 | 2.21 | 2.94 | 1.20 | 1.17 | 1.29 | 1.12 | -1.2 | -5.2 |
| Oil | 9.96 | 11.22 | 5.76 | 5.71 | 5.33 | 5.56 | 5.27 | -3.2 | -0.5 |
| Gas | 0.41 | 0.61 | 3.40 | 9.15 | 8.78 | 10.08 | 9.35 | 13.3 | 5.8 |
| Comb. renew. & waste | - | 0.17 | 1.85 | 1.30 | 1.59 | 1.62 | 1.50 | - | -1.2 |
| Electricity | 3.26 | 4.64 | 5.44 | 7.37 | 8.40 | 8.75 | 8.88 | 3.1 | 2.8 |
| Heat | - | - | - | - | - | - | - | - | - |
| Transport | 10.85 | 15.07 | 21.28 | 30.21 | 37.53 | 38.61 | 36.78 | 4.0 | 3.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.02 | 0.01 | - | - | - | - | - | - | - |
| Oil | 10.71 | 14.90 | 20.97 | 29.77 | 36.96 | 37.90 | 35.86 | 4.0 | 3.0 |
| Gas | - | - | - | 0.01 | 0.06 | 0.07 | 0.07 | - | - |
| Comb. renew. & waste | - | - | - | 0.07 | 0.17 | 0.39 | 0.61 | - | - |
| Electricity | 0.12 | 0.16 | 0.32 | 0.36 | 0.34 | 0.25 | 0.25 | 5.6 | -1.3 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 1.37 | 2.17 | 3.41 | 6.70 | 9.18 | 9.10 | 9.15 | 5.5 | 5.6 |
| Geothermal | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Solar thermal | - | - | - | 0.01 | 0.02 | 0.02 | 0.02 | - | - |
| Coal | - | - | 0.02 | 0.02 e | - | - | - | - | - |
| Oil | 0.67 | 1.01 | 1.05 | 1.69 | 1.63 | 1.52 | 1.46 | 2.7 | 1.9 |
| Gas | 0.06 | 0.11 | 0.19 | 0.63 | 0.87 | 0.78 | 0.85 | 6.7 | 8.7 |
| Comb. renew. & waste | - | - | - | 0.05 | 0.11 | 0.11 | 0.09 | - | - |
| Electricity | 0.64 | 1.05 | 2.16 | 4.30 | 6.55 | 6.66 | 6.73 | 7.4 | 6.5 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

SPAIN

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 3.63 | 5.13 | 9.15 | 11.88 | 15.81 | 15.87 | 15.70 | 5.6 | 3.0 |
| Geothermal | - | - | - | - | 0.00 | 0.00 | 0.00 | - | - |
| Solar thermal | - | - | - | 0.02 | 0.05 | 0.07 | 0.10 | - | - |
| Coal | 0.31 | 0.26 | 0.28 | 0.04 | 0.20 | 0.18 | 0.19 | -0.6 | -2.1 |
| Oil | 2.15 | 2.85 | 3.57 | 4.05 | 3.78 | 3.67 | 3.52 | 3.0 | -0.1 |
| Gas | 0.23 | 0.34 | 0.64 | 2.02 | 3.66 | 3.78 | 3.64 | 6.1 | 10.2 |
| Comb. renew. & waste | - | - | 2.07 | 1.99 | 2.03 | 2.04 | 2.05 | - | -0.1 |
| Electricity | 0.93 | 1.68 | 2.60 | 3.75 | 6.08 | 6.13 | 6.20 | 6.2 | 4.9 |
| Heat | - | - | - | - | - | - | - | - | - |
| Agriculture & fishing | 2.12 | 2.32 | 1.66 | 2.56 | 2.82 | 2.95 | 2.71 | -1.4 | 2.8 |
| Geothermal | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | - | - |
| Solar thermal | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Coal | - | - | 0.01 | - | - | - | - | - | - |
| Oil | 2.01 | 2.14 | 1.35 | 2.02 | 1.93 | 2.07 | 1.83 | -2.3 | 1.7 |
| Gas | - | - | 0.00 | 0.09 | 0.34 | 0.34 | 0.32 | - | 30.6 |
| Comb. renew. & waste | - | - | - | 0.01 | 0.02 | 0.02 | 0.03 | - | - |
| Electricity | 0.11 | 0.18 | 0.30 | 0.43 | 0.52 | 0.52 | 0.52 | 6.0 | 3.1 |
| Heat | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | 0.00 | 1.70 | 0.97 | 0.88 | - | - |
| Geothermal | - | - | - | 0.00 | - | - | - | - | - |
| Solar thermal | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Coal | - | - | - | - | 0.05 | 0.03 | 0.04 | - | - |
| Oil | - | - | - | - | - | - | - | - | - |
| Gas | - | - | - | - | 1.48 | 0.69 | 0.59 | - | - |
| Comb. renew. & waste | - | - | - | 0.00 | 0.01 | 0.01 | 0.01 | - | - |
| Electricity | - | - | - | - | 0.16 | 0.24 | 0.25 | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 3.36 | 4.61 | 5.84 | 9.40 | 8.00 | 7.98 | 7.71 | 3.30 | 1.56 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

SPAIN

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|--------------|--------------|--------------|-----------------|---------------|---------------|---------------|
| TFC (Mtoe) | 38.59 | 48.16 | 60.74 | 85.48 | 102.09 | 100.31 | 102.79 | 99.07 |
| Total industry (Mtoe) | 17.26 | 18.85 | 19.39 | 24.72 | 30.48 | 25.27 | 27.30 | 26.12 |
| Iron and steel | 4.27 | 3.92 | 2.98 | 3.33 | 3.98 | 3.28 | 3.30 | 3.20 |
| Chem. and petrochemical | 2.48 | 3.14 | 3.07 | 3.75 | 4.68 | 4.52 | 4.39 | 4.35 |
| Non-ferrous metals | 0.27 | 1.31 | 0.98 | 1.17 | 1.18 | 1.20 | 1.32 | 1.27 |
| Non-metallic minerals | 4.11 | 4.67 | 4.54 | 6.37 | 7.53 | 6.66 | 6.78 | 6.45 |
| Transport equipment | 0.24 | 0.37 | 0.52 | 0.93 | 0.83 | 0.67 | 0.78 | 0.77 |
| Machinery | 0.45 | 0.54 | 0.85 | 1.04 | 1.38 | 1.20 | 1.26 | 1.24 |
| Mining and quarrying | 0.28 | 0.34 | 0.27 | 0.35 | 0.47 | 0.26 | 0.33 | 0.33 |
| Food and tobacco | 1.41 | 1.64 | 1.67 | 2.56 | 2.88 | 2.26 | 2.32 | 2.26 |
| Paper, pulp and printing | 0.93 | 1.24 | 1.15 | 2.09 | 2.49 | 2.21 | 2.43 | 2.24 |
| Wood and wood products | 0.17 | 0.23 | 0.16 | 0.60 | 0.79 | 0.67 | 0.74 | 0.72 |
| Construction | 0.16 | 0.11 | 0.11 | 0.26 | 0.47 | 0.47 | 0.46 | 0.45 |
| Textile and leather | 0.74 | 0.76 | 0.85 | 1.21 | 0.98 | 0.64 | 0.56 | 0.54 |
| Non specified/other | 1.75 | 0.57 | 2.23 | 1.08 | 2.82 | 1.22 | 2.65 | 2.29 |
| Electricity consumption (Mtoe) | 5.08 | 7.72 | 10.82 | 16.21 | 20.83 | 22.06 | 22.55 | 22.82 |
| Total industry (Mtoe) | 3.26 | 4.64 | 5.44 | 7.37 | 9.03 | 8.40 | 8.75 | 8.88 |
| Iron and steel | 0.62 | 0.89 | 0.82 | 1.27 | 1.58 e | 1.44 | 1.49 | 1.51 |
| Chem. and petrochemical | 0.59 | 0.82 | 0.89 | 1.10 | 1.15 e | 1.15 | 1.09 | 1.10 |
| Non-ferrous metals | 0.27 | 0.71 | 0.70 | 0.80 | 0.88 e | 0.91 | 0.97 | 0.98 |
| Non-metallic minerals | 0.33 | 0.47 | 0.60 | 0.83 | 1.14 e | 1.04 | 1.08 | 1.09 |
| Transport equipment | 0.09 | 0.18 | 0.23 | 0.35 | 0.38 e | 0.34 | 0.34 | 0.35 |
| Machinery | 0.25 | 0.27 | 0.40 | 0.49 | 0.63 e | 0.57 | 0.60 | 0.60 |
| Mining and quarrying | 0.07 | 0.11 | 0.14 | 0.11 | 0.13 e | 0.12 | 0.13 | 0.13 |
| Food and tobacco | 0.20 | 0.27 | 0.50 | 0.77 | 0.99 e | 0.91 | 0.95 | 0.96 |
| Paper, pulp and printing | 0.19 | 0.26 | 0.34 | 0.32 | 0.68 e | 0.65 | 0.70 | 0.71 |
| Wood and wood products | 0.05 | 0.08 | 0.12 | 0.13 | 0.22 e | 0.20 | 0.20 | 0.20 |
| Construction | 0.07 | 0.07 | 0.07 | 0.13 | 0.23 e | 0.23 | 0.26 | 0.26 |
| Textile and leather | 0.20 | 0.21 | 0.33 | 0.36 | 0.37 e | 0.26 | 0.27 | 0.27 |
| Non specified/other | 0.34 | 0.32 | 0.30 | 0.71 | 0.65 e | 0.57 | 0.67 | 0.72 |
| Total industry (TWh) | 37.95 | 53.94 | 63.28 | 85.64 | 105.04 e | 97.66 | 101.73 | 103.26 |
| Iron and steel | 7.19 | 10.30 | 9.53 | 14.73 | 18.37 e | 16.80 | 17.33 | 17.50 |
| Chem. and petrochemical | 6.90 | 9.55 | 10.32 | 12.80 | 13.38 e | 13.36 | 12.68 | 12.81 |
| Non-ferrous metals | 3.20 | 8.24 | 8.14 | 9.29 | 10.27 e | 10.54 | 11.23 | 11.35 |
| Non-metallic minerals | 3.84 | 5.44 | 6.93 | 9.61 | 13.30 e | 12.09 | 12.58 | 12.70 |
| Transport equipment | 1.06 | 2.07 | 2.70 | 4.01 | 4.41 e | 3.93 | 4.01 | 4.05 |
| Machinery | 2.86 | 3.12 | 4.70 | 5.65 | 7.33 e | 6.62 | 6.95 | 7.02 |
| Mining and quarrying | 0.83 | 1.25 | 1.67 | 1.30 | 1.56 e | 1.45 | 1.50 | 1.51 |
| Food and tobacco | 2.30 | 3.10 | 5.77 | 8.97 | 11.51 e | 10.53 | 11.02 | 11.13 |
| Paper, pulp and printing | 2.16 | 3.01 | 3.98 | 3.77 | 7.87 e | 7.57 | 8.13 | 8.22 |
| Wood and wood products | 0.57 | 0.97 | 1.44 | 1.51 | 2.60 e | 2.36 | 2.35 | 2.38 |
| Construction | 0.77 | 0.77 | 0.78 | 1.51 | 2.64 e | 2.70 | 2.99 | 3.02 |
| Textile and leather | 2.36 | 2.48 | 3.82 | 4.20 | 4.29 e | 3.07 | 3.11 | 3.14 |
| Non specified/other | 3.93 | 3.67 | 3.50 | 8.28 | 7.51 e | 6.66 | 7.84 | 8.43 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

SPAIN

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|------------|-------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|
| Total imports⁽¹⁾ | 315 | 2306 | 3208 | 7633 | 12268 | 10212 | 9093 | 8773 | 5881 |
| Imports from: | | | | | | | | | |
| Total OECD | 315 | 2306 | 3208 | 7633 | 12267 | 10102 | 9065 | 8751 | 5866 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | 237 | 1792 | 1511 | 5891 | 8500 | 7301 | 5890 | 6598 | 4552 |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | 78 | 514 | 1697 | 1742 | 3767 | 2801 | 3175 | 2153 | 1314 |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | 1 | 110 | 28 | 22 | 15 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

SPAIN

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
| Total exports ⁽¹⁾ | 2331 | 3688 | 3628 | 3147 | 7827 | 11555 | 12373 | 14524 | 16920 |
| Exports to: | | | | | | | | | |
| Total OECD | 2298 | 3609 | 3609 | 3037 | 5293 | 10386 | 10114 | 10761 | 12415 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | 2166 | 1267 | 1875 | 376 | 595 | 756 | 1481 | 1111 | 1662 |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | 132 | 2342 | 1734 | 2661 | 4698 | 9630 | 8633 | 9650 | 10753 |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 33 | 79 | 19 | 110 | 2534 | 1169 | 2259 | 3763 | 4505 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

SPAIN

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 22.33 | 28.77 | 42.10 | 43.62 | 49.18 | 76.57 | 81.24 | 88.67 | 93.53 |
| Nuclear | 1.09 | 1.09 | 6.97 | 7.07 | 7.50 | 7.58 e | 7.37 | 7.37 | 7.37 |
| Hydro | 11.22 | 12.99 | 15.66 | 16.51 | 17.96 | 18.22 | 18.32 | 18.37 | 18.45 |
| <i>of which: pumped storage</i> | - | - | 4.91 | 5.10 | 5.29 | 5.35 | 5.35 | 5.35 | 5.35 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.01 | 0.01 | 0.06 | 0.18 | 0.75 | 3.33 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.10 | 2.21 | 9.92 | 11.72 | 14.78 | 16.55 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 10.02 | 14.69 | 19.46 | 19.94 | 21.50 | 40.80 e | 43.66 | 47.41 | 47.83 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 2.85 | 6.02 | 9.78 | 10.20 | 11.00 | .. | .. | .. | .. |
| Liquid fuels | 6.24 | 7.68 | 7.26 | 7.32 | 6.87 | .. | .. | .. | .. |
| Natural gas | - | - | - | - | - | .. | .. | .. | .. |
| Comb. renew. & waste | - | - | - | - | 0.22 | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 0.93 | 0.06 | 0.50 | 0.50 | 0.30 | .. | .. | .. | .. |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | 0.93 | 1.93 | 1.93 | 3.12 | .. | .. | .. | .. |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | 14.25 | 18.43 | 18.87 | 20.23 | .. | .. | .. | .. |
| Internal combustion | - | 0.18 | 0.36 | 0.36 | 0.49 | .. | .. | .. | .. |
| Gas turbine | - | 0.26 | 0.44 | 0.48 | 0.48 | .. | .. | .. | .. |
| Combined cycle | - | - | 0.24 | 0.24 | 0.30 | .. | .. | .. | .. |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | 25.16 | 25.81 | 33.24 | 43.38 | 42.15 | 44.88 | 42.96 |
| Available capacity | .. | .. | 25.13 | 32.27 | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|------|------|------|------|------|------|------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 1.03 | 1.17 | 1.32 | 2.28 | 4.74 | .. | .. | .. | .. |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.44 | 0.49 | 0.57 | 0.28 | .. | .. | .. | .. | .. |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 0.60 | 0.69 | 0.75 | 2.00 | 4.74 | .. | .. | .. | .. |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 0.13 | 0.11 | 0.12 | 0.10 | 0.06 | .. | .. | .. | .. |
| Liquid fuels | 0.40 | 0.44 | 0.39 | 0.64 | 1.27 | .. | .. | .. | .. |
| Natural gas | - | - | 0.06 | 0.49 | 3.16 | .. | .. | .. | .. |
| Comb. renew. & waste | 0.07 | 0.10 | 0.10 | 0.13 | 0.24 | .. | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | 0.16 | - | - | - | - | - |
| Solid / natural gas | - | - | 0.02 | 0.01 | - | - | - | - | - |
| Liquid / natural gas | - | 0.03 | 0.06 | 0.36 | - | - | - | - | - |
| Solid / liquid / gas | - | - | - | 0.12 | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | 0.06 | 0.03 | 0.74 | 0.87 | .. | .. | .. | .. |
| Internal combustion | - | 0.03 | 0.02 | 0.06 | 1.94 | .. | .. | .. | .. |
| Gas turbine | - | - | - | 0.47 | 1.06 | .. | .. | .. | .. |
| Combined cycle | - | 0.59 | 0.70 | 0.73 | 0.88 | .. | .. | .. | .. |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-------------------|--------|--------|--------|--------|--------|--------|--------|------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Euro/ unit | | | | | | | | |
| Steam coal (t) | 15.43 | 23.62 | .. | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil (t) | 40.57 | 72.57 | 87.60 | 246.67 | .. | .. | .. | .. | .. |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | 35.67 | 70.72 | 93.31 | 179.02 | .. | .. | .. | .. | .. |
| | Euro/ toe | | | | | | | | |
| Steam coal | 28 | 43 | .. | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil | 43 | 77 | 93 | 262 | .. | .. | .. | .. | .. |
| Natural gas ⁽²⁾ | 40 | 79 | 104 | 199 | .. | .. | .. | .. | .. |
| End-user prices of electricity | | | | | | | | | |
| | Euro/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0129 | 0.0191 | 0.0597 | 0.0462 | 0.0671 | 0.0728 | 0.0654 | 0.0856 | .. |
| <i>of which: tax</i> | .. | 0.0010 | - | 0.0022 | 0.0033 | 0.0035 | 0.0032 | 0.0042 | .. |
| Household | | | | | | | | | |
| Price | 0.0264 | 0.0345 | 0.1163 | 0.1271 | 0.1236 | 0.1313 | 0.1365 | 0.1491 | .. |
| <i>of which: tax</i> | .. | 0.0005 | 0.0125 | 0.0228 | 0.0222 | 0.0236 | 0.0245 | 0.0268 | .. |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

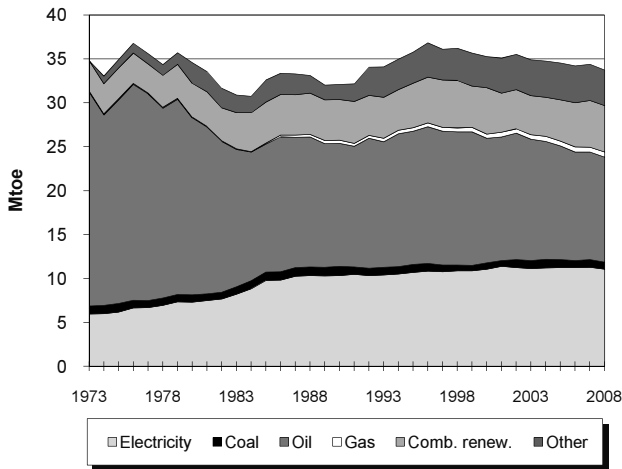


Figure 2. Electricity generation by fuel

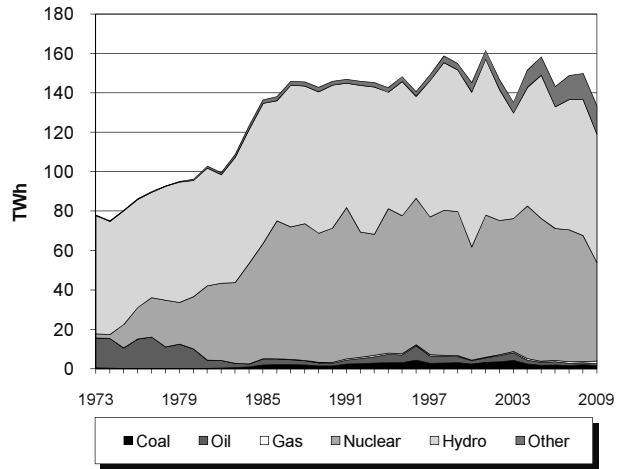


Figure 3. Electricity consumption by sector

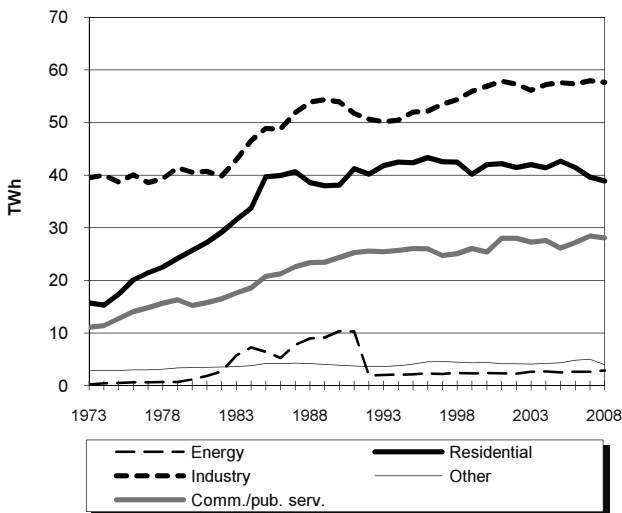


Figure 4. Electricity indicators

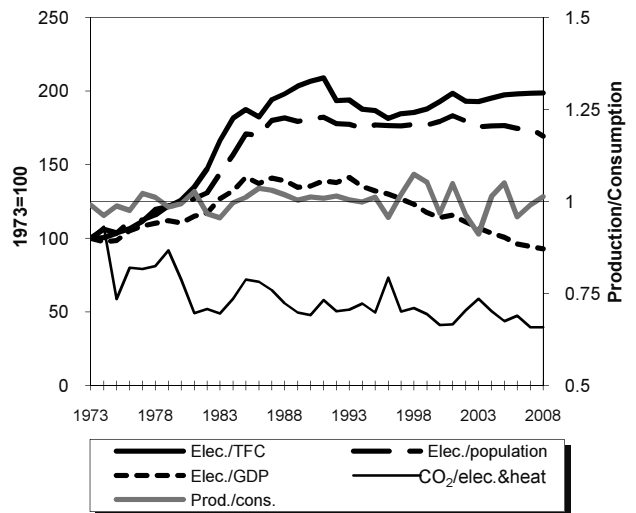
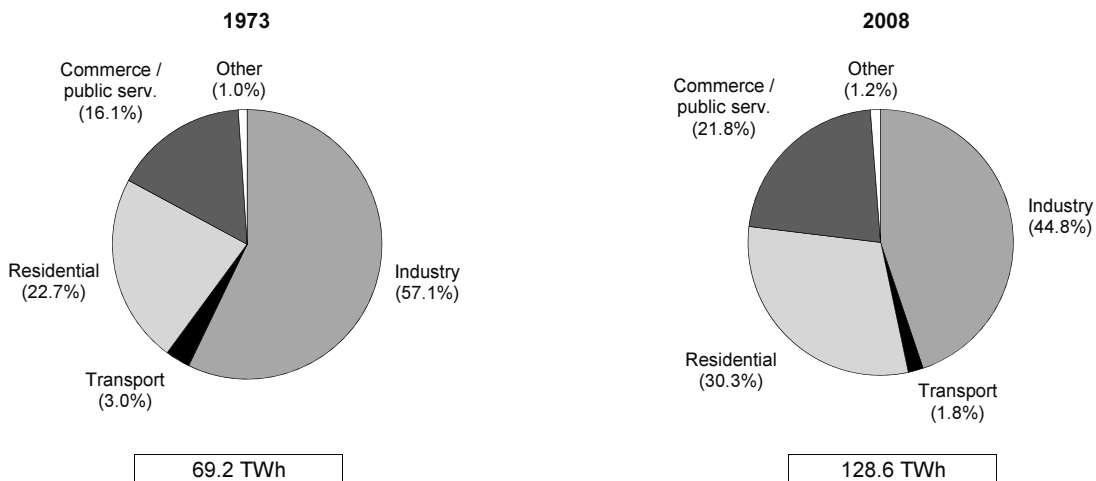


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 38.84 | 40.49 | 47.20 | 47.56 | 50.03 | 49.59 | 43.49 | 1.2 | -0.4 |
| GDP (billion 2000 USD) | 143.40 | 162.17 | 201.52 | 245.57 | 297.82 | 297.17 | 285.39 | 2.0 | 1.8 |
| TPES/GDP ⁽¹⁾ | 0.27 | 0.25 | 0.23 | 0.19 | 0.17 | 0.17 | 0.15 | -0.9 | -2.2 |
| Population (millions) | 8.14 | 8.31 | 8.56 | 8.87 | 9.15 | 9.26 | 9.29 | 0.3 | 0.4 |
| TPES/population ⁽²⁾ | 4.77 | 4.87 | 5.51 | 5.36 | 5.47 | 5.36 | 4.68 | 0.9 | -0.9 |
| TPES/GDP (2000 = 100) | 140 | 129 | 121 | 100 | 87 | 86 | 79 | -0.9 | -2.2 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 92 | 100 | 114 | 100 | 84 | 83 | .. | 1.3 | .. |
| Ele.TFC/population ⁽⁴⁾ | 8508 | 10220 | 14066 | 14514 | 14334 | 13904 | .. | 3.0 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 78.06 | 96.32 | 145.98 | 145.23 | 148.82 | 149.89 | 133.54 | 3.8 | -0.5 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 38.84 | 40.49 | 47.20 | 47.56 | 50.03 | 49.59 | 43.49 | 1.2 | -0.4 |
| Coal | 1.63 | 1.70 | 2.96 | 2.45 | 2.65 | 2.43 | 1.51 | 3.6 | -3.5 |
| Oil | 27.91 | 22.64 | 14.30 | 13.57 | 12.93 | 13.52 | 11.84 | -3.9 | -1.0 |
| Gas | - | - | 0.58 | 0.78 | 0.91 | 0.83 | 1.11 | - | 3.5 |
| Comb. renew & waste | 3.54 | 4.13 | 5.51 | 8.26 | 9.87 | 9.94 | 9.50 | 2.6 | 2.9 |
| Nuclear | 0.55 | 6.90 | 17.77 | 14.94 | 17.45 | 16.65 | 13.04 | 22.7 | -1.6 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.00 | 0.04 | 0.13 | 0.18 | 0.22 | - | 24.1 |
| Hydro | 5.15 | 5.06 | 6.24 | 6.76 | 5.69 | 5.94 | 5.60 | 1.1 | -0.6 |
| Net electricity imports ⁽²⁾ | 0.06 | 0.05 | -0.15 | 0.40 | 0.11 | -0.17 | 0.40 | - | - |
| Heat | - | - | - | 0.36 | 0.28 | 0.28 | 0.27 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 78.1 | 96.7 | 146.5 | 145.3 | 158.4 | 148.9 | 150.0 | 133.7 |
| Nuclear | 2.1 | 26.5 | 68.2 | 57.3 | 72.4 | 67.0 | 63.9 | 50.0 |
| Hydro | 59.9 | 59.2 | 73.0 | 78.6 | 72.9 | 66.3 | 69.2 | 65.2 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 0.0 | 0.4 | 0.5 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.0 | 0.5 | 0.9 | 1.4 | 2.0 | 2.5 |
| Combustible fuels | 16.1 | 11.0 | 5.3 | 8.9 | 12.2 | 14.3 | 14.9 | 15.9 |
| <i>Coal</i> | 0.5 | 0.2 | 1.6 | 2.5 | 1.9 | 1.7 | 2.2 | 1.6 |
| <i>Oil</i> | 15.2 | 10.0 | 1.3 | 1.5 | 1.4 | 1.1 | 0.9 | 1.1 |
| <i>Gas</i> | - | - | 0.4 | 0.5 | 0.6 | 0.8 | 0.6 | 1.3 |
| <i>Comb. renew. & waste</i> | 0.4 | 0.8 | 2.0 e | 4.3 | 8.4 | 10.7 | 11.2 | 11.9 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - |
| - Own use by power plant | 1.7 | 2.3 | 4.0 | 3.7 | 3.8 | 3.8 | 3.6 | .. |
| Net production | 76.4 | 94.4 | 142.5 | 141.6 | 154.6 | 145.1 | 146.4 | .. |
| Nuclear | .. | 25.3 | 65.2 | 54.8 | 69.5 | 64.3 | 61.3 | .. |
| Hydro | .. | 58.5 | 72.3 | 77.9 | 72.3 | 65.7 | 68.7 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | - | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | 0.0 | 0.5 | 0.9 | 1.4 | 2.0 | .. |
| Combustible fuels | .. | 10.5 | 5.0 | 8.5 | 11.9 | 13.8 | 14.4 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | - | - | - | .. |
| - Used for heat pumps | - | - | - | 2.2 | 1.9 | 1.7 | 1.6 | 1.6 |
| - Used for electric boilers | - | - | - | 2.1 | 0.3 | 0.3 | 0.1 | 0.2 |
| - Used for pumped storage | 0.0 | 0.5 | 0.8 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 |
| + Imports | 6.0 | 3.4 | 12.9 | 18.3 | 14.6 | 16.1 | 12.8 | 13.8 |
| - Exports | 5.2 | 2.8 | 14.7 | 13.6 | 22.0 | 14.7 | 14.7 | 9.1 |
| Electrical energy supplied | 77.1 | 94.4 | 140.0 | 142.0 | 144.9 | 144.4 | 142.5 | .. |
| - Transmission & distr. losses | 7.7 | 8.3 | 9.2 | 10.8 | 11.7 | 10.7 | 11.0 | .. |
| - Statistical difference | - | - | 0.0 | - | - | - | - | .. |
| Total consumption | 69.4 | 86.1 | 130.7 | 131.1 | 133.2 | 133.7 | 131.5 | .. |
| - Energy industry consumption ⁽²⁾ | 0.2 | 1.2 | 10.4 | 2.4 | 2.5 | 2.7 | 2.9 | .. |
| Final consumption | 69.2 | 84.9 | 120.3 | 128.7 | 130.7 | 131.1 | 128.6 | .. |
| Industry | 39.5 | 40.6 | 54.0 | 56.9 | 57.6 | 58.0 | 57.7 | .. |
| Transport | 2.1 | 2.3 | 2.5 | 3.2 | 2.8 | 2.9 | 2.4 | .. |
| Commercial & publ. serv. | 11.1 | 15.2 | 24.4 | 25.4 | 26.1 | 28.5 | 28.1 | .. |
| Residential | 15.7 | 25.7 | 38.1 | 42.0 | 42.7 | 39.6 | 38.9 | .. |
| Agriculture & fishing | 0.7 | 1.1 | 1.5 | 1.2 | 1.5 | 2.1 | 1.6 | .. |
| Sector non specified | - | - | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

SWEDEN

4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 75.13 | 96.70 | 146.51 | 145.27 | 143.42 | 148.93 | 150.04 | 4.3 | 0.1 |
| - Hydro pumped storage | 0.02 | 0.38 | 0.53 | 0.04 | 0.13 | 0.10 | 0.14 | 22.7 | -7.1 |
| Total generation⁽¹⁾ | 75.11 | 96.32 | 145.98 | 145.23 | 143.29 | 148.82 | 149.89 | 4.2 | 0.1 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 75.13 | 85.31 | 139.32 | 141.05 | 138.02 | 142.94 | 143.56 | 3.9 | 0.2 |
| - Hydro pumped storage | 0.02 | 0.38 | 0.53 | 0.04 | 0.13 | 0.10 | 0.14 | 22.7 | -7.1 |
| Total generation ⁽¹⁾ | 75.11 | 84.94 | 138.79 | 141.02 | 137.89 | 142.84 | 143.42 | 3.9 | 0.2 |
| Nuclear | 2.05 | 26.49 | 68.19 | 57.32 | 66.98 | 66.97 | 63.89 | 24.5 | -0.4 |
| Hydro | 57.27 | 51.65 | 68.05 | 78.36 | 61.71 | 66.14 | 69.05 | 1.1 | 0.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 0.01 | 0.46 | 0.99 | 1.43 | 2.00 | - | 38.1 |
| Coal | 0.45 | 0.17 | 1.51 | 2.27 | 1.76 | 1.45 | 1.58 | 7.9 | 0.2 |
| Oil | 14.99 | 6.40 | 0.52 | 0.76 | 0.80 | 0.43 | 0.34 | -18.9 | -2.3 |
| Gas | - | - | 0.31 | 0.40 | 0.51 | 0.75 | 0.55 | - | 3.3 |
| Comb. renew. & waste | 0.36 | 0.22 e | 0.21 | 1.46 | 5.14 | 5.65 | 6.01 | -3.3 | 20.5 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | - | 11.38 | 7.20 | 4.21 | 5.40 | 5.99 | 6.47 | - | -0.6 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | - | 11.38 | 7.20 | 4.21 | 5.40 | 5.99 | 6.47 | - | -0.6 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | 7.22 | 4.45 | 0.23 | 0.01 | 0.02 | 0.02 | - | -26.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | - | - | - | - | - |
| Coal | - | 0.01 | 0.08 | 0.27 | 0.23 | 0.26 | 0.66 | - | 12.4 |
| Oil | - | 3.59 | 0.78 | 0.77 | 0.87 | 0.64 | 0.53 | - | -2.1 |
| Gas | - | - | 0.09 | 0.07 | 0.07 | 0.07 | 0.06 | - | -2.6 |
| Comb. renew. & waste | - | 0.56 | 1.80 | 2.88 | 4.21 | 5.00 | 5.21 | - | 6.1 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

SWEDEN

5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|------|------|------|------|------|------|------|---|
| Total | .. | 4029 | 7036 | 4096 | 5243 | 5777 | 6262 | -0.6 |
| Total energy | .. | - | - | - | - | - | - | - |
| Coal mines | .. | - | - | - | - | - | - | - |
| Oil and gas extraction | .. | - | - | - | - | - | - | - |
| Patent fuel plants | .. | - | - | - | - | - | - | - |
| Coke ovens | .. | - | - | - | - | - | - | - |
| Gas works | .. | - | - | - | - | - | - | - |
| BKB | .. | - | - | - | - | - | - | - |
| Oil refineries | .. | - | - | - | - | - | - | - |
| Energy non specified/other | .. | - | - | - | - | - | - | - |
| Total industry | .. | 4029 | 7014 | 4096 | 5243 | 5777 | 6262 | -0.6 |
| Iron and steel | .. | - | 5 | 204 | 369 | 252 | 233 | 23.8 |
| Chemical and petrochemical | .. | 50 | 870 | 105 | 67 | 82 | 89 | -11.9 |
| Non-ferrous metals | .. | - | 6 | - | - | - | - | - |
| Non-metallic minerals | .. | - | - | - | - | - | - | - |
| Transport equipment | .. | - | 1 | - | - | - | - | - |
| Machinery | .. | - | 13 | - | - | - | - | - |
| Mining and quarrying | .. | - | - | 17 | 25 | 13 | 37 | - |
| Food and tobacco | .. | 70 | 93 | 61 | 42 | 37 | 41 | -4.4 |
| Pulp and printing | .. | 3909 | 3834 | 3709 | 4740 | 5393 | 5862 | 2.4 |
| Wood and wood products | .. | - | 2155 | - | - | - | - | - |
| Construction | .. | - | - | - | - | - | - | - |
| Textile and leather | .. | - | 10 | - | - | - | - | - |
| Non specified/other industries | .. | - | 27 | - | - | - | - | - |
| Total transport | .. | - | - | - | - | - | - | - |
| Rail and pipeline | .. | - | - | - | - | - | - | - |
| Transport non specified | .. | - | - | - | - | - | - | - |
| Other | .. | - | 22 | - | - | - | - | - |
| Commerce and pub. services | .. | - | - | - | - | - | - | - |
| Residential | .. | - | - | - | - | - | - | - |
| Agriculture and fishing | .. | - | - | - | - | - | - | - |
| Sector non specified | .. | - | 22 | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

SWEDEN

6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|-----------------|----------------|---------------|---------------|---------------|---------------|---------------|---|
| Total | 107326 e | 78134 e | 157919 | 181066 | 177466 | 177632 | 182063 | 4.7 |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | 2286 e | 34872 | 15461 | 21572 | 19374 | 20663 | 15139 | -2.9 |
| Oil | 98628 e | 12372 | 9902 | 10458 | 7137 | 4063 | 8008 | -6.0 |
| Gas | 16 e | 6356 | 7800 | 6697 | 8291 | 6414 | 11343 | 0.1 |
| Comb. renew. & waste | 6396 e | 24534 e | 90539 | 118879 | 120825 | 125461 | 127208 | 9.5 |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | .. | .. | 26941 | 22298 | 20958 | 20509 | 19728 | .. |
| Electric boilers | .. | .. | 7276 | 1162 | 881 | 522 | 637 | .. |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 107326 e | 78134 e | 141201 | 154488 | 158120 | 159623 | .. | 4.0 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | 2286 e | 34872 | 15461 | 21572 | 19374 | 20663 | .. | -2.9 |
| Oil | 98628 e | 12372 | 9902 | 10458 | 7137 | 4063 | .. | -6.0 |
| Gas | 16 e | 6356 | 7800 | 6697 | 8291 | 6414 | .. | 0.1 |
| Comb. renew. & waste | 6396 e | 24534 e | 73821 | 92301 | 101479 | 107452 | .. | 8.6 |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | .. | .. | 26941 | 22298 | 20958 | 20509 | .. | .. |
| Electric boilers | .. | .. | 7276 | 1162 | 881 | 522 | .. | .. |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | - | 16718 | 26578 | 19346 | 18009 | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | - | - | - | - | - | .. | - |
| Gas | - | - | - | - | - | - | .. | - |
| Comb. renew. & waste | - | - | 16718 | 26578 | 19346 | 18009 | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

SWEDEN

7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 2.47 | 2.96 | 2.67 | 4.45 | 6.03 | 5.92 | 5.92 | 0.5 | 4.5 |
| Coal | 0.05 | 0.08 | 1.15 | 0.77 | 0.85 | 0.76 | 0.81 | 19.8 | -1.9 |
| Oil | 2.33 | 2.60 | 0.45 | 0.45 | 0.50 | 0.33 | 0.22 | -9.2 | -4.0 |
| Gas | - | 0.00 | 0.20 | 0.26 | 0.22 | 0.29 | 0.22 | - | 0.5 |
| Comb. renew. & waste | 0.09 | 0.27 | 0.87 | 2.97 | 4.45 | 4.55 | 4.67 | 14.4 | 9.8 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 2.44 | 2.38 | 3.50 | 4.82 | 4.70 | 4.78 | .. | 4.0 |
| Coal | .. | 0.08 | 1.14 | 0.71 | 0.80 | 0.70 | 0.75 | .. | -2.3 |
| Oil | .. | 2.15 | 0.37 | 0.38 | 0.41 | 0.26 | 0.16 | .. | -4.4 |
| Gas | .. | 0.00 | 0.19 | 0.25 | 0.22 | 0.28 | 0.21 | .. | 0.7 |
| Comb. renew. & waste | .. | 0.21 | 0.69 | 2.17 | 3.39 | 3.45 | 3.66 | .. | 9.8 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 0.55 | 6.90 | 17.77 | 14.94 | 17.45 | 17.45 | 16.65 | 22.7 | -0.4 |
| Nuclear | 0.55 | 6.90 | 17.77 | 14.94 | 17.45 | 17.45 | 16.65 | 22.7 | -0.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 5.15 | 5.06 | 6.24 | 6.80 | 5.39 | 5.81 | 6.11 | 1.1 | -0.1 |
| Hydro | 5.15 | 5.06 | 6.24 | 6.76 | 5.31 | 5.69 | 5.94 | 1.1 | -0.3 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.00 | 0.04 | 0.08 | 0.12 | 0.17 | - | 38.1 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

SWEDEN

8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|------|------|------|------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 149 | 466 | 2325 | 1871 | - | - | - |
| Electricity production (GWh) | 25 | 47 | 210 | 194 | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 190 | 11 | 23 | 64 | 33 | 35 | 6.6 |
| Fuel input (TJ) | 7895 | 451 | 945 | 2809 | 1343 | 1450 | 6.7 |
| Electricity production (GWh) | 730 | 32 | 64 | 279 | 104 | 168 | 9.7 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 755 | 79 | 274 | 473 | 104 | 168 | 4.3 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

SWEDEN

**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|---------|--------|-------|--------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 85 | 829 | 501 | 563 | 403 | 332 | -5.0 |
| Fuel input (TJ) | 2318 | 22562 | 13955 | 14938 | 10871 | 8800 | -5.1 |
| Electricity production (GWh) | 158 | 1081 | 1636 | 879 | 649 | 514 | -4.0 |
| CHP Heat production (TJ) | 1276 e | 15376 | 5329 | 9223 | 6807 | 5526 | -5.5 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | 185 | 429 | 651 | 531 | 908 | 9.2 |
| Fuel input (TJ) | - | 2405 | 4667 | 7555 | 5908 | 10460 | 8.5 |
| Electricity production (GWh) | - | 56 | 70 | 454 | 355 | 616 | 14.2 |
| CHP Heat production (TJ) | - | 1922 | 3842 | 4625 | 3663 | 6774 | 7.2 |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 24 | 4734 | 7153 | 8922 | 10039 | 10793 | 4.7 |
| Electricity production (GWh) | 2 | 405 | 620 | 464 | 701 | 1105 | 5.7 |
| CHP Heat production (TJ) | 6 e | 2054 | 2600 | 4979 | 4782 | 5043 | 5.1 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 2577 | 271 | 264 | 313 | 200 | 129 | -4.0 |
| Fuel input (TJ) | 106678 | 11646 | 11076 | 13602 | 8376 | 5441 | -4.1 |
| Electricity production (GWh) | 9266 | 1269 | 1469 | 1390 | 973 | 705 | -3.2 |
| CHP Heat production (TJ) | 54584 e | 5264 | 3878 | 5908 | 3459 | 1935 | -5.4 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 6066 | 9990 | 9145 | 12973 | 9748 | 2.7 |
| Electricity production (GWh) | - | 395 | 462 | 582 | 824 | 603 | 2.4 |
| CHP Heat production (TJ) | - | 3645 | 6238 | 5468 | 7933 | 6006 | 2.8 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 4784 | 12330 | 70998 | 100950 | 104229 | 107135 | 12.8 |
| Electricity production (GWh) | 663 e | 1902 | 3970 | 7503 | 8496 | 8932 | 9.0 |
| CHP Heat production (TJ) | 975 e | 3845 | 45738 | 55737 | 56324 | 59157 | 16.4 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | 1039 | 2496 | 1309 | 463 | - |
| Electricity production (GWh) | - | - | 101 | 145 | 78 | 42 | - |
| CHP Heat production (TJ) | - | - | 489 | 1548 | 821 | 231 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 2000 | 5560 | 14368 | 24400 | 30729 | 36787 | 11.1 |
| Electricity production (GWh) | 116 e | 103 e | 239 | 1419 | 1851 | 2115 | 18.3 |
| CHP Heat production (TJ) | 1115 e | 4673 e | 10971 | 15135 | 19262 | 23264 | 9.3 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 823 | 5089 | 3858 | 2361 | - |
| Electricity production (GWh) | - | - | 32 | 288 | 231 | 136 | - |
| CHP Heat production (TJ) | - | - | 589 | 3179 | 2415 | 1490 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 10205 | 5211 | 8599 | 13124 | 14158 | 14768 | 6.0 |
| CHP Heat production (TJ) | 57956 | 36779 | 79674 | 105802 | 105466 | 109426 | 6.2 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

SWEDEN

10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|---------|--------|-------|-------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | 357 | 1 | - | - | - | - |
| Fuel input (TJ) | - | 9711 | 30 | 18 | - | - | - |
| Heat production (TJ) | - | 8529 | 26 | 15 | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | 629 | 334 | 207 | 329 | 261 | -4.8 |
| Fuel input (TJ) | - | 7548 | 3983 | 2309 | 4607 | 3721 | -3.9 |
| Heat production (TJ) | - | 6462 | 3485 | 1961 | 3869 | 2988 | -4.2 |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 1167 | 619 | 201 | 29 | 300 | 392 | -2.5 |
| Heat production (TJ) | 1004 e | 529 | 179 | 25 | 253 | 332 | -2.6 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 1235 | 190 | 161 | 142 | 103 | 57 | -6.5 |
| Fuel input (TJ) | 51183 | 8253 | 6888 | 6186 | 4379 | 2511 | -6.4 |
| Heat production (TJ) | 44044 e | 7108 | 6024 | 5260 | 3678 | 2128 | -6.5 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 19 | 3250 | 1876 | 1232 | 427 | 482 | -10.1 |
| Heat production (TJ) | 16 e | 2711 | 1562 | 1044 | 358 | 408 | -10.0 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 147 | 9509 | 30283 | 43975 | 38212 | 37852 | 8.0 |
| Heat production (TJ) | 126 e | 8141 | 26592 | 37322 | 31746 | 32072 | 7.9 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | 22 | - | - | - | - |
| Heat production (TJ) | - | - | 19 | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 4860 | 9080 | 6501 | 7628 | 7908 | 7531 | -1.0 |
| Heat production (TJ) | 4180 e | 7875 e | 5688 | 6480 | 6642 | 6381 | -1.2 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 519 | 1804 | 4304 | 3383 | - |
| Heat production (TJ) | - | - | 453 | 1551 | 3615 | 2866 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | 49370 | 41355 | 44028 | 53658 | 50161 | 47175 | 0.7 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

SWEDEN

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 34.82 | 34.60 | 32.12 | 35.30 | 34.23 | 34.40 | 33.77 | -0.5 | 0.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | - | 6.2 |
| Coal | 0.93 | 0.84 | 1.04 | 0.74 | 0.81 | 0.90 | 0.82 | 0.7 | -1.3 |
| Oil | 24.38 | 20.16 | 14.02 | 14.17 | 12.37 | 12.24 | 11.96 | -3.2 | -0.9 |
| Gas | 0.11 | 0.08 | 0.36 | 0.48 | 0.56 | 0.56 | 0.58 | 7.5 | 2.6 |
| Comb. renew. & waste | 3.46 | 3.86 | 4.64 | 5.29 | 5.06 | 5.32 | 5.27 | 1.7 | 0.7 |
| Electricity | 5.95 | 7.30 | 10.35 | 11.07 | 11.25 | 11.27 | 11.06 | 3.3 | 0.4 |
| Heat | - | 2.36 | 1.71 | 3.55 | 4.18 | 4.09 | 4.06 | - | 4.9 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 13.26 | 11.95 | 11.86 | 13.68 | 12.05 | 12.20 | 11.67 | -0.7 | -0.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.84 | 0.78 | 0.96 | 0.72 | 0.80 | 0.88 | 0.80 | 0.8 | -1.0 |
| Oil | 6.08 | 4.65 | 2.16 | 3.07 | 1.66 | 1.51 | 1.30 | -5.9 | -2.8 |
| Gas | 0.01 | 0.01 | 0.26 | 0.31 | 0.36 | 0.36 | 0.37 | 20.3 | 2.1 |
| Comb. renew. & waste | 2.94 | 3.02 | 3.67 | 4.33 | 3.92 | 4.08 | 3.86 | 1.3 | 0.3 |
| Electricity | 3.40 | 3.49 | 4.64 | 4.90 | 4.93 | 4.99 | 4.96 | 1.8 | 0.4 |
| Heat | - | - | 0.17 | 0.34 | 0.39 | 0.38 | 0.38 | - | 4.6 |
| Transport | 5.26 | 5.83 | 6.91 | 7.39 | 7.90 | 8.09 | 8.27 | 1.6 | 1.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | 0.00 | - | - | - | - | - | - | - |
| Oil | 5.09 | 5.63 | 6.70 | 7.11 | 7.45 | 7.53 | 7.68 | 1.6 | 0.8 |
| Gas | - | - | - | 0.01 | 0.02 | 0.02 | 0.02 | - | - |
| Comb. renew. & waste | - | - | - | - | 0.19 | 0.28 | 0.37 | - | - |
| Electricity | 0.18 | 0.20 | 0.21 | 0.27 | 0.25 | 0.25 | 0.20 | 1.0 | -0.2 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 0.99 | 1.35 | 4.00 | 4.40 | 4.08 | 4.18 | 4.13 | 8.6 | 0.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | 0.00 | - | - | - | - | - | - | - |
| Oil | 0.03 | 0.02 | 1.35 | 1.05 | 0.35 | 0.39 | 0.34 | 24.9 | -7.4 |
| Gas | - | 0.02 | 0.04 | 0.04 | 0.10 | 0.10 | 0.10 e | - | 5.0 |
| Comb. renew. & waste | - | 0.01 | 0.02 | 0.01 | 0.04 | 0.04 | 0.05 | - | 5.6 |
| Electricity | 0.96 | 1.31 | 2.10 | 2.18 | 2.33 | 2.45 | 2.42 | 4.7 | 0.8 |
| Heat | - | - | 0.50 | 1.12 | 1.26 | 1.20 | 1.22 | - | 5.2 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

SWEDEN

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 10.74 | 9.75 | 6.54 | 7.29 | 7.00 | 6.73 | 6.64 | -2.9 | 0.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | - | 6.2 |
| Coal | 0.05 | 0.01 | - | - | - | - | - | - | - |
| Oil | 8.73 | 6.65 | 1.54 | 0.88 | 0.25 | 0.15 | 0.10 | -9.7 | -14.3 |
| Gas | 0.10 | 0.05 | 0.05 | 0.10 | 0.06 | 0.05 | 0.05 e | -3.6 | 0.2 |
| Comb. renew. & waste | 0.52 | 0.83 | 0.63 | 0.62 | 0.60 | 0.60 | 0.68 | 1.2 | 0.4 |
| Electricity | 1.35 | 2.21 | 3.28 | 3.61 | 3.57 | 3.41 | 3.35 | 5.3 | 0.1 |
| Heat | - | - | 1.04 | 2.08 | 2.53 | 2.51 | 2.45 | - | 4.9 |
| Agriculture & fishing | 0.50 | 0.67 | 0.87 | 0.76 | 0.78 | 0.76 | 0.72 | 3.3 | -1.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | 0.01 | 0.04 | - | - | - | - | - | - |
| Oil | 0.44 | 0.57 | 0.38 | 0.30 | 0.28 | 0.24 | 0.23 | -0.9 | -2.7 |
| Gas | - | - | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 e | - | 3.2 |
| Comb. renew. & waste | - | 0.00 | 0.31 | 0.33 | 0.31 | 0.31 | 0.32 | - | 0.1 |
| Electricity | 0.06 | 0.10 | 0.13 | 0.10 | 0.17 | 0.18 | 0.14 | 4.2 | 0.5 |
| Heat | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | - | - |
| Other | 1.88 | 3.48 | - | 0.04 | 0.02 | 0.02 | 0.01 | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | 0.00 | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 1.88 | 1.12 | - | 0.04 | 0.02 | 0.02 | 0.01 | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | - | - | - | - | - | - | - | - | - |
| Heat | - | 2.36 | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 2.18 | 1.57 | 1.93 | 1.73 | 2.39 | 2.43 | 2.33 | -0.71 | 1.05 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

SWEDEN

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 34.82 | 34.60 | 32.12 | 35.30 | 34.54 | 34.23 | 34.40 | 33.77 |
| Total industry (Mtoe) | 13.26 | 11.95 | 11.86 | 13.68 | 11.96 | 12.05 | 12.20 | 11.67 |
| Iron and steel | 1.91 | 1.47 | 1.06 | 1.17 | 1.38 | 1.26 | 1.35 | 1.23 |
| Chem. and petrochemical | 0.85 | 0.95 | 1.22 | 2.03 | 0.99 | 0.82 | 0.81 | 0.77 |
| Non-ferrous metals | 0.32 | 0.32 | 0.33 | 0.33 | 0.34 | 0.33 | 0.34 | 0.33 |
| Non-metallic minerals | 1.20 | 0.77 | 0.63 | 0.50 | 0.44 | 0.46 | 0.46 | 0.44 |
| Transport equipment | 0.26 | 0.36 | 0.25 | 0.28 | 0.31 | 0.29 | 0.29 | 0.23 |
| Machinery | 0.81 | 0.71 | 0.70 | 0.29 | 0.28 | 0.28 | 0.26 | 0.21 |
| Mining and quarrying | 0.44 | 0.42 | 0.34 | 0.33 | 0.36 | 0.37 | 0.38 | 0.41 |
| Food and tobacco | 0.57 | 0.56 | 0.54 | 0.52 | 0.44 | 0.42 | 0.40 | 0.40 |
| Paper, pulp and printing | 5.41 | 5.16 | 5.33 | 5.99 | 5.61 | 6.08 | 6.19 | 5.96 |
| Wood and wood products | 0.65 | 0.68 | 0.78 | 1.08 | 0.66 | 0.66 | 0.64 | 0.59 |
| Construction | 0.07 | 0.07 | 0.04 | 0.06 | 0.07 | 0.08 | 0.08 | 0.08 |
| Textile and leather | 0.20 | 0.14 | 0.12 | 0.05 | 0.05 | 0.04 | 0.04 | 0.04 |
| Non specified/other | 0.58 | 0.33 | 0.51 | 1.05 | 1.04 | 0.96 | 0.97 | 0.97 |
| Electricity consumption (Mtoe) | 5.95 | 7.30 | 10.35 | 11.07 | 11.24 | 11.25 | 11.27 | 11.06 |
| Total industry (Mtoe) | 3.40 | 3.49 | 4.64 | 4.90 | 4.95 | 4.93 | 4.99 | 4.96 |
| Iron and steel | 0.50 | 0.44 | 0.38 | 0.46 | 0.46 | 0.45 | 0.45 | 0.45 |
| Chem. and petrochemical | 0.46 | 0.44 | 0.57 | 0.47 | 0.57 | 0.55 | 0.53 | 0.51 |
| Non-ferrous metals | 0.20 | 0.19 | 0.23 | 0.24 | 0.28 | 0.28 | 0.28 | 0.26 |
| Non-metallic minerals | 0.11 | 0.10 | 0.12 | 0.10 | 0.09 | 0.09 | 0.10 | 0.11 |
| Transport equipment | - | 0.12 | 0.20 | 0.21 | 0.22 | 0.21 | 0.22 | 0.18 |
| Machinery | 0.35 | 0.29 | 0.42 | 0.16 | 0.15 | 0.16 | 0.15 | 0.13 |
| Mining and quarrying | 0.18 | 0.18 | 0.20 | 0.22 | 0.22 | 0.22 | 0.22 | 0.26 |
| Food and tobacco | 0.10 | 0.14 | 0.22 | 0.26 | 0.21 | 0.21 | 0.21 | 0.21 |
| Paper, pulp and printing | 1.13 | 1.22 | 1.77 | 2.03 | 1.99 | 2.08 | 2.13 | 2.11 |
| Wood and wood products | 0.11 | 0.13 | 0.17 | 0.20 | 0.19 | 0.19 | 0.19 | 0.19 |
| Construction | 0.07 | 0.07 | 0.04 | 0.06 | 0.07 | 0.07 | 0.08 | 0.08 |
| Textile and leather | 0.03 | 0.03 | 0.08 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 |
| Non specified/other | 0.15 | 0.12 | 0.21 | 0.46 | 0.48 | 0.40 | 0.42 | 0.45 |
| Total industry (TWh) | 39.54 | 40.57 | 53.96 | 56.94 | 57.56 | 57.34 | 57.98 | 57.66 |
| Iron and steel | 5.82 | 5.14 | 4.45 | 5.37 | 5.36 | 5.29 | 5.22 | 5.20 |
| Chem. and petrochemical | 5.38 | 5.11 | 6.66 | 5.42 | 6.64 | 6.35 | 6.14 | 5.90 |
| Non-ferrous metals | 2.30 | 2.26 | 2.73 | 2.80 | 3.27 | 3.23 | 3.28 | 3.03 |
| Non-metallic minerals | 1.33 | 1.22 | 1.45 | 1.17 | 1.05 | 1.05 | 1.14 | 1.23 |
| Transport equipment | - | 1.38 | 2.31 | 2.46 | 2.61 | 2.47 | 2.52 | 2.11 |
| Machinery | 4.06 | 3.41 | 4.91 | 1.89 | 1.75 | 1.85 | 1.73 | 1.50 |
| Mining and quarrying | 2.12 | 2.15 | 2.35 | 2.59 | 2.52 | 2.56 | 2.57 | 3.00 |
| Food and tobacco | 1.17 | 1.58 | 2.60 | 2.99 | 2.43 | 2.44 | 2.46 | 2.50 |
| Paper, pulp and printing | 13.15 | 14.21 | 20.62 | 23.56 | 23.10 | 24.19 | 24.77 | 24.52 |
| Wood and wood products | 1.29 | 1.57 | 1.98 | 2.33 | 2.20 | 2.17 | 2.23 | 2.22 |
| Construction | 0.76 | 0.86 | 0.49 | 0.66 | 0.80 | 0.87 | 0.89 | 0.92 |
| Textile and leather | 0.39 | 0.33 | 0.96 | 0.31 | 0.26 | 0.24 | 0.21 | 0.27 |
| Non specified/other | 1.78 | 1.37 | 2.46 | 5.39 | 5.59 | 4.64 | 4.85 | 5.26 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

SWEDEN

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|-------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Total imports⁽¹⁾ | 5950 | 3369 | 12909 | 7720 | 18308 | 14576 | 17537 | 16052 | 12754 |
| Imports from: | | | | | | | | | |
| Total OECD | 5950 | 3369 | 12909 | 7720 | 18308 | 14576 | 17537 | 16052 | 12754 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | 289 | 703 | 219 | 627 | 1619 | 761 | 5246 | 2128 | 1368 |
| Finland | 260 | 1163 | 360 | 213 | 830 | 1393 | 2458 | 2565 | 3088 |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | 20 | 83 | 423 | 1891 | 930 | 512 |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | 5401 | 1503 | 12330 | 6860 | 15723 | 10817 | 6452 | 10199 | 7641 |
| Poland | - | - | - | - | 53 | 1182 | 1490 | 230 | 145 |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

SWEDEN

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|-------------|-------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Total exports ⁽¹⁾ | 5216 | 2834 | 14677 | 9401 | 13630 | 21968 | 11497 | 14736 | 14715 |
| Exports to: | | | | | | | | | |
| Total OECD | 5216 | 2834 | 14677 | 9401 | 13630 | 21968 | 11497 | 14736 | 14715 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | 918 | 1174 | 7921 | 2091 | 3392 | 7690 | 1392 | 4706 | 6213 |
| Finland | 4133 | 669 | 6356 | 3820 | 8234 | 7193 | 2365 | 3088 | 2774 |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | 2269 | 664 | 3433 | 1512 | 1852 | 2541 |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | 165 | 991 | 400 | 1221 | 915 | 2835 | 5965 | 2880 | 1122 |
| Poland | - | - | - | - | 425 | 817 | 263 | 2210 | 2065 |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

SWEDEN

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 20.77 | 27.42 | 32.41 | 32.13 | 32.71 | 32.40 | 33.03 | 33.10 | 32.63 |
| Nuclear | 1.06 | 4.61 | 9.97 | 10.06 | 9.46 | 9.47 | 9.45 | 9.07 | 8.94 |
| Hydro | 12.31 | 14.86 | 15.39 | 15.41 | 16.47 | 16.34 | 16.27 | 16.63 | 16.43 |
| <i>of which: pumped storage</i> | - | - | 0.43 | 0.43 | 0.02 | 0.04 | 0.04 | 0.05 | 0.09 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | 0.01 | 0.01 | 0.01 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.01 | 0.07 | 0.21 | 0.49 | 0.52 | 0.71 | 0.81 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 7.39 | 7.95 | 7.04 | 6.59 | 6.57 | 6.09 | 6.78 | 6.68 | 6.44 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | .. | .. | .. | - | .. | .. | .. |
| Liquid fuels | 7.39 | 7.95 | .. | .. | .. | 3.68 | .. | .. | .. |
| Natural gas | - | - | .. | .. | .. | 0.07 | .. | .. | .. |
| Comb. renew. & waste | - | - | .. | .. | .. | 0.23 | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | .. | .. | .. | 1.89 | .. | .. | .. |
| Solid / natural gas | - | - | .. | .. | .. | - | - | - | - |
| Liquid / natural gas | - | - | .. | .. | .. | 0.15 | .. | .. | .. |
| Solid / liquid / gas | - | - | .. | .. | .. | 0.07 | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 5.33 | 4.77 | 4.38 | 4.36 | 4.61 | 4.59 | 4.30 |
| Internal combustion | - | - | 0.02 | 0.09 | 0.08 | 0.05 | 0.09 | 0.09 | 0.09 |
| Gas turbine | - | - | 1.69 | 1.73 | 1.93 | 1.64 | 1.76 | 1.60 | 1.66 |
| Combined cycle | - | - | - | - | 0.18 | 0.04 | 0.34 | 0.40 | 0.39 |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | 21.97 | 24.40 | 26.00 | 25.80 | 26.20 | 26.30 | 23.59 |
| Available capacity | .. | .. | .. | .. | 28.70 | .. | 23.25 | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)

(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|------|------|------|------|------|------|------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | - | - | 1.78 | 1.50 | 1.01 | 0.99 | 1.10 | 1.20 | 1.31 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | 0.94 | 0.74 | 0.06 | - | - | - | - |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | - | - | 0.84 | 0.76 | 0.95 | 0.98 | 1.10 | 1.20 | 1.31 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | .. | .. | .. | - | - | - | .. |
| Liquid fuels | - | - | .. | .. | .. | 0.03 | .. | .. | .. |
| Natural gas | - | - | .. | .. | .. | 0.03 | .. | .. | .. |
| Comb. renew. & waste | - | - | .. | .. | .. | 0.04 | .. | .. | .. |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | .. | .. | .. | 0.76 | .. | .. | .. |
| Solid / natural gas | - | - | .. | .. | .. | 0.04 | .. | .. | .. |
| Liquid / natural gas | - | - | .. | .. | .. | 0.08 | .. | .. | .. |
| Solid / liquid / gas | - | - | .. | .. | .. | - | .. | .. | .. |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 0.84 | 0.76 | 0.95 | 0.97 | 1.10 | 1.20 | 1.31 |
| Internal combustion | - | - | - | - | - | - | - | - | - |
| Gas turbine | - | - | - | - | - | 0.02 | - | - | - |
| Combined cycle | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | - | - | - | - |
| Peak load | .. | .. | 1.33 | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-----------------------------|-------|-------|------|------|------|-------|-------|-------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Swedish Crowns/ unit | | | | | | | | |
| Steam coal (t) | 215 | 370 | .. | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil (t) | 416 | 842 | 632 | .. | .. | .. | .. | .. | .. |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Swedish Crowns/ toe | | | | | | | | |
| Steam coal | 323 | 555 | .. | .. | .. | .. | .. | .. | .. |
| Heavy fuel oil | 433.3 | 877.1 | 658.3 | .. | .. | .. | .. | .. | .. |
| Natural gas ⁽²⁾ | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| End-user prices of electricity | | | | | | | | | |
| | Swedish Crowns/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.130 | 0.170 | 0.295 | .. | .. | .. | 0.512 | 0.629 | 0.633 |
| <i>of which: tax</i> | 0.020 | 0.030 | 0.055 | .. | .. | .. | 0.005 | 0.005 | 0.005 |
| Household | | | | | | | | | |
| Price | 0.210 | 0.250 | 0.520 | .. | .. | .. | 1.323 | 1.441 | 1.485 |
| <i>of which: tax</i> | 0.030 | 0.040 | 0.156 | .. | .. | .. | 0.522 | 0.543 | 0.565 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

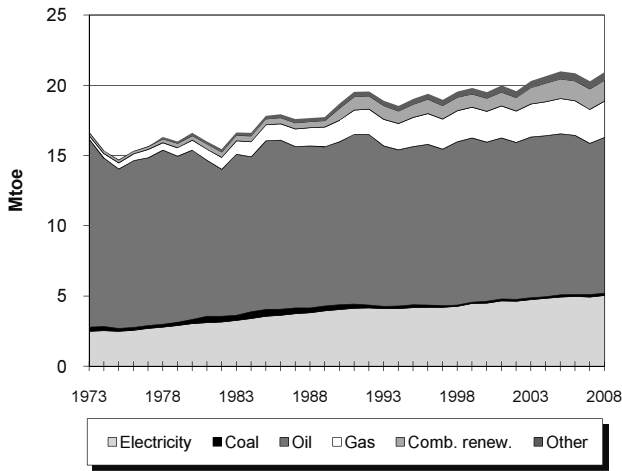


Figure 2. Electricity generation by fuel

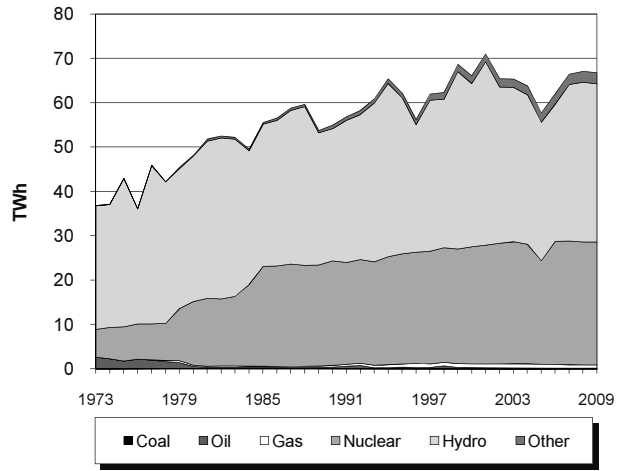


Figure 3. Electricity consumption by sector

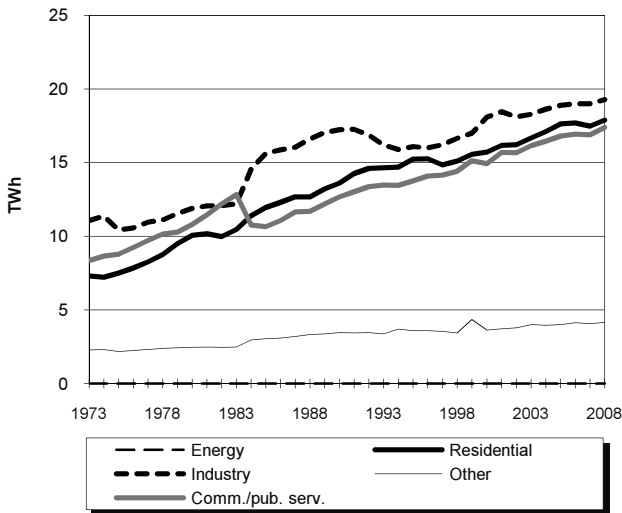


Figure 4. Electricity indicators

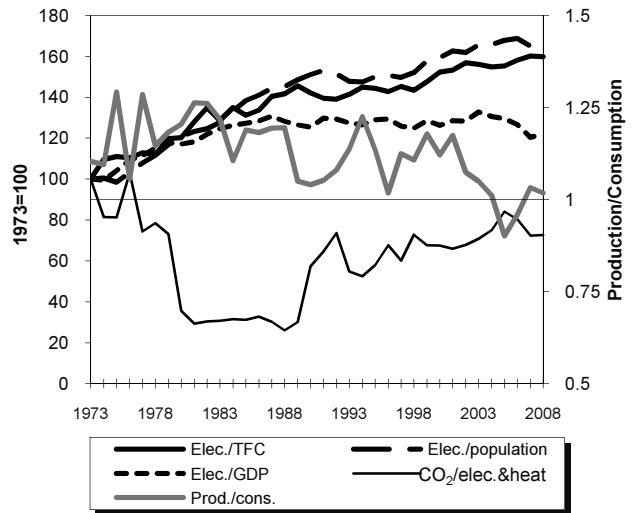
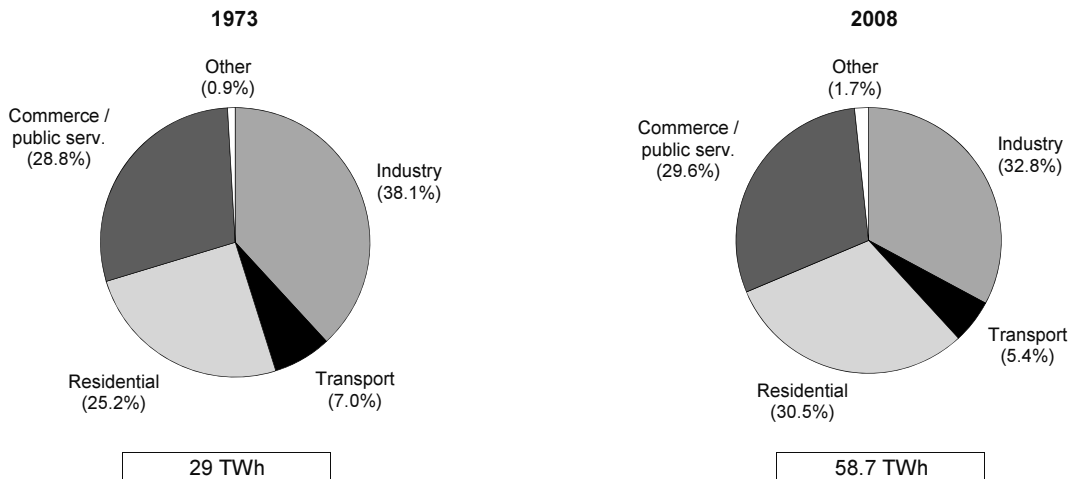


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 18.91 | 20.04 | 24.04 | 24.63 | 25.72 | 26.70 | 26.92 | 1.4 | 0.6 |
| GDP (billion 2000 USD) | 176.69 | 180.70 | 224.77 | 249.91 | 286.34 | 291.43 | 290.73 | 1.4 | 1.4 |
| TPES/GDP ⁽¹⁾ | 0.11 | 0.11 | 0.11 | 0.10 | 0.09 | 0.09 | 0.09 | -0.0 | -0.8 |
| Population (millions) | 6.44 | 6.39 | 6.80 | 7.21 | 7.62 | 7.71 | 7.68 | 0.3 | 0.6 |
| TPES/population ⁽²⁾ | 2.94 | 3.14 | 3.54 | 3.42 | 3.38 | 3.46 | 3.50 | 1.1 | -0.1 |
| TPES/GDP (2000 = 100) | 109 | 113 | 109 | 100 | 91 | 93 | 94 | -0.0 | -0.8 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 78 | 93 | 100 | 100 | 96 | 96 | .. | 1.4 | .. |
| Ele.TFC/population ⁽⁴⁾ | 4505 | 5523 | 6913 | 7268 | 7541 | 7620 | .. | 2.6 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 36.82 | 48.18 | 54.99 | 66.13 | 66.46 | 67.09 | 66.81 | 2.4 | 1.0 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 18.91 | 20.04 | 24.04 | 24.63 | 25.72 | 26.70 | 26.92 | 1.4 | 0.6 |
| Coal | 0.33 | 0.33 | 0.36 | 0.14 | 0.18 | 0.16 | 0.15 | 0.5 | -4.5 |
| Oil | 14.45 | 12.51 | 12.26 | 11.02 | 10.45 | 11.09 | 11.51 | -1.0 | -0.3 |
| Gas | 0.15 | 0.87 | 1.63 | 2.43 | 2.63 | 2.81 | 2.69 | 15.1 | 2.7 |
| Comb. renew & waste | 0.24 | 0.47 | 1.16 | 1.44 | 2.10 | 2.16 | 2.16 | 9.7 | 3.3 |
| Nuclear | 1.64 | 3.74 | 6.18 | 6.92 | 7.31 | 7.25 | 7.25 | 8.1 | 0.8 |
| Geothermal | - | - | 0.06 | 0.09 | 0.16 | 0.19 | 0.23 | - | 7.2 |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.01 | 0.02 | 0.03 | 0.03 | 0.04 | - | 8.7 |
| Hydro | 2.40 | 2.82 | 2.56 | 3.17 | 3.03 | 3.10 | 3.07 | 0.4 | 1.0 |
| Net electricity imports ⁽²⁾ | -0.30 | -0.70 | -0.18 | -0.61 | -0.18 | -0.10 | -0.19 | -2.9 | 0.1 |
| Heat | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 38.0 | 49.2 | 56.2 | 67.5 | 59.6 | 68.0 | 69.0 | 68.6 |
| Nuclear | 6.3 | 14.3 | 23.6 | 26.4 | 23.3 | 27.9 | 27.7 | 27.7 |
| Hydro | 29.1 | 33.9 | 31.0 | 38.2 | 33.1 | 36.7 | 37.9 | 37.5 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 1.2 | 1.1 | 1.2 | 1.4 | 1.9 | 1.5 | 1.9 | 1.8 |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Combustible fuels | 2.6 e | 1.0 | 1.6 | 2.8 | 3.2 | 3.2 | 3.3 | 3.3 |
| <i>Coal</i> | - | 0.1 | 0.0 | - | - | - | - | - |
| <i>Oil</i> | 2.6 | 0.5 | 0.4 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 |
| <i>Gas</i> | - | 0.3 | 0.3 | 0.9 | 0.9 | 0.8 | 0.8 | 0.8 |
| <i>Comb. renew. & waste</i> | - | 0.2 | 0.8 | 1.7 | 2.1 | 2.3 | 2.4 | 2.4 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - |
| - Own use by power plant | 0.9 | 1.1 | 1.7 | 2.0 | 1.8 | 2.1 | 2.1 | .. |
| Net production | 37.2 | 48.2 | 54.4 | 65.5 | 57.8 | 65.8 | 66.9 | .. |
| Nuclear | .. | 13.7 | 22.3 | 24.9 | 22.0 | 26.3 | 26.1 | .. |
| Hydro | .. | 33.5 | 30.7 | 37.9 | 32.8 | 36.4 | 37.6 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | - | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Combustible fuels | .. | 1.0 | 1.5 | 2.7 | 3.0 | 3.1 | 3.1 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | - | - | - | .. |
| - Used for heat pumps | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | 1.7 | 1.5 | 1.7 | 2.0 | 2.6 | 2.1 | 2.7 | 2.5 |
| + Imports | 7.0 | 8.5 | 20.8 | 24.3 | 38.3 | 34.8 | 31.6 | 31.4 |
| - Exports | 10.5 | 16.7 | 22.9 | 31.4 | 32.0 | 36.9 | 32.7 | 33.5 |
| Electrical energy supplied | 31.9 | 38.5 | 50.6 | 56.4 | 61.5 | 61.7 | 63.0 | .. |
| - Transmission & distr. losses | 2.9 | 3.2 | 3.7 | 4.1 | 4.2 | 4.2 | 4.3 | .. |
| - Statistical difference | - | - | - | - | - | - | - | .. |
| Total consumption | 29.0 | 35.3 | 47.0 | 52.4 | 57.3 | 57.4 | 58.7 | .. |
| - Energy industry consumption ⁽²⁾ | - | - | - | - | - | - | - | .. |
| Final consumption | 29.0 | 35.3 | 47.0 | 52.4 | 57.3 | 57.4 | 58.7 | .. |
| Industry | 11.1 | 11.9 | 17.2 | 18.1 | 18.9 | 19.0 | 19.3 | .. |
| Transport | 2.0 | 2.1 | 2.6 | 2.6 | 3.0 | 3.1 | 3.1 | .. |
| Commercial & publ. serv. | 8.3 | 10.8 | 12.7 | 14.9 | 16.8 | 16.9 | 17.4 | .. |
| Residential | 7.3 | 10.1 | 13.6 | 15.7 | 17.6 | 17.5 | 17.9 | .. |
| Agriculture & fishing | 0.3 | 0.4 | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | .. |
| Sector non specified | - | - | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 38.18 | 49.25 | 56.18 | 67.52 | 64.04 | 67.95 | 68.98 | 2.4 | 1.1 |
| - Hydro pumped storage | 1.08 | 1.07 | 1.19 | 1.40 | 1.92 | 1.49 | 1.90 | 0.6 | 2.6 |
| Total generation⁽¹⁾ | 37.10 | 48.18 | 54.99 | 66.13 | 62.11 | 66.46 | 67.09 | 2.5 | 1.1 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 34.55 | 44.86 | 51.33 | 61.80 | 58.50 | 62.19 | 63.18 | 2.5 | 1.2 |
| - Hydro pumped storage | 1.08 | 1.07 | 1.19 | 1.37 | 1.87 | 1.45 | 1.85 | 0.6 | 2.5 |
| Total generation ⁽¹⁾ | 33.47 | 43.79 | 50.15 | 60.43 | 56.63 | 60.74 | 61.33 | 2.6 | 1.1 |
| Nuclear | 7.07 | 14.35 | 23.64 | 26.45 | 27.82 | 27.93 | 27.70 | 7.8 | 0.9 |
| Hydro | 24.25 | 28.87 | 26.19 | 33.88 | 28.69 | 32.69 | 33.40 | 0.5 | 1.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.00 | 0.02 | 0.02 | 0.02 | - | - |
| Coal | - | 0.03 | 0.01 | - | - | - | - | - | - |
| Oil | 2.15 | 0.25 | 0.26 | 0.00 | 0.01 | 0.00 | 0.00 | -12.5 | -26.5 |
| Gas | - | 0.12 | 0.06 | 0.10 | 0.09 | 0.05 | 0.11 | - | 3.7 |
| Comb. renew. & waste | - | 0.17 | - | 0.00 | 0.02 | 0.06 | 0.10 | - | - |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 3.63 | 4.39 | 4.84 | 5.72 | 5.54 | 5.76 | 5.81 | 1.8 | 1.0 |
| - Hydro pumped storage | - | - | - | 0.03 | 0.05 | 0.04 | 0.05 | - | - |
| Total generation ⁽¹⁾ | 3.63 | 4.39 | 4.84 | 5.70 | 5.48 | 5.72 | 5.76 | 1.8 | 1.0 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 3.52 | 3.94 | 3.61 | 2.96 | 2.27 | 2.56 | 2.63 | 0.2 | -1.7 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 0.00 | 0.01 | 0.02 | 0.03 | 0.03 | - | 21.6 |
| Coal | - | 0.03 | 0.03 | - | - | - | - | - | - |
| Oil | 0.11 | 0.24 | 0.13 | 0.23 | 0.18 | 0.19 | 0.14 | 0.8 | 0.5 |
| Gas | - | 0.17 | 0.28 | 0.76 | 0.70 | 0.70 | 0.65 | - | 4.9 |
| Comb. renew. & waste | - | - | 0.80 | 1.75 | 2.31 | 2.25 | 2.30 | - | 6.0 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|------|------|------|--------|--------|--------|--------|---|
| Total | .. | 420 | 4745 | 5550 | 5352 | 5580 | 5627 | 1.0 |
| Total energy | .. | - | - | - | - | - | - | - |
| Coal mines | .. | - | - | - | - | - | - | - |
| Oil and gas extraction | .. | - | - | - | - | - | - | - |
| Patent fuel plants | .. | - | - | - | - | - | - | - |
| Coke ovens | .. | - | - | - | - | - | - | - |
| Gas works | .. | - | - | - | - | - | - | - |
| BKB | .. | - | - | - | - | - | - | - |
| Oil refineries | .. | - | - | - | - | - | - | - |
| Energy non specified/other | .. | - | - | - | - | - | - | - |
| Total industry | .. | 420 | 945 | 3669 | 3696 e | 3821 e | 3846 e | 8.1 |
| Iron and steel | .. | - | - | - | - | - | - | - |
| Chemical and petrochemical | .. | - | - | 631 e | 480 e | 536 e | 550 e | - |
| Non-ferrous metals | .. | - | - | 691 e | 527 e | 589 e | 604 e | - |
| Non-metallic minerals | .. | - | - | 35 e | 26 e | 29 e | 30 e | - |
| Transport equipment | .. | - | - | - | - | - | - | - |
| Machinery | .. | - | - | 61 e | 47 e | 52 e | 53 e | - |
| Mining and quarrying | .. | - | - | - | - | - | - | - |
| Food and tobacco | .. | - | - | 5 e | 4 e | 4 e | 4 e | - |
| Pulp and printing | .. | - | - | 108 e | 83 e | 93 e | 95 e | - |
| Wood and wood products | .. | - | - | - | - | - | - | - |
| Construction | .. | - | - | - | - | - | - | - |
| Textile and leather | .. | - | - | - | - | - | - | - |
| Non specified/other industries | .. | 420 | 945 | 2138 | 2529 e | 2518 e | 2510 e | 5.6 |
| Total transport | .. | - | - | 1328 e | 1007 e | 1124 e | 1153 e | - |
| Rail and pipeline | .. | - | - | - | - | - | - | - |
| Transport non specified | .. | - | - | 1328 e | 1007 e | 1124 e | 1153 e | - |
| Other | .. | - | 3800 | 553 e | 649 e | 635 e | 628 e | -9.5 |
| Commerce and pub. services | .. | - | - | - | - | - | - | - |
| Residential | .. | - | - | - | - | - | - | - |
| Agriculture and fishing | .. | - | - | - | - | - | - | - |
| Sector non specified | .. | - | 3800 | 553 e | 649 e | 635 e | 628 e | -9.5 |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|-------------|----------------|--------------|--------------|--------------|--------------|--------------|---|
| Total | 8930 | 11470 e | 14510 | 17300 | 17070 | 17980 | 17820 | 2.5 |
| Nuclear | 121 | 890 | 1100 | 1100 | 1270 | 1290 | 1296 | 2.1 |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | - | 198 | - | - | - | - | - | - |
| Oil | - | 1264 | 448 | 678 | 364 | 325 | 323 | -7.3 |
| Gas | - | 1458 e | 5131 | 5830 | 4425 | 4898 | 4852 | 7.0 |
| Comb. renew. & waste | - | 5547 e | 7758 | 9645 | 10947 | 11355 | 11248 | 4.1 |
| Non-spec. comb. fuels | 8809 | 2113 | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | 73 | 47 | 64 | 112 | 101 | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | 8930 | 5619 e | 6320 | 7198 | 6168 | 6784 | .. | 1.1 |
| Nuclear | 121 | 890 | 1100 | 1100 | 1270 | 1290 | .. | 2.1 |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | 198 | - | - | - | - | .. | - |
| Oil | - | 1025 | 306 | 570 | 282 | 257 | .. | -7.4 |
| Gas | - | 1393 e | 4800 | 5386 | 4155 | 4509 | .. | 6.7 |
| Comb. renew. & waste | - | - e | 114 | 142 | 461 | 728 | .. | - |
| Non-spec. comb. fuels | 8809 | 2113 | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | 5851 | 8190 | 10102 | 10902 | 11196 | .. | 3.7 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | 239 | 142 | 108 | 82 | 68 | .. | -6.7 |
| Gas | - | 65 | 331 | 444 | 270 | 389 | .. | 10.5 |
| Comb. renew. & waste | - | 5547 | 7644 | 9503 | 10486 | 10627 | .. | 3.7 |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | 73 | 47 | 64 | 112 | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 0.44 | 0.39 | 0.51 | 0.76 | 0.88 | 0.88 | 0.93 | 0.9 | 3.5 |
| Coal | - | 0.02 | 0.01 | - | - | - | - | - | - |
| Oil | 0.44 | 0.12 | 0.12 | 0.04 | 0.05 | 0.04 | 0.03 | -7.5 | -7.7 |
| Gas | - | 0.10 | 0.08 | 0.23 | 0.22 | 0.20 | 0.22 | - | 6.0 |
| Comb. renew. & waste | - | 0.15 | 0.30 e | 0.49 e | 0.61 | 0.64 | 0.69 | - | 4.7 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 0.30 | 0.15 | 0.16 | 0.17 | 0.17 | 0.22 | .. | 2.2 |
| Coal | .. | 0.01 | 0.01 | - | - | - | - | .. | - |
| Oil | .. | 0.11 | 0.09 | 0.01 | 0.02 | 0.01 | 0.01 | .. | -12.7 |
| Gas | .. | 0.03 | 0.05 | 0.14 | 0.14 | 0.13 | 0.14 | .. | 6.5 |
| Comb. renew. & waste | .. | 0.15 | - | 0.01 e | 0.01 | 0.04 | 0.07 | .. | - |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 1.64 | 3.74 | 6.18 | 6.92 | 7.28 | 7.31 | 7.25 | 8.1 | 0.9 |
| Nuclear | 1.64 | 3.74 | 6.18 | 6.92 | 7.28 | 7.31 | 7.25 | 8.1 | 0.9 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 21.6 |
| Non-Thermal | | | | | | | | | |
| Total | 2.40 | 2.82 | 2.56 | 3.17 | 2.66 | 3.03 | 3.10 | 0.4 | 1.1 |
| Hydro | 2.40 | 2.82 | 2.56 | 3.17 | 2.66 | 3.03 | 3.10 | 0.4 | 1.1 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

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8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|------|------|------|------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | 72 | 4 | 4 | 11 | 3 | -16.2 |
| Fuel input (TJ) | - | 2878 | 154 | 154 | 412 | 145 | -15.3 |
| Electricity production (GWh) | - | 242 | 15 | 15 | 40 | 14 | -14.6 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | 12 | 3 | - | - |
| Electricity production (GWh) | - | - | - | 1 | - | - | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 2926 | 4530 | 2392 | 2356 | 2444 | -1.0 |
| Electricity production (GWh) | - | 204 | 314 | 166 | 164 | 170 | -1.0 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 185 | 386 | 89 | 62 | 48 | -7.2 |
| Electricity production (GWh) | - | 20 | 44 | 10 | 7 | 5 | -7.4 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | - | 466 | 373 | 192 | 211 | 189 | -4.9 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|--------|-------|-------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 23 | 21 | - | - | - | - | - |
| Fuel input (TJ) | 197 | 507 | - | - | - | - | - |
| Electricity production (GWh) | 65 | 40 | - | - | - | - | - |
| CHP Heat production (TJ) | - | 198 | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 150 | 47 | 28 | 23 | 18 | 17 | -5.5 |
| Fuel input (TJ) | 6281 | 1990 | 1130 | 970 | 743 | 649 | -6.0 |
| Electricity production (GWh) | 492 | 143 | 214 | 167 | 146 | 130 | -0.5 |
| CHP Heat production (TJ) | - | 1264 | 197 | 224 | 105 | 86 | -13.9 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 4840 | 3536 | 5928 | 5364 | 4187 | 4881 | 1.8 |
| Electricity production (GWh) | 294 | 331 | 857 | 785 | 750 | 754 | 4.7 |
| CHP Heat production (TJ) | - | 1458 e | 1565 | 1186 | 386 | 844 | -3.0 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 186 | 348 | 1129 | 2180 | 3593 | 17.9 |
| Electricity production (GWh) | - | 40 | 58 | 72 | 128 | 150 | 7.6 |
| CHP Heat production (TJ) | - | 7 | 64 | 181 | 489 | 748 | 29.6 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | 253 | 1475 | 1581 | 1335 | 1417 | 10.0 |
| Electricity production (GWh) | - | 44 | 270 | 284 | 230 | 244 | 10.0 |
| CHP Heat production (TJ) | - | 42 | 326 | 394 | 415 | 436 | 13.9 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | 6406 | 8596 | 12914 | 19562 | 19802 | 20138 | 4.8 |
| Electricity production (GWh) | 173 | 432 | 954 | 1650 | 1616 | 1654 | 7.7 |
| CHP Heat production (TJ) | - | 5318 e | 7018 | 9714 | 10024 | 10156 | 3.7 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 302 | 554 | 878 | 1014 | 1106 | 7.5 |
| Electricity production (GWh) | - | 60 | 106 | 148 | 164 | 175 | 6.1 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 1024 | 1090 | 2459 | 3106 | 3034 | 3107 | 6.0 |
| CHP Heat production (TJ) | 8809 | 8287 | 9170 | 11699 | 11419 | 12270 | 2.2 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|------|------|------|------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | 295 | 666 | 304 | 281 | - |
| Heat production (TJ) | - | - | 251 | 566 | 259 | 239 | - |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 4657 | 5016 | 5275 | 5294 | - |
| Heat production (TJ) | - | - | 3566 | 3840 | 4039 | 4054 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 226 | 376 | - | - | - | - |
| Heat production (TJ) | - | 180 | 300 | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 122 | 34 | 34 | 37 | - |
| Heat production (TJ) | - | - | 50 | 13 | 19 | 15 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | - | 2293 | 4167 | 4419 | 4317 | 4308 | 3.6 |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 16.67 | 16.62 | 18.70 | 19.52 | 20.88 | 20.30 | 20.97 | 0.7 | 0.6 |
| Geothermal | - | - | 0.06 | 0.09 | 0.15 | 0.16 | 0.19 | - | 6.6 |
| Solar thermal | - | - | 0.01 | 0.02 | 0.03 | 0.03 | 0.03 | - | 8.0 |
| Coal | 0.29 | 0.31 | 0.35 | 0.14 | 0.15 | 0.18 | 0.16 | 1.0 | -4.2 |
| Oil | 13.41 | 12.04 | 11.60 | 11.33 | 11.32 | 10.75 | 11.10 | -0.8 | -0.2 |
| Gas | 0.24 | 0.72 | 1.54 | 2.19 | 2.46 | 2.41 | 2.57 | 11.6 | 2.9 |
| Comb. renew. & waste | 0.24 | 0.32 | 0.86 | 0.94 | 1.41 | 1.46 | 1.47 | 7.8 | 3.0 |
| Electricity | 2.49 | 3.03 | 4.04 | 4.50 | 4.97 | 4.94 | 5.05 | 2.9 | 1.2 |
| Heat | - | 0.19 | 0.25 | 0.32 | 0.38 | 0.37 | 0.39 | - | 2.5 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 3.99 | 3.88 | 3.33 | 3.90 | 4.16 | 4.10 | 4.12 | -1.1 | 1.2 |
| Geothermal | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | - | - |
| Solar thermal | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Coal | 0.08 | 0.22 | 0.30 | 0.11 | 0.14 | 0.17 | 0.15 | 8.4 | -3.8 |
| Oil | 2.92 | 2.13 | 0.75 | 0.87 | 0.85 | 0.76 | 0.76 | -7.7 | 0.1 |
| Gas | 0.05 | 0.36 | 0.59 | 0.76 | 0.87 | 0.89 | 0.92 | 15.5 | 2.5 |
| Comb. renew. & waste | - | 0.12 | 0.16 | 0.47 | 0.51 | 0.49 | 0.46 | - | 6.2 |
| Electricity | 0.95 | 1.02 | 1.48 | 1.55 | 1.63 | 1.63 | 1.66 | 2.6 | 0.6 |
| Heat | - | 0.03 | 0.05 | 0.14 | 0.15 | 0.15 | 0.16 | - | 7.1 |
| Transport | 3.54 | 3.70 | 5.15 | 5.83 | 5.86 | 5.98 | 6.12 | 2.2 | 1.0 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 3.36 | 3.52 | 4.92 | 5.60 | 5.59 | 5.70 | 5.83 | 2.3 | 0.9 |
| Gas | - | - | - | - | 0.00 | 0.01 | 0.01 | - | - |
| Comb. renew. & waste | - | - | - | - | 0.01 | 0.01 | 0.01 | - | - |
| Electricity | 0.17 | 0.18 | 0.22 | 0.23 | 0.27 | 0.26 | 0.27 | 1.4 | 1.1 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 0.72 | 2.68 | 3.35 | 3.28 | 3.77 | 3.68 | 3.78 | 9.5 | 0.7 |
| Geothermal | - | - | - | 0.01 | 0.02 | 0.02 | 0.02 | - | - |
| Solar thermal | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Coal | - | - | 0.00 | - | - | - | - | - | - |
| Oil | - | 1.55 | 1.84 | 1.26 | 1.15 | 1.00 | 1.06 | - | -3.0 |
| Gas | - | 0.09 | 0.30 | 0.50 | 0.53 | 0.50 | 0.53 | - | 3.3 |
| Comb. renew. & waste | - | - | 0.02 | 0.15 e | 0.53 | 0.62 | 0.58 | - | 19.5 |
| Electricity | 0.72 | 0.93 | 1.09 | 1.28 | 1.46 | 1.45 | 1.50 | 2.5 | 1.8 |
| Heat | - | 0.11 | 0.10 | 0.07 | 0.09 | 0.09 | 0.09 | - | -0.4 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|--------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 1.27 | 5.40 | 5.22 | 5.63 | 6.09 | 5.62 | 6.02 | 8.7 | 0.8 |
| Geothermal | - | - | - | 0.07 | 0.12 | 0.13 | 0.15 | - | - |
| Solar thermal | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | - | - |
| Coal | 0.21 | 0.09 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -16.3 | -0.5 |
| Oil | - | 3.94 | 3.33 | 2.92 | 2.98 | 2.58 | 2.73 | - | -1.1 |
| Gas | 0.19 | 0.28 | 0.61 | 0.86 | 0.98 | 0.94 | 1.02 | 7.2 | 2.9 |
| Comb. renew. & waste | 0.24 | 0.17 | - | 0.29 | 0.33 | 0.31 | 0.41 | - | - |
| Electricity | 0.63 | 0.87 | 1.17 | 1.35 | 1.52 | 1.50 | 1.54 | 3.7 | 1.5 |
| Heat | - | 0.05 | 0.11 | 0.11 | 0.14 | 0.13 | 0.14 | - | 1.6 |
| Agriculture & fishing | 0.12 | 0.15 | 0.20 | 0.13 | 0.14 | 0.13 | 0.12 | 3.1 | -2.9 |
| Geothermal | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Solar thermal | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.09 | 0.09 | 0.11 | - | - | - | - | 0.7 | - |
| Gas | - | 0.00 | 0.01 | - | - | - | - | - | - |
| Comb. renew. & waste | - | 0.02 | 0.00 e | 0.03 | 0.04 | 0.03 | 0.02 | - | 11.2 |
| Electricity | 0.02 | 0.03 | 0.08 | 0.09 | 0.09 | 0.09 | 0.09 | 7.3 | 0.8 |
| Heat | - | - | - | - | - | - | - | - | - |
| Other | 6.28 | 0.19 | 0.90 | 0.18 | 0.25 | 0.23 | 0.26 | -10.8 | -6.7 |
| Geothermal | - | - | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | - | -20.7 |
| Solar thermal | - | - | 0.01 | - | - | - | - | - | - |
| Coal | - | - | 0.03 | 0.02 | - | - | - | - | - |
| Oil | 6.28 | 0.19 | 0.09 | 0.11 | 0.16 | 0.14 | 0.17 | -21.9 | 3.3 |
| Gas | - | - | 0.03 | 0.06 | 0.09 | 0.08 | 0.09 | - | 5.4 |
| Comb. renew. & waste | - | - | 0.68 | - | - | - | - | - | - |
| Electricity | - | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 0.75 | 0.62 | 0.56 | 0.57 | 0.60 | 0.57 | 0.55 | -1.72 | -0.09 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

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12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 16.67 | 16.62 | 18.70 | 19.52 | 20.99 | 20.88 | 20.30 | 20.97 |
| Total industry (Mtoe) | 3.99 | 3.88 | 3.33 | 3.90 | 4.08 | 4.16 | 4.10 | 4.12 |
| Iron and steel | 0.02 | - | - | 0.15 | 0.21 | 0.24 | 0.25 | 0.24 |
| Chem. and petrochemical | 0.17 | 0.39 | 0.57 | 0.61 | 0.83 | 0.84 | 0.81 | 0.79 |
| Non-ferrous metals | 0.16 | 0.18 | 0.19 | 0.13 | 0.12 | 0.06 | 0.05 | 0.06 |
| Non-metallic minerals | 0.01 | 0.22 | 0.55 | 0.52 | 0.45 | 0.50 | 0.48 | 0.49 |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | 0.28 | 0.37 | 0.62 | 0.36 | 0.53 | 0.55 | 0.53 | 0.68 |
| Mining and quarrying | - | - | - | - | - | - | - | - |
| Food and tobacco | 0.04 | 0.05 | 0.15 | 0.43 | 0.43 | 0.47 | 0.45 | 0.46 |
| Paper, pulp and printing | 0.10 | 0.21 | 0.38 | 0.56 | 0.57 | 0.57 | 0.57 | 0.56 |
| Wood and wood products | - | 0.03 | - | - | - | - | - | - |
| Construction | 0.01 | 0.02 | 0.04 | 0.23 | 0.23 | 0.22 | 0.22 | 0.22 |
| Textile and leather | 0.10 | 0.10 | 0.16 | 0.12 | 0.07 | 0.08 | 0.07 | 0.07 |
| Non specified/other | 3.10 | 2.30 | 0.68 | 0.79 | 0.63 | 0.64 | 0.64 | 0.55 |
| Electricity consumption (Mtoe) | 2.49 | 3.03 | 4.04 | 4.50 | 4.93 | 4.97 | 4.94 | 5.05 |
| Total industry (Mtoe) | 0.95 | 1.02 | 1.48 | 1.55 | 1.63 | 1.63 | 1.63 | 1.66 |
| Iron and steel | - | - | - | 0.09 e | 0.12 | 0.14 | 0.14 | 0.13 |
| Chem. and petrochemical | 0.14 | 0.16 | 0.20 | 0.22 e | 0.32 | 0.32 | 0.31 | 0.31 |
| Non-ferrous metals | 0.16 | 0.16 | 0.14 | 0.10 e | 0.10 | 0.03 | 0.03 | 0.03 |
| Non-metallic minerals | - | 0.05 | 0.06 | 0.15 | 0.09 | 0.10 | 0.09 | 0.10 |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | 0.27 | 0.29 | 0.31 | 0.23 e | 0.28 | 0.30 | 0.29 | 0.37 |
| Mining and quarrying | - | - | - | - | - | - | - | - |
| Food and tobacco | 0.03 | 0.03 | 0.04 | 0.15 e | 0.15 | 0.16 | 0.16 | 0.17 |
| Paper, pulp and printing | 0.09 | 0.11 | 0.13 | 0.22 e | 0.22 | 0.22 | 0.22 | 0.22 |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | - | 0.01 | 0.01 | 0.06 e | 0.04 | 0.04 | 0.05 | 0.05 |
| Textile and leather | 0.10 | 0.09 | 0.09 | 0.05 e | 0.03 | 0.03 | 0.03 | 0.03 |
| Non specified/other | 0.18 | 0.13 | 0.50 | 0.29 | 0.28 | 0.29 | 0.30 | 0.25 |
| Total industry (TWh) | 11.06 | 11.90 | 17.24 | 18.08 | 18.90 | 19.00 | 18.99 | 19.28 |
| Iron and steel | - | - | - | 1.00 e | 1.39 | 1.63 | 1.65 | 1.57 |
| Chem. and petrochemical | 1.61 | 1.88 | 2.36 | 2.59 e | 3.75 | 3.77 | 3.65 | 3.56 |
| Non-ferrous metals | 1.81 | 1.84 | 1.62 | 1.15 e | 1.11 | 0.38 | 0.34 | 0.35 |
| Non-metallic minerals | - | 0.63 | 0.71 | 1.73 | 1.00 | 1.12 | 1.08 | 1.16 |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | 3.11 | 3.37 | 3.57 | 2.68 e | 3.20 | 3.49 | 3.41 | 4.33 |
| Mining and quarrying | - | - | - | - | - | - | - | - |
| Food and tobacco | 0.30 | 0.36 | 0.47 | 1.72 e | 1.78 | 1.91 | 1.90 | 2.01 |
| Paper, pulp and printing | 1.04 | 1.23 | 1.51 | 2.52 e | 2.56 | 2.52 | 2.56 | 2.54 |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | - | 0.07 | 0.08 | 0.75 e | 0.48 | 0.48 | 0.54 | 0.55 |
| Textile and leather | 1.15 | 1.01 | 1.10 | 0.53 e | 0.37 | 0.35 | 0.33 | 0.32 |
| Non specified/other | 2.05 | 1.51 | 5.81 | 3.42 | 3.26 | 3.36 | 3.53 | 2.90 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

SWITZERLAND

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total imports⁽¹⁾ | 7018 | 8487 | 20754 | 19419 | 24330 | 38346 | 33803 | 34818 | 31601 |
| Imports from: | | | | | | | | | |
| Total OECD | - | - | 20754 | 19419 | 24330 | 38346 | 33803 | 34818 | 31601 |
| Austria | - | - | 767 | 1965 | 4189 | 9245 | 7430 | 8377 | 7651 |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | 11106 | 9702 | 9613 | 10448 | 11733 | 10997 | 9300 |
| Germany | - | - | 8811 | 7663 | 10450 | 18467 | 14193 | 15307 | 14182 |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | 70 | 89 | 78 | 186 | 447 | 137 | 468 |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 7018 | 8487 | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

SWITZERLAND

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total exports⁽¹⁾ | 10516 | 16668 | 22862 | 26690 | 31400 | 31996 | 31100 | 36880 | 32736 |
| Exports to: | | | | | | | | | |
| Total OECD | - | - | 22696 | 26513 | 31178 | 31710 | 30796 | 36574 | 32422 |
| Austria | - | - | 75 | 288 | 213 | 64 | 82 | 36 | 105 |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | 743 | 816 | 2068 | 3044 | 2558 | 3026 | 3945 |
| Germany | - | - | 4796 | 6469 | 6560 | 2720 | 4092 | 4362 | 3896 |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | 17082 | 18940 | 22337 | 25882 | 24064 | 29150 | 24476 |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | 10516 | 16668 | 166 | 177 | 222 | 286 | 304 | 306 | 314 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 13.32 | 15.54 | 15.59 | 16.08 | 17.62 | 17.69 | 17.69 | 17.75 | 17.87 |
| Nuclear | 1.01 | 1.94 | 2.95 | 3.08 | 3.20 | 3.22 | 3.22 | 3.22 | 3.22 |
| Hydro | 11.72 | 12.90 | 12.54 e | 12.90 e | 14.39 e | 14.42 e | 14.41 e | 14.46 e | 14.55 |
| <i>of which: pumped storage</i> | <i>1.31</i> | <i>1.45</i> | <i>1.39 e</i> | <i>1.41 e</i> | <i>1.60 e</i> | <i>1.59 e</i> | <i>1.59 e</i> | <i>1.57 e</i> | <i>1.69</i> |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 0.59 | 0.70 | 0.10 e | 0.10 e | 0.03 e | 0.04 e | 0.05 | 0.06 | 0.09 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | - e | - | - | - | - | - | 0.03 |
| Liquid fuels | 0.59 | 0.70 | 0.08 e | 0.07 e | - e | - e | 0.01 | 0.01 | 0.01 |
| Natural gas | - | - | 0.02 e | 0.03 e | 0.03 e | 0.03 e | 0.01 | 0.01 | - |
| Comb. renew. & waste | - | - | - | - | - | 0.01 e | - | 0.01 | 0.02 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | 0.04 | 0.04 | 0.04 |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 0.07 e | 0.06 e | 0.02 e | 0.02 e | 0.02 | 0.03 | 0.04 |
| Internal combustion | - | - | - | - | - | - | - | - | - |
| Gas turbine | - | - | 0.01 e | 0.01 e | - e | - e | 0.01 | 0.01 | 0.01 |
| Combined cycle | - | - | 0.01 e | 0.02 e | 0.01 e | 0.01 e | 0.03 | 0.03 | 0.05 |
| Other | 0.59 | 0.70 | 0.02 e | 0.01 e | - e | - e | - | - | - |
| Peak load | .. | .. | 8.54 | 8.63 | 9.03 | 9.78 | 10.18 | 10.05 | 9.48 |
| Available capacity | .. | .. | 8.71 | 9.85 | 11.74 | 9.06 | 9.19 | 11.62 | 9.21 |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|--------|--------|--------|--------|--------|--------|------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | - | - | 0.98 | 1.01 | 1.28 | 1.43 | 1.42 | 1.46 | 1.53 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | - | - | 0.59 e | 0.44 e | 0.50 e | 0.59 e | 0.60 e | 0.64 e | 0.71 |
| <i>of which: pumped storage</i> | - | - | 0.07 e | 0.05 e | 0.06 e | 0.07 e | 0.07 e | 0.07 e | 0.08 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.01 | 0.02 | 0.03 | 0.03 | 0.03 | 0.05 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | - | - | 0.39 e | 0.56 e | 0.77 e | 0.82 e | 0.79 | 0.79 | 0.78 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | 0.01 e | - | - | - | - | - | - |
| Liquid fuels | - | - | 0.04 e | 0.04 e | 0.06 e | 0.05 e | 0.14 | 0.10 | 0.10 |
| Natural gas | - | - | 0.09 e | 0.19 e | 0.21 e | 0.20 e | 0.12 | 0.12 | 0.17 |
| Comb. renew. & waste | - | - | 0.25 e | 0.33 e | 0.49 e | 0.56 e | 0.26 | 0.24 | 0.24 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | 0.05 | 0.13 | 0.12 |
| Solid / natural gas | - | - | - | - | - | - | 0.08 | 0.10 | 0.08 |
| Liquid / natural gas | - | - | - | - | - | - | 0.06 | 0.06 | 0.01 |
| Solid / liquid / gas | - | - | - | - | - | - | 0.08 | 0.05 | 0.06 |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 0.27 e | 0.33 e | 0.41 e | 0.46 e | 0.54 | 0.54 | 0.52 |
| Internal combustion | - | - | - | - | - | - | 0.15 | 0.15 | 0.15 |
| Gas turbine | - | - | 0.03 e | 0.04 e | 0.05 e | 0.05 e | 0.04 | 0.04 | 0.04 |
| Combined cycle | - | - | 0.02 e | 0.12 e | 0.23 e | 0.24 e | 0.07 | 0.07 | 0.07 |
| Other | - | - | 0.06 e | 0.07 e | 0.08 e | 0.08 e | - | - | - |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | 0.46 |
| Available capacity | .. | .. | 0.41 | 0.34 | 0.41 | 0.37 | 0.39 | 0.51 | 0.45 |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Swiss Francs/ unit | | | | | | | | |
| Steam coal (t) | x | x | x | x | x | x | x | x | x |
| Heavy fuel oil (t) | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Swiss Francs/ toe | | | | | | | | |
| Steam coal | x | x | x | x | x | x | x | x | x |
| Heavy fuel oil | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Natural gas ⁽²⁾ | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| End-user prices of electricity | | | | | | | | | |
| | Swiss Francs/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0917 | 0.0944 | 0.1238 | 0.1166 | 0.1004 | 0.1006 | 0.1004 | 0.1016 | 0.1016 |
| <i>of which: tax</i> | - | - | - | - | - | - | - | - | 0.0045 |
| Household | | | | | | | | | |
| Price | 0.1180 | 0.1216 | 0.1538 | 0.1879 | 0.1730 | 0.1660 | 0.1636 | 0.1672 | 0.1780 |
| <i>of which: tax</i> | - | - | - | 0.0131 | 0.0120 | 0.0120 | 0.0116 | 0.0118 | 0.0170 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

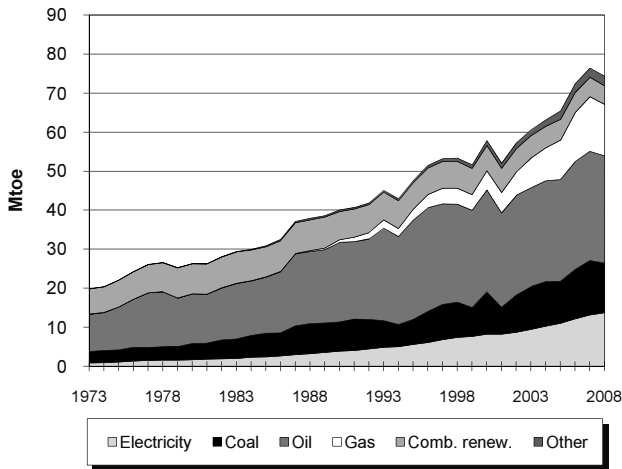


Figure 2. Electricity generation by fuel

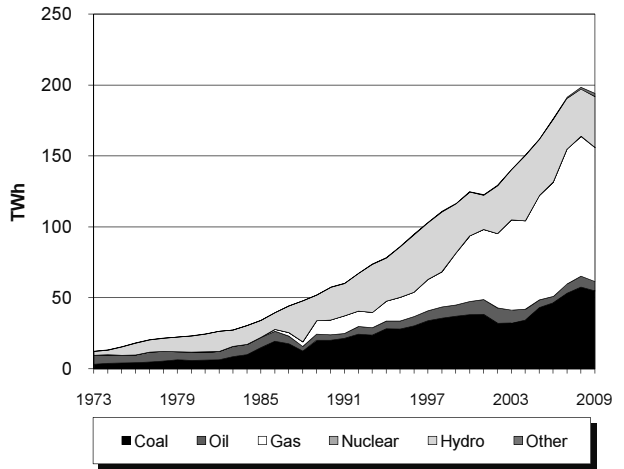


Figure 3. Electricity consumption by sector

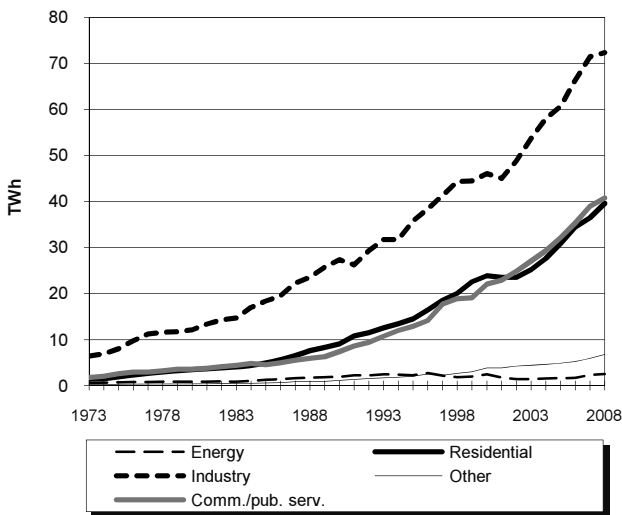


Figure 4. Electricity indicators

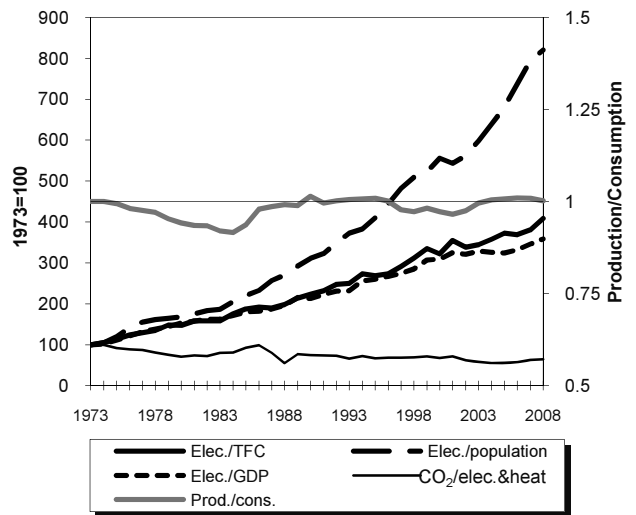
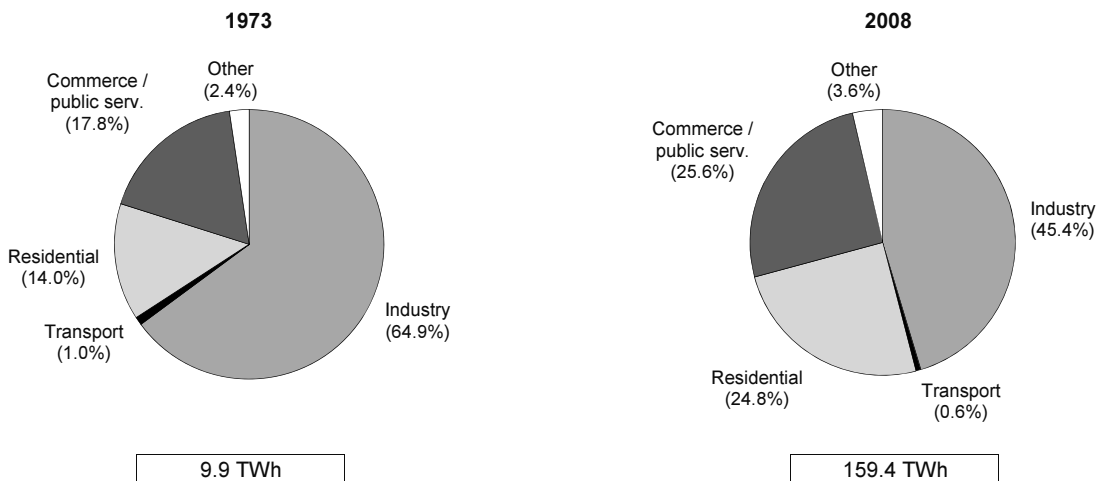


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|-------|--------|--------|--------|--------|--------|--------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 24.35 | 31.44 | 52.76 | 76.35 | 100.01 | 98.50 | 92.15 | 4.7 | 3.0 |
| GDP (billion 2000 USD) | 87.98 | 111.91 | 185.95 | 266.56 | 372.61 | 375.96 | 357.46 | 4.5 | 3.5 |
| TPES/GDP ⁽¹⁾ | 0.28 | 0.28 | 0.28 | 0.29 | 0.27 | 0.26 | 0.26 | 0.1 | -0.5 |
| Population (millions) | 38.07 | 44.44 | 55.12 | 64.26 | 70.26 | 71.08 | 72.05 | 2.2 | 1.4 |
| TPES/population ⁽²⁾ | 0.64 | 0.71 | 0.96 | 1.19 | 1.42 | 1.39 | 1.28 | 2.4 | 1.5 |
| TPES/GDP (2000 = 100) | 97 | 98 | 99 | 100 | 94 | 91 | 90 | 0.1 | -0.5 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 31 | 49 | 67 | 100 | 114 | 118 | .. | 4.6 | .. |
| Ele.TFC/population ⁽⁴⁾ | 261 | 440 | 816 | 1493 | 2176 | 2244 | .. | 6.9 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 12.43 | 23.28 | 57.54 | 124.92 | 191.56 | 198.42 | 194.06 | 9.4 | 6.6 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|--------------|--------------|--------------|--------------|---------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 24.35 | 31.44 | 52.76 | 76.35 | 100.01 | 98.50 | 92.15 | 4.7 | 3.0 |
| Coal | 5.15 | 6.99 | 16.91 | 22.91 | 29.39 | 29.46 | 28.53 | 7.2 | 2.8 |
| Oil | 12.48 | 15.62 | 23.40 | 30.40 | 30.70 | 29.55 | 25.08 | 3.8 | 0.4 |
| Gas | - | - | 2.85 | 12.63 | 30.42 | 30.18 | 28.86 | - | 12.9 |
| Comb. renew & waste | 6.45 | 7.68 | 7.21 | 6.51 | 5.05 | 4.83 | 4.66 | 0.7 | -2.3 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | 0.05 | 0.06 | 0.43 | 0.68 | 1.05 | 1.15 | 1.44 | 13.8 | 6.5 |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.03 | 0.26 | 0.45 | 0.49 | 0.56 | - | 17.0 |
| Hydro | 0.22 | 0.98 | 1.99 | 2.66 | 3.08 | 2.86 | 3.09 | 13.7 | 2.3 |
| Net electricity imports ⁽²⁾ | - | 0.12 | -0.06 | 0.29 | -0.13 | -0.03 | -0.06 | - | 0.0 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

(TWh)

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
|--|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Gross production | 12.4 | 23.3 | 57.5 | 124.9 | 162.0 | 191.6 | 198.4 | 194.1 |
| Nuclear | - | - | - | - | - | - | - | - |
| Hydro | 2.6 | 11.3 | 23.1 | 30.9 | 39.6 | 35.9 | 33.3 | 35.9 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | - | - | - | - | - | - | - | - |
| Geothermal | - | - | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.5 |
| Solar | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.0 | 0.1 | 0.4 | 0.8 | 1.5 |
| Combustible fuels | 9.8 | 11.9 | 34.3 | 93.9 | 122.2 | 155.2 | 164.1 | 156.2 |
| <i>Coal</i> | 3.2 | 6.0 | 20.2 | 38.2 | 43.2 | 53.4 | 57.7 | 55.0 |
| <i>Oil</i> | 6.4 | 5.8 | 3.9 | 9.3 | 5.5 | 6.5 | 7.5 | 6.6 |
| <i>Gas</i> | - | - | 10.2 | 46.2 | 73.4 | 95.0 | 98.7 | 94.4 |
| <i>Comb. renew. & waste</i> | 0.2 | 0.1 | - | 0.2 | 0.1 | 0.2 | 0.2 | 0.3 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - |
| - Own use by power plant | 0.6 | 1.4 | 3.3 | 6.2 | 6.5 | 8.2 | 8.7 | .. |
| Net production | 11.8 | 21.9 | 54.2 | 118.7 | 155.5 | 183.3 | 189.8 | .. |
| Nuclear | .. | - | - | - | - | - | - | .. |
| Hydro | .. | 11.2 | 22.7 | 30.2 | 39.3 | 35.6 | 33.0 | .. |
| Geothermal | .. | - | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | .. |
| Solar | .. | - | - | - | - | - | - | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | - | 0.0 | 0.1 | 0.4 | 0.8 | .. |
| Combustible fuels | .. | 10.7 | 31.4 | 88.4 | 116.1 | 147.3 | 155.8 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | - | - | - | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | - | - | - | - | - | - | - | - |
| + Imports | - | 1.3 | 0.2 | 3.8 | 0.6 | 0.9 | 0.8 | 0.8 |
| - Exports | - | - | 0.9 | 0.4 | 1.8 | 2.4 | 1.1 | 1.6 |
| Electrical energy supplied | 11.8 | 23.2 | 53.5 | 122.1 | 154.3 | 181.8 | 189.4 | .. |
| - Transmission & distr. losses | 1.3 | 2.8 | 6.7 | 23.8 | 24.0 | 26.6 | 27.5 | .. |
| - Statistical difference | - | - | - | - | - | - | - | .. |
| Total consumption | 10.5 | 20.4 | 46.8 | 98.3 | 130.3 | 155.1 | 161.9 | .. |
| - Energy industry consumption ⁽²⁾ | 0.6 | 0.9 | 1.9 | 2.4 | 1.6 | 2.3 | 2.5 | .. |
| Final consumption | 9.9 | 19.5 | 45.0 | 95.9 | 128.6 | 152.8 | 159.4 | .. |
| Industry | 6.4 | 12.2 | 27.3 | 46.1 | 60.7 | 71.5 | 72.3 | .. |
| Transport | 0.1 | 0.1 | 0.3 | 0.8 | 0.8 | 0.9 | 1.0 | .. |
| Commercial & publ. serv. | 1.8 | 3.5 | 7.4 | 22.1 | 32.2 | 38.9 | 40.7 | .. |
| Residential | 1.4 | 3.5 | 9.1 | 23.9 | 30.9 | 36.5 | 39.6 | .. |
| Agriculture & fishing | 0.1 | 0.2 | 0.6 | 3.1 | 4.1 | 5.0 | 5.8 | .. |
| Sector non specified | 0.2 | 0.0 | 0.2 | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

TURKEY

4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 13.48 | 23.28 | 57.54 | 124.92 | 176.30 | 191.56 | 198.42 | 9.5 | 7.1 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation⁽¹⁾ | 13.48 | 23.28 | 57.54 | 124.92 | 176.30 | 191.56 | 198.42 | 9.5 | 7.1 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 12.63 | 21.09 | 54.18 | 108.96 | 161.86 | 176.23 | 182.70 | 9.5 | 7.0 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 12.63 | 21.09 | 54.18 | 108.96 | 161.86 | 176.23 | 182.70 | 9.5 | 7.0 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 3.33 | 11.29 | 23.14 | 30.82 | 43.04 | 34.94 | 32.52 | 12.9 | 1.9 |
| Geothermal | - | - | 0.08 | 0.08 | 0.09 | 0.16 | 0.16 | - | 4.0 |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.03 | 0.12 | 0.35 | 0.84 | - | - |
| Coal | 3.68 | 5.11 | 19.81 | 36.17 | 43.13 | 50.06 | 54.56 | 11.1 | 5.8 |
| Oil | 5.63 | 4.69 | 0.97 | 5.75 | 2.52 | 4.39 | 5.77 | -10.4 | 10.4 |
| Gas | - | - | 10.19 | 36.13 | 72.96 | 86.30 | 88.73 | - | 12.8 |
| Comb. renew. & waste | - | - | - | - | 0.01 | 0.04 | 0.10 | - | - |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 0.85 | 2.19 | 3.36 | 15.96 | 14.44 | 15.33 | 15.72 | 9.0 | 8.9 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 0.85 | 2.19 | 3.36 | 15.96 | 14.44 | 15.33 | 15.72 | 9.0 | 8.9 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.03 | 0.06 | 0.01 | 0.06 | 1.20 | 0.91 | 0.75 | -6.4 | 27.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | 0.00 | 0.01 | 0.00 | 0.00 | - | - |
| Coal | 0.19 | 0.85 | 0.38 | 2.02 | 3.52 | 3.37 | 3.15 | 4.2 | 12.5 |
| Oil | 0.42 | 1.14 | 2.97 | 3.57 | 1.82 | 2.14 | 1.75 | 13.1 | -2.9 |
| Gas | - | - | 0.00 | 10.09 | 7.73 | 8.73 | 9.95 | - | 66.8 |
| Comb. renew. & waste | 0.21 | 0.14 | - | 0.22 | 0.15 | 0.18 | 0.12 | - | - |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

TURKEY

5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|--------------|-------------|-------------|--------------|--------------|--------------|--------------|---|
| Total | 798 | 1914 | 3085 | 15288 | 13691 | 14591 | 14991 | 9.2 |
| Total energy | - | - | - | 601 | 759 | 955 | 1059 | - |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | - | 580 | 739 | 934 | 1041 | - |
| Energy non specified/other | - | - | - | 21 | 20 | 21 | 18 | - |
| Total industry | 769 e | 1878 | 3085 | 14409 | 12915 | 13571 | 13871 | 8.7 |
| Iron and steel | 242 e | 756 | - | 3662 | 4683 | 4434 | 4155 | - |
| Chemical and petrochemical | 82 e | 246 | - | 1111 | 1325 | 1697 | 3230 | - |
| Non-ferrous metals | - | - | - | 164 | 588 | 880 | 749 | - |
| Non-metallic minerals | 37 e | 36 | - | 1638 | 1315 | 1106 | 791 | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Machinery | 1 e | 1 | - | 480 | 381 | 360 | 301 | - |
| Mining and quarrying | 42 e | 61 | - | 62 | 53 | 59 | 26 | - |
| Food and tobacco | 150 e | 409 | - | 724 | 767 | 824 | 806 | - |
| Pulp and printing | - | - | - | 719 | 572 | 656 | 768 | - |
| Wood and wood products | 150 e | 294 | - | 166 | 232 | 183 | 226 | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | 42 e | 73 | - | 3202 | 1910 | 1554 | 1123 | - |
| Non specified/other industries | 23 e | 2 | 3085 | 2481 | 1089 | 1818 | 1696 | -3.3 |
| Total transport | - | - | - | - | - | - | - | - |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | - | - | - | - | - | - |
| Other | 29 e | 36 | - | 278 | 17 | 65 | 61 | - |
| Commerce and pub. services | 29 e | 36 e | - | 278 | 17 | 64 | 59 | - |
| Residential | - | - | - | - | - | - | - | - |
| Agriculture and fishing | - | - | - | - | - | 1 | 2 | - |
| Sector non specified | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

TURKEY

6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|------|------|-------|-------|-------|-------|-------|---|
| Total | - | - | 16183 | 35597 | 43212 | 42539 | 39347 | - |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | - | - | 916 | 654 | 781 | 579 | 430 | - |
| Oil | - | - | 1124 | 1476 | 713 | 562 | 719 | - |
| Gas | - | - | 14143 | 33467 | 41718 | 41398 | 38198 | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | - | - | 115 | 14669 | 23909 | 22289 | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | - | - | - | - | .. | - |
| Oil | - | - | - | 335 | 12 | 17 | .. | - |
| Gas | - | - | 115 | 14334 | 23897 | 22272 | .. | - |
| Comb. renew. & waste | - | - | - | - | - | - | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | - | 16068 | 20928 | 19303 | 20250 | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | - | 916 | 654 | 781 | 579 | .. | - |
| Oil | - | - | 1124 | 1141 | 701 | 545 | .. | - |
| Gas | - | - | 14028 | 19133 | 17821 | 19126 | .. | - |
| Comb. renew. & waste | - | - | - | - | - | - | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

TURKEY

7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 2.54 | 3.29 | 8.72 | 19.93 | 25.69 | 30.58 | 32.56 | 7.5 | 7.6 |
| Coal | 1.28 | 1.82 | 5.48 | 9.88 | 11.32 | 13.30 | 14.33 | 9.0 | 5.5 |
| Oil | 1.26 | 1.47 | 1.11 | 2.59 | 1.04 | 1.42 | 1.71 | -0.8 | 2.4 |
| Gas | - | - | 2.13 | 7.40 | 13.29 | 15.81 | 16.45 | - | 12.0 |
| Comb. renew. & waste | - | - | - | 0.06 e | 0.04 | 0.06 | 0.06 | - | - |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 2.69 | 7.50 | 16.58 | 22.56 | 27.34 | 29.07 | .. | 7.8 |
| Coal | .. | 1.52 | 5.02 | 9.36 | 10.35 | 12.34 | 13.35 | .. | 5.6 |
| Oil | .. | 1.16 | 0.35 | 1.84 | 0.57 | 0.99 | 1.29 | .. | 7.5 |
| Gas | .. | - | 2.13 | 5.37 | 11.64 | 14.00 | 14.40 | .. | 11.2 |
| Comb. renew. & waste | .. | - | - | - | 0.00 | 0.01 | 0.02 | .. | - |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | - | - | 0.07 | 0.07 | 0.08 | 0.13 | 0.14 | - | 4.0 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | 0.07 | 0.07 | 0.08 | 0.13 | 0.14 | - | 4.0 |
| Solar | - | - | - | - | - | - | - | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 0.22 | 0.98 | 1.99 | 2.66 | 3.82 | 3.11 | 2.93 | 13.7 | 2.2 |
| Hydro | 0.22 | 0.98 | 1.99 | 2.66 | 3.80 | 3.08 | 2.86 | 13.7 | 2.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.00 | 0.01 | 0.03 | 0.07 | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

TURKEY

8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|-------|--------|--------|--------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 703 | 444 | 1921 | 5423 | 5854 | 6172 | 15.7 |
| Fuel input (TJ) | 12943 | 6986 | 29456 | 118478 | 129901 | 137082 | 18.0 |
| Electricity production (GWh) | 804 | 564 | 2868 | 13014 | 13883 | 14470 | 19.8 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 5473 | 29632 | 52330 | 49473 | 60313 | 65456 | 4.5 |
| Fuel input (TJ) | 46833 | 203063 | 369857 | 334507 | 405551 | 438603 | 4.4 |
| Electricity production (GWh) | 4302 | 19241 | 34036 | 32094 | 38006 | 41554 | 4.4 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 9986 | 13435 | 14289 | 18716 | - |
| Electricity production (GWh) | - | - | 793 | 781 | 863 | 1122 | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 1267 | 433 | 2458 | 873 | 1204 | 1650 | 7.7 |
| Fuel input (TJ) | 51711 | 17486 | 100902 | 34566 | 47532 | 65376 | 7.6 |
| Electricity production (GWh) | 4690 | 1176 | 8056 | 3431 | 4941 | 6900 | 10.3 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 98996 | 312911 | 540193 | 648241 | 675287 | 11.3 |
| Electricity production (GWh) | - | 10191 | 43045 | 74669 | 88490 | 91550 | 13.0 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | 855 | 78 | 107 | 151 | - |
| Electricity production (GWh) | - | - | 53 | 5 | 7 | 9 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | 648 | 1152 | 1428 | 924 | - |
| Electricity production (GWh) | - | - | 54 | 96 | 119 | 77 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | 209 | 295 | 593 | 1091 | - |
| Electricity production (GWh) | - | - | 21 | 32 | 67 | 118 | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 9796 | 31172 | 88926 | 124122 | 146376 | 155800 | 9.4 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

TURKEY

**9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)**

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|-------|-------|-------|-------|-------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 62 | 30 | 21 | 53 | 58 | 25 | -1.0 |
| Fuel input (TJ) | 1700 | 778 | 646 | 1387 | 1509 | 592 | -1.5 |
| Electricity production (GWh) | 108 | 57 | 96 | 161 | 156 | 47 | -1.1 |
| CHP Heat production (TJ) | - | - | - | 119 | 121 | 109 | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 559 | 252 | 210 | 236 | 223 | 229 | -0.5 |
| Fuel input (TJ) | 7024 | 3654 | 3289 | 3566 | 3499 | 3483 | -0.3 |
| Electricity production (GWh) | 746 | 319 | 330 | 339 | 288 | 304 | -0.3 |
| CHP Heat production (TJ) | - | - | 916 | 573 | 660 | 470 | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 686 | 2887 | 2720 | 2523 | - |
| Electricity production (GWh) | - | - | 64 | 261 | 235 | 219 | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 323 | 722 | 227 | 218 | 276 | 138 | -8.8 |
| Fuel input (TJ) | 13151 | 30026 | 9434 | 8853 | 11073 | 5525 | -9.0 |
| Electricity production (GWh) | 1141 | 2766 | 1255 | 909 | 1585 | 619 | -8.0 |
| CHP Heat production (TJ) | - | - | 1124 | 659 | 713 | 562 | - |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 9 | 31614 | 78199 | 87274 | 90297 | 66.8 |
| Electricity production (GWh) | - | 1 | 3171 | 6022 | 6535 | 7135 | 63.7 |
| CHP Heat production (TJ) | - | - | 14143 | 38786 | 41718 | 41398 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | 1134 | - | 730 | 241 | 265 | 260 | - |
| Electricity production (GWh) | 136 | - | 92 | 17 | 18 | 15 | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | - | - e | 36 | 36 | - | - |
| Electricity production (GWh) | - | - | - | 3 | 3 | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 2131 | 3143 | 5008 | 7712 | 8820 | 8339 | 5.6 |
| CHP Heat production (TJ) | - | - | 16183 | 40137 | 43212 | 42539 | - |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

TURKEY

11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 19.86 | 26.32 | 40.07 | 57.85 | 72.47 | 76.48 | 74.38 | 4.2 | 3.5 |
| Geothermal | 0.05 | 0.06 | 0.36 | 0.62 | 0.90 | 0.91 | 1.01 | 12.6 | 5.8 |
| Solar thermal | - | - | 0.03 | 0.26 | 0.40 | 0.42 | 0.42 | - | 16.2 |
| Coal | 2.93 | 4.16 | 7.52 | 10.84 | 12.68 | 13.98 | 12.78 | 5.7 | 3.0 |
| Oil | 9.54 | 12.69 | 20.37 | 26.13 | 27.67 | 27.95 | 27.45 | 4.6 | 1.7 |
| Gas | 0.04 | 0.04 | 0.72 | 4.91 | 12.55 | 14.05 | 13.23 | 18.6 | 17.5 |
| Comb. renew. & waste | 6.45 | 7.68 | 7.21 | 6.45 | 5.14 | 5.00 | 4.77 | 0.7 | -2.3 |
| Electricity | 0.85 | 1.68 | 3.87 | 8.25 | 12.16 | 13.14 | 13.71 | 9.3 | 7.3 |
| Heat | - | - | - | 0.39 | 0.96 | 1.03 | 1.02 | - | - |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 3.71 | 6.55 | 10.90 | 19.74 | 23.43 | 23.67 | 18.01 | 6.5 | 2.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | 0.01 | 0.10 | 0.12 | 0.13 | 0.13 | - | 16.5 |
| Coal | 1.14 | 2.17 | 4.50 | 8.83 | 10.19 | 11.23 | 6.12 | 8.4 | 1.7 |
| Oil | 2.02 | 3.33 | 3.54 | 4.80 | 3.11 | 1.42 | 1.33 | 3.4 | -5.3 |
| Gas | 0.00 | 0.00 | 0.50 | 1.67 | 3.34 | 3.72 | 3.19 | 34.9 | 10.9 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.55 | 1.05 | 2.35 | 3.96 | 5.71 | 6.14 | 6.22 | 8.9 | 5.6 |
| Heat | - | - | - | 0.39 | 0.96 | 1.03 | 1.02 | - | - |
| Transport | 4.38 | 5.49 | 9.22 | 11.76 | 14.00 | 15.95 | 15.07 | 4.5 | 2.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.52 | 0.18 | 0.01 | 0.00 | - | - | - | -18.9 | - |
| Oil | 3.85 | 5.29 | 9.18 | 11.65 | 13.80 | 15.69 | 14.79 | 5.2 | 2.7 |
| Gas | - | - | - | 0.04 | 0.12 | 0.17 | 0.18 | - | - |
| Comb. renew. & waste | - | - | - | - | 0.02 | 0.01 | 0.02 | - | - |
| Electricity | 0.01 | 0.01 | 0.03 | 0.07 | 0.07 | 0.08 | 0.08 | 7.6 | 5.9 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 0.31 | 0.31 | 0.64 | 2.31 | 5.82 | 6.42 | 7.63 | 4.3 | 14.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | 1.06 | - | - |
| Oil | 0.16 | - | - | - | - | - | - | - | - |
| Gas | 0.00 | 0.00 | 0.00 | 0.42 | 2.78 | 3.07 | 3.07 | -9.1 | 60.1 |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.15 | 0.30 | 0.64 | 1.90 | 3.04 | 3.35 | 3.50 | 8.8 | 9.9 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

TURKEY

11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 10.08 | 12.21 | 14.53 | 17.59 | 19.89 | 20.72 | 22.60 | 2.2 | 2.5 |
| Geothermal | 0.05 | 0.06 | 0.36 | 0.62 | 0.90 | 0.91 | 1.01 | 12.6 | 5.8 |
| Solar thermal | - | - | 0.02 | 0.16 | 0.28 | 0.29 | 0.29 | - | 16.1 |
| Coal | 1.27 | 1.81 | 3.00 | 2.02 | 2.49 | 2.75 | 4.93 | 5.2 | 2.8 |
| Oil | 2.16 | 2.32 | 3.11 | 3.59 | 1.96 | 1.75 | 1.69 | 2.2 | -3.3 |
| Gas | 0.03 | 0.03 | 0.05 | 2.69 | 6.18 | 6.90 | 6.52 | 2.6 | 30.8 |
| Comb. renew. & waste | 6.45 | 7.68 | 7.21 | 6.45 | 5.12 | 4.98 | 4.75 | 0.7 | -2.3 |
| Electricity | 0.12 | 0.30 | 0.78 | 2.05 | 2.96 | 3.14 | 3.40 | 11.7 | 8.5 |
| Heat | - | - | - | - | - | - | - | - | - |
| Agriculture & fishing | 0.79 | 0.93 | 1.95 | 2.92 | 3.54 | 3.89 | 5.03 | 5.4 | 5.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0.79 | 0.91 | 1.90 | 2.65 | 3.16 | 3.46 | 4.53 | 5.3 | 4.9 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.00 | 0.01 | 0.05 | 0.26 | 0.38 | 0.43 | 0.50 | 14.9 | 13.7 |
| Heat | - | - | - | - | - | - | - | - | - |
| Other | 0.02 | 0.00 | 0.02 | - | - | - | 0.66 | 1.3 | 21.7 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | 0.66 | - | - |
| Oil | - | - | - | - | - | - | - | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | - | - | - | - | - |
| Electricity | 0.02 | 0.00 | 0.02 | - | - | - | - | 1.3 | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 0.57 | 0.84 | 2.81 | 3.52 | 5.78 | 5.84 | 5.37 | 9.83 | 3.67 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

TURKEY

12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TFC (Mtoe) | 19.86 | 26.32 | 40.07 | 57.85 | 65.43 | 72.47 | 76.48 | 74.38 |
| Total industry (Mtoe) | 3.71 | 6.55 | 10.90 | 19.74 | 21.23 | 23.43 | 23.67 | 18.01 |
| Iron and steel | 0.41 | 1.09 | 1.69 | 2.34 | 2.50 | 2.52 | 2.98 | 3.33 |
| Chem. and petrochemical | 0.43 | 0.62 | 1.50 | 1.35 | 2.41 | 2.30 | 1.70 | 1.07 |
| Non-ferrous metals | 0.03 | 0.30 | 0.70 | 0.70 | 0.94 | 1.05 | 1.01 | 0.36 |
| Non-metallic minerals | 0.10 | 0.17 | 0.54 | 1.05 | 1.19 | 1.23 | 1.36 | 2.10 |
| Transport equipment | - | - | 0.00 | 0.02 | 0.05 | 0.04 | 0.03 | 0.04 |
| Machinery | 0.03 | 0.05 | 0.13 | 0.25 | 0.25 | 0.26 | 0.28 | 0.44 |
| Mining and quarrying | 0.02 | 0.02 | 0.04 | 0.06 | 0.08 | 0.10 | 0.11 | 0.12 |
| Food and tobacco | 0.22 | 0.38 | 1.03 | 1.17 | 1.11 | 1.11 | 1.23 | 1.02 |
| Paper, pulp and printing | - | 0.23 | 0.15 | 0.41 | 0.36 | 0.39 | 0.38 | 0.36 |
| Wood and wood products | 0.05 | 0.09 | 0.17 | 0.06 | 0.09 | 0.09 | 0.12 | 0.14 |
| Construction | 0.20 | 0.29 | 1.35 | 1.31 | 2.06 | 2.19 | 2.32 | 3.04 |
| Textile and leather | 0.28 | 0.46 | 0.84 | 1.37 | 1.57 | 1.62 | 1.56 | 1.17 |
| Non specified/other | 1.95 | 2.85 | 2.76 | 9.66 | 8.61 | 10.55 | 10.59 | 4.81 |
| Electricity consumption (Mtoe) | 0.85 | 1.68 | 3.87 | 8.25 | 11.06 | 12.16 | 13.14 | 13.71 |
| Total industry (Mtoe) | 0.55 | 1.05 | 2.35 | 3.96 | 5.22 | 5.71 | 6.14 | 6.22 |
| Iron and steel | 0.07 | 0.16 | 0.42 | 0.72 | 1.00 | 1.15 | 1.33 | 1.38 |
| Chem. and petrochemical | 0.06 | 0.11 | 0.29 | 0.23 | 0.34 | 0.33 | 0.35 | 0.32 |
| Non-ferrous metals | 0.02 | 0.13 | 0.22 | 0.22 | 0.21 | 0.24 | 0.26 | 0.21 |
| Non-metallic minerals | 0.10 | 0.17 | 0.34 | 0.50 | 0.52 | 0.55 | 0.67 | 0.77 |
| Transport equipment | .. | .. | .. | .. | - | - | - | - |
| Machinery | 0.03 | 0.03 | 0.10 | 0.21 | 0.21 | 0.22 | 0.24 | 0.31 |
| Mining and quarrying | 0.02 | 0.02 | 0.04 | 0.06 | 0.08 | 0.10 | 0.11 | 0.12 |
| Food and tobacco | 0.07 | 0.13 | 0.22 | 0.27 | 0.32 | 0.35 | 0.42 | 0.42 |
| Paper, pulp and printing | .. | .. | .. | 0.14 | 0.12 | 0.15 | 0.18 | 0.17 |
| Wood and wood products | 0.05 | 0.09 | 0.17 | 0.06 | 0.09 | 0.09 | 0.12 | 0.14 |
| Construction | 0.00 | 0.02 | 0.03 | 0.10 | 0.11 | 0.14 | 0.18 | 0.19 |
| Textile and leather | 0.11 | 0.15 | 0.34 | 0.78 | 1.04 | 1.08 | 1.16 | 0.99 |
| Non specified/other | 0.02 | 0.05 | 0.19 | 0.68 | 1.17 | 1.31 | 1.12 | 1.20 |
| Total industry (TWh) | 6.44 | 12.15 | 27.34 | 46.09 | 60.67 | 66.36 | 71.45 | 72.32 |
| Iron and steel | 0.84 | 1.82 | 4.84 | 8.40 | 11.66 | 13.40 | 15.48 | 16.02 |
| Chem. and petrochemical | 0.66 | 1.22 | 3.37 | 2.62 | 3.97 | 3.88 | 4.11 | 3.69 |
| Non-ferrous metals | 0.23 | 1.52 | 2.55 | 2.51 | 2.49 | 2.79 | 3.04 | 2.47 |
| Non-metallic minerals | 1.21 | 2.00 | 3.99 | 5.87 | 6.02 | 6.44 | 7.74 | 9.01 |
| Transport equipment | .. | .. | .. | .. | - | - | - | - |
| Machinery | 0.30 | 0.39 | 1.14 | 2.48 | 2.49 | 2.52 | 2.73 | 3.65 |
| Mining and quarrying | 0.21 | 0.18 | 0.47 | 0.68 | 0.90 | 1.12 | 1.31 | 1.41 |
| Food and tobacco | 0.85 | 1.54 | 2.59 | 3.09 | 3.75 | 4.07 | 4.93 | 4.83 |
| Paper, pulp and printing | .. | .. | .. | 1.64 | 1.38 | 1.75 | 2.13 | 1.96 |
| Wood and wood products | 0.61 | 1.02 | 1.92 | 0.67 | 0.99 | 1.04 | 1.39 | 1.63 |
| Construction | 0.02 | 0.19 | 0.40 | 1.21 | 1.26 | 1.58 | 2.06 | 2.17 |
| Textile and leather | 1.22 | 1.74 | 3.92 | 9.06 | 12.10 | 12.53 | 13.45 | 11.55 |
| Non specified/other | 0.29 | 0.52 | 2.15 | 7.86 | 13.65 | 15.25 | 13.08 | 13.95 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

TURKEY

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|------|------|------|------|------|------|------|------|------|
| Total imports ⁽¹⁾ | - | 1341 | 176 | - | 3791 | 636 | 573 | 864 | 789 |
| Imports from: | | | | | | | | | |
| Total OECD | - | - | - | - | - | - | - | - | 30 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | 30 |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | 1341 | 176 | - | 3501 | 636 | 573 | 864 | 759 |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | 15 | 94 |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | 750 | - | - | 3297 | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | 591 | 176 | - | 204 | 101 | 40 | 216 | 215 |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | 535 | 533 | 633 | 450 |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | 290 | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

TURKEY

14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|------|------|------|------|------|------|------|------|------|
| Total exports ⁽¹⁾ | - | - | 907 | 696 | 437 | 1798 | 2236 | 2422 | 1122 |
| Exports to: | | | | | | | | | |
| Total OECD | - | - | - | - | - | - | - | 90 | 59 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | 90 | 59 |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | 907 | 673 | 437 | 393 | 433 | 133 | 54 |
| Albania | - | - | 84 | - | - | - | - | - | - |
| Azerbaijan | - | - | - | 495 | 437 | 384 | 326 | 15 | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | 506 | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | 122 | 178 | - | 9 | 107 | 118 | 54 |
| Romania | - | - | 195 | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | 23 | - | 1405 | 1803 | 2199 | 1009 |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

TURKEY

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 3.31 | 4.52 | 15.12 | 19.61 | 24.27 | 34.78 | 36.79 | 37.10 | 38.29 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 1.44 | 2.12 | 6.75 | 9.85 | 11.14 | 12.34 | 12.50 | 12.84 | 13.28 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | 0.02 | 0.02 | 0.06 | 0.15 | 0.36 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 1.87 | 2.40 | 8.35 | 9.74 | 13.10 | 22.41 | 24.21 | 24.10 | 24.62 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 0.79 | 1.20 | 5.02 | 6.21 | 6.69 | 8.62 | 9.70 | 9.70 | 9.84 |
| Liquid fuels | 1.08 | 1.21 | 1.13 | 0.98 | 0.98 | 1.81 | 1.76 | 1.44 | 1.28 |
| Natural gas | - | - | 2.21 | 2.55 | 4.24 | 10.15 | 10.41 | 10.64 | 9.59 |
| Comb. renew. & waste | - | - | - | - | - | - | 0.01 | 0.01 | 0.03 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | - | - | - | - | - | - |
| Solid / natural gas | - | - | - | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | 1.19 | 1.83 | 2.34 | 2.31 | 3.89 |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | .. | .. | - | - | 7.37 | 7.98 | 9.07 | 9.07 | 9.21 |
| Internal combustion | .. | .. | - | - | 0.10 | 1.01 | 1.01 | 0.73 | 0.87 |
| Gas turbine | .. | .. | - | - | 0.02 | 0.30 | 0.42 | 0.41 | 0.58 |
| Combined cycle | .. | .. | - | - | 5.61 | 13.08 | 13.64 | 13.84 | 13.91 |
| Other | .. | .. | 8.35 | 9.74 | - | 0.03 | 0.06 | 0.04 | 0.05 |
| Peak load | 2.23 | 3.82 | 8.82 | 13.49 | 17.29 | 23.11 | 25.02 | 26.90 | 28.55 |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

TURKEY

15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 0.43 | 0.60 | 1.19 | 1.35 | 3.00 | 4.06 | 3.78 | 3.73 | 3.53 |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 0.01 | 0.01 | 0.01 | 0.01 | 0.04 | 0.56 | 0.56 | 0.56 | 0.55 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 0.42 | 0.59 | 1.18 | 1.34 | 2.96 | 3.50 | 3.21 | 3.18 | 2.98 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 0.16 | 0.18 | 0.18 | 0.16 | 0.30 | 0.50 | 0.50 | 0.50 | 0.36 |
| Liquid fuels | 0.20 | 0.21 | 0.62 | 0.38 | 0.61 | 0.70 | 0.64 | 0.56 | 0.54 |
| Natural gas | - | - | - | 0.33 | 0.66 | 0.96 | 1.06 | 1.01 | 1.07 |
| Comb. renew. & waste | 0.01 | 0.01 | - | 0.01 | 0.02 | 0.03 | 0.04 | 0.04 | 0.03 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 0.05 | 0.18 | 0.37 | 0.41 | 0.41 | 0.45 | 0.46 | 0.46 | 0.46 |
| Solid / natural gas | - | - | - | - | - | 0.02 | 0.02 | 0.02 | 0.02 |
| Liquid / natural gas | - | - | - | 0.04 | 0.95 | 0.84 | 0.52 | 0.60 | 0.51 |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | .. | .. | - | - | 1.15 | 1.45 | 1.45 | 1.48 | 1.34 |
| Internal combustion | .. | .. | - | - | 0.14 | 0.49 | 0.46 | 0.44 | 0.44 |
| Gas turbine | .. | .. | - | - | 0.43 | 0.55 | 0.66 | 0.66 | 0.67 |
| Combined cycle | .. | .. | - | - | 1.24 | 1.00 | 0.61 | 0.59 | 0.53 |
| Other | .. | .. | 1.18 | 1.34 | - | 0.01 | 0.04 | 0.01 | 0.01 |
| Peak load | 0.07 | 0.13 | 0.36 | 0.68 | 2.10 | 2.06 | 2.57 | 2.35 | 1.97 |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-------------------------------|------|--------|--------|--------|--------|---------|---------|---------|
| Fuel prices for electricity generation | | | | | | | | | |
| | New Turkish Lira/ unit | | | | | | | | |
| Steam coal (t) | .. | - | 0.02 | 9.01 | 33.83 | 35.49 | 36.07 | 42.01 | 49.69 |
| Heavy fuel oil (t) | - | 0.0 | 0.6 | 128.9 | 731.1 | 916.7 | 1021.8 | 1297.7 | 1241.5 |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | .. | .. | 0.4 | 105.4 | 404.0 | 499.6 | 570.5 | 742.9 | 721.3 |
| | New Turkish Lira/ toe | | | | | | | | |
| Steam coal | .. | 0.01 | 0.12 | 45.06 | 169.17 | 177.46 | 180.35 | 210.07 | 248.46 |
| Heavy fuel oil | - | 0.02 | 0.65 | 134.23 | 761.58 | 954.93 | 1064.38 | 1351.79 | 1293.26 |
| Natural gas ⁽²⁾ | .. | .. | 0.41 | 117.07 | 448.87 | 555.07 | 633.88 | 825.44 | 801.42 |
| End-user prices of electricity | | | | | | | | | |
| | New Turkish Lira/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | - | - | 0.0002 | 0.0500 | 0.1427 | 0.1427 | 0.1414 | 0.1803 | 0.2129 |
| <i>of which: tax</i> | - | - | - | 0.0076 | 0.0264 | 0.0264 | 0.0262 | 0.0334 | 0.0394 |
| Household | | | | | | | | | |
| Price | - | - | 0.0001 | 0.0528 | 0.1583 | 0.1583 | 0.1583 | 0.2140 | 0.2554 |
| <i>of which: tax</i> | - | - | - | 0.0098 | 0.0341 | 0.0341 | 0.0341 | 0.0461 | 0.0550 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

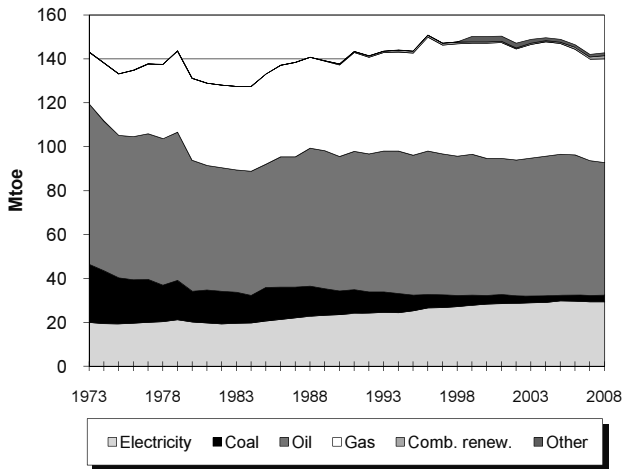


Figure 2. Electricity generation by fuel

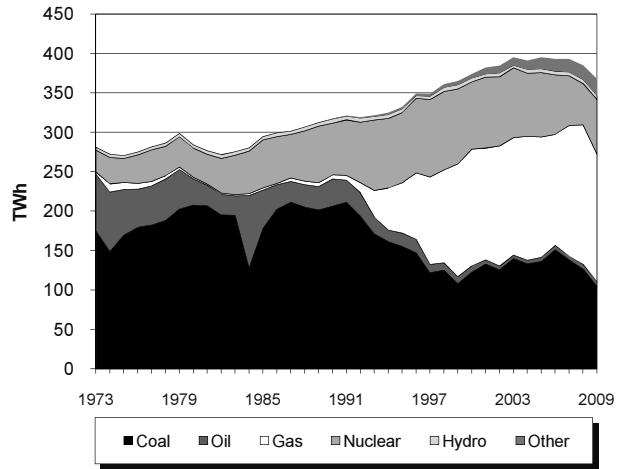


Figure 3. Electricity consumption by sector

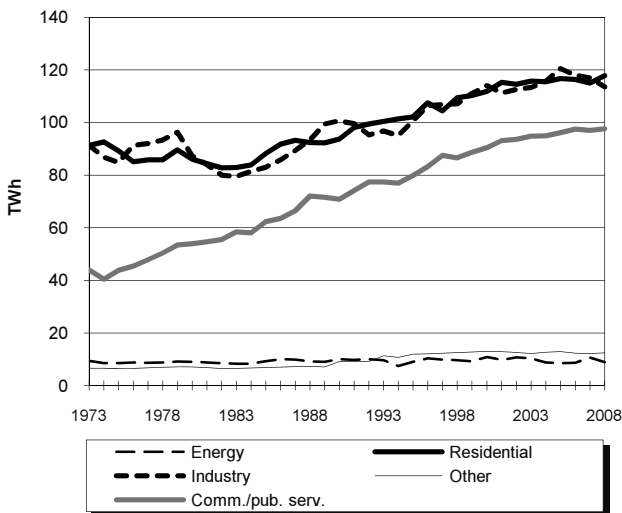


Figure 4. Electricity indicators

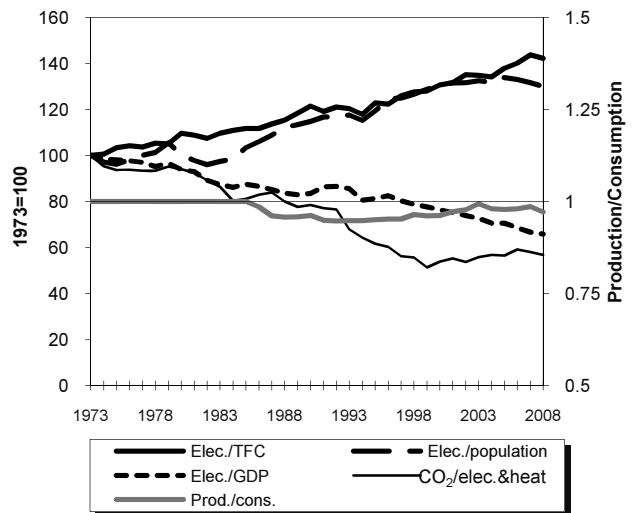
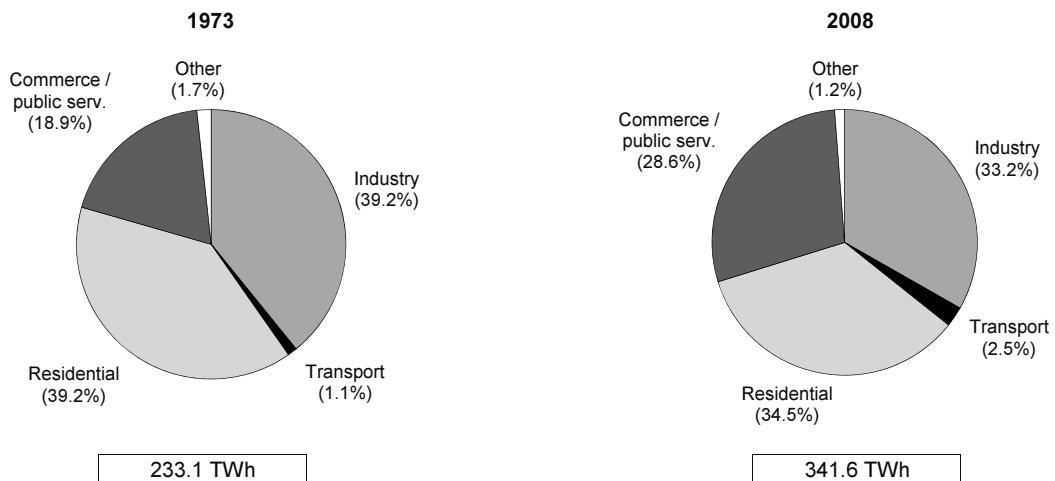


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|--------|--------|---------|---------|---------|---------|---------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 218.07 | 198.43 | 205.92 | 222.94 | 210.06 | 208.45 | 197.60 | -0.3 | -0.2 |
| GDP (billion 2000 USD) | 822.68 | 879.78 | 1150.27 | 1477.51 | 1763.15 | 1772.81 | 1711.84 | 2.0 | 2.1 |
| TPES/GDP ⁽¹⁾ | 0.27 | 0.23 | 0.18 | 0.15 | 0.12 | 0.12 | 0.12 | -2.3 | -2.3 |
| Population (millions) | 56.22 | 56.33 | 57.24 | 58.89 | 60.98 | 61.35 | 61.78 | 0.1 | 0.4 |
| TPES/population ⁽²⁾ | 3.88 | 3.52 | 3.60 | 3.79 | 3.45 | 3.40 | 3.20 | -0.4 | -0.6 |
| TPES/GDP (2000 = 100) | 176 | 149 | 119 | 100 | 79 | 78 | 77 | -2.3 | -2.3 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 127 | 119 | 107 | 100 | 87 | 86 | .. | -1.0 | .. |
| Ele.TFC/population ⁽⁴⁾ | 4147 | 4161 | 4796 | 5596 | 5600 | 5569 | .. | 0.9 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 281.35 | 284.07 | 317.76 | 374.38 | 393.19 | 385.28 | 368.09 | 0.7 | 0.8 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 218.07 | 198.43 | 205.92 | 222.94 | 210.06 | 208.45 | 197.60 | -0.3 | -0.2 |
| Coal | 76.43 | 68.80 | 63.11 | 36.50 | 38.77 | 35.89 | 30.12 | -1.1 | -3.8 |
| Oil | 108.90 | 79.34 | 76.37 | 73.22 | 67.44 | 67.73 | 64.57 | -2.1 | -0.9 |
| Gas | 25.11 | 40.31 | 47.19 | 87.37 | 81.94 | 84.45 | 78.04 | 3.8 | 2.7 |
| Comb. renew & waste | - | - | 0.63 | 1.92 | 4.10 | 4.64 | 5.34 | - | 11.9 |
| Nuclear | 7.30 | 9.65 | 17.13 | 22.17 | 16.43 | 13.68 | 18.03 | 5.2 | 0.3 |
| Geothermal | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.01 | 0.09 | 0.50 | 0.67 | 0.79 | - | 25.2 |
| Hydro | 0.33 | 0.33 | 0.45 | 0.44 | 0.44 | 0.44 | 0.45 | 1.8 | 0.0 |
| Net electricity imports ⁽²⁾ | 0.01 | 0.00 | 1.03 | 1.22 | 0.45 | 0.95 | 0.25 | 36.1 | -7.2 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 282.0 | 285.3 | 319.7 | 377.1 | 398.3 | 397.0 | 389.4 | 371.8 |
| Nuclear | 28.0 | 37.0 | 65.7 | 85.1 | 81.6 | 63.0 | 52.5 | 69.2 |
| Hydro | 4.6 | 5.1 | 7.2 | 7.8 | 7.8 | 8.9 | 9.3 | 8.9 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | 0.7 | 1.2 | 2.0 | 2.7 | 2.9 | 3.9 | 4.1 | 3.7 |
| Geothermal | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.0 | 0.9 | 2.9 | 5.3 | 7.1 | 8.5 |
| Combustible fuels | 249.5 | 243.2 | 246.8 | 283.3 | 306.0 | 319.8 | 320.5 | 285.1 |
| <i>Coal</i> | 174.6 | 207.9 | 206.4 e | 122.3 | 136.3 | 138.2 | 126.7 | 104.5 |
| <i>Oil</i> | 72.2 | 33.1 | 34.7 e | 8.4 | 5.3 | 4.7 | 6.1 | 5.8 |
| <i>Gas</i> | 2.7 | 2.1 | 5.0 e | 148.1 | 152.6 | 165.8 | 176.7 | 162.1 |
| <i>Comb. renew. & waste</i> | - | - | 0.7 | 4.5 | 11.7 | 11.1 | 11.0 | 12.6 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - |
| - Own use by power plant | 19.2 | 19.0 | 19.6 | 16.3 | 17.8 | 17.7 | 16.3 | .. |
| Net production | 262.9 | 266.3 | 300.1 | 360.8 | 380.5 | 379.3 | 373.0 | .. |
| Nuclear | .. | 32.3 | 58.7 | 78.3 | 75.2 | 57.2 | 47.7 | .. |
| Hydro | .. | 5.1 | 7.1 | 7.7 | 7.5 | 8.9 | 9.2 | .. |
| Geothermal | .. | - | - | - | - | - | - | .. |
| Solar | .. | - | - | 0.0 | 0.0 | 0.0 | 0.0 | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | 0.0 | 0.9 | 2.9 | 5.3 | 7.1 | .. |
| Combustible fuels | .. | 228.9 | 234.4 | 273.8 | 294.9 | 307.9 | 309.1 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | - | - | - | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | 0.9 | 1.5 | 2.6 | 3.5 | 3.7 | 5.1 | 5.4 | 4.8 |
| + Imports | 0.2 | 0.0 | 12.0 | 14.3 | 11.2 | 8.6 | 12.3 | 6.6 |
| - Exports | 0.1 | 0.0 | 0.0 | 0.1 | 2.8 | 3.4 | 1.3 | 3.7 |
| Electrical energy supplied | 262.1 | 264.9 | 309.4 | 371.4 | 385.1 | 379.5 | 378.7 | .. |
| - Transmission & distr. losses | 19.6 | 21.5 | 25.0 | 31.1 | 30.1 | 27.5 | 28.2 | .. |
| - Statistical difference | - | - | - | - | - | 0.0 | -0.0 | .. |
| Total consumption | 242.5 | 243.3 | 284.4 | 340.3 | 355.0 | 352.0 | 350.5 | .. |
| - Energy industry consumption ⁽²⁾ | 9.4 | 9.0 | 10.0 | 10.9 | 8.5 | 10.7 | 8.9 | .. |
| Final consumption | 233.1 | 234.3 | 274.4 | 329.4 | 346.5 | 341.4 | 341.6 | .. |
| Industry | 91.3 | 87.3 | 100.6 | 114.1 | 120.5 | 117.0 | 113.6 | .. |
| Transport | 2.6 | 3.0 | 5.3 | 8.6 | 8.8 | 8.1 | 8.4 | .. |
| Commercial & publ. serv. | 43.9 | 53.9 | 70.9 | 90.5 | 96.2 | 97.1 | 97.7 | .. |
| Residential | 91.3 | 86.1 | 93.8 | 111.8 | 116.8 | 115.1 | 117.8 | .. |
| Agriculture & fishing | 4.0 | 4.0 | 3.8 | 4.4 | 4.2 | 4.1 | 4.1 | .. |
| Sector non specified | - | - | - | - | - | - | - | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 273.13 | 285.30 | 319.74 | 377.07 | 397.29 | 397.04 | 389.37 | 1.0 | 1.1 |
| - Hydro pumped storage | 0.73 | 1.23 | 1.98 | 2.69 | 3.85 | 3.86 | 4.09 | 6.4 | 4.1 |
| Total generation⁽¹⁾ | 272.40 | 284.07 | 317.76 | 374.38 | 393.44 | 393.19 | 385.28 | 1.0 | 1.1 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 250.47 | 266.38 | 298.50 | 337.68 | 351.39 | 349.93 | 340.82 | 1.1 | 0.7 |
| - Hydro pumped storage | 0.73 | 1.23 | 1.98 | 2.69 | 3.85 | 3.86 | 4.09 | 6.4 | 4.1 |
| Total generation ⁽¹⁾ | 249.74 | 265.15 | 296.51 | 334.98 | 347.54 | 346.07 | 336.73 | 1.1 | 0.7 |
| Nuclear | 29.40 | 33.46 | 61.31 | 85.06 | 75.45 | 63.03 | 52.49 | 4.7 | -0.9 |
| Hydro | 3.50 | 3.27 | 4.39 | 4.33 | 3.69 | 4.14 | 4.22 | 1.4 | -0.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | - | - | - | - | - | - | - |
| Coal | 140.78 | 201.72 | 201.33 | 117.03 | 145.31 | 132.68 | 121.25 | 2.3 | -2.8 |
| Oil | 66.64 | 26.16 | 29.48 | 2.42 | 3.36 | 2.40 | 3.67 | -5.0 | -10.9 |
| Gas | 9.42 | 0.54 | - | 125.71 | 116.79 | 141.43 | 152.47 | - | - |
| Comb. renew. & waste | - | - | - | 0.44 | 2.93 | 2.39 | 2.63 | - | - |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | 22.67 | 18.92 | 21.24 | 39.39 | 45.91 | 47.12 | 48.55 | -0.4 | 4.7 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | 22.67 | 18.92 | 21.24 | 39.39 | 45.91 | 47.12 | 48.55 | -0.4 | 4.7 |
| Nuclear | 4.22 | 3.56 | 4.44 | - | - | - | - | 0.3 | - |
| Hydro | 0.57 | 0.63 | 0.81 | 0.76 | 0.90 | 0.95 | 0.94 | 2.3 | 0.8 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 0.01 | 0.95 | 4.24 | 5.29 | 7.11 | - | 44.9 |
| Coal | 8.05 | 6.18 | 5.11 e | 5.28 | 5.67 | 5.49 | 5.45 | -2.8 | 0.4 |
| Oil | 8.77 | 6.98 | 5.20 | 6.03 | 2.45 | 2.33 | 2.43 | -3.2 | -4.1 |
| Gas | 1.06 | 1.58 | 5.00 e | 22.37 | 24.04 | 24.36 | 24.28 | 10.2 | 9.2 |
| Comb. renew. & waste | - | - | 0.68 | 4.02 | 8.62 | 8.71 | 8.33 | - | 15.0 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---|
| Total | 16814 | 13509 | 19524 | 37548 | 44099 | 45262 | 46612 | 5.0 |
| Total energy | - | - | 4194 | 10103 | 15697 | 17107 | 18526 | 8.6 |
| Coal mines | - | - | - | - | - | - | - | - |
| Oil and gas extraction | - | - | - | - | - | - | - | - |
| Patent fuel plants | - | - | - | - | - | - | - | - |
| Coke ovens | - | - | - | - | - | - | - | - |
| Gas works | - | - | - | - | - | - | - | - |
| BKB | - | - | - | - | - | - | - | - |
| Oil refineries | - | - | 1982 | 5521 | 4094 | 5257 | 3858 | 3.8 |
| Energy non specified/other | - | - | 2212 | 4582 | 11603 | 11850 | 14668 | 11.1 |
| Total industry | 16196 | 12826 | 13499 | 23336 | 24027 | 23961 | 23801 | 3.2 |
| Iron and steel | 2049 | 806 | 1138 | 2531 | 3536 | 3480 | 3212 | 5.9 |
| Chemical and petrochemical | 7477 | 6931 | 7131 | 10505 | 9699 | 8963 | 9098 | 1.4 |
| Non-ferrous metals | - | - | 1759 | 2698 | 3728 | 3729 | 3659 | 4.2 |
| Non-metallic minerals | - | - | 80 | 457 | 183 | 185 | 142 | 3.2 |
| Transport equipment | 354 | 49 | 52 | 170 | 72 | 61 | 59 | 0.7 |
| Machinery | 96 | 49 | 35 | 565 | 109 | 344 | 383 | 14.2 |
| Mining and quarrying | 236 | 40 | 42 | 245 | 208 | 268 | 87 | 4.1 |
| Food and tobacco | 490 | 520 | 1033 | 2038 | 1910 | 2067 | 2049 | 3.9 |
| Pulp and printing | 2443 | 1527 | 1786 | 3764 | 4230 | 4325 | 4520 | 5.3 |
| Wood and wood products | - | - | - | - | - | - | - | - |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | 459 | 247 | 9 | 103 | 5 | 5 | 5 | -3.2 |
| Non specified/other industries | 2592 | 2657 | 434 | 260 | 347 | 534 | 587 | 1.7 |
| Total transport | - | - | 985 | 1942 | 1129 | 1203 | 1187 | 1.0 |
| Rail and pipeline | - | - | - | - | - | - | - | - |
| Transport non specified | - | - | 985 | 1942 | 1129 | 1203 | 1187 | 1.0 |
| Other | 618 | 683 | 846 | 2167 | 3246 | 2991 | 3098 | 7.5 |
| Commerce and pub. services | - | - | 245 | 411 | - | - | - | - |
| Residential | - | - | - | - | 449 | 504 | 550 | - |
| Agriculture and fishing | - | - | 80 | 579 | - | - | - | - |
| Sector non specified | 618 | 683 | 521 | 1177 | 2797 | 2487 | 2548 | 9.2 |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|-------------|----------|---------------|----------------|----------------|--------------|--------------|---|
| Total | 5037 | - | 102110 | 57195 e | 50064 e | 53634 | 53634 | - |
| Nuclear | - | .. | - | - | - | - | - | .. |
| Geothermal | - | .. | - | - | - | - | - | .. |
| Coal | - | .. | 19641 | 8185 | 7307 | 7483 | 7483 | .. |
| Oil | 5037 | .. | 20757 | 1534 e | 1350 e | 1388 | 1388 | .. |
| Gas | - | .. | 61712 | 47476 | 41407 | 44763 | 44763 | .. |
| Comb. renew. & waste | - | .. | - | - | - | - | - | .. |
| Non-spec. comb. fuels | - | .. | - | - | - | - | - | .. |
| Chemical processes | - | .. | - | - | - | - | - | .. |
| Heat pumps | - | .. | - | - | - | - | - | .. |
| Electric boilers | - | .. | - | - | - | - | - | .. |
| Other sources ⁽¹⁾ | - | .. | - | - | - | - | - | .. |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | - | - | - | - | - | - | .. | - |
| Nuclear | - | .. | - | - | - | - | .. | .. |
| Geothermal | - | .. | - | - | - | - | .. | .. |
| Coal | - | .. | - | - | - | - | .. | .. |
| Oil | - | .. | - | - | - | - | .. | .. |
| Gas | - | .. | - | - | - | - | .. | .. |
| Comb. renew. & waste | - | .. | - | - | - | - | .. | .. |
| Non-spec. comb. fuels | - | .. | - | - | - | - | .. | .. |
| Chemical processes | - | .. | - | - | - | - | .. | .. |
| Heat pumps | - | .. | - | - | - | - | .. | .. |
| Electric boilers | - | .. | - | - | - | - | .. | .. |
| Other sources ⁽¹⁾ | - | .. | - | - | - | - | .. | .. |
| <u>Autoproducers</u> | | | | | | | | |
| Total | 5037 | - | 102110 | 57195 e | 50064 e | 53634 | .. | - |
| Nuclear | - | .. | - | - | - | - | .. | .. |
| Geothermal | - | .. | - | - | - | - | .. | .. |
| Coal | - | .. | 19641 | 8185 | 7307 | 7483 | .. | .. |
| Oil | 5037 | .. | 20757 | 1534 e | 1350 e | 1388 | .. | .. |
| Gas | - | .. | 61712 | 47476 | 41407 | 44763 | .. | .. |
| Comb. renew. & waste | - | .. | - | - | - | - | .. | .. |
| Non-spec. comb. fuels | - | .. | - | - | - | - | .. | .. |
| Chemical processes | - | .. | - | - | - | - | .. | .. |
| Heat pumps | - | .. | - | - | - | - | .. | .. |
| Electric boilers | - | .. | - | - | - | - | .. | .. |
| Other sources ⁽¹⁾ | - | .. | - | - | - | - | .. | .. |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 64.80 | 60.65 | 56.24 | 59.04 | 65.22 | 65.42 | 64.35 | -0.8 | 0.8 |
| Coal | 45.48 | 51.99 | 47.78 | 28.74 | 35.37 | 32.44 | 29.54 | 0.3 | -2.6 |
| Oil | 18.37 | 8.11 | 7.14 | 1.96 | 1.06 | 0.90 | 0.96 | -5.4 | -10.5 |
| Gas | 0.94 | 0.55 | 1.11 e | 27.04 | 25.65 | 28.98 | 30.73 | 1.0 | 20.2 |
| Comb. renew. & waste | - | - | 0.21 | 1.30 | 3.15 | 3.10 | 3.12 | - | 16.1 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 56.81 | 52.65 | 48.23 | 54.05 | 54.30 | 53.21 | .. | 0.1 |
| Coal | .. | 50.39 | 46.44 | 26.40 | 33.20 | 30.29 | 27.47 | .. | -2.9 |
| Oil | .. | 6.29 | 6.20 | 0.36 | 0.55 | 0.39 | 0.35 | .. | -14.7 |
| Gas | .. | 0.12 | - | 21.34 | 19.74 | 23.14 | 24.80 | .. | - |
| Comb. renew. & waste | .. | - | - | 0.13 | 0.56 | 0.48 | 0.58 | .. | - |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 7.30 | 9.65 | 17.13 | 22.17 | 19.66 | 16.43 | 13.68 | 5.2 | -1.2 |
| Nuclear | 7.30 | 9.65 | 17.13 | 22.17 | 19.66 | 16.43 | 13.68 | 5.2 | -1.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Non-Thermal | | | | | | | | | |
| Total | 0.33 | 0.33 | 0.45 | 0.52 | 0.76 | 0.89 | 1.05 | 1.8 | 4.9 |
| Hydro | 0.33 | 0.33 | 0.45 | 0.44 | 0.39 | 0.44 | 0.44 | 1.8 | -0.0 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.00 | 0.08 | 0.36 | 0.45 | 0.61 | - | 44.9 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

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8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|---------|-----------|---------|---------|---------|---------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | 91978 | 83330 e | 45990 | 57190 | 52275 | 47563 | -3.1 |
| Fuel input (TJ) | 2094150 | 1961834 e | 1135944 | 1421458 | 1299296 | 1182179 | -2.8 |
| Electricity production (GWh) | 207530 | 202884 e | 119289 | 148485 | 135842 | 124624 | -2.7 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 9457 | 20962 e | 35005 | 35514 | 36354 | 32583 | 2.5 |
| Electricity production (GWh) | 366 | 1324 e | 1921 | 1270 | 1271 | 1080 | -1.1 |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 8486 | 7108 e | 815 e | 828 | 565 | 853 | -11.1 |
| Fuel input (TJ) | 343100 | 302815 e | 33041 e | 34285 | 23380 | 35207 | -11.3 |
| Electricity production (GWh) | 33139 | 30176 e | 2584 | 3495 | 2552 | 3838 | -10.8 |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | 25628 | 31446 e | 1032197 | 945471 | 1102386 | 1181046 | 22.3 |
| Electricity production (GWh) | 2122 | 2198 e | 128687 | 118835 | 144151 | 155248 | 26.7 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | 6742 | 38562 | 35099 | 34063 | - |
| Electricity production (GWh) | - | - | 541 | 3324 | 2920 | 2767 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 2089 | 355 | 367 | - |
| Electricity production (GWh) | - | - | - | 350 | 55 | 59 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 3244 | 15937 | 20274 | 20953 | 20921 | 10.9 |
| Electricity production (GWh) | - | 223 | 1304 | 1490 | 1676 | 1599 | 11.6 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 1718 | 27038 | 55580 | 58589 | 59947 | 21.8 |
| Electricity production (GWh) | - | 139 | 2188 | 4493 | 4728 | 4848 | 21.8 |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | 243157 | 236944 | 256514 | 281742 | 293195 | 294063 | 1.2 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|---------|--------|--------|--------|--------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | - | 684 e | 208 | 247 | 240 | 238 | -5.7 |
| Fuel input (TJ) | - | 15257 e | 5147 | 6139 | 5965 | 5915 | -5.1 |
| Electricity production (GWh) | - | 1780 e | 661 | 729 | 704 | 692 | -5.1 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 2755 e | 2640 | 4968 | 3876 | 3356 | 1.1 |
| Electricity production (GWh) | - | 450 e | 429 | 494 | 353 | 303 | -2.2 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | - | 862 e | 685 | 458 | 428 | 375 | -4.5 |
| Fuel input (TJ) | - | 36818 e | 28588 | 20850 | 19817 | 17257 | -4.1 |
| Electricity production (GWh) | - | 4500 e | 5862 | 2315 | 2180 | 2263 | -3.7 |
| CHP Heat production (TJ) | 5037 | - | - | - | - | - | - |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | - | 20364 e | 136230 | 168746 | 167468 | 165658 | 12.4 |
| Electricity production (GWh) | - | 2800 e | 19390 | 21993 | 21633 | 21500 | 12.0 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | - | - | 8282 | 7394 | 6509 | - |
| Electricity production (GWh) | - | - | - | 1257 | 1062 | 850 | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | - | 357 | 2371 | 2056 | 3026 | - |
| Electricity production (GWh) | - | - | 55 | 243 | 208 | 363 | - |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 3904 | 4537 | 4730 | 5335 | 5822 | 2.2 |
| Electricity production (GWh) | - | 316 | 367 | 387 | 445 | 475 | 2.3 |
| CHP Heat production (TJ) | - | - | - | - | - | - | - |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Electricity production (GWh) | - | 9846 | 26764 | 27418 | 26585 | 26446 | 5.6 |
| CHP Heat production (TJ) | 5037 | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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10. Heat produced for sale from combustible fuels
in heat plants

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|------|--------|--------|--------|-------|---|
| Hard coal and patent fuel | | | | | | | |
| Fuel input (1000 t) | .. | .. | 656 | 457 | 456 | 458 | .. |
| Fuel input (TJ) | .. | .. | 17239 | 11379 | 11378 | 11398 | .. |
| Heat production (TJ) | .. | .. | 12438 | 7210 | 6637 | 6799 | .. |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | .. | .. | - | - | - | - | .. |
| Fuel input (TJ) | .. | .. | - | - | - | - | .. |
| Heat production (TJ) | .. | .. | - | - | - | - | .. |
| Peat | | | | | | | |
| Fuel input (1000 t) | .. | .. | - | - | - | - | .. |
| Fuel input (TJ) | .. | .. | - | - | - | - | .. |
| Heat production (TJ) | .. | .. | - | - | - | - | .. |
| Coal manufactured gases⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | .. | .. | 8748 | 2151 | 2151 | 2151 | .. |
| Heat production (TJ) | .. | .. | 7203 | 727 | 670 | 684 | .. |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | .. | .. | 710 | 59 e | 58 | 57 | .. |
| Fuel input (TJ) | .. | .. | 28770 | 2441 e | 2315 e | 2327 | .. |
| Heat production (TJ) | .. | .. | 20757 | 1490 e | 1350 e | 1388 | .. |
| Natural gas and gas works gas⁽¹⁾ | | | | | | | |
| Fuel input (TJ) | .. | .. | 89608 | 79282 | 78871 | 83380 | .. |
| Heat production (TJ) | .. | .. | 61712 | 45209 | 41407 | 44763 | .. |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | .. | .. | - | - | - | - | .. |
| Heat production (TJ) | .. | .. | - | - | - | - | .. |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | .. | .. | - | - | - | - | .. |
| Heat production (TJ) | .. | .. | - | - | - | - | .. |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | .. | .. | - | - | - | - | .. |
| Heat production (TJ) | .. | .. | - | - | - | - | .. |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | .. | .. | - | - | - | - | .. |
| Heat production (TJ) | .. | .. | - | - | - | - | .. |
| Total combustible fuels⁽²⁾ | | | | | | | |
| Heat production (TJ) | .. | .. | 102110 | 54636 | 50064 | 53634 | .. |

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 143.23 | 131.28 | 137.79 | 150.29 | 146.58 | 142.21 | 142.85 | -0.2 | 0.2 |
| Geothermal | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Solar thermal | - | - | 0.01 | 0.01 | 0.04 | 0.04 | 0.06 | - | 9.9 |
| Coal | 26.46 | 14.07 | 10.77 | 3.90 | 2.79 | 2.95 | 3.10 | -5.1 | -6.7 |
| Oil | 73.09 | 59.62 | 61.22 | 62.57 | 63.97 | 61.44 | 60.35 | -1.0 | -0.1 |
| Gas | 23.64 | 37.31 | 41.77 | 52.42 | 48.17 | 46.28 | 47.24 | 3.4 | 0.7 |
| Comb. renew. & waste | - | - | 0.42 | 0.62 | 0.76 | 1.01 | 1.52 | - | 7.5 |
| Electricity | 20.04 | 20.15 | 23.60 | 28.33 | 29.61 | 29.36 | 29.37 | 1.0 | 1.2 |
| Heat | - | 0.12 | - | 2.44 | 1.24 | 1.13 | 1.21 | - | - |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 52.54 | 39.28 | 31.83 | 33.71 | 31.38 | 30.33 | 29.65 | -2.9 | -0.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 13.33 | 5.95 | 6.38 | 2.30 | 2.24 | 2.37 | 2.46 | -4.2 | -5.2 |
| Oil | 21.23 | 12.19 | 6.30 | 6.03 | 6.75 | 6.52 | 6.14 | -6.9 | -0.1 |
| Gas | 10.13 | 13.51 | 10.40 | 14.19 | 11.27 | 10.46 | 10.25 | 0.2 | -0.1 |
| Comb. renew. & waste | - | - | 0.10 | 0.28 | 0.17 | 0.22 | 0.27 | - | 5.8 |
| Electricity | 7.85 | 7.51 | 8.66 | 9.81 | 10.14 | 10.06 | 9.77 | 0.6 | 0.7 |
| Heat | - | 0.12 | - | 1.10 | 0.81 | 0.69 | 0.77 | - | - |
| Transport | 27.63 | 30.37 | 39.18 | 41.87 | 43.78 | 44.04 | 43.22 | 2.1 | 0.5 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.05 | 0.04 | 0.00 | - | - | - | - | -18.3 | - |
| Oil | 27.35 | 30.07 | 38.72 | 41.13 | 42.89 | 42.99 | 41.70 | 2.1 | 0.4 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | 0.18 | 0.35 | 0.79 | - | - |
| Electricity | 0.22 | 0.26 | 0.45 | 0.74 | 0.71 | 0.70 | 0.73 | 4.2 | 2.6 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 13.32 | 12.74 | 12.86 | 16.85 | 16.12 | 15.89 | 16.30 | -0.2 | 1.3 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 1.97 | 1.31 | 0.90 | 0.04 | 0.02 | 0.01 | 0.01 | -4.5 | -20.6 |
| Oil | 5.86 | 4.64 | 3.10 | 1.41 | 0.82 | 0.84 | 0.81 | -3.7 | -7.2 |
| Gas | 1.72 | 2.16 | 2.73 | 6.25 | 6.43 | 6.22 | 6.59 | 2.8 | 5.0 |
| Comb. renew. & waste | - | - | 0.04 | 0.08 | 0.08 | 0.09 | 0.09 | - | 4.8 |
| Electricity | 3.78 | 4.64 | 6.09 | 7.78 | 8.39 | 8.35 | 8.40 | 2.9 | 1.8 |
| Heat | - | - | - | 1.29 | 0.38 | 0.39 | 0.38 | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------------|--------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 33.67 | 35.92 | 37.27 | 43.03 | 42.19 | 40.80 | 42.06 | 0.6 | 0.7 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 11.02 | 6.75 | 3.48 | 1.56 | 0.53 | 0.57 | 0.63 | -6.6 | -9.0 |
| Oil | 3.88 | 2.63 | 2.31 | 3.02 | 3.03 | 2.68 | 2.83 | -3.0 | 1.1 |
| Gas | 10.92 | 19.13 | 23.24 | 28.62 | 28.30 | 27.31 | 28.11 | 4.5 | 1.1 |
| Comb. renew. & waste | - | - | 0.17 | 0.17 | 0.27 | 0.29 | 0.31 | - | 3.3 |
| Electricity | 7.85 | 7.41 | 8.07 | 9.62 | 10.01 | 9.89 | 10.13 | 0.2 | 1.3 |
| Heat | - | - | - | 0.04 | 0.05 | 0.05 | 0.05 | - | - |
| Agriculture & fishing | 2.09 | 1.42 | 1.28 | 1.15 | 0.86 | 0.85 | 0.87 | -2.8 | -2.1 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 0.08 | 0.02 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | -8.3 | -9.5 |
| Oil | 1.67 | 1.06 | 0.78 | 0.59 | 0.28 | 0.28 | 0.28 | -4.4 | -5.5 |
| Gas | - | - | 0.08 | 0.12 | 0.16 | 0.15 | 0.17 | - | 4.4 |
| Comb. renew. & waste | - | - | 0.07 | 0.06 | 0.06 | 0.06 | 0.06 | - | -0.8 |
| Electricity | 0.34 | 0.34 | 0.33 | 0.37 | 0.36 | 0.35 | 0.35 | -0.2 | 0.3 |
| Heat | - | - | - | - | - | - | - | - | - |
| Other | 1.92 | 4.45 | 4.55 | 2.36 | 1.75 | 1.67 | 1.68 | 5.2 | -5.4 |
| Geothermal | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Solar thermal | - | - | 0.01 | 0.01 | 0.04 | 0.04 | 0.06 | - | 9.9 |
| Coal | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Oil | 1.05 | 1.94 | 0.73 | 0.14 | 0.32 | 0.29 | 0.23 | -2.1 | -6.3 |
| Gas | 0.88 | 2.51 | 3.77 | 2.18 | 1.40 | 1.34 | 1.40 | 8.9 | -5.4 |
| Comb. renew. & waste | - | - | 0.03 | 0.03 | - | - | - | - | - |
| Electricity | - | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 12.06 | 7.10 | 10.82 | 11.32 | 10.49 | 8.64 | 9.07 | -0.63 | -0.98 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

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12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| TFC (Mtoe) | 143.23 | 131.28 | 137.79 | 150.29 | 149.02 | 146.58 | 142.21 | 142.85 |
| Total industry (Mtoe) | 52.54 | 39.28 | 31.83 | 33.71 | 32.11 | 31.38 | 30.33 | 29.65 |
| Iron and steel | 9.53 | 4.81 | 4.64 | 3.27 | 2.05 | 2.34 | 2.17 | 2.22 |
| Chem. and petrochemical | 8.43 | 8.38 | 5.03 | 6.95 | 6.08 | 5.72 | 5.49 | 5.35 |
| Non-ferrous metals | 2.04 | 1.47 | 1.17 | 1.11 | 0.98 | 0.98 | 0.96 | 0.93 |
| Non-metallic minerals | 5.94 | 4.20 | 3.51 | 2.77 | 2.59 | 2.50 | 2.44 | 2.39 |
| Transport equipment | 2.28 | 1.47 | 1.05 | 1.57 | 1.50 | 1.39 | 1.34 | 1.31 |
| Machinery | 5.22 | 5.01 | 3.77 | 2.66 | 2.51 | 2.47 | 2.39 | 2.34 |
| Mining and quarrying | 0.83 | 0.63 | 0.28 | 0.34 | - | - | - | - |
| Food and tobacco | 4.63 | 4.05 | 3.58 | 3.36 | 3.58 | 3.49 | 3.36 | 3.34 |
| Paper, pulp and printing | 3.47 | 2.24 | 2.06 | 2.34 | 2.44 | 2.28 | 2.14 | 2.12 |
| Wood and wood products | 0.20 | 0.17 | 0.13 | 0.02 | - | - | - | - |
| Construction | 1.34 | 0.99 | 0.89 | 0.80 | 0.55 | 0.50 | 0.50 | 0.48 |
| Textile and leather | 2.78 | 2.06 | 1.08 | 1.10 | 0.99 | 0.97 | 0.94 | 0.89 |
| Non specified/other | 5.86 | 3.80 | 4.64 | 7.42 | 8.85 | 8.73 | 8.60 | 8.29 |
| Electricity consumption (Mtoe) | 20.04 | 20.15 | 23.60 | 28.33 | 29.80 | 29.61 | 29.36 | 29.37 |
| Total industry (Mtoe) | 7.85 | 7.51 | 8.66 | 9.81 | 10.37 | 10.14 | 10.06 | 9.77 |
| Iron and steel | 1.12 | 0.87 | 0.78 | 0.55 | 0.43 | 0.50 | 0.42 | 0.42 |
| Chem. and petrochemical | 1.77 | 1.64 | 1.56 | 2.04 | 2.07 | 1.93 | 1.91 | 1.82 |
| Non-ferrous metals | 0.58 | 0.73 | 0.58 | 0.53 | 0.66 | 0.65 | 0.63 | 0.61 |
| Non-metallic minerals | 0.45 | 0.45 | 0.65 | 0.70 | 0.69 | 0.69 | 0.68 | 0.67 |
| Transport equipment | 0.55 | 0.53 | - | 0.54 | 0.50 | 0.50 | 0.49 | 0.48 |
| Machinery | 1.01 | 0.99 | 1.80 | 1.34 | 1.38 | 1.36 | 1.36 | 1.31 |
| Mining and quarrying | 0.16 | 0.17 | - | - | - | - | - | - |
| Food and tobacco | 0.56 | 0.61 | 0.94 | 1.01 | 1.10 | 1.06 | 1.06 | 1.05 |
| Paper, pulp and printing | 0.50 | 0.49 | 0.69 | 0.98 | 1.18 | 1.15 | 1.15 | 1.14 |
| Wood and wood products | 0.08 | 0.08 | - | - | - | - | - | - |
| Construction | 0.06 | 0.07 | 0.11 | 0.14 | 0.17 | 0.14 | 0.14 | 0.13 |
| Textile and leather | 0.53 | 0.42 | 0.26 | 0.31 | 0.29 | 0.29 | 0.29 | 0.27 |
| Non specified/other | 0.50 | 0.45 | 1.29 | 1.68 | 1.89 | 1.87 | 1.94 | 1.87 |
| Total industry (TWh) | 91.27 | 87.29 | 100.64 | 114.11 | 120.53 | 117.92 | 117.01 | 113.56 |
| Iron and steel | 13.01 | 10.06 | 9.07 | 6.35 | 5.02 | 5.86 | 4.92 | 4.87 |
| Chem. and petrochemical | 20.53 | 19.12 | 18.19 | 23.73 | 24.13 | 22.39 | 22.20 | 21.15 |
| Non-ferrous metals | 6.78 | 8.45 | 6.71 | 6.15 | 7.69 | 7.52 | 7.33 | 7.08 |
| Non-metallic minerals | 5.19 | 5.25 | 7.51 | 8.11 | 7.98 | 7.97 | 7.86 | 7.76 |
| Transport equipment | 6.40 | 6.21 | - | 6.32 | 5.84 | 5.85 | 5.73 | 5.60 |
| Machinery | 11.70 | 11.47 | 20.90 | 15.62 | 16.05 | 15.83 | 15.81 | 15.26 |
| Mining and quarrying | 1.81 | 1.98 | - | - | - | - | - | - |
| Food and tobacco | 6.46 | 7.10 | 10.94 | 11.72 | 12.77 | 12.32 | 12.28 | 12.22 |
| Paper, pulp and printing | 5.77 | 5.73 | 7.98 | 11.42 | 13.73 | 13.41 | 13.36 | 13.22 |
| Wood and wood products | 0.90 | 0.92 | - | - | - | - | - | - |
| Construction | 0.75 | 0.85 | 1.28 | 1.59 | 1.93 | 1.64 | 1.60 | 1.51 |
| Textile and leather | 6.20 | 4.89 | 3.03 | 3.60 | 3.39 | 3.38 | 3.35 | 3.18 |
| Non specified/other | 5.77 | 5.25 | 15.03 | 19.51 | 22.00 | 21.75 | 22.57 | 21.72 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

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13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|------------------------------------|------------|-----------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|
| Total imports⁽¹⁾ | 177 | 22 | 11990 | 16336 | 14308 | 11160 | 10282 | 8613 | 12294 |
| Imports from: | | | | | | | | | |
| Total OECD | 177 | 22 | 11990 | 16336 | 14308 | 11160 | 10282 | 8613 | 12294 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | 177 | 22 | 11990 | 16306 | 14267 | 11159 | 10272 | 8560 | 12142 |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | 30 | 41 | 1 | 10 | 53 | 152 |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

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14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|------------|-----------|-----------|-----------|------------|-------------|-------------|-------------|-------------|
| Total exports ⁽¹⁾ | 114 | 19 | 47 | 23 | 134 | 2839 | 2765 | 3398 | 1272 |
| Exports to: | | | | | | | | | |
| Total OECD | 114 | 19 | 47 | 23 | 134 | 2839 | 2765 | 3398 | 1272 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | - | - | - | - | - | - | - | - | - |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | 114 | 19 | 47 | 23 | 1 | 765 | 977 | 2016 | 899 |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | 133 | 2074 | 1788 | 1382 | 373 |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | - | - | - | - | - | - | - |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 69.14 | 68.31 | 69.02 | 65.71 | 72.03 | 74.01 | 75.06 | 75.32 | 75.54 |
| Nuclear | 3.75 | 5.77 | 10.73 | 12.37 | 12.49 | 11.85 | 10.97 | 10.98 | 10.98 |
| Hydro | 2.30 | 2.34 | 3.80 | 4.10 | 4.12 | 4.13 | 4.09 | 4.10 | 4.20 |
| <i>of which: pumped storage</i> | - | - | 2.79 | 2.79 | 2.79 | 2.79 | 2.73 | 2.74 | 2.74 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | - | - | - | - |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | - | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 63.09 | 60.20 | 54.50 | 49.24 | 55.43 | 58.03 | 60.01 | 60.24 | 60.36 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 45.12 | 40.14 | 34.30 | 27.49 | 24.84 | 22.63 | 22.88 | 23.01 | 23.14 |
| Liquid fuels | 14.50 | 15.79 | 15.03 | 7.10 | 4.26 | 4.62 | 5.22 | 5.22 | 5.09 |
| Natural gas | - | - | - | 9.03 | 19.35 | 24.26 | 24.86 | 24.85 | 26.49 |
| Comb. renew. & waste | - | - | - | 0.07 | 0.12 | 0.12 | 0.10 | 0.21 | 0.18 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 1.92 | 2.66 | 4.81 | 5.53 | 6.87 | 6.40 | 6.95 | 6.95 | 5.46 |
| Solid / natural gas | 1.57 | 1.61 | 0.37 | - | - | - | - | - | - |
| Liquid / natural gas | - | - | - | - | - | - | - | - | - |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 51.37 | 38.31 | 34.64 | 32.29 | 33.61 | 33.73 | 32.43 |
| Internal combustion | - | - | - | - | - | - | - | - | - |
| Gas turbine | - | - | 3.13 | 1.89 | 1.32 | 1.36 | 1.44 | 1.45 | 1.26 |
| Combined cycle | - | - | - | 9.03 | 19.35 | 24.26 | 24.86 | 24.85 | 26.49 |
| Other | - | - | - | - | 0.12 | 0.12 | 0.10 | 0.21 | 0.18 |
| Peak load | .. | .. | 54.07 | 55.61 | 58.45 | 61.70 | 59.07 | 61.53 | 60.29 |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)

(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 5.08 | 5.33 | 4.18 | 4.41 | 6.36 | 8.37 | 8.55 | 9.18 | 10.07 |
| Nuclear | 0.54 | 0.69 | 0.62 | 0.39 | - | - | - | - | - |
| Hydro | 0.11 | 0.11 | 0.10 | 0.12 | 0.16 | 0.16 | 0.15 | 0.17 | 0.17 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar | - | - | - | - | - | 0.01 | 0.01 | 0.02 | 0.02 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.01 | 0.20 | 0.41 | 1.57 | 1.96 | 2.48 | 3.41 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |
| Combustible fuels | 4.43 | 4.53 | 3.45 | 3.71 | 5.79 | 6.63 | 6.43 | 6.52 | 6.47 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | 1.10 | 1.09 | 1.07 | 0.95 | 0.87 | 0.93 | 0.89 |
| Liquid fuels | 4.43 | 4.53 | 0.90 | 0.89 | 0.93 | 0.83 | 0.77 | 0.81 | 0.78 |
| Natural gas | - | - | - | 0.15 | 1.79 | 2.18 | 2.11 | 2.08 | 2.07 |
| Comb. renew. & waste | - | - | 0.12 | 0.25 | 0.67 | 1.49 | 1.59 | 1.55 | 1.60 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | 0.60 | 0.60 | 0.27 | 0.24 | 0.22 | 0.23 | 0.22 |
| Solid / natural gas | - | - | - | - | 0.33 | 0.30 | 0.27 | 0.29 | 0.28 |
| Liquid / natural gas | - | - | 0.73 | 0.73 | 0.73 | 0.65 | 0.60 | 0.64 | 0.62 |
| Solid / liquid / gas | - | - | - | - | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 2.50 | 2.48 | 1.86 | 0.49 | 0.44 | 0.44 | 0.44 |
| Internal combustion | - | - | 0.17 | 0.17 | 0.18 | 0.16 | 0.15 | 0.15 | 0.15 |
| Gas turbine | - | - | 0.67 | 0.66 | 1.23 | 0.49 | 0.47 | 0.49 | 0.48 |
| Combined cycle | - | - | - | 0.15 | 1.79 | 2.18 | 2.11 | 2.08 | 2.07 |
| Other | - | - | 0.12 | 0.25 | 0.73 | 3.31 | 3.27 | 3.37 | 3.33 |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | Pounds Sterling/ unit | | | | | | | | |
| Steam coal (t) | 21.97 | 31.84 | 43.77 | 29.35 | 36.07 | 38.06 | 41.16 | 65.57 | 54.42 |
| Heavy fuel oil (t) | 49.72 | 85.73 | 53.16 | 119.80 | 211.50 | 231.91 | 227.14 | 291.31 | 300.48 |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | 35.47 | 51.54 | c | 68.73 | 118.04 | 149.33 | 143.75 | 191.16 | 163.06 |
| | Pounds Sterling/ toe | | | | | | | | |
| Steam coal | 38.86 | 56.32 | 77.43 | 51.92 | 63.81 | 67.33 | 72.81 | 115.99 | 96.27 |
| Heavy fuel oil | 50.37 | 86.86 | 53.86 | 121.38 | 214.29 | 234.96 | 230.13 | 295.15 | 304.44 |
| Natural gas ⁽²⁾ | 39.41 | 57.27 | c | 76.37 | 131.16 | 165.92 | 159.72 | 212.40 | 181.17 |
| End-user prices of electricity | | | | | | | | | |
| | Pounds Sterling/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0198 | 0.0270 | 0.0398 | 0.0366 | 0.0477 | 0.0635 | 0.0649 | 0.0797 | 0.0866 |
| <i>of which: tax</i> | - | - | - | - | 0.0022 | 0.0023 | 0.0021 | 0.0024 | 0.0032 |
| Household | | | | | | | | | |
| Price | 0.0272 | 0.0375 | 0.0667 | 0.0705 | 0.0820 | 0.1012 | 0.1093 | 0.1263 | 0.1321 |
| <i>of which: tax</i> | - | - | - | 0.0034 | 0.0039 | 0.0048 | 0.0052 | 0.0060 | 0.0063 |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

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Figure 1. Total final consumption by fuel

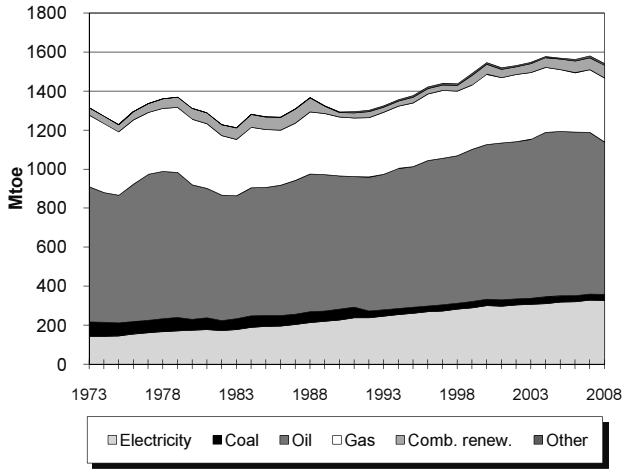


Figure 2. Electricity generation by fuel

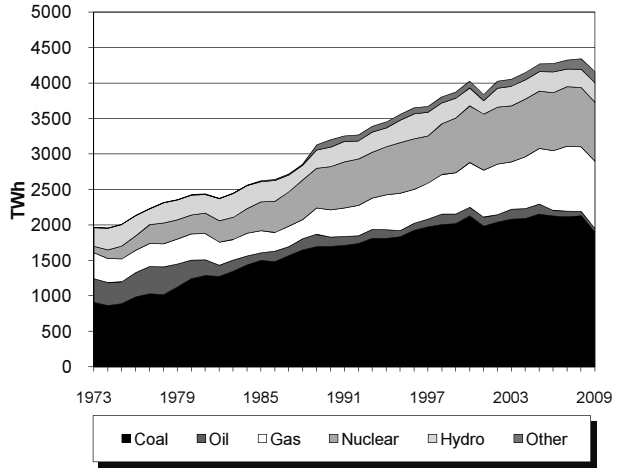


Figure 3. Electricity consumption by sector

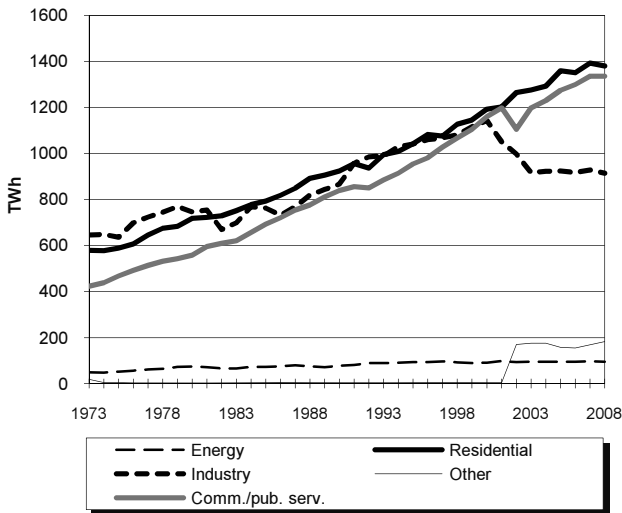


Figure 4. Electricity indicators

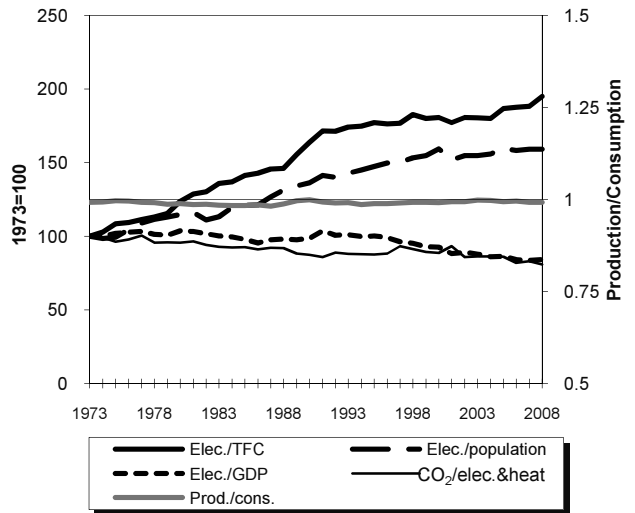
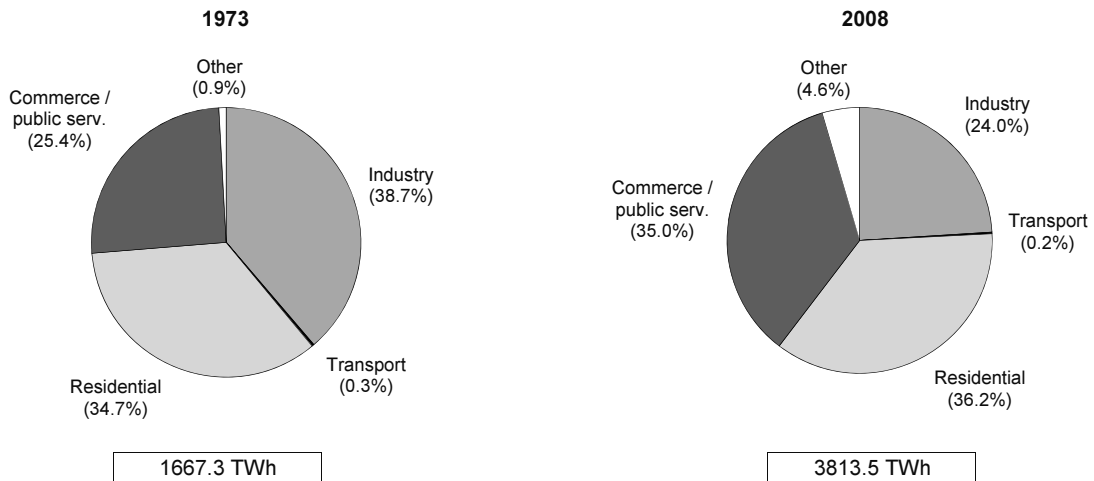


Figure 5. Total final electricity consumption by sector



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1. Energy consumption, GDP and population

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--------------------------------------|---------|---------|---------|---------|----------|----------|----------|----------------------------------|-------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 1729.94 | 1804.68 | 1915.00 | 2273.33 | 2336.55 | 2283.72 | 2172.11 | 0.6 | 0.7 |
| GDP (billion 2000 USD) | 4321.89 | 5142.14 | 7063.99 | 9898.80 | 11693.18 | 11742.29 | 11591.77 | 2.9 | 2.6 |
| TPES/GDP ⁽¹⁾ | 0.40 | 0.35 | 0.27 | 0.23 | 0.20 | 0.19 | 0.19 | -2.3 | -1.9 |
| Population (millions) | 211.94 | 227.73 | 250.18 | 282.41 | 301.74 | 304.53 | 307.53 | 1.0 | 1.1 |
| TPES/population ⁽²⁾ | 8.16 | 7.92 | 7.65 | 8.05 | 7.74 | 7.50 | 7.06 | -0.4 | -0.4 |
| TPES/GDP (2000 = 100) | 174 | 153 | 118 | 100 | 87 | 85 | 82 | -2.3 | -1.9 |
| Ele.TFC/GDP(2000=100) ⁽³⁾ | 109 | 111 | 105 | 100 | 93 | 92 | .. | -0.2 | .. |
| Ele.TFC/population ⁽⁴⁾ | 7870 | 8898 | 10530 | 12396 | 12684 | 12527 | .. | 1.7 | .. |
| Elec. generated (TWh) ⁽⁵⁾ | 1965.51 | 2427.32 | 3202.81 | 4025.89 | 4323.91 | 4343.82 | 4161.22 | 2.9 | 1.4 |

Source: IEA/OECD Energy Balances of OECD Countries and OECD Main Economic Indicators.

(1) In units of toe/2000 thousand US dollars.

(2) In units of toe/per capita.

(3) Ele.TFC = electricity total final consumption.

(4) In units of kWh/per capita.

(5) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

2. Total primary energy supply (TPES) by source

| | 1973 | 1980 | 1990 | 2000 | 2007 | 2008 | 2009e | Average annual percent change | |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-09 |
| TPES (Mtoe) | 1729.94 | 1804.68 | 1915.00 | 2273.33 | 2336.55 | 2283.72 | 2172.11 | 0.6 | 0.7 |
| Coal | 311.05 | 376.23 | 460.20 | 533.63 | 554.80 | 545.76 | 486.06 | 2.3 | 0.3 |
| Oil | 817.49 | 796.93 | 756.84 | 871.15 | 902.87 | 851.60 | 800.13 | -0.5 | 0.3 |
| Gas | 514.51 | 476.78 | 438.23 | 547.58 | 542.69 | 542.77 | 543.84 | -0.9 | 1.1 |
| Comb. renew & waste | 37.50 | 54.49 | 62.26 | 73.23 | 80.68 | 84.77 | 82.30 | 3.0 | 1.5 |
| Nuclear | 23.24 | 69.37 | 159.38 | 207.89 | 218.03 | 218.34 | 216.33 | 12.0 | 1.6 |
| Geothermal | 2.11 | 4.60 | 14.10 | 13.09 | 8.79 | 9.08 | 9.04 | 11.8 | -2.3 |
| Solar, wind, tide ⁽¹⁾ | - | - | 0.32 | 2.07 e | 4.54 e | 6.49 e | 7.87 | - | 18.3 |
| Hydro | 22.82 | 23.98 | 23.49 | 21.78 | 21.47 | 22.08 | 23.60 | 0.2 | 0.0 |
| Net electricity imports ⁽²⁾ | 1.23 | 2.30 | 0.17 | 2.92 | 2.69 | 2.83 | 2.93 | -11.0 | 16.2 |
| Heat | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Includes wave, ocean and other (e.g. fuel cells).

(2) Net Imports = total imports - total exports

Note: Please refer to definitions in the introductory information.

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3. Summary electricity production and consumption ⁽¹⁾

| | (TWh) | | | | | | | |
|--|---------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|---------------|
| | 1973 | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e |
| Gross production | 1965.5 | 2427.3 | 3218.6 | 4052.7 e | 4294.4 e | 4349.8 e | 4369.1 e | 4184.4 |
| Nuclear | 89.2 | 266.2 | 611.6 | 797.7 | 810.7 | 836.6 | 837.8 | 830.1 |
| Hydro | 265.4 | 278.8 | 289.0 | 280.0 | 297.9 | 275.5 | 282.0 | 297.6 |
| <i>of which:</i> | | | | | | | | |
| <i>pumped storage production</i> | - | - | 15.8 | 26.8 | 25.5 | 25.9 | 25.3 | 23.1 |
| Geothermal | 2.5 | 5.4 | 16.0 | 14.6 | 16.8 | 16.8 | 17.0 | 16.5 |
| Solar | - | - | 0.7 | 0.7 e | 1.1 e | 1.7 e | 2.5 e | 2.5 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - |
| Wind | - | - | 3.1 | 5.7 | 17.9 | 34.6 | 55.7 | 71.2 |
| Combustible fuels | 1608.5 | 1877.0 | 2298.3 e | 2954.0 e | 3149.3 | 3183.4 | 3173.4 | 2965.6 |
| <i>Coal</i> | 907.4 | 1242.9 | 1699.6 e | 2129.5 e | 2154.0 | 2118.5 | 2132.6 | 1899.5 |
| <i>Oil</i> | 336.0 | 263.2 | 130.6 | 118.5 | 141.3 | 78.1 | 57.8 | 50.2 |
| <i>Gas</i> | 364.9 | 370.5 | 381.7 | 634.3 | 782.8 | 915.2 | 910.6 | 948.6 |
| <i>Comb. renew. & waste</i> | 0.3 | 0.5 | 86.4 e | 71.7 | 71.2 | 71.7 | 72.4 | 67.3 |
| Other (e.g. fuel cells) | - | - | - | - | 0.6 | 1.1 | 0.8 | 0.9 |
| - Own use by power plant | 100.8 | 141.2 | 188.8 | 235.9 e | 206.4 e | 159.3 e | 216.3 e | .. |
| Net production | 1864.7 | 2286.1 | 3029.8 | 3816.7 e | 4088.0 e | 4190.5 e | 4152.8 e | .. |
| Nuclear | .. | 251.1 | 577.0 | 753.9 | 782.0 | 806.4 | 806.2 | .. |
| Hydro | .. | 276.0 | 286.1 | 275.0 | 295.8 | 273.4 | 280.1 | .. |
| Geothermal | .. | 5.1 | 15.1 | 14.1 | 14.7 | 14.6 | 15.0 | .. |
| Solar | .. | - | 0.7 | 0.7 e | 1.1 e | 1.6 e | 2.3 e | .. |
| Tide, wave, ocean | .. | - | - | - | - | - | - | .. |
| Wind | .. | - | 3.0 | 5.6 | 17.8 | 34.5 | 55.4 | .. |
| Combustible fuels | .. | 1753.9 | 2148.0 | 2767.5 | 2976.0 | 3058.9 | 2993.1 | .. |
| Other (e.g. fuel cells) | .. | - | - | - | 0.6 | 1.1 | 0.8 | .. |
| - Used for heat pumps | - | - | - | - | - | - | - | - |
| - Used for electric boilers | - | - | - | - | - | - | - | - |
| - Used for pumped storage | - | - | 22.6 | 31.7 | 32.0 | 32.8 | 31.6 | 27.5 |
| + Imports | 16.8 | 30.2 | 22.5 | 48.6 | 44.5 | 51.4 | 57.0 | 52.2 |
| - Exports | 2.6 | 3.5 | 20.5 | 14.7 | 19.8 | 20.1 | 24.1 | 18.1 |
| Electrical energy supplied | 1878.9 | 2312.8 | 3009.2 | 3818.9 e | 4080.6 e | 4189.0 e | 4154.2 e | .. |
| - Transmission & distr. losses | 163.1 | 213.1 | 296.7 | 229.1 e | 269.2 | 267.0 | 246.1 | .. |
| - Statistical difference | - | - | - | - | - | 0.0 | 0.2 | .. |
| Total consumption | 1715.9 | 2099.8 | 2712.6 | 3589.8 e | 3811.5 e | 3921.9 e | 3907.9 e | .. |
| - Energy industry consumption ⁽²⁾ | 48.6 | 74.2 | 79.0 | 90.3 | 95.3 | 96.1 | 94.4 | .. |
| Final consumption | 1667.3 | 2025.5 | 2633.6 | 3499.5 e | 3716.2 e | 3825.8 e | 3813.5 e | .. |
| Industry | 645.8 | 746.1 | 866.5 | 1142.1 | 923.8 | 928.8 | 914.9 | .. |
| Transport | 4.3 | 3.1 | 4.1 | 4.4 | 7.5 | 8.2 | 7.7 | .. |
| Commercial & publ. serv. | 423.5 | 558.8 | 838.9 | 1160.3 | 1275.1 | 1336.3 | 1336.0 | .. |
| Residential | 579.3 | 717.5 | 924.0 | 1192.4 | 1359.2 | 1392.2 | 1380.0 | .. |
| Agriculture & fishing | 14.5 | - | - | - | - | - | - | .. |
| Sector non specified | - | - | - | 0.2 e | 150.5 e | 160.2 e | 175.0 e | .. |

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

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4. Electricity production and generation by source
(TWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------|
| | | | | | | | | 74-90 | 90-08 |
| Total gross production | 1957.34 | 2427.32 | 3218.62 | 4052.67 | 4300.83 | 4349.84 | 4369.10 | 3.2 | 1.7 |
| - Hydro pumped storage | - | - | 15.81 | 26.78 | 25.82 | 25.93 | 25.28 | - | 2.6 |
| Total generation⁽¹⁾ | 1957.34 | 2427.32 | 3202.81 | 4025.89 | 4275.01 | 4323.91 | 4343.82 | 3.1 | 1.7 |
| <u>Main activity producers</u> | | | | | | | | | |
| Gross production | 1957.34 | 2427.32 | 2987.97 | 3862.12 | 4137.67 | 4190.76 | 4215.70 | 2.7 | 1.9 |
| - Hydro pumped storage | - | - | 15.81 | 26.78 | 25.82 | 25.93 | 25.28 | - | 2.6 |
| Total generation ⁽¹⁾ | 1957.34 | 2427.32 | 2972.16 | 3835.33 | 4111.85 | 4164.83 | 4190.41 | 2.6 | 1.9 |
| Nuclear | 121.25 | 266.18 | 611.47 | 797.72 | 816.20 | 836.63 | 837.80 | 10.6 | 1.8 |
| Hydro | 304.07 | 278.78 | 266.92 | 248.93 | 288.84 | 247.90 | 254.95 | -0.8 | -0.3 |
| Geothermal | 2.60 | 5.35 | 9.10 | 14.62 | 16.58 | 16.80 | 17.01 | 8.1 | 3.5 |
| Solar, wind, tide ⁽²⁾ | - | - | 0.00 | 6.18 | 27.48 | 35.51 | 56.87 | - | 70.1 |
| Coal | 864.68 | 1242.87 | 1674.68 e | 2074.51 e | 2102.61 e | 2096.10 e | 2110.44 e | 4.2 | 1.3 |
| Oil | 322.00 | 263.21 | 125.21 | 112.09 | 67.01 | 66.84 | 48.55 | -5.7 | -5.1 |
| Gas | 342.47 | 370.46 | 282.58 | 547.96 | 758.47 | 830.31 | 827.91 | -1.2 | 6.2 |
| Comb. renew. & waste | 0.26 | 0.46 | 2.21 | 33.34 | 34.68 | 34.73 | 36.87 | 14.2 | 16.9 |
| <u>Autoproducers</u> | | | | | | | | | |
| Gross production | - | - | 230.65 | 190.55 | 163.16 | 159.08 | 153.40 | - | -2.2 |
| - Hydro pumped storage | - | - | - | - | - | - | - | - | - |
| Total generation ⁽¹⁾ | - | - | 230.65 | 190.55 | 163.16 | 159.08 | 153.40 | - | -2.2 |
| Nuclear | - | - | 0.12 | - | - | - | - | - | - |
| Hydro | - | - | 6.24 | 4.28 | 3.03 | 1.72 | 1.77 | - | -6.8 |
| Geothermal | - | - | 6.92 | - | - | - | - | - | - |
| Solar, wind, tide ⁽²⁾ | - | - | 3.73 | 0.18 e | 1.69 e | 1.91 e | 2.06 e | - | -3.2 |
| Coal | - | - | 24.97 e | 54.99 e | 25.18 e | 22.35 e | 22.16 e | - | -0.7 |
| Oil | - | - | 5.44 | 6.39 | 11.62 | 11.30 | 9.22 | - | 3.0 |
| Gas | - | - | 99.09 | 86.33 | 84.31 | 84.89 | 82.68 | - | -1.0 |
| Comb. renew. & waste | - | - | 84.15 e | 38.38 | 37.34 | 36.92 | 35.52 | - | -4.7 |

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

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5. Net electricity production by autoproducers
(GWh)

| | 1974 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--------------------------------|------|------|--------|----------|----------|----------|----------|---|
| Total | .. | .. | 216177 | 185086 e | 157339 e | 152374 e | 146519 e | -2.1 |
| Total energy | .. | .. | - | 4203 e | 24875 | 24015 | 23801 | - |
| Coal mines | .. | .. | - | - | - | - | - | - |
| Oil and gas extraction | .. | .. | - | - | 6644 | 6871 | 6670 | - |
| Patent fuel plants | .. | .. | - | - | - | - | - | - |
| Coke ovens | .. | .. | - | - | - | - | - | - |
| Gas works | .. | .. | - | - | - | - | - | - |
| BKB | .. | .. | - | - | - | - | - | - |
| Oil refineries | .. | .. | - | - | 18221 | 17133 | 17128 | - |
| Energy non specified/other | .. | .. | - | 4203 e | 10 | 11 | 3 | - |
| Total industry | .. | .. | 178649 | 64725 e | 123147 | 118892 | 113050 | -2.5 |
| Iron and steel | .. | .. | - | - | - | - | - | - |
| Chemical and petrochemical | .. | .. | - | - | 57759 | 58046 | 54298 | - |
| Non-ferrous metals | .. | .. | - | - | - | - | - | - |
| Non-metallic minerals | .. | .. | - | - | 499 | 442 | 261 | - |
| Transport equipment | .. | .. | - | - | 306 | 307 | 409 | - |
| Machinery | .. | .. | - | - | 97 | 106 | 92 | - |
| Mining and quarrying | .. | .. | - | - | 717 | 801 | 948 | - |
| Food and tobacco | .. | .. | - | - | 5838 | 5745 | 4911 | - |
| Pulp and printing | .. | .. | - | - | 44966 | 44676 | 43399 | - |
| Wood and wood products | .. | .. | - | - | 1383 | 1303 | 1360 | - |
| Construction | .. | .. | - | - | - | - | - | - |
| Textile and leather | .. | .. | - | - | 289 | 270 | 258 | - |
| Non specified/other industries | .. | .. | 178649 | 64725 e | 11293 | 7196 | 7114 | -16.4 |
| Total transport | .. | .. | - | - | 374 | 483 | 419 | - |
| Rail and pipeline | .. | .. | - | - | 10 | 4 | 3 | - |
| Transport non specified | .. | .. | - | - | 364 | 479 | 416 | - |
| Other | .. | .. | 37528 | 116158 | 8943 | 8984 | 9249 | -7.5 |
| Commerce and pub. services | .. | .. | - | - | 7974 | 7766 | 7483 | - |
| Residential | .. | .. | - | - | 25 | 24 | 22 | - |
| Agriculture and fishing | .. | .. | - | - | 229 | 220 | 264 | - |
| Sector non specified | .. | .. | 37528 | 116158 e | 715 e | 974 e | 1480 e | -16.4 |

Source: IEA/OECD Electricity Statistics.

Notes: Data reported in this table prior to 1990 may refer to combustible fuels only.
Please refer to definitions in the introductory information.

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6. Heat production in transformation processes
(TJ)

| | 1980 | 1990 | 2000 | 2005 | 2007 | 2008 | 2009e | Average annual percent change 1990-2008 |
|--------------------------------|------|----------|----------|----------|----------|----------|--------|---|
| Total | - | 101308 e | 323778 e | 249773 e | 551695 e | 533668 e | 527482 | 9.7 |
| Nuclear | - | - | - | - | - | - | - | - |
| Geothermal | - | - | - | - | - | - | - | - |
| Coal | - | 20000 e | 81572 e | 50316 e | 100382 e | 96438 e | 85766 | 9.1 |
| Oil | - | - | 6747 e | 26682 | 37339 | 41139 | 40608 | - |
| Gas | - | - | 208341 e | 156067 | 366297 | 351542 | 351754 | - |
| Comb. renew. & waste | - | - | 27118 | 16708 | 47677 | 44549 | 49354 | - |
| Non-spec. comb. fuels | - | 81308 | - | - | - | - | - | - |
| Chemical processes | - | - | - | - | - | - | - | - |
| Heat pumps | - | - | - | - | - | - | - | - |
| Electric boilers | - | - | - | - | - | - | - | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | - | - |
| <i>of which:</i> | | | | | | | | |
| <u>Main activity producers</u> | | | | | | | | |
| Total | - | 87663 e | 323778 e | 249773 e | 551695 e | 533668 e | .. | 10.6 |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | 6355 e | 81572 e | 50316 e | 100382 e | 96438 e | .. | 16.3 |
| Oil | - | - | 6747 e | 26682 | 37339 | 41139 | .. | - |
| Gas | - | - | 208341 e | 156067 | 366297 | 351542 | .. | - |
| Comb. renew. & waste | - | - | 27118 | 16708 | 47677 | 44549 | .. | - |
| Non-spec. comb. fuels | - | 81308 | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |
| <u>Autoproducers</u> | | | | | | | | |
| Total | - | 13645 e | - | - | - | - | .. | - |
| Nuclear | - | - | - | - | - | - | .. | - |
| Geothermal | - | - | - | - | - | - | .. | - |
| Coal | - | 13645 e | - | - | - | - | .. | - |
| Oil | - | - | - | - | - | - | .. | - |
| Gas | - | - | - | - | - | - | .. | - |
| Comb. renew. & waste | - | - | - | - | - | - | .. | - |
| Non-spec. comb. fuels | - | - | - | - | - | - | .. | - |
| Chemical processes | - | - | - | - | - | - | .. | - |
| Heat pumps | - | - | - | - | - | - | .. | - |
| Electric boilers | - | - | - | - | - | - | .. | - |
| Other sources ⁽¹⁾ | - | - | - | - | - | - | .. | - |

Source: IEA/OECD Electricity Statistics.

(1) Includes solar and recovered waste heat from industry sold to third parties.

Note: Please refer to definitions in the introductory information.

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7A. Fuel use for electricity and heat production from combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|--------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Combustible fuels | | | | | | | | | |
| Total | 381.98 | 438.23 | 552.65 | 689.34 | 691.36 | 712.77 | 695.98 | 2.2 | 1.3 |
| Coal | 216.91 | 292.05 | 396.00 e | 501.58 e | 494.85 | 502.28 | 495.11 | 3.6 | 1.2 |
| Oil | 81.61 | 60.50 | 27.25 | 29.56 | 19.18 | 18.22 | 13.21 | -6.2 | -3.9 |
| Gas | 83.39 | 85.57 | 89.74 e | 136.88 e | 158.33 | 173.11 | 168.24 | 0.4 | 3.6 |
| Comb. renew. & waste | 0.07 | 0.11 | 39.66 e | 21.31 | 19.01 e | 19.15 | 19.42 | 45.1 | -3.9 |
| <i>of which: main activity prod.</i> | | | | | | | | | |
| Total | .. | 438.23 | 484.83 | 639.88 | 663.37 | 686.49 | 671.38 | .. | 1.8 |
| Coal | .. | 292.05 | 391.69 | 489.79 e | 490.39 | 498.59 | 491.47 | .. | 1.3 |
| Oil | .. | 60.50 | 27.25 | 18.41 | 15.16 | 15.49 | 11.15 | .. | -4.8 |
| Gas | .. | 85.57 | 65.32 | 121.14 e | 144.97 | 159.36 | 155.30 | .. | 4.9 |
| Comb. renew. & waste | .. | 0.11 | 0.57 e | 10.54 | 12.86 | 13.05 | 13.46 | .. | 19.2 |

Source: IEA/OECD Energy Balances of OECD Countries.

7B. Imputed energy used for electricity and heat production
from non-combustible fuels
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| Thermal | | | | | | | | | |
| Total | 25.34 | 73.97 | 173.21 | 220.61 | 220.61 | 226.02 | 226.58 | 12.0 | 1.5 |
| Nuclear | 23.24 | 69.37 | 159.38 | 207.89 | 212.71 | 218.03 | 218.34 | 12.0 | 1.8 |
| Geothermal | 2.11 | 4.60 | 13.77 | 12.57 | 7.71 | 7.75 | 7.92 | 11.7 | -3.0 |
| Solar | - | - | 0.06 | 0.15 e | 0.19 e | 0.23 e | 0.33 e | - | 10.2 |
| Non-Thermal | | | | | | | | | |
| Total | 22.82 | 23.98 | 23.75 | 22.26 | 27.39 | 24.44 | 26.87 | 0.2 | 0.7 |
| Hydro | 22.82 | 23.98 | 23.49 | 21.78 | 25.10 | 21.47 | 22.08 | 0.2 | -0.3 |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 0.26 | 0.49 | 2.29 | 2.98 | 4.79 | - | 17.5 |
| Other (e.g. fuel cells) | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Imputed inputs are calculated from the electricity produced from these energy sources using the methodology described in the introductory information.

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8. Electricity production from combustible fuels
In electricity plants*

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|----------|------------|------------|------------|------------|------------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | 478660 | 625552 e | 805132 e | 845698 | 863171 | 860729 | 1.8 |
| Fuel input (TJ) | 12220721 | 15200225 e | 19121463 e | 19134046 e | 19489987 e | 19205199 e | 1.3 |
| Electricity production (GWh) | 1193156 | 1565896 e | 1949674 e | 1972584 e | 1967682 e | 1983281 e | 1.3 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | 37777 | 70943 | 68764 | 68627 | 65483 | 63367 | -0.6 |
| Fuel input (TJ) | 538552 | 1061570 | 980785 | 977065 | 929166 | 907029 | -0.9 |
| Electricity production (GWh) | 49715 | 96038 | 94082 | 95429 | 90231 | 87106 | -0.5 |
| Peat | | | | | | | |
| Fuel input (1000 t) | - | - | - | - | - | - | - |
| Fuel input (TJ) | - | - | - | - | - | - | - |
| Electricity production (GWh) | - | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | - | - | 10047 | 11984 | 13581 | 7490 | - |
| Electricity production (GWh) | - | - | 877 | 585 | 701 | 312 | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | 62789 | 28779 | 25535 | 15677 | 15883 | 11395 | -5.0 |
| Fuel input (TJ) | 2778658 | 1324986 | 1072721 | 605348 | 627084 | 440543 | -5.9 |
| Electricity production (GWh) | 263213 | 125208 | 104552 | 59186 | 59388 | 42518 | -5.8 |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | 4020304 | 3039619 | 4404832 | 5543627 | 6132693 | 6010740 | 3.9 |
| Electricity production (GWh) | 370463 | 282576 | 426188 | 640275 | 701497 | 708012 | 5.2 |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | - | 222206 e | 113950 | 151273 | 156189 | 157916 | -1.9 |
| Electricity production (GWh) | - | 11539 e | 10512 | 9592 | 9635 | 10537 | -0.5 |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | - | 9138 | 10421 | 15779 e | 12975 | 14832 | 2.7 |
| Electricity production (GWh) | - | 749 | 923 | 1427 | 1116 | 1288 | 3.1 |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | - | 162000 e | 217946 | 242329 | 240859 | 244467 | 2.3 |
| Electricity production (GWh) | - | 9693 e | 14525 | 15471 | 15195 | 15107 | 2.5 |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | - | 30674 | 50532 | 74235 | 76265 | 90459 | 6.2 |
| Electricity production (GWh) | - | 2494 | 3905 | 6110 | 6488 | 7415 | 6.2 |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | 1877004 | 2094193 e | 2605238 e | 2800659 | 2851933 | 2855576 | 1.7 |

Source: IEA/OECD Electricity Statistics.

* Excludes CHP plants.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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9. Electricity and heat produced for sale from combustible fuels
in combined heat and power plants (CHP plants)

| | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change 1990-2008 |
|--|------|-----------|----------|----------|----------|----------|---|
| Hard coal⁽¹⁾ and patent fuel | | | | | | | |
| Fuel input (1000 t) | .. | 11445 e | 30402 e | 24060 | 24427 | 24845 | 4.4 |
| Fuel input (TJ) | .. | 302045 e | 788540 e | 548110 e | 554741 e | 565326 e | 3.5 |
| Electricity production (GWh) | .. | 35063 e | 75408 e | 55645 e | 56548 e | 58352 e | 2.9 |
| CHP Heat production (TJ) | .. | 19742 e | 81572 e | 88979 e | 88453 e | 85898 e | 8.5 |
| Lignite/brown coal and BKB | | | | | | | |
| Fuel input (1000 t) | .. | 1096 e | 1246 e | - | - | - | - |
| Fuel input (TJ) | .. | 16154 e | 18583 e | - | 5 | - | - |
| Electricity production (GWh) | .. | 2651 e | 3134 e | - | 1 | - | - |
| CHP Heat production (TJ) | .. | 258 e | - | - | - | - | - |
| Peat | | | | | | | |
| Fuel input (1000 t) | .. | - | - | - | - | - | - |
| Fuel input (TJ) | .. | - | - | - | - | - | - |
| Electricity production (GWh) | .. | - | - | - | - | - | - |
| CHP Heat production (TJ) | .. | - | - | - | - | - | - |
| Coal manufactured gases⁽²⁾ | | | | | | | |
| Fuel input (TJ) | .. | - | 83858 e | 47711 | 42975 | 45083 | - |
| Electricity production (GWh) | .. | - | 6323 | 3553 | 3292 | 3545 | - |
| CHP Heat production (TJ) | .. | - | - | 15676 | 11929 | 10540 | - |
| Petroleum products | | | | | | | |
| Fuel input (1000 t) | .. | - | 3926 | 3961 | 3776 | 3027 | - |
| Fuel input (TJ) | .. | - | 141818 | 153500 | 146022 | 116021 | - |
| Electricity production (GWh) | .. | 5441 | 13930 | 19435 | 18748 | 15258 | 5.9 |
| CHP Heat production (TJ) | .. | - | 6747 e | 36417 | 37339 | 41139 | - |
| Natural gas and gas works gas⁽²⁾ | | | | | | | |
| Fuel input (TJ) | .. | 1136099 | 1964502 | 1823800 | 1922827 | 1818186 | 2.6 |
| Electricity production (GWh) | .. | 99093 | 208102 | 202499 | 213699 | 202577 | 4.1 |
| CHP Heat production (TJ) | .. | - | 208341 e | 357714 | 366297 | 351542 | - |
| Wood and other solid waste | | | | | | | |
| Fuel input (TJ) | .. | 1153493 e | 388431 | 232829 | 238708 | 225001 | -8.7 |
| Electricity production (GWh) | .. | 57006 e | 32074 | 32292 | 32355 | 31082 | -3.3 |
| CHP Heat production (TJ) | .. | - | 9489 | 27903 | 32164 | 28358 | - |
| Industrial waste | | | | | | | |
| Fuel input (TJ) | .. | 71583 | 58985 | 36864 | 33668 | 35515 | -3.8 |
| Electricity production (GWh) | .. | 3961 | 6247 | 4178 | 3890 | 3915 | -0.1 |
| CHP Heat production (TJ) | .. | - | 187 | 3899 | 3525 | 3751 | - |
| Municipal waste | | | | | | | |
| Fuel input (TJ) | .. | 11829 e | 39483 | 30324 | 31178 | 32045 | 5.7 |
| Electricity production (GWh) | .. | 920 e | 2202 | 1832 | 1909 | 1880 | 4.1 |
| CHP Heat production (TJ) | .. | - | 15251 | 10075 | 10707 | 11378 | - |
| Biogas and liquid biofuels | | | | | | | |
| Fuel input (TJ) | .. | - | 12790 | 12859 | 12115 | 12848 | - |
| Electricity production (GWh) | .. | - | 1325 | 1112 | 1065 | 1167 | - |
| CHP Heat production (TJ) | .. | - | 2191 | 1095 | 1281 | 1062 | - |
| Total combustible fuels⁽³⁾ | | | | | | | |
| Electricity production (GWh) | .. | 204135 e | 348745 e | 320546 | 331507 | 317776 | 2.5 |
| CHP Heat production (TJ) | .. | 101308 | 323778 e | 541758 | 551695 | 533668 | 9.7 |

Source: IEA/OECD Electricity Statistics.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases, natural gas and gas works gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|---------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------------------|------------|
| | | | | | | | | 73-90 | 90-08 |
| TFC⁽¹⁾ | 1315.37 | 1311.29 | 1293.50 | 1546.23 | 1563.66 | 1581.62 | 1542.25 | -0.1 | 1.0 |
| Geothermal | - | - | 0.34 | 0.52 | 0.92 | 1.04 | 1.16 | - | 7.1 |
| Solar thermal | - | - | - | 1.44 | 1.28 | 1.32 | 1.37 | - | - |
| Coal | 73.75 | 56.16 | 55.66 | 32.58 | 31.72 | 31.02 | 30.08 | -1.6 | -3.4 |
| Oil | 693.49 | 689.14 | 683.29 | 793.42 | 838.90 | 828.80 | 781.70 | -0.1 | 0.8 |
| Gas | 367.31 | 337.41 | 302.99 | 359.89 | 304.24 | 321.70 | 327.65 | -1.1 | 0.4 |
| Comb. renew. & waste | 37.43 | 54.38 | 22.59 | 52.15 | 59.34 | 61.52 | 65.36 | -2.9 | 6.1 |
| Electricity | 143.39 | 174.19 | 226.49 | 300.95 | 320.18 | 329.02 | 327.96 | 2.7 | 2.1 |
| Heat | - | - | 2.15 | 5.28 | 7.07 | 7.20 | 6.96 | - | 6.7 |
| <i>of which:</i> | | | | | | | | | |
| Total industry | 393.80 | 387.38 | 283.73 | 332.26 | 299.84 | 297.33 | 295.40 | -1.9 | 0.2 |
| Geothermal | - | - | - | 0.11 | 0.11 | 0.12 | 0.13 | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 60.15 | 48.25 | 46.02 | 30.36 | 30.17 | 29.27 | 28.35 | -1.6 | -2.7 |
| Oil | 72.23 | 89.49 | 44.25 | 25.66 | 35.49 | 31.13 | 34.39 | -2.8 | -1.4 |
| Gas | 177.30 | 151.53 | 109.89 | 137.88 | 113.41 | 116.84 | 116.32 | -2.8 | 0.3 |
| Comb. renew. & waste | 28.57 | 33.94 | 9.05 | 35.85 | 36.24 | 34.40 | 32.03 | -6.5 | 7.3 |
| Electricity | 55.54 | 64.17 | 74.52 | 98.22 | 78.84 | 79.88 | 78.68 | 1.7 | 0.3 |
| Heat | - | - | - | 4.17 | 5.59 | 5.69 | 5.50 | - | - |
| Transport | 414.27 | 425.27 | 487.57 | 588.24 | 625.49 | 628.75 | 601.42 | 1.0 | 1.2 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 397.06 | 410.25 | 471.80 | 569.49 | 599.37 | 598.62 | 565.12 | 1.0 | 1.0 |
| Gas | 16.84 | 14.75 | 15.41 | 15.18 | 14.17 | 15.07 | 15.75 | -0.5 | 0.1 |
| Comb. renew. & waste | - | - | - | 3.19 | 11.32 | 14.36 | 19.90 | - | - |
| Electricity | 0.37 | 0.27 | 0.35 | 0.38 | 0.63 | 0.70 | 0.66 | -0.2 | 3.5 |
| Heat | - | - | - | - | - | - | - | - | - |
| Comm. & public serv. | 148.72 | 142.56 | 159.27 | 193.05 | 197.44 | 204.71 | 207.64 | 0.4 | 1.5 |
| Geothermal | - | - | - | 0.19 | 0.35 | 0.36 | 0.37 | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 3.41 | 1.82 | 2.41 | 0.89 e | 1.53 | 1.70 | 1.73 | -2.0 | -1.8 |
| Oil | 48.81 | 32.00 | 21.31 | 16.66 | 14.93 | 14.53 | 14.63 | -4.8 | -2.1 |
| Gas | 60.08 | 60.68 | 61.25 | 73.17 | 65.20 | 69.57 | 72.24 | 0.1 | 0.9 |
| Comb. renew. & waste | - | - | - | 1.24 | 2.16 | 2.10 | 2.30 | - | - |
| Electricity | 36.42 | 48.06 | 72.14 | 99.79 | 111.78 | 114.92 | 114.89 | 4.1 | 2.6 |
| Heat | - | - | 2.15 e | 1.11 e | 1.48 e | 1.51 e | 1.46 e | - | -2.1 |

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

Note: Please refer to notes in the introductory information for data coverage.

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11. Final consumption of energy by source (continued)
(Mtoe)

| | 1973 | 1980 | 1990 | 2000 | 2006 | 2007 | 2008 | Average annual percent change | |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|-------------|
| | | | | | | | | 73-90 | 90-08 |
| Residential | 237.50 | 215.58 | 209.88 | 264.04 | 253.50 | 267.34 | 268.02 | -0.7 | 1.4 |
| Geothermal | - | - | - | 0.22 | 0.46 | 0.55 | 0.67 | - | - |
| Solar thermal | - | - | - | 1.44 | 1.28 | 1.32 | 1.37 | - | - |
| Coal | 2.94 | 1.57 | 1.49 | 1.33 e | - | - | - | -3.9 | - |
| Oil | 71.66 | 41.85 | 26.37 | 31.91 | 24.37 | 25.14 | 23.08 | -5.7 | -0.7 |
| Gas | 113.09 | 110.45 | 102.56 | 116.23 | 101.82 | 110.29 | 113.45 | -0.6 | 0.6 |
| Comb. renew. & waste | - | - | - | 10.37 | 9.33 | 10.29 | 10.77 | - | - |
| Electricity | 49.82 | 61.70 | 79.47 | 102.55 | 116.23 | 119.73 | 118.68 | 2.8 | 2.3 |
| Heat | - | - | - | - | - | - | - | - | - |
| Agriculture & fishing | 16.27 | 13.60 | 14.40 | 14.10 | 17.73 | 16.34 | 15.53 | -0.7 | 0.4 |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | - | - | - | - | 0.02 | 0.05 | - | - | - |
| Oil | 15.02 | 13.60 | 14.40 | 14.10 | 17.42 | 15.92 | 15.17 | -0.2 | 0.3 |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | - | - | - | - | 0.29 | 0.37 | 0.36 | - | - |
| Electricity | 1.24 | - | - | - | - | - | - | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Other | 16.09 | 24.97 | 19.61 | 1.51 | 12.70 | 13.78 | 15.05 | 1.2 | -1.5 |
| Geothermal | - | - | 0.34 | - | - | - | - | - | - |
| Solar thermal | - | - | - | - | - | - | - | - | - |
| Coal | 7.24 | 4.53 | 5.74 | - | - | - | - | -1.4 | - |
| Oil | - | - | - | - | - | - | - | - | - |
| Gas | - | - | - | - | - | - | - | - | - |
| Comb. renew. & waste | 8.85 | 20.44 | 13.54 | 1.50 | - | - | - | 2.5 | - |
| Electricity | - | - | - | 0.02 e | 12.70 e | 13.78 e | 15.05 e | - | - |
| Heat | - | - | - | - | - | - | - | - | - |
| Non-energy use⁽¹⁾ | 88.72 | 101.94 | 119.04 | 153.03 | 156.96 | 153.38 | 139.20 | 1.74 | 0.87 |

Source: IEA/OECD *Energy Balances of OECD Countries*.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

Note: Please refer to notes in the introductory information for data coverage.

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12. Total final industry consumption of energy and electricity

| | 1973 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| TFC (Mtoe) | 1315.37 | 1311.29 | 1293.50 | 1546.23 | 1569.70 | 1563.66 | 1581.62 | 1542.25 |
| Total industry (Mtoe) | 393.80 | 387.38 | 283.73 | 332.26 | 285.04 | 299.84 | 297.33 | 295.40 |
| Iron and steel | 43.95 | 30.77 | 18.93 | 28.40 | 21.69 | 21.69 | 21.52 | 21.14 |
| Chem. and petrochemical | 20.30 | 25.76 | 67.79 | 92.41 | 77.75 | 74.77 | 74.70 | 75.95 |
| Non-ferrous metals | 9.43 | 12.09 | 6.26 | 19.51 | 13.14 | 13.21 | 13.46 | 13.25 |
| Non-metallic minerals | 5.99 | 10.50 | 10.69 | 24.57 | 25.16 | 28.18 | 28.67 | 27.76 |
| Transport equipment | 4.56 | 4.68 | 4.24 | 13.25 | 9.34 | 10.97 | 11.15 | 11.06 |
| Machinery | 4.81 | 6.60 | 11.47 | 24.82 | 20.40 | 21.45 | 21.94 | 21.22 |
| Mining and quarrying | 2.15 | 1.86 | 2.89 | 3.18 | 2.21 | 2.20 | 2.23 | 2.19 |
| Food and tobacco | 7.20 | 7.84 | 9.27 | 27.45 | 29.17 | 32.49 | 32.57 | 32.21 |
| Paper, pulp and printing | 19.35 | 18.79 | 18.10 | 57.15 | 54.60 | 59.32 | 57.49 | 56.01 |
| Wood and wood products | 1.93 | 2.06 | 2.61 | 13.26 | 11.78 | 12.57 | 11.98 | 13.27 |
| Construction | - | - | 0.99 | 0.56 | 1.69 | 1.69 | 1.34 | 1.36 |
| Textile and leather | 3.89 | 4.92 | 3.77 | 8.67 | 6.22 | 6.50 | 6.54 | 6.02 |
| Non specified/other | 270.24 | 261.52 | 126.73 | 19.04 | 11.90 | 14.79 | 13.73 | 13.96 |
| Electricity consumption (Mtoe) | 143.39 | 174.19 | 226.49 | 300.95 | 319.59 | 320.18 | 329.02 | 327.96 |
| Total industry (Mtoe) | 55.54 | 64.17 | 74.52 | 98.22 | 79.45 | 78.84 | 79.88 | 78.68 |
| Iron and steel | 5.48 | 5.88 | 6.27 | 6.50 | 6.92 | 6.87 | 6.98 | 6.85 |
| Chem. and petrochemical | 11.94 | 13.00 | 17.62 | 22.63 | 21.87 | 21.70 | 21.95 | 21.66 |
| Non-ferrous metals | 8.51 | 10.42 | 4.80 | 8.11 | 7.07 | 7.02 | 7.10 | 7.00 |
| Non-metallic minerals | 2.36 | 2.64 | 2.95 | 3.43 | 3.66 | 3.63 | 3.69 | 3.62 |
| Transport equipment | 2.42 | 2.58 | 3.30 | 5.18 | 4.01 | 3.98 | 4.05 | 3.98 |
| Machinery | 4.20 | 4.97 | 10.30 | 11.83 | 9.93 | 9.86 | 10.02 | 9.84 |
| Mining and quarrying | 1.97 | 1.86 | 2.89 | 3.18 | 2.21 | 2.20 | 2.23 | 2.19 |
| Food and tobacco | 3.26 | 3.66 | 5.13 | 6.52 | 7.32 | 7.27 | 7.35 | 7.25 |
| Paper, pulp and printing | 4.07 | 5.10 | 10.86 | 11.46 | 10.58 | 10.50 | 10.62 | 10.48 |
| Wood and wood products | 1.46 | 1.60 | 2.47 | 2.83 | 2.52 | 2.50 | 2.54 | 2.49 |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | 2.97 | 2.85 | 3.21 | 3.28 | 2.47 | 2.45 | 2.49 | 2.45 |
| Non specified/other | 6.91 | 9.62 | 4.72 | 13.28 e | 0.88 | 0.87 | 0.88 | 0.87 |
| Total industry (TWh) | 645.80 | 746.14 | 866.54 | 1142.11 | 923.83 | 916.71 | 928.83 | 914.90 |
| Iron and steel | 63.73 | 68.36 | 72.89 | 75.54 | 80.48 | 79.86 | 81.17 | 79.70 |
| Chem. and petrochemical | 138.86 | 151.11 | 204.93 | 263.12 | 254.34 | 252.38 | 255.19 | 251.88 |
| Non-ferrous metals | 98.91 | 121.19 | 55.81 | 94.35 | 82.24 | 81.60 | 82.51 | 81.44 |
| Non-metallic minerals | 27.40 | 30.68 | 34.31 | 39.88 | 42.51 | 42.19 | 42.88 | 42.10 |
| Transport equipment | 28.15 | 29.97 | 38.38 | 60.18 | 46.68 | 46.32 | 47.07 | 46.23 |
| Machinery | 48.79 | 57.76 | 119.78 | 137.54 | 115.51 | 114.62 | 116.50 | 114.40 |
| Mining and quarrying | 22.88 | 21.57 | 33.58 | 36.96 | 25.74 | 25.54 | 25.96 | 25.49 |
| Food and tobacco | 37.89 | 42.51 | 59.62 | 75.83 | 85.14 | 84.48 | 85.42 | 84.31 |
| Paper, pulp and printing | 47.37 | 59.34 | 126.25 | 133.24 | 123.05 | 122.10 | 123.46 | 121.86 |
| Wood and wood products | 16.92 | 18.62 | 28.75 | 32.85 | 29.25 | 29.02 | 29.49 | 28.96 |
| Construction | - | - | - | - | - | - | - | - |
| Textile and leather | 34.59 | 33.14 | 37.34 | 38.19 | 28.72 | 28.50 | 28.96 | 28.44 |
| Non specified/other | 80.31 | 111.89 | 54.92 | 154.44 e | 10.18 | 10.10 | 10.22 | 10.08 |

Source: IEA/OECD Energy Balances of OECD Countries.

Note: Please refer to notes in the introductory information for data coverage.

UNITED STATES

13. Electricity imports by origin
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total imports ⁽¹⁾ | 16848 | 30181 | 22506 | 46760 | 48592 | 44527 | 42691 | 51396 | 57020 |
| Imports from: | | | | | | | | | |
| Total OECD | 16848 | 30181 | 22506 | 46760 | 48592 | 44527 | 42691 | 51396 | 57020 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | 16848 e | 30181 | 20555 | 44503 | 48515 | 42930 | 41544 | 50118 | 55732 |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | 1951 | 2257 | 77 | 1597 | 1147 | 1278 | 1288 |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

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14. Electricity exports by destination
(GWh)

| | 1973 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|-------------------------------------|-------------|-------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Total exports ⁽¹⁾ | 2570 | 3461 | 20526 | 9146 | 14678 | 19803 | 24271 | 20143 | 24083 |
| Exports to: | | | | | | | | | |
| Total OECD | 2570 | 3461 | 20526 | 9146 | 14678 | 19803 | 24271 | 20143 | 24083 |
| Austria | - | - | - | - | - | - | - | - | - |
| Belgium | - | - | - | - | - | - | - | - | - |
| Canada | 2570 e | 3461 | 19936 | 7992 | 12685 | 19332 | 23405 | 19559 | 23499 |
| Czech Republic | - | - | - | - | - | - | - | - | - |
| Denmark | - | - | - | - | - | - | - | - | - |
| Finland | - | - | - | - | - | - | - | - | - |
| France | - | - | - | - | - | - | - | - | - |
| Germany | - | - | - | - | - | - | - | - | - |
| Greece | - | - | - | - | - | - | - | - | - |
| Hungary | - | - | - | - | - | - | - | - | - |
| Ireland | - | - | - | - | - | - | - | - | - |
| Italy | - | - | - | - | - | - | - | - | - |
| Luxembourg | - | - | - | - | - | - | - | - | - |
| Mexico | - | - | 590 | 1154 | 1993 | 471 | 866 | 584 | 584 |
| Netherlands | - | - | - | - | - | - | - | - | - |
| Norway | - | - | - | - | - | - | - | - | - |
| Poland | - | - | - | - | - | - | - | - | - |
| Portugal | - | - | - | - | - | - | - | - | - |
| Slovak Republic | - | - | - | - | - | - | - | - | - |
| Spain | - | - | - | - | - | - | - | - | - |
| Sweden | - | - | - | - | - | - | - | - | - |
| Switzerland | - | - | - | - | - | - | - | - | - |
| Turkey | - | - | - | - | - | - | - | - | - |
| United Kingdom | - | - | - | - | - | - | - | - | - |
| United States | - | - | - | - | - | - | - | - | - |
| Total non-OECD | - | - | - | - | - | - | - | - | - |
| Albania | - | - | - | - | - | - | - | - | - |
| Azerbaijan | - | - | - | - | - | - | - | - | - |
| Belarus | - | - | - | - | - | - | - | - | - |
| Bulgaria | - | - | - | - | - | - | - | - | - |
| Croatia | - | - | - | - | - | - | - | - | - |
| Estonia | - | - | - | - | - | - | - | - | - |
| F.Y.R. of Macedonia | - | - | - | - | - | - | - | - | - |
| Georgia | - | - | - | - | - | - | - | - | - |
| Romania | - | - | - | - | - | - | - | - | - |
| Russian Federation | - | - | - | - | - | - | - | - | - |
| Serbia | - | - | - | - | - | - | - | - | - |
| Slovenia | - | - | - | - | - | - | - | - | - |
| Turkmenistan | - | - | - | - | - | - | - | - | - |
| Ukraine | - | - | - | - | - | - | - | - | - |
| Non-specified/others | - | - | - | - | - | - | - | - | - |

Source: IEA/OECD Electricity Statistics.

(1) Total may not add-up due to rounding.

Note: Please refer to notes in the introductory information for data coverage.

UNITED STATES

15. Net maximum electricity generating capacity on 31 December
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| MAIN ACTIVITY PRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | 420.10 | 625.92 | 690.47 | 706.11 | 621.47 | 948.57 | 956.18 | 965.74 | 981.26 |
| Nuclear | 31.66 | 56.49 | 99.62 | 99.52 | 97.86 | 99.99 | 100.33 | 100.27 | 100.76 |
| Hydro | - | 76.35 | 90.89 | 96.66 | 91.76 | 98.20 | 98.57 | 99.42 | 99.43 |
| <i>of which: pumped storage</i> | - | - | - | 21.39 | 19.52 | 21.35 | 21.46 | 21.89 | 21.86 |
| Geothermal | - | 1.01 | 1.61 | 1.75 | 2.79 | 2.29 | 2.27 | 2.21 | 2.26 |
| Solar | - | - | - | - | 0.42 e | 0.40 e | 0.41 e | 0.50 e | 0.54 e |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | - | 0.01 | 2.38 | 8.71 | 11.33 | 16.52 | 24.65 |
| Other (e.g. fuel cells) | - | - | - | - | - | 0.04 | 0.04 | 0.04 | 0.03 |
| Combustible fuels | 388.44 | 492.08 | 498.34 | 508.18 | 426.26 | 738.95 | 743.23 | 746.79 | 753.61 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | 174.32 | 240.02 | 263.81 | 254.14 | 263.75 | 309.30 | 309.66 | 309.57 | 309.86 |
| Liquid fuels | 80.45 | 104.64 | 55.19 | 46.42 | 25.43 | 57.44 | 56.77 | 54.84 | 56.38 |
| Natural gas | 59.55 | 65.80 | 15.00 | 16.53 | 32.07 | 367.54 | 371.97 | 377.11 | 381.82 |
| Comb. renew. & waste | 0.06 | 0.10 | 0.07 | 0.14 | 0.51 e | 4.68 | 4.83 | 5.27 | 5.55 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | 12.40 | 15.09 | 8.13 | 12.48 | - | - | - | - | - |
| Solid / natural gas | 12.07 | 12.41 | 26.03 | 32.44 | - | - | - | - | - |
| Liquid / natural gas | 47.27 | 50.84 | 126.98 | 142.90 | 104.50 | - | - | - | - |
| Solid / liquid / gas | 2.32 | 3.19 | 3.14 | 3.14 | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 444.65 | 441.09 | 357.54 | 435.73 | 433.50 | 430.26 | 428.40 |
| Internal combustion | - | - | 4.55 | 4.64 | 5.11 | 6.82 | 7.00 | 7.21 | 7.50 |
| Gas turbine | - | - | 41.68 | 50.08 | 48.26 | 125.80 | 125.46 | 127.67 | 130.28 |
| Combined cycle | - | - | 7.46 | 12.19 | 14.66 | 170.45 | 177.13 | 181.51 | 187.31 |
| Other | - | - | - | 0.18 | 0.70 | 0.15 | 0.14 | 0.14 | 0.13 |
| Peak load | .. | .. | 546.00 | 620.25 | 678.41 | 758.88 | 789.48 | 782.23 | 752.47 |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

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15. Net maximum electricity generating capacity on 31 December (continued)
(GW)

| | 1974 | 1980 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|------|------|-------|-------|---------|--------|--------|--------|--------|
| AUTOPRODUCERS | | | | | | | | | |
| <u>Classification by source</u> | | | | | | | | | |
| Total capacity | - | - | 43.12 | 70.22 | 191.16 | 29.97 | 30.77 | 30.14 | 30.34 |
| Nuclear | - | - | 0.02 | - | - | - | - | - | - |
| Hydro | - | - | 1.48 | 3.40 | 7.12 | 0.69 | 0.72 | 0.35 | 0.36 |
| <i>of which: pumped storage</i> | - | - | - | - | - | - | - | - | - |
| Geothermal | - | - | 1.06 | 1.22 | - | - | - | - | - |
| Solar | - | - | 0.34 | 0.40 | 0.17 e | 0.48 e | 0.69 e | 0.94 e | 1.42 e |
| Tide, wave, ocean | - | - | - | - | - | - | - | - | - |
| Wind | - | - | 1.91 | 1.72 | - | - | - | - | - |
| Other (e.g. fuel cells) | - | - | - | - | - | 0.44 | 0.44 | 0.44 | 0.40 |
| Combustible fuels | - | - | 38.33 | 63.48 | 183.86 | 28.36 | 28.93 | 28.41 | 28.16 |
| <i>of which:</i> | | | | | | | | | |
| <i>Single-fired:</i> | | | | | | | | | |
| Coal and coal products | - | - | 6.85 | 1.11 | 57.30 e | 6.14 | 5.55 | 5.48 | 5.46 |
| Liquid fuels | - | - | 0.82 | 1.50 | 10.13 | 1.11 | 1.32 | 1.23 | 1.07 |
| Natural gas | - | - | 18.41 | 21.18 | 63.68 | 15.53 | 16.33 | 15.76 | 15.61 |
| Comb. renew. & waste | - | - | 7.52 | 1.33 | 9.76 e | 5.58 | 5.73 | 5.93 | 6.02 |
| <i>Multi-fired:</i> | | | | | | | | | |
| Solid / liquid | - | - | - | 3.18 | - | - | - | - | - |
| Solid / natural gas | - | - | - | 2.13 | - | - | - | - | - |
| Liquid / natural gas | - | - | 4.73 | 12.44 | 42.99 | - | - | - | - |
| Solid / liquid / gas | - | - | - | 20.61 | - | - | - | - | - |
| <u>Type of generation</u> | | | | | | | | | |
| Steam | - | - | 19.06 | 26.93 | 106.84 | 13.44 | 13.04 | 12.92 | 12.64 |
| Internal combustion | - | - | 0.26 | 1.33 | 1.91 | 0.92 | 1.03 | 0.97 | 0.96 |
| Gas turbine | - | - | 5.56 | 8.27 | 33.67 | 5.96 | 6.02 | 6.03 | 5.80 |
| Combined cycle | - | - | 12.74 | 26.83 | 41.16 | 7.99 | 8.78 | 8.42 | 8.69 |
| Other | - | - | 0.71 | 0.12 | 0.29 | 0.06 | 0.06 | 0.07 | 0.08 |
| Peak load | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Available capacity | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD Electricity Statistics.

Note: Please refer to notes in the introductory information for data coverage.

UNITED STATES

16. Fuel prices to end users

| | 1978 | 1980 | 1990 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fuel prices for electricity generation | | | | | | | | | |
| | US Dollars/ unit | | | | | | | | |
| Steam coal (t) | 26.11 | 31.72 | 33.57 | 27.46 | 35.30 | 38.76 | 40.48 | 47.35 | 50.53 |
| Heavy fuel oil (t) | 88.65 | 178.01 | 139.37 | 178.64 | 292.94 | 326.67 | 359.64 | 572.74 | 370.52 |
| Natural gas (10 ⁷ kcal) ⁽¹⁾ | 56.43 | 87.26 | 92.11 | 172.86 | 325.89 | 274.59 | 281.51 | 362.42 | 185.93 |
| | US Dollars/ toe | | | | | | | | |
| Steam coal | 42.80 | 51.99 | 55.02 | 45.01 | 57.85 | 63.52 | 66.35 | 77.61 | 82.82 |
| Heavy fuel oil | 88.76 | 178.22 | 139.54 | 178.85 | 293.29 | 327.06 | 360.07 | 573.43 | 370.96 |
| Natural gas ⁽²⁾ | 62.70 | 96.96 | 102.34 | 192.07 | 362.10 | 305.10 | 312.79 | 402.68 | 206.59 |
| End-user prices of electricity | | | | | | | | | |
| | US Dollars/ kWh | | | | | | | | |
| Industry | | | | | | | | | |
| Price | 0.0279 | 0.0369 | 0.0475 | 0.0460 | 0.0573 | 0.0616 | 0.0639 | 0.0683 | 0.0684 |
| <i>of which: tax</i> | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Household | | | | | | | | | |
| Price | 0.0431 | 0.0536 | 0.0785 | 0.0820 | 0.0945 | 0.1040 | 0.1065 | 0.1126 | 0.1155 |
| <i>of which: tax</i> | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Source: IEA/OECD *Energy Prices & Taxes*.

(1) Gross calorific value basis.

(2) Net calorific value basis.

Energy Data Manager / Statistician

Possible Staff Vacancies

International Energy Agency, Paris, France

The IEA

The International Energy Agency, based in Paris, acts as energy policy advisor to 28 member countries in their effort to ensure reliable, affordable and clean energy for their citizens. Founded during the oil crisis of 1973-74, the IEA's initial role was to co-ordinate measures in times of oil supply emergencies. As energy markets have changed, so has the IEA. Its mandate has broadened to incorporate the "Three E's" of balanced energy policy making: energy security, economic development and environmental protection. Current work focuses on climate change policies, market reform, energy technology collaboration and outreach to the rest of the world, especially major consumers and producers of energy like China, India, Russia and the OPEC countries.

The Energy Statistics Division, with a staff of around 30 people, provides a dynamic environment for young people just finishing their studies or with one to two years of work experience.

Job description

The data managers/statisticians compile, verify and disseminate information on all aspects of energy including production, transformation and consumption of all fuels, renewables, the emergency reporting system, energy efficiency indicators, CO₂ emissions, and energy prices and taxes. The data managers are responsible for receiving, reviewing and inputting data submissions from member countries and other sources into large computerised databases. They check for completeness, correct calculations, internal consistency, accuracy and consistency with definitions. Often this entails proactively investigating and helping to resolve anomalies in collaboration with national administrations of member and non-member countries. The data managers/statisticians also play a key role in helping to design and implement computer macros used in the preparation of their energy statistics publication(s).

Principal Qualifications

- University degree in a topic relevant to energy, computer programming or statistics. We currently have staff with degrees in Mathematics, Statistics, Information Technology, Economics, Engineering, Physics, Chemistry, Environmental Studies, Hydrology, Public Administration and Business.
- Experience in the basic use of databases and computer software. Good computer programming skills in Visual Basic.
- Ability to work accurately, pay attention to detail and work to deadlines. Ability to deal simultaneously with a wide variety of tasks and to organise work efficiently.
- Good communication skills; ability to work well in a team and in a multicultural environment, particularly in liaising with contacts in national administrations and industry.
- Very good knowledge of one of the two official languages of the Organisation (English or French). Knowledge of other languages would be an advantage.
- Some knowledge of energy industry operations and terminology would also be an advantage, but is not required.

Nationals of any OECD member country are eligible for appointment. Basic salaries start at 3 000 Euros per month. The possibilities for advancement are good for candidates with appropriate qualifications and experience. Tentative enquiries about future vacancies are welcomed from men and women with relevant qualifications and experience. Applications in French or English, accompanied by a curriculum vitae, should be sent to:

Personnel and Finance Division
International Energy Agency
9 rue de la Fédération
75739 Paris Cedex 15, France
Email: recruitment@iea.org

On-Line Data Services

Users can instantly access not only all the data published in this book, but also all the time series used for preparing this publication and all the other statistics publications of the IEA. The data are available on-line, either through annual subscription or pay-per-view access. More information on this service can be found on our website: <http://data.iea.org>

Ten Annual Publications

■ Energy Statistics of OECD Countries, 2010 Edition

No other publication offers such in-depth statistical coverage. It is intended for anyone involved in analytical or policy work related to energy issues. It contains data on energy supply and consumption in original units for coal, oil, natural gas, combustible renewables/wastes and products derived from these primary fuels, as well as for electricity and heat. Complete data are available for 2007 and 2008 and supply estimates are available for the most recent year (*i.e.* 2009). Historical tables summarise data on production, trade and final consumption. Each issue includes definitions of products and flows and explanatory notes on the individual country data.

Published July 2010 - Price €120

■ Energy Balances of OECD Countries, 2010 Edition

A companion volume to *Energy Statistics of OECD Countries*, this publication presents standardised energy balances expressed in million tonnes of oil equivalent. Energy supply and consumption data are divided by main fuel: coal, oil, gas, nuclear, hydro, geothermal/solar, combustible renewables/wastes, electricity and heat. This allows for easy comparison of the contributions each fuel makes to the economy and their interrelationships through the conversion of one fuel to another. All of this is essential for estimating total energy supply, forecasting, energy conservation, and analysing the potential for interfuel substitution. Complete data are available for 2007 and 2008 and supply estimates are available for the most recent year (*i.e.* 2009). Historical tables summarise key energy and economic indicators as well as data on production, trade and final consumption. Each issue includes definitions of products and flows and explanatory notes on the individual country data as well as conversion factors from original units to tonnes of oil equivalent.

Published July 2010 - Price €120

■ Energy Statistics of Non-OECD Countries, 2010 Edition

This publication offers the same in-depth statistical coverage as the homonymous publication covering OECD countries. It includes data in original units for more than 100 individual countries and nine main regions. The consistency of OECD and non-OECD countries' detailed statistics provides an accurate picture of the global energy situation for 2007 and 2008. For a description of the content, please see *Energy Statistics of OECD Countries* above.

Published August 2010 - Price €120

■ **Energy Balances of Non-OECD Countries, 2010 Edition**

A companion volume to the publication *Energy Statistics of Non-OECD Countries*, this publication presents energy balances in million tonnes of oil equivalent and key economic and energy indicators for more than 100 individual countries and nine main regions. It offers the same statistical coverage as the homonymous publication covering OECD countries, and thus provides an accurate picture of the global energy situation for 2007 and 2008. For a description of the content, please see *Energy Balances of OECD Countries* above.

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■ **Electricity Information 2010**

This reference document provides essential statistics on electricity and heat for each OECD member country by bringing together information on production, installed capacity, input energy mix to electricity and heat production, input fuel prices, consumption, end-user electricity prices and electricity trades. The document also presents selected non-OECD country statistics on the main electricity and heat flows. It is an essential document for electricity and heat market and policy analysts.

Published August 2010 - Price €150

■ **Coal Information 2010**

This well-established publication provides detailed information on past and current evolution of the world coal market. It presents country-specific statistics for OECD member countries and selected non-OECD countries on coal production, demand, trade and prices. This publication represents a key reference tool for all those involved in the coal supply or consumption stream, as well as institutions and governments involved in market and policy analysis of the world coal market.

Published August 2010 - Price €165

■ **Natural Gas Information 2010**

A detailed reference work on gas supply and demand, covering not only the OECD countries but also the rest of the world. Contains essential information on LNG and pipeline trade, gas reserves, storage capacity and prices. The main part of the book, however, concentrates on OECD countries, showing a detailed gas supply and demand balance for each individual country and for the three OECD regions: North America, Europe and Asia-Pacific, as well as a breakdown of gas consumption by end-user. Import and export data are reported by source and destination.

Published August 2010 - Price €165

■ **Oil Information 2010**

A comprehensive reference book on current developments in oil supply and demand. The first part of this publication contains key data on world production, trade, prices and consumption of major oil product groups, with time series back to the early 1970s. The second part gives a more detailed and comprehensive picture of oil supply, demand, trade, production and consumption by end-user for each OECD country individually and for the OECD regions. Trade data are reported extensively by origin and destination.

Published August 2010 - Price €165

■ Renewables Information 2010

This reference document brings together in one volume essential statistics on renewables and waste energy sources. It presents a detailed and comprehensive picture of developments for renewable and waste energy sources for each of the OECD member countries, encompassing energy indicators, generating capacity, electricity and heat production from renewable and waste sources, as well as production and consumption of renewable and waste products. It also includes a selection of indicators for non-OECD countries. This report provides a strong foundation for renewables energy policy and market analysis to assess progress towards domestic and international objectives.

Published August 2010 - Price €110

■ CO₂ Emissions from Fuel Combustion, 2010 Edition

In order for nations to tackle the problem of climate change, they need accurate greenhouse gas emissions data. This publication provides a basis for comparative analysis of CO₂ emissions from fossil fuel combustion, a major source of anthropogenic emissions. The data in this book are designed to assist in understanding the evolution of the emissions of CO₂ from 1971 to 2008 for more than 140 countries and regions by sector and by fuel. Emissions were calculated using IEA energy databases and the default methods and emissions factors from the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*.

Published November 2010 - Price €165

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- | | |
|---------------------------------------|------------------------------------|
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