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Coal information



International
Energy Agency
Secure
Sustainable
Together

2017

Coal information

with 2016 data **2017**

INTERNATIONAL ENERGY AGENCY

The International Energy Agency (IEA), an autonomous agency, was established in November 1974. Its primary mandate was – and is – two-fold: to promote energy security amongst its member countries through collective response to physical disruptions in oil supply, and provide authoritative research and analysis on ways to ensure reliable, affordable and clean energy for its 29 member countries and beyond. The IEA carries out a comprehensive programme of energy co-operation among its member countries, each of which is obliged to hold oil stocks equivalent to 90 days of its net imports. The Agency's aims include the following objectives:

- 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.
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INTRODUCTION

IEA *Coal Information 2017* is the latest edition of an annual publication providing sound market information on coal to policy and market analysts and those employed in all sectors of the coal 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 *Coal Information 2017* brings together in one volume, statistics compiled by the IEA on coal supply, consumption, trade and prices for both member and non-member countries¹. It also includes information on coal by-products.

Part I provides important documentation that will assist the reader in correctly using the data in this publication and to understand the details of the statistical methodology and collection practices related to the coal data.

Part II presents, in tabular form, a statistical overview of world coal market in 2015 and 2016². It covers world coal production, coal trade, world coal supply, and coal consumption for selected end uses.

Part III provides in tabular and graphic form, a more detailed and comprehensive statistical picture of coal developments in the 35 OECD member countries, both by regional aggregate and individually. Detailed information pertinent to specific countries has been

compiled these specificities are presented at the end of Part III, along with a weighted average of the supply-side calorific values used for preparing national energy balances for each applicable fuel.

Part IV covers summary statistics on coal balances and trade (including partner) data for selected years for 22 major non-OECD coal-producing and consuming countries and economies, in addition to several regional aggregates.

Part V and Part VI provide the reference tables to the Part II review on coal production, consumption, trade and prices. It also includes some more specialised end-use tables and selected charts.

OECD data are taken from IEA/OECD databases of Energy Statistics that are based on annual, quarterly and monthly submissions from OECD member countries to the Secretariat. The Energy Data Centre of the IEA Secretariat works closely with national administration to secure consistent time series with particular regard for IEA product definitions and reporting conventions. This work is supplemented by the use of energy industry publications, national statistics reports and other material. Non-OECD data are based upon information collected by the IEA Secretariat, official national submissions to the United Nations, and national energy publications. The resulting synthesis is published in *World Energy Balances* and *World Energy Statistics*. Users of this publication are directed to the Methodology section of those publications for more detail on individual non-Member countries covered here.

OECD coal balances and statistics, including itemized import and export data, along with world supply data are available on our online data service and CD-ROM. Information on ordering the data service or CD-ROM and other energy statistics publications is available at the end of this book and on the IEA website at www.iea.org/statistics. Moreover, data can also be

1. This publication is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. In addition, the term "country" refers to a country or a territory, as the case may be.

2. With the exception of some pricing data, most data for 2016 are provisional. Some provisional data, particularly for non-OECD economies, may have been estimated by the IEA Secretariat.

obtained on a pay-per-view basis. Details are available at <http://data.iea.org>.

Price data in Parts II, III and V are derived from the quarterly publication *Energy Prices and Taxes*. Readers should consult this IEA/OECD publication for detailed information on methodology, data coverage and data sources. Country notes and documentation are available online in the *Energy Prices and Taxes* folder at: <http://wds.iea.org/wds/>.

Further information on reporting methodologies is also available on the IEA website.

Within the IEA Secretariat, annual energy data are collected by the Energy Data Centre (EDC), which is headed by Mr. Duncan Millard.

The IEA would like to thank and acknowledge the dedication and professionalism of the statisticians working on energy data within national administrations, without whose work, this publication would not be possible.

Within the IEA, for OECD members: electricity, and renewable data were prepared, respectively, by Mark Mateo, and Dae Yong Kwon, under the responsibility of Vladimir Kubecek; oil and natural gas data were prepared, respectively, by Aitor Soler García and Laura Thompson, under the responsibility of Erica Robin; balances data were prepared by Rémi Gigoux, under the responsibility of Roberta Quadrelli. Non-OECD

countries statistics were prepared by Emmanouil Christinakis, Laila El-Ashmawy, Musa Erdogan, Markus Fager-Pintilä, Nikolaos Kordevas, Agnieszka Koscielniak, Claire Morel, Klaus Pedersen and Arnaud Pincet under the responsibility of Céline Rouquette.

OECD coal statistics in the EDC were the responsibility of Beatriz Martínez, whilst Samantha Mead contributed to Part II, Part III and Part IV. Vladimir Kubecek had overall responsibility for this publication. Elsewhere within the EDC, Loïc Coent was responsible for the CO₂ data and the energy economic indicators.

Also in the IEA Secretariat, input from the Energy Supply Outlook Division, part of the Directorate of Sustainability, Technology and Outlooks, was crucial to the compilation of this edition, while special thanks are also due to the Gas, Coal and Power Markets Division and Carlos Fernandez-Alvarez and Eren Cam for invaluable assistance.

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

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What's new?

Geographical coverage

Latvia became an OECD member in July 2016. Accordingly, starting with the 2017 edition, Latvia appears in the list of OECD members for data starting in 1990.

COAL OVERVIEW

Summary

World coal production declined in 2016 by 458 Mt, which is the largest decline in absolute terms since IEA records began in 1971. This decline, which doubles the one seen in 2015, was the result of a multitude of factors, among them, the setting quotas for mine operating days in the People's Republic of China.

In addition, coal demand for power generation fell in the People's Republic of China, the United States and the United Kingdom, all witnessing the growth of gas generation.

With lower demand, less coal was produced in the United States, leading India to be the second largest producer with 708 Mt in 2016 overtaking for first time the US production.

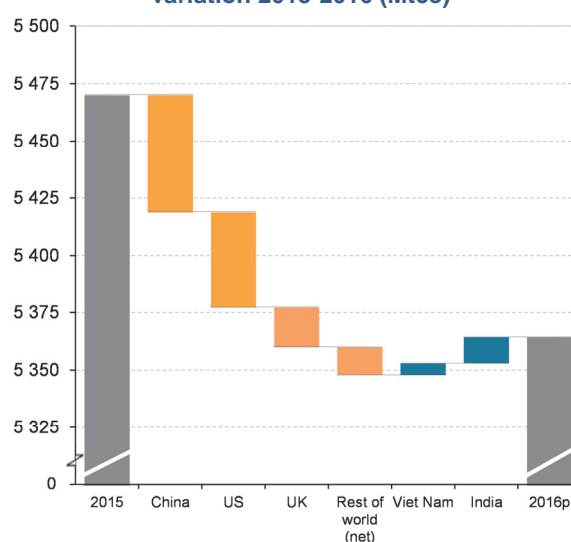
Production of steam coal, coking coal and lignite all fell in 2016. Conversely, international trade increased in 2016 as imports grew by 1.5% to 1 331.3 Mt. The People's Republic of China increased imports to 255.6 Mt, 25% above volumes of 2015, while Indian imports decreased to 200.1 Mt, or 7.2%. Despite the decline of Indian imports, the People's Republic of China and India, were in 2016 both, the two largest producers and importers.

In total, across Asia Oceania region increased their imports to 973.0 Mt, representing a 72.9% of global imports, showing the key role of this region in coal trade.

Australia and Indonesia remained the world's largest coal exporters in 2016. Additionally, South Africa, Colombia and Mongolia hit records exports in 2016, exceeding 2015 levels by 1.3%, 7.1% and 78.3% respectively.

India's coal consumption increased by 2.1% in 2016, continuing 18 years of constant growth, while consumption in the People's Republic of China declined

Figure 1: World coal consumption variation 2015-2016 (Mtce)



by 1.8% in 2016. Meanwhile, United States' consumption declined by 7.8% but Indonesia saw an increase of 3.8%, continuing the 10.2% increase reported in 2015.

Electricity generation from coal-fired power plants in OECD countries fell by 6.1% to a new low of 3 029 TWh in 2016, while total gross electricity production grew by 0.4% compared to 2015.

Production

Total world coal production

World coal production declined in 2014 for the first time this century. This decrease continued through 2015 and accelerated in 2016 to 458 Mt, or 6.3% lower, as combined production of all coal types fell to its lowest level since 2010.

This reduced level, however, was still 2.63 Gt (56.7%) higher than production in 2000.

Table 1: Total world coal production¹ (Mt)

	2014	2015	2016p
Steam coal	6 010.1	5 834.6	5 407.0
Coking coal	1 108.7	1 081.1	1 074.3
Lignite	815.4	811.1	783.3
Total² coal	7 934.1	7 726.8	7 268.6
Peat	15.2	10.1	.. ³
Oil Shale/sands	21.4	20.0	.. ³

1. Production includes recovered slurries and similar sources.

2. Total coal comprises steam coal, coking coal and lignite, so excludes peat, and oil shale and oil sands even though they are shown here for completeness.

3. Peat and oil shale and oil sands data are not currently compiled on a provisional basis for non-OECD countries.

The People's Republic of China remained the world's leading coal producer, as it has been since 1985, with 3 242.5 Mt of total coal produced –320.7 Mt, 9.0% lower than in 2015. Falling production of United States in 2016 continued an eight-year decline since 2008, decreasing to 743 Mt in 2016, 17.4% lower than in 2015, and the lowest level since 1978.

Putting these two declines in some context, there are currently only nine coal producing countries that produce more than 100 Mt/y; China's decline was more than the entire 2016 production of South Africa, and the United States decline was more than the entire 2016 production of Colombia, the world's 5th and 4th largest coal exporters respectively.

Other countries that saw noticeable year-on-year decline in 2016 were Kazakhstan and Germany with a provisional fall of 9.4 Mt and 9.1 Mt respectively. Declines in Ukraine were due to turmoil in the Eastern regions of Donetsk and Luhansk in the second half of 2014 continuing through 2015 and 2016.

Table 2: Major coal producers¹ (Mt)

	2014	2015	2016p
PR of China	3 640.2	3 563.2	3 242.5
India	657.4	683.1	707.6
United States	918.2	813.7	671.8
Australia	488.8	512.4	503.3
Indonesia	488.3	453.5	460.5
Russian Federation	332.9	351.7	365.5
South Africa	260.5	258.6	256.9
Germany	186.5	184.7	175.6
Poland	137.1	135.8	130.9
Kazakhstan	114.0	107.3	97.9
Other	710.2	662.8	656.1
World	7 934.1	7 726.8	7 268.6

1. Production includes recovered slurries and production from other sources.

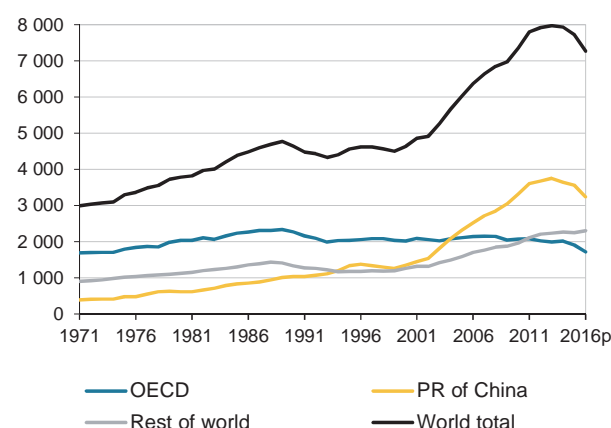
Data for Australia and India are provided on a fiscal basis.

In this general trend of declining coal production, among the ten largest producers, only India (+24.5 Mt), Russia (+13.8 Mt) and Indonesia (+7 Mt)

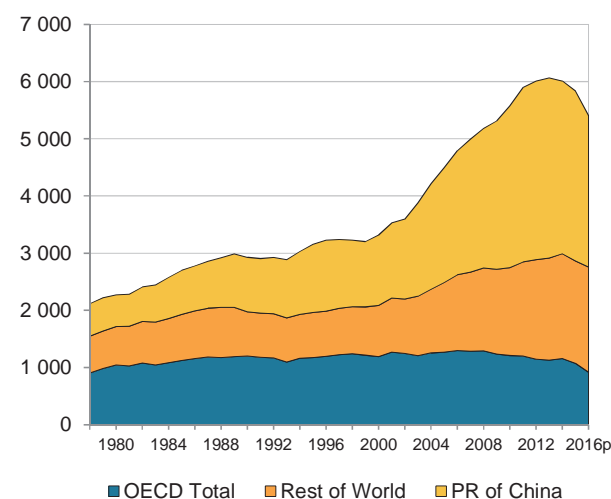
increased production in 2016. Indonesia, one of the world's leading steam coal producers and exporters, decreased production in 2015 by 34.8 Mt. Despite the slight recovery of production in 2016, current levels are still 5.7% lower compared to 2014.

Since 2000, coal production in the People's Republic of China has increased by 139.3%, despite falling by 13.5% since 2013. In comparison, the OECD total coal production declined by 14.7% for the same period, being the fall in 2016 the largest annual decline.

Historically, OECD coal production as a percentage of global production was 56.6% in 1971 but has become 23.7% in 2016.

Figure 2: World total coal production (Mt)

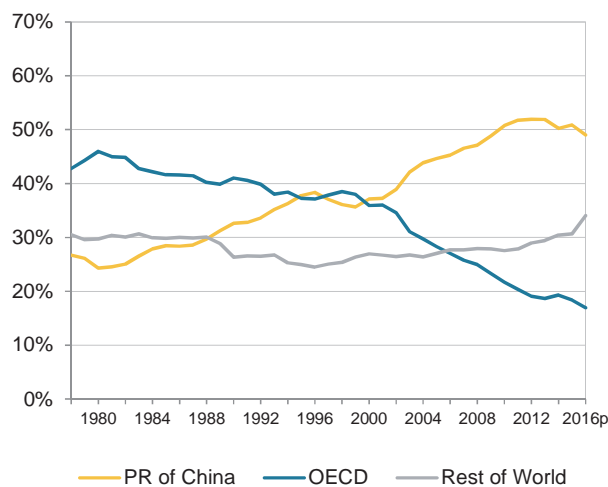
Steam coal production

Figure 3: Steam coal production (Mt)

In 1978, the OECD accounted for 42.8% of the world steam coal production and this figure remained above

37% until 2000. However, since then its share has generally declined, as non-OECD countries increased their steam coal production, predominantly led by the expansion of the Chinese coal industry since 2001 and OECD production fall. In 2016, the OECD's share (17.0%) was less than half its 1978 share (42.8%), and its production decreased to 917 Mt, the lowest level since 1971.

Figure 4: Shares in world steam coal production (%)



Coking coal production

2015 witnessed the first annual decrease in world coking coal production since 2002. This trend continued in 2016 although less pronounced, with world coking coal production of 1 074.3 Mt, a decrease of 0.6%. Australia, the world's second largest producer of coking coal after the People's Republic of China, saw a decline of 0.9% in 2016, after peaking in 2015 at 191.1 Mt.

On the other side of the ledger, Mongolian coking coal production increased to 22.8 Mt in 2016, a rise of 9.7 Mt compared to 2015. This was the result of a growth in production intended for export, putting Mongolia just behind Australia among leading suppliers to People's Republic of China.

However by far the most prominent story is production and consumption by the People's Republic of China. Chinese production increased by 377% since 2000 to peak at 619.8 Mt in 2014 but subsequently dropped to 592.0 Mt in 2016, 0.2% lower than in 2015. People's Republic of China increased its share of world production from 26.0% to 55.1% over the same period.

The three major declines of coal production in 2016 occurred in the United States (-6.9 Mt), Kazakhstan (-6.5 Mt) and Germany (-1.7 Mt).

Lignite¹ production

Worldwide, lignite production fell for the 5th straight year in 2016, decreasing by 2.9% to 787.3 Mt, the lowest value since records began in 1978. This was 35.0% lower than the peak of 1 210.9 Mt in 1989.

OECD lignite production fell for the 4th straight year, decreasing from 535.6 Mt in 2015 to 513.5 Mt. This was driven by reported decreases in Greece (-14.0 Mt), Germany (-6.5 Mt) and Bulgaria (-4.6 Mt), and overall was 39.9% down on the OECD maximum production of 854.9 Mt in 1989.

Table 3: Major lignite¹ producers (Mt)

	2014	2015	2016p
Germany	178.2	178.1	171.5
Russian Federation	68.9	73.6	73.7
United States	72.1	64.9	66.5
Australia	60.5	65.6	63.6
Poland	63.9	63.1	60.2
Turkey	62.6	56.1	56.9
India	48.3	43.8	45.0
Czech Republic	38.2	38.1	38.5
Serbia	30.0	37.8	38.4
Greece	50.8	46.2	32.3
Other	141.9	144.0	140.7
World	815.4	811.1	787.3

1. Lignite does not include oil shale and oil sands.

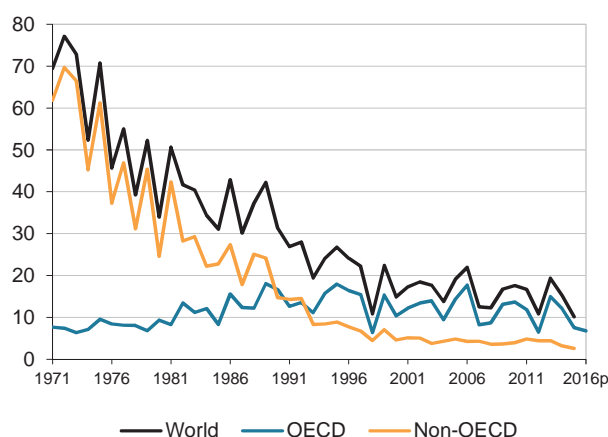
Data for Australia and India are provided on a fiscal basis.

Peat production

Productions (or harvests) can be highly variable and are weather dependent for both access to the peat bogs and for outdoor drying. Disruptions in 2012 for Ireland and Finland were prominent, with Ireland's production of 1.5 Mt being the lowest since IEA records began in 1960, while peat production in Finland in 1998 dropped to 1.7 Mt from 10.4 Mt in 1997, before returning to 8.1 Mt in 1999.

1. Production and consumption of lignite are reported as sub-bituminous coal in Indonesia, and under other bituminous coal (along with sub-bituminous coal) in the People's Republic of China. Both reclassifications significantly affect lignite statistics, as Indonesia has extensive lignite resources and reserves and markets for coals of lower quality exist, while the People's Republic of China is most likely the second largest producer and consumer of lignite globally.

Figure 5: World peat production (Mt)



Despite interannual oscillations, world peat production has followed a relatively steady decline from 69.5 Mt in 1971 to 31.5 Mt in 1990, 14.9 Mt in 2000, and 10.1 Mt in 2015 as non-OECD production fell from 89% of global production in 1971 to 26% in 2015.

Trade

World coal trade

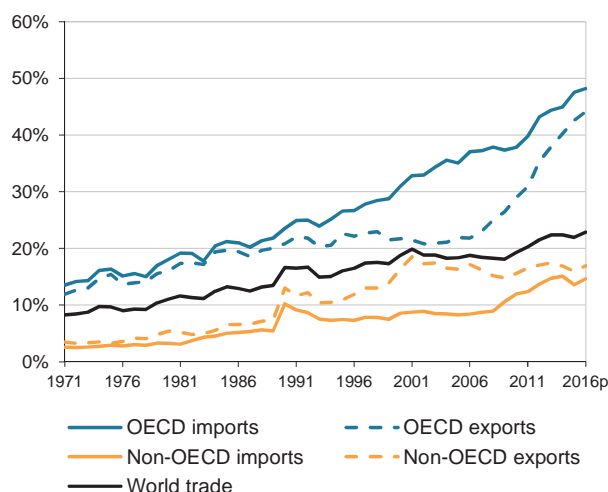
Export trade of all types of coal in the world increased by 1.9% in 2016, from a level of 1 308.1 Mt in 2015 as steam coal exports increased by 14.6 Mt (1.5%) and coking coal exports increased by 10.2 Mt (3.4%). The 2016 level is 21.7% above 2010 level, and total exports have more than doubled (105.3%) since 2000.

Table 4: World coal trade (Mt)

	2014	2015	2016p
Steam coal exports	1 048.6	995.3	1 010.4
Coking coal exports	312.4	303.9	314.1
Lignite exports	8.4	8.9	9.0
Steam coal imports	1 112.1	1 038.5	1 045.0
Coking coal imports	295.3	267.9	282.1
Lignite imports	5.2	5.1	4.2
Total exports	1 369.3	1 308.1	1 333.5
Total imports	1 412.5	1 311.5	1 331.3
Balancing item	43.2	3.4	-2.2

Note: The balancing item is the difference between total coal imports and total coal exports. This is primarily due to the different coal classification methodologies used by the importing and exporting countries, which does not hold on a global basis. It also occurs because of coal in-transit, coal that is unaccounted for, and reporting discrepancies by importing and exporting countries.

Figure 6: Steam and coking coal trade as a percentage of consumption



Overall, global trade reached 1 333.5 Mt in 2016, 17.9% of coal consumption on an energy basis.

Global trade has been growing faster than global consumption on a relatively consistent basis, as evidenced in the chart above which shows regional trade as a portion of consumption on an energy basis. However in 2015, world trade decreased slightly at 21.9% of consumption, and increased in 2016 to 22.8%, the highest level.

Exports

Australia and Indonesia remained the world's largest coal exporters in 2016, with 29.2% and 27.7% of exports on a tonnage basis. Despite its decline in domestic consumption, the Russian Federation, third in the rank, contributed with 171.1 Mt – representing a share of 12.8%.

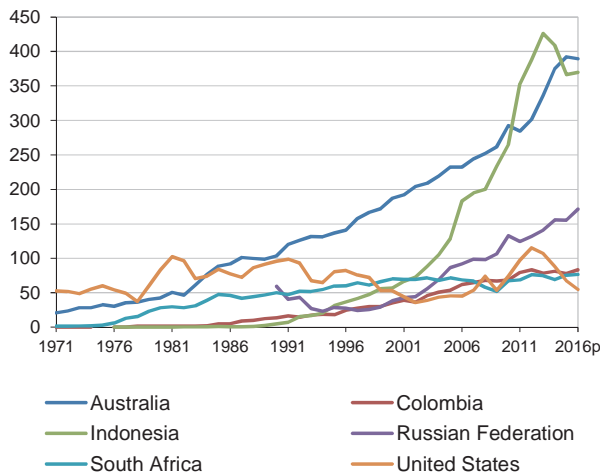
South Africa, Colombia and Mongolia hit records exports in 2016, exceeding 2015 levels by 1.3%, 7.1% and 78.3% respectively.

The combination of the ten largest exporting countries shipped 95% of global coal exports during 2016.

Indonesian coal export rose slightly by 0.9% in 2016, increasing to 368.9 Mt from 365.7 Mt in 2015, driven by high imports to the People's Republic of China. Despite the continued declines in Chinese coal demand, imports increased as a consequence of the reduction in its domestic production. This rise benefited Indonesia allowing the recovery of its exports

that had fallen by 16% compared to 2013 levels. Exports to the People's Republic of China reached 98.7 Mt representing 26.7% of the total Indonesian exports in 2016.

Figure 7: Total coal exports by major exporters (Mt)



The decline of United States exports by 18.5% promoted the rise in Colombian exports which hit a record of 83.3 Mt in 2016 with Colombia exporting 92.1% of its coal production. While coal production and exports increased by 5.8% and 7.1% respectively, domestic consumption decreased to 7.2 Mt – a decline of 7.1%. Traditionally, the market for Colombian coal has been Europe and North America. However, Colombian coal exports to Asia grew in 2016, with Japan and Korea ramping up.

Table 5: Major coal exporters (Mt)

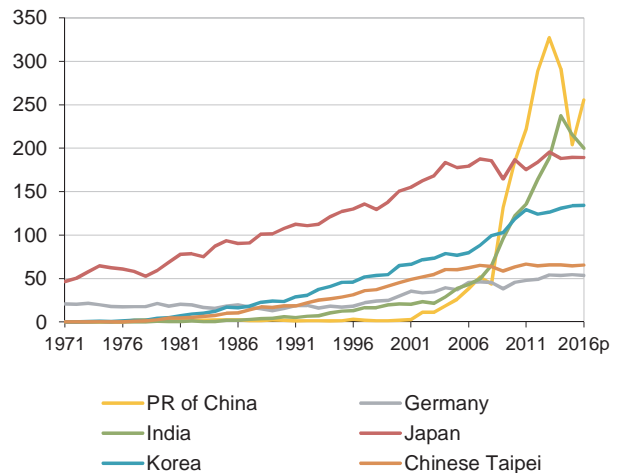
	2014	2015	2016p
Australia	375.0	392.3	389.3
Indonesia	409.2	366.7	369.9
Russian Federation	155.5	155.2	171.1
Colombia	81.2	77.8	83.3
South Africa	69.0	75.5	76.5
United States	88.2	67.1	54.7
Netherlands ¹	31.3	36.6	40.6
Canada	34.5	30.5	30.3
Mongolia	19.8	14.5	25.8
Kazakhstan	30.9	31.2	25.7
Other	74.7	60.7	66.3
World	1 369.3	1 308.1	1 333.5

1. For 2013 data and onwards, the Netherlands made a conscious decision to stop trying to account for coal in transit. As a consequence there was a very large increase in both their imports and exports leading Netherlands to be the 7th largest coal exporter despite having no indigenous production and the world's 6th largest coal importer.

Data for Australia are provided on a fiscal basis.

Imports

Figure 8: Total coal imports by major importers (Mt)



Total world coal imports were 1 331.3 Mt in 2016, a 1.5% increase from 2015 numbers. The main contributor to this rise was the People's Republic of China whose imports increased by 25.2% in 2016, to 255.6 Mt, reversing partially the 30.0% drop seen in 2015.

Table 6: Major coal importers (Mt)

	2014	2015	2016p
PR of China	291.6	204.1	255.6
India	237.6	215.6	200.1
Japan	188.1	189.6	189.4
Korea	131.0	133.9	134.5
Chinese Taipei	65.8	64.8	65.6
Netherlands ¹	47.3	57.1	55.5
Germany	53.8	54.5	53.6
Turkey	29.8	34.0	36.2
Malaysia	21.7	25.5	28.9
Russian Federation	26.8	24.1	24.0
Other	319.0	308.3	287.9
OECD Americas	35.2	35.5	35.0
OECD Asia Oceania	330.7	335.1	333.1
OECD Europe	273.5	265.3	239.0
OECD Total	639.4	635.9	607.1
Africa + Mid. East	15.1	14.5	14.6
Other Asia Oceania	682.5	587.2	636.9
Oth. Europe + Eurasia	50.1	47.3	47.1
Other Americas	25.4	26.7	25.6
Non-OECD Total	773.1	675.6	724.2
World	1 412.5	1 311.5	1 331.3

1. For 2013 data and onwards, the Netherlands made a conscious decision to stop trying to account for coal in transit. As a consequence there was a very large increase in both their imports and exports leading Netherlands to be the 7th largest coal exporter despite having no indigenous production and the world's 6th largest coal importer.

Data for India and Japan are provided on a fiscal basis.

Traditionally an exporter, Viet Nam turned into an importer in 2005. Imports by Viet Nam have been growing since then to reach 13.3 Mt in 2016. This

is 6.4 Mt up compared to 2015, the second largest increase with Australia as its biggest supplier.

In contrast to these increases, significant declines occurred in 2016, most notably in India (-15.5 Mt) and the United Kingdom (-15.9 Mt).

Looking at the OECD Asia Oceania and non-OECD Asia Oceania (including China) regions combined, their total imports increased to 973.0 Mt (72.9% of all imports) from 922.3 Mt, or 70.3% in 2015, with the top five individual importers being from this area, as has been the case since 2009. Although China is responsible for a significant proportion, Japan, Chinese Taipei and Korea imported significant quantities of steam coal for electricity generation and coking coal for steel production in 2016.

The next five largest importing countries were from Europe or Eurasia. However their combined 2016 imports of 198.2 Mt were still less than either India's or the People's Republic of China's alone.

Steam coal trade

In 2016, steam coal imports in the Asia-Oceania market increased by 36.7 Mt to 767.0 Mt, 247.2 Mt of which was to OECD countries. Asia-Oceania imports represented 73.4% of total world steam coal trade in 2016, up from 70.3% in the previous year.

The People's Republic of China's steam coal imports increased substantially by 25.7% to 196.3 Mt in 2016, contrasting with the drop in Indian imports, which declined by 8.4% to 152.2 Mt. Other major importers in the region were Japan (138.3 Mt, down 0.5%), Korea (99.7 Mt – down 0.3 %) and Chinese Taipei (59.0 Mt – up 1.2 %). In 2016, the major steam coal suppliers to this Asia Oceania market were Indonesia (360.4 Mt), Australia (204.1 Mt), the Russian Federation (74.5 Mt), and South Africa (51.1 Mt).

Steam coal imports in the Europe/Eurasian market were 223.4 Mt in 2016, 31.3 Mt lower than in 2015. This market now represents 21.4% of total world steam coal trade, compared to 39.9% in 2000 and 65.4% in 1991, which included new international trade between members of the Former Soviet Union.

Within the region, the major Europe/Eurasian importers were the Netherlands with national imports and also transit stocks (51.7 Mt), Germany (43.1 Mt), Turkey (30.4 Mt, up 2.3 Mt), the Russian Federation (21.1 Mt, predominantly from Kazakhstan) and Italy (14.4 Mt). The United Kingdom descended several positions in the list as imports decreasing to 5.5 Mt, from 19.5 Mt in 2015 and 35.9 Mt in 2014.

The 2016 main steam coal suppliers to this market were the Russian Federation (65.2 Mt), Colombia (58.7 Mt), Kazakhstan (22.5 Mt), South Africa (22.1 Mt), and the United States (20.0 Mt).

Coking coal trade

Total world coking coal exports increased by 3.4% to 314.1 Mt in 2016 fiscal year. Australia remained by far the largest exporter of coking coal at 189.2 Mt, accounting for 59.9% of coking coal exports, down from 61.8% in 2015.

Table 7: Major coking coal exporters (Mt)

	2014	2015	2016p
Australia	180.5	187.7	188.0
United States	54.5	41.7	37.1
Canada	31.1	28.0	28.0
Mongolia	7.7	12.5	23.6
Russian Federation	21.1	18.5	21.7
Other	17.5	15.5	15.7
World	312.4	303.9	314.1

Data for Australia are provided on a fiscal basis.

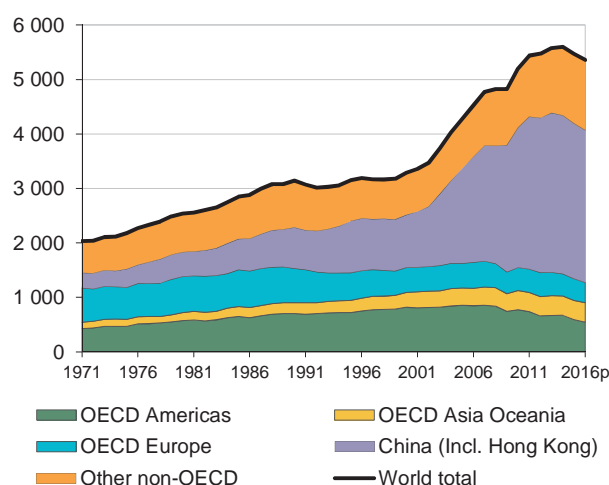
The United States remained, the second largest coking coal exporter with a volume of 37.1 Mt, down by 11.0% from 41.7 Mt in 2015, while third-ranked Canada remained flat exporting 28.0 Mt of coking coal. Exports from Mongolia increased by 88.5%, to 23.6 from 12.5 in the previous year, overtaking the Russian Federation position whose exports increased by 17.7% reaching a volume of 21.7 Mt. The combined total of the five largest exporters accounted for 95% of the global coking coal exports in 2016.

Consumption

Total coal consumption²

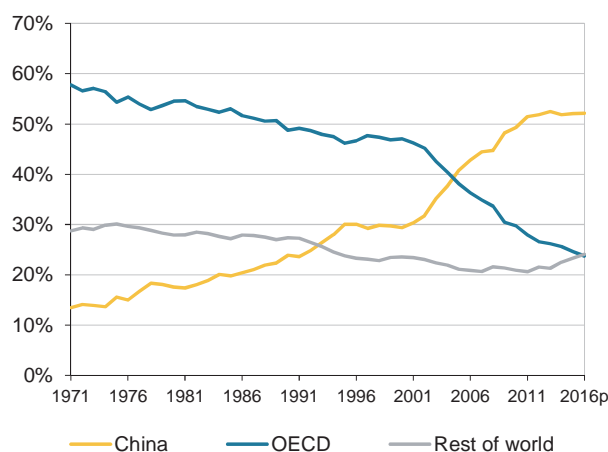
In 2016, total global coal consumption in energy terms decreased by 1.9% or 105.7 Mtce, as OECD consumption decreased by 70.8 Mtce (5.3%) and non-OECD countries decreased consumption by 34.9 Mtce (0.9%). The new OECD coal consumption level of 1 273.1 Mtce was the lowest level since 1979 and was 23.5% lower than the maximum coal consumption by OECD countries of 1 665.3 Mtce in 2007.

2. Total coal refers to the sum of anthracite, other bituminous coal, coking coal, sub-bituminous coal and lignite, converted to a common energy unit, million tonnes of coal equivalent (Mtce). Consumption data for the provisional year (2016p) for non-OECD countries, unless supplied, are estimated from production and trade data obtained from partner countries and other secondary sources. Stock changes are usually not accounted for.

Figure 9: World coal consumption (Mtce)

Consumption in the People's Republic of China declined by 1.8% in 2016, or 51.2 Mtce to 2 787.5 Mtce, as a result of several factors such as the change in the economic growth model and the air pollution concerns.

Steel production and cement manufacture are industries strongly dependant on coal, with China the world's largest producer. In 2015 the People's Republic of China produced 446 Mt of coke oven coke (66.0% of world production), 804 Mt of crude steel (49.6% of world production), 696 Mt of pig iron (59.9% of world production), and around 2.35 Gt of cement (57.3% of world production)³.

Figure 10: Shares in world coal consumption (%)

3. Iron and steel data are provided by the World Steel Association and cement data by the United States Geological Survey.

India's consumption grew by 2.1% in 2016 to reach 549.8 Mtce continuing with the trend of the last 18 years, while in 2016, the United States' consumption declined by 7.8% from 535.6 Mtce to 494.1 Mtce. This means that the United States has slipped to become the third largest coal consumer on an energy basis, being overtaken by the People's Republic of China in 1987 and India in 2015.

Domestic coal consumption in Indonesia increased by 3.8% in 2016 to reach 60.8 Mtce. The country has kept a constant growth pace during the last five years, reflected an increase of 22.4 Mtce or 58.3% since 2011.

Consumption changes in the United States and the United Kingdom were a key driver of changes to OECD total consumption as United States consumption declined by 41.6 Mtce, United Kingdom by 17.2 Mtce, and the other 33 countries in the 1 lower coal use for power generation, with increasing in the use of natural gas and renewable sources.

Steam coal consumption

World steam coal consumption was down 3.9% in 2016, decreasing by 227.9 Mt. Steam coal consumption in the OECD decreased by 78.2 Mt to 1 172.8 Mt, including a decrease of 50.3 Mt in the United States.

A downturn of 17.4 Mt or 53.2% in the United Kingdom was largely due to electricity generation from coal or coal products declining by 59.4%, or 45 TWh. This generation was mostly replaced by increases in generation from natural gas (43 TWh).

Table 8: Major steam coal¹ consumers (Mt)

	2014	2015	2016p
PR of China	3 207.3	3 141.4	2 959.5
India	740.1	746.6	761.4
United States	742.5	633.2	582.9
South Africa	189.6	180.5	178.0
Japan	137.0	138.9	138.3
Korea	100.1	100.6	101.8
Indonesia	79.1	86.8	90.6
Russian Federation	77.4	85.8	83.4
Poland	61.0	58.5	62.8
Kazakhstan	62.6	58.3	59.6
Chinese Taipei	59.7	57.3	59.0
Australia	46.9	47.9	52.8
Other	507.2	516.3	492.2
World	6 010.5	5 852.1	5 622.3

1. Steam coal comprises anthracite, other bituminous coal and sub-bituminous for all countries.

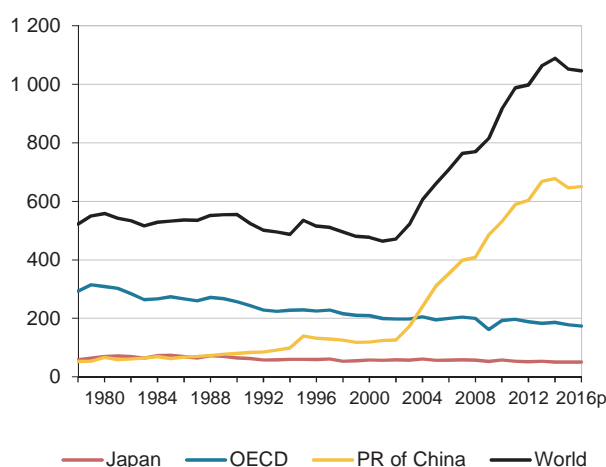
Data for Australia, India and Japan are provided on a fiscal basis.

Viewed on a regional basis, steam coal consumption decreased by 8.2% in the OECD Americas, while it increased slightly by 1.1% in OECD Asia Oceania, and declined, by 9.7% in OECD Europe. Non-OECD steam coal consumption decreased by 3.3% to 4 451.4 Mt in 2016.

Coking coal consumption

Global coking coal consumption fell by 5.1 Mt or 0.5% in 2016 to 1 046.6 Mt, an increase of 582.8 Mt or 126% since 2001. Consumption within the People's Republic of China accounts for 62.1% of global coking coal consumption.

Figure 11: World coking coal consumption (Mt)



Coking coal consumption in the OECD also decreased by 2.6% to 173.4 Mt in 2016, remaining 13.3% below the pre-economic crisis level in 2008.

Lignite⁴ consumption

The 2016 global lignite consumption was 784.7 Mt, the lowest since records began in 1978, with consumption decreasing by 21.7 Mt or 2.7% from 2015.

Despite the decrease of 2.9%, Germany remained the largest producer and consumer of lignite in 2016, using 171.9 Mt, ahead of the Russian Federation (69.8 Mt). United States consumption decreased

slightly by 0.7%, despite production increased by 2.4% or 1.6 Mt to 66.5 Mt. Australia saw a lignite consumption fall by 1.8 Mt but remained the fourth largest consumer, while Greece lost several places due to the drop of 23.4%, down to 33.9 Mt.

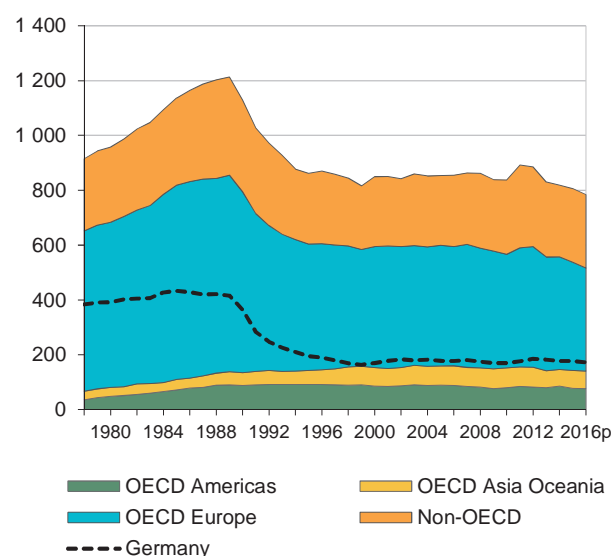
Table 9: Major lignite consumers (Mt)

	2014	2015	2016p
Germany	177.0	177.0	171.9
Russian Federation	67.3	72.2	69.8
United States	76.5	67.9	67.4
Australia	60.5	65.4	63.6
Poland	63.8	63.0	60.4
Turkey	64.7	56.7	56.4
India	47.0	42.2	46.0
Serbia	30.7	38.4	38.7
Czech Republic	38.4	37.8	37.8
Greece	51.9	44.3	33.9
Other	140.8	141.5	138.4
World	818.6	806.4	784.3

Data for Australia and India are provided on a fiscal basis.

As things stand, lignite consumption in OECD countries hit a minimum record since 1978 after a new decrease of 3.9% from 2015 to 516.1 Mt.

Figure 12: World lignite consumption (Mt)



Note: Areas are cumulative. Lines are individual.

Coke oven coke consumption

Coke oven coke statistics for non-OECD countries are not available for 2016. However, in 2015, OECD countries accounted for 18.3% of world coke oven coke consumption as total of the global consumption of 676.8 Mt. Consumption within the People's Republic of China

4. Production and consumption of lignite are reported as sub-bituminous coal in Indonesia, and under other bituminous coal (along with sub-bituminous coal) in the People's Republic of China. Both reclassifications significantly affect lignite statistics, as Indonesia has extensive lignite resources and reserves and markets for coals of lower quality exist, while the People's Republic of China is most likely the second largest producer and consumer of lignite globally.

(438.3 Mt), contributed 64.8% of global consumption and 79.2% of non-OECD consumption in 2015. This is 10.8 times larger than Japan's 2015 consumption and 11.5 times more than the second largest non-OECD consumer, the Russian Federation.

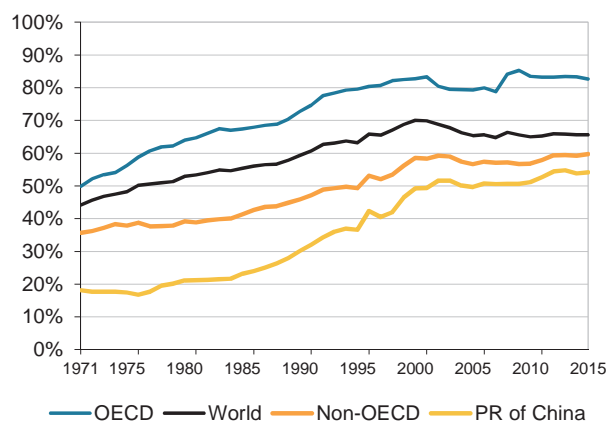
Table 10: Major coke oven coke consumers (Mt)

	2013	2014	2015
PR of China	456.7	467.6	438.3
Japan	40.7	42.1	40.5
Russian Federation	34.1	37.0	38.1
India	30.0	32.3	33.0
Korea	15.1	18.9	19.4
Ukraine	16.3	14.3	13.4
Germany	11.3	11.2	11.4
Brazil	11.5	11.7	11.4
United States	13.0	13.0	11.3
Other	60.7	62.4	60.0
World	689.4	710.5	676.8

Data for India and Japan are provided on a fiscal basis.

Uses of coal

Figure 13: Percentage of primary coal used for electricity and commercial heat production

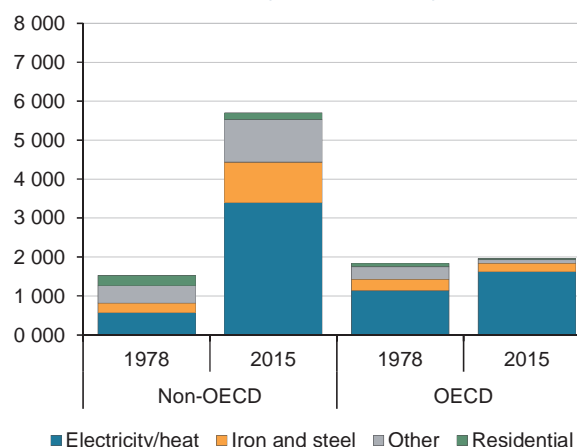


Coal comprises steam coal, coking coal and lignite. Power and commercial heat produced from derived products is not shown here, and instead counts as consumption in transformation to manufacture the secondary fuel.

Coal continues to be primarily used for the generation of electricity and commercial heat, with 65.5% of primary coal being used for this purpose globally in 2015, and 82.7% in OECD countries.

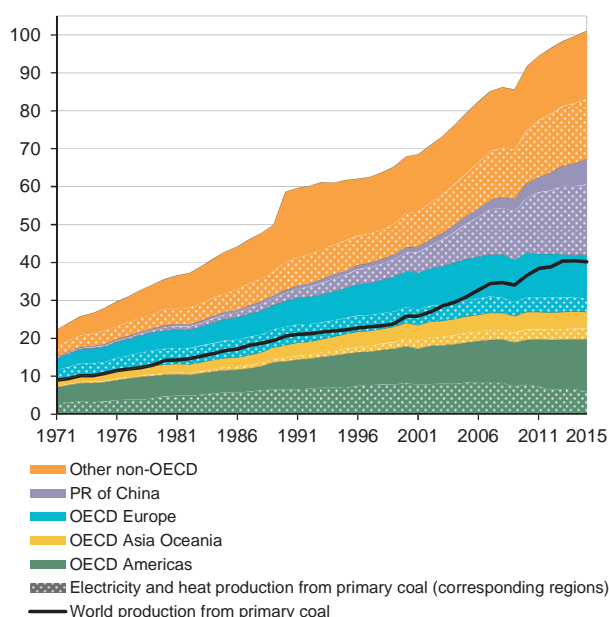
Coal is also essential for the iron and steel industry and has increased substantially during the last 40 years, driven primarily by increased production in China. The share of non-OECD countries is 82.8% of the total global consumption, or 1.0 Gt.

Figure 14: Primary coal's OECD and Non-OECD breakdown by broad activity (Mt)



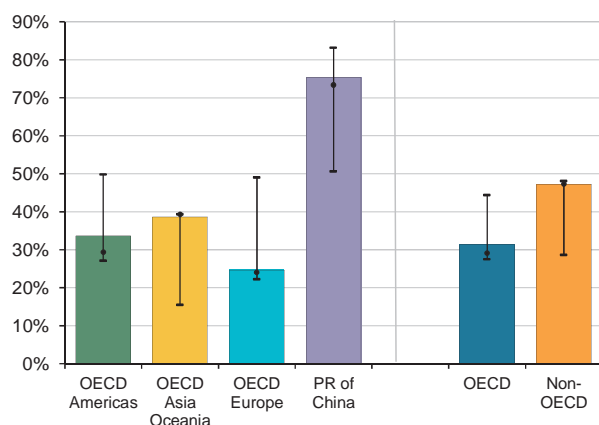
Residential also contains data for the Commercial and public services sector. Iron and steel includes coke oven coke manufacture and PCI/GCI. In addition to other conventional consumption, Other includes non-specified industry, which may contain iron and steel consumption, and also non-energy uses.

Figure 15: Electricity and commercial heat production, outputs by region (EJ)



In OECD countries in 2016, the share of electricity and heat produced from primary coal as a fuel fell to a new low of 27.5%, down from 29.2% in 2015 and 44.4% in 1985.

Looking at the three OECD regions, we see differing pathways, with OECD Europe declining to 22.2% in 2016 from 49.1% in 1971, while the OECD Americas dropped from 41.0% in 1971 to 27.1% in 2016. Meanwhile in OECD Asia Oceania, generation from coal has risen from 18.0% in 1971 to 39.4% in 2016.

Figure 16: Share of electricity and heat produced from primary coal in 2015 (%)

Each vertical line illustrates the historical highest-lowest value (top-bottom). The round point corresponds to 2014 level.

To date, despite the wide variety of factors influencing positive and negative growth in this regard, the global share of heat and power generated from coal has remained around 40% over the last 40 years of data as generation outputs have grown from 22.3 Exajoules (EJ) in 1971 to 101.0 EJ in 2015.

Gross electricity production in 2016 in the OECD (excluding generation from pumped storage plants) remained almost constant at 10 897 TWh, an increase of 0.4% compared to 2015, while the share of electricity generated from coal-fired plants in OECD countries fell by 6.1% to 3 029 TWh.

Heat produced in combined heat and power (CHP) or heat only plants was 2 999 PJ during this period, down 1.4% from 3 040 PJ, while the share of heat produced from coal-fired plants in OECD countries declined to 690 PJ from 725 PJ in 2015.

If we look at electricity and heat generated in 2016 and adopt 2015 efficiencies, the potential coal inputs in OECD countries for electricity and heat generation fell to 1 064.8 Mtce – a potential decrease of 60.1 Mtce or 5.6%. Following the same trend we see a higher theoretical decrease in United States, down from 486.8 Mtce in 2015 to 446.5 Mtce in 2016 – an 8.3% decline.

Pulverised coal injection (PCI)

The latest available data for 2015 shows that total PCI consumption increased by 3.3% or 1.5 Mt. Consumption decreased for second year in Japan (0.2 Mt) and

slightly increased in Korea (0.1 Mt), the two largest consumers of PCI in 2015. Other increases occurred in the Russian Federation becoming the third major consumer (1.1 Mt), Germany (0.2 Mt), India (0.2 Mt) and Austria that jumped up 0.5 Mt from 2014 levels.

Table 11: PCI used in blast furnaces (major consumers in thousand tonnes)

	2013	2014	2015
Japan	14 681	14 207	14 005
Korea	9 092	8 827	9 592
Russian Federation	3 831	4 020	5 080
Germany	4 460	4 650	4 881
India	3 037	3 237	3 390
France	2 505	2 840	3 033
Netherlands	1 299	1 398	1 496
United Kingdom	1 411	1 513	1 444
Chinese Taipei	1 111	1 383	1 381
Belgium	1 087	1 080	1 035
Spain	759	780	879
United States	1 461	1 207	870
Austria	187	230	764
Turkey	744	651	690
Italy	815	1 021	672
Slovak Republic	576	655	608
Sweden	443	396	313
Czech Republic	..	276	300
Poland	141	184	270
Norway	113	106	74
Australia	206	190	60
Serbia	25	37	56
Finland	..	..	53
World	47984	48888	50946

Data for Australia, India and Japan are provided on a fiscal basis.

Data for OECD countries are shown here as submitted, and this may differ from consumption data available elsewhere where portions may have been moved from blast furnace transformation to consumption in the iron and steel industry as part of the IEA blast furnace model.

See Table 4.4 in Part VI for other countries and historical data. Includes granular coal injection for some countries. Data for PR China are not available.

The top five reported PCI consumers (Japan, Korea, the Russian Federation, Germany, and India) accounted for 72.5% of all PCI consumption, up from 71.5% in 2014.

Many countries are starting to use PCI techniques as it is the case of Finland since fall of 2015. Other emerging economies are injecting metallurgical quality coal, but are not yet providing statistics in this area. For example, reasonable estimates for the magnitude of PCI use in the People's Republic of China could outweigh the entire table above.

Coal resources and reserves

Coal reserve estimates

In its 2016 study⁵, the German Federal Institute for Geosciences and Natural Resources (BGR) estimates that proven economically recoverable global coal reserves were 1 029.0 billion tonnes, an increase of 44.4 billion tonnes from its 2015 study.

These proven reserves represent 133.1 years of production at current levels, up from 124.2 years in 2015 as reserves increased by 4.51% and production decreased by 2.5%. Overall, the long-term trend shows a decreasing number of years available at given production level despite the increase of 2015.

Table 12: Changes in production at current levels over time. World and China (Gt)

Coal Edition	Proven reserves		Production		Years	
	World	China	World	China	World	China
2003	984.5	114.5	4.86	1.45	202.6	79.0
2004	907.3	114.5	4.91	1.54	184.8	74.4
2005	909.1	114.5	5.27	1.82	172.5	62.9
2006	989.5	114.5	5.66	2.09	174.8	54.8
2007	934.9	133.2	6.02	2.32	155.3	57.4
2008	1 019.3	192.0	6.37	2.52	160.0	76.2
2009	989.9	192.0	6.64	2.72	149.1	70.6
2010	997.2	191.6	6.84	2.84	145.8	67.5
2011	1 000.5	191.6	6.97	3.04	143.5	63.0
2012	1 003.8	191.6	7.35	3.32	136.6	57.7
2013	1 037.6	191.6	7.8	3.61	133.0	53.1
2014	1 052.1	191.6	7.92	3.68	132.8	52.1
2015	968.2	128.0	7.97	3.75	121.5	34.1
2016	984.6	131.6	7.93	3.64	124.2	36.2
2017	1029.0	133.7	7.73	3.56	133.1	37.6

Reserves data from 2003 to 2005 are from the World Energy Council, while other data are provided by BGR.

Reserve data are as submitted in initial publications. Production data are inclusive of current country revisions.

Current world hard coal total resources are estimated to be 17.7 trillion tonnes, or over 18 times current proven reserves, while lignite resources amount to another 4.4 trillion tonnes. So taking the example of the People's Republic of China, proven reserves are deemed to currently constitute just 2.4% of their total hard coal resources (5.3 Tt).

For most years where expansion of proven reserves has occurred, it has done so outside of a commodities boom cycle, so record prices are not driving reclassification between resources and reserves. This is interesting, as it shows that tens of billions of tonnes of proven reserves are being identified in greenfield sites annually, despite currently depressed prices, which are currently problematic for some existing producers. This also indicates that a not inconsiderable percentage of resources exist as resources rather than proven reserves, simply because no one has invested the funds to prove them, or they were pending upon third party infrastructure investment.

Geographic location of proven coal reserves

Although coal resources are widely distributed around the world⁶, proven coal reserves tend to be concentrated in the countries which rely on coal for domestic energy or export revenue.

The People's Republic of China accounts for 13.0% of proven reserves while India accounts for a 9.2%. OECD countries controlled 48.3% of the proven total coal reserves in 2015, with United States as the main contributor with a 24.4% in 2015.

Proven reserves in the top five producing countries account for 523 Gt of hard coal and nearly 128 Gt of lignite, for 73.4% and 40.3% respectively of global proven reserves. If you then include the 6th largest producer, the Russian Federation, this becomes 83.2% of hard coal reserves and 68.9% of lignite reserves.

5. *Reserves, Resources and Availability of Energy Resources*, Federal Institute for Geosciences and Natural Resources, Hanover, Germany, 2016.

6. The range of definitions of coal resources and reserves and an overview of the national classification systems is provided in an Appendix to *Major Coalfields of the World*, IEA Coal Research, London, June 2000.

PART I

EXPLANATORY NOTES

1. DEFINITIONS OF PRODUCTS AND FLOWS

The energy statistics tables provide a set of commodity balances for all sources of energy (“products”): primary coal and coal products, peat, natural gas primary oil and oil products, solid biofuels, liquid biofuels, biogases, waste, as well as electricity and heat, which are derived from various sources.

Each commodity balance is divided into three main blocks of “flows”: from top to bottom, the first showing *supply*, the second showing the *transformation processes* and *energy industries*, and the third showing *final consumption*, broken down into the various end-use sectors.

The definitions of products and flows presented in this chapter are based on those of the *Joint IEA/Eurostat/UNECE annual energy questionnaires*¹, and on the United Nations *International Recommendations on Energy Statistics*.²

Products

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 two main categories, which are themselves divided into two subcategories:

- Hard coal
 - Anthracite

- Bituminous coal
 - Coking coal
 - Other bituminous coal
- Brown coal
 - Sub-bituminous coal
 - Lignite

In cases where data are presented in Mtoe or Mtce in this book and sourced to OECD/IEA *World Energy Balances*, the term “Coal” includes all primary coal types listed above, and coal products (patent fuel, coke oven coke, gas coke, coal tar, BKB, coke oven gas, gas works gas, blast furnace gas, and other recovered gases). For simplicity in some cases, coal, peat for energy use, peat products and oil shale and oil sands are shown together as coal.

Classifying different types of coal into practical categories for use at an international level is difficult for two reasons:

Divisions between coal categories vary between classification systems, both national and international, based on calorific value, volatile matter content, fixed carbon content, caking and coking properties, or some combination of two or more of these criteria.

Although the relative value of the coals within a particular category depends on the degree of dilution by moisture and ash and contamination by sulphur, chlorine, phosphorous and certain trace elements, these factors do not affect the divisions between categories.

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

1. www.iea.org/statistics/resources/questionnaires/annual/

2. http://unstats.un.org/unsd/energy/ires/IRES_Whitecover.pdf

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

- i) **Hard coal:** Coal of gross calorific value not less than 5 732 kcal/kg (24 GJ/t) on an ash-free but moist basis and with a mean random reflectance of vitrinite of at least 0.6 percent.
- ii) **Brown coal:** Non-agglomerating coal with a gross calorific value less than 5 732 kcal/kg (24 GJ/t) and with a mean random reflectance of vitrinite of less than 0.6 percent.

The IEA has adopted the basis of these definitions of hard coal and brown coal in this book and in other publications for presenting statistics relating to coal production, trade and consumption throughout the history of these publications.

Over 20 international organisations including the International Energy Agency, Eurostat and the United Nations Statistics Division have been collaborating since 2005 under the umbrella of the Intersecretariat Working Group on Energy Statistics (InterEnerStat) to harmonise a collective energy vocabulary between organisations and anticipate future needs. This work was also to feed into the UN's International Recommendations for Energy Statistics:

<http://unstats.un.org/unsd/energy/ires/default.htm>.

The harmonised suite of product and energy flow definitions are available at:

www.iea.org/interenerstat_v2/meetings.asp.

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, which should also minimise the differences between reported data from consumer and producer nations or producers and consumers on a national basis.

Some countries however may still choose to report consumption by classification based on or guided by usage, so data presented in this book may differ from those presented in the national publications of individual countries because the countries may have adopted a different coal classification and reporting system that better suits their particular national needs. As far as possible, national coal statistics reported by the IEA in this book and in other publications have been adjusted to be consistent with the IEA definitions noted above, however this may not always be the case.

In order to improve the information base for coal market analysis and projections, these two main categories of coal have been further sub-divided in IEA/OECD Coal Statistics from 1978 as follows:

Hard coal

Hard coal is calculated as the sum of anthracite and all bituminous coals.

- **Anthracite** is a high-rank, hard coal used mainly for industrial and residential heat raising.
- **Bituminous coal** is a medium- to high-rank coal used for gasification, industrial coking and heat raising and residential heat raising:
 - Bituminous coal that can be used in the production of a porous coke capable of supporting a blast furnace charge is known as **coking coal**.
 - **Other bituminous coal**, not included under coking coal, may also be commonly known as thermal coal; however this less formal grouping increasingly tends to include a range of brown coals. Also included in other bituminous coal statistics are recovered slurries, middlings and other low-grade, higher-rank coal products not further classified by type.

Due to the differing nature of the criteria for these coal types, in some cases it is possible to fulfil some, but not all criteria. In this case a judgement call needs to be made. As a general rule, para-bituminous and ortho-bituminous coals tend to be classed as other bituminous coal despite failing to meet one of the calorific or vitrinite mean random reflectance criteria requisite for hard coal classification.

Primary coal used in pulverised (or granular) coal injection in blast furnaces is commonly abbreviated to PCI (or GCI) coal. In this book PCI includes GCI. The IEA does not have a separate product classification for PCI as the term defines a particular end-use for coal. In IEA statistics, PCI is generally included in steam coal, with the exception of Japan, Korea, the Netherlands, Poland, the Slovak Republic, Turkey (for some years) and the United Kingdom, where it is included with coking coal. This also means that production and trade of PCI suitable coal are not available in this book.

Note: In editions prior to Coal Information 2014, for the following countries, hard coal data also contained sub-bituminous coal: Australia, Belgium, Chile, Finland, France, Iceland, Japan, Korea, Mexico, New Zealand,

Portugal and the United States. Prior to 1978, where only hard coal and brown coal are available as classification breakdowns, hard coal data for these countries may still contain sub-bituminous coal data.

Brown coal

Brown coal is calculated as the sum of sub-bituminous coal and lignite. Until *Coal Information* 2013, oil shale mined and combusted directly was reported as lignite, while shale oil was reported as other hydrocarbons in *Oil Information*. Since the 2014 edition, oil shale and oil sands have their own category, while shale oil continues to be reported as other hydrocarbons in *Oil Information*.

Definitions for sub-bituminous coal and lignite are as follows:

- **Sub-bituminous coal:** non-agglomerating coals with a gross calorific value between 4 777 kcal/kg (20 GJ/t) and 5 732 kcal/kg (24 GJ/t) on an ash-free but moist basis.
- **Lignite:** non-agglomerating coal with a gross calorific value less than 4 777 kcal/kg (20 GJ/t) on an ash-free but moist basis.

Note: In the 2014 edition, the calorific floor for sub-bituminous coal (on an adjusted basis) was raised from 4 165 kcal/kg to 4 777 kcal/kg. Very little product re-classification from sub-bituminous coal to lignite occurred as a result of this change in requirements.

Steam Coal

In addition to the other coal aggregates, we also provide data for steam coal. While coking coal tends to have more specific applications, a more general use of coal is combustion to provide heat, often with the specific use of raising steam in a boiler.

Steam coal in this publication contains all anthracite, other bituminous coal and sub-bituminous coal, but not lignite or coking coal.

Prior to the 2012 publication, all hard coals that were not coking coal (including the sub-bituminous coal from the excepted countries listed above) were classed as steam coal. This also included by necessity countries (not listed) where sub-bituminous coal was unable to be separated from other bituminous coal data for reporting purposes.

For the *Coal Information* 2012 publication onwards, the definition of steam coal was adjusted to include all sub-bituminous coals. This move was done to achieve

greater congruence with practical, formal and informal definitions of steam (thermal) coal in the market and coal industry at large.

The definitions of hard coal and brown coal as aggregates in terms of their component parts remain unchanged and consistent with the UNECE guidelines above and InterEnerStat definitions. This means hard coal can no longer be calculated by adding steam coal data to coking coal data.

Coal products

The primary coal types mentioned above may be directly consumed or transformed into another fuel or energy source. Derived solid fuels and liquids are products resulting from the transformation from hard coal, brown coal or other primary solid fuels, sometimes with the addition of other materials.

Coke oven coke

Coke oven coke is the solid product obtained from the carbonisation of coal, principally coking coal, at high temperature. It is low in moisture content and volatile matter. Coke oven coke is used mainly in the iron and steel industry, acting as an energy source and a chemical agent. Also included are semi-coke (a solid product obtained from the carbonisation of coal at a low temperature), lignite coke (a semi-coke made from lignite), coke breeze and foundry coke. The heading *other energy industry own use* includes the consumption at the coking plants themselves. Consumption in the *iron and steel industry* does not include coke converted into blast furnace gas. To obtain the total consumption of coke oven coke in the iron and steel industry, the quantities converted into blast furnace gas have to be added (these are included in *blast furnaces*).

Gas coke

Gas coke is a solid by-product of coal used for the production of town gas in gas works. Gas coke is used for heating purposes.

Patent fuel

Patent fuel is a composition fuel manufactured from coal fines by shaping with the addition of a binding agent such as pitch. The amount of patent fuel produced may, therefore, be slightly higher than the actual amount of coal consumed in the transformation process. Consumption of patent fuels during the patent fuel manufacturing process is included under *other energy industry own use*.

Brown coal briquettes (BKB)

BKB is a composition fuel manufactured from lignite or sub-bituminous coal, produced by briquetting under high pressure with or without the addition of a binding agent. These figures include peat briquettes, dried lignite fines and dust. The heading *other energy industry own use* includes consumption by briquetting plants.

Coal tar

Coal tar is a result of the destructive distillation of bituminous or of the low-temperature carbonisation of brown coal. Coal tar from bituminous coal is the liquid by-product of the distillation of coal to make coke in the coke oven process. Coal tar can be further distilled into different organic products (e.g. benzene, toluene, naphthalene), which normally would be reported as a feedstock to the petrochemical industry.

Quite a few countries are currently unable to report coal tar data. For these countries, coke oven transformation losses will likely appear larger than they actually are, while consumption data will obviously be missing from the relevant end-use sector.

Manufactured Gases

Manufactured gases created outside of refineries, sourced primarily from solid hydrocarbons are reported on the coal questionnaire. They include purpose built products like gas works gas, whose manufacture is the main purpose of the transformation process, and products like coke oven gas and blast furnace gas which are useful energy by-products of another process.

Coke oven gas

Coke oven gas is obtained as a by-product of solid fuel carbonisation and gasification operations carried out by coke producers and iron and steel plants. It is calorifically rich, and when cleaned is predominantly H₂.

Gas works gas

Gas works gas covers all types of gas produced in public utility or private plants, whose main purpose is the manufacture, transport and distribution of gas, regardless of process. It includes gas produced by carbonisation (potentially including gas produced by coke ovens and transferred to gas works), by total gasification (with or without enrichment from oil products) and by reforming and simple mixing of gases, which may include air.

Coal seam gas is reported on the natural gas questionnaire as colliery gas, as most likely will be the case for underground coal gasification (UGC).

Note: In terms of aggregated data for fossil-fuel families, starting with the 2011 edition, gas works gas is included as a coal product for the years 1990 and beyond. Before 1990, gas works gas is included with natural gas.

Blast furnace gas

Blast furnace gas is obtained as a by-product from operating blast furnaces. It is recovered upon leaving the furnace and used partly within the plant and partly in other steel industry processes; or used in power stations equipped to burn it. It is mainly nitrogen (N₂), with roughly equal amounts of carbon dioxide and carbon monoxide, and will contain other trace gases. Off gases from direct reduced iron and other similar processes may also be reported here.

Other recovered gases

Other recovered gases were previously known as oxygen steel furnace gas, which is most commonly obtained as a by-product of the production of steel in an oxygen-fired furnace; and is recovered upon leaving the furnace. This gas can also be known as converter gas, LD gas or BOS gas. Other off-gases of similar nature (generally free of N₂) are also reported in this category, hence the change of name to be intrinsically more inclusive of other processes, metallurgy and industries.

Peat

A solid formed from the partial decomposition of dead vegetation under conditions of high humidity and limited air access (initial stage of coalification). It is available in two main forms *for use as a fuel* - sod peat and milled peat. Peat is not considered a renewable resource as its regeneration period is considerable.

Peat has a considerable amount of non-energy purposes. Non-energy consumption, and production of peat which is consumed in non-energy use are not included in IEA peat statistics.

Peat products

Sod peat can be pressed into briquettes. Milled peat can also be made into briquettes or pellets for fuel use. Briquettes are significantly denser and contain much less water, so have a higher calorific value than peat. They can be used on residential or industrial scale.

Oil shale and oil sands

Oil shale should not be confused with shale oil. Shale oil (often obtained by in situ thermally enhanced mining practices) is reported as an oil product.

Oil shale is a sedimentary rock which contains organic matter in the form of kerogen – a waxy hydrocarbon-rich material regarded as a precursor of petroleum. In solid form, it contains more inert matter than coal, while the sand in oil sands may often be in the form of sandstone. Oil shale may be burned directly, or retorted to extract shale oil, the process of which is reported as coal liquefaction transformation.

Regarding the data as marshalled by the EDC, while supply and demand data for oil shale and oil sands exist in the *Coal Information* publication, data for shale oil (as part of Other hydrocarbons) exist in the *Oil Information* publication. Whether this is the result of in-situ extraction technologies (*Oil Information* only); transformation of oil shale via liquefaction technologies (inputs exist in *Coal Information*, outputs in *Oil Information*, combined with other data); or deeming that primary supply begins with the saleable product and that therefore, above-ground retorts are part of the extraction process rather than a transformation process, thereby treating the second case as the first.

Shale gas, like colliery gas, is not reported on the Solid Fossil-fuels and Manufactured Gases questionnaire or included in this publication, but is included in the *Natural Gas Information* publication.

Historical production and consumption of oil shale and oil sands occurred to varying degrees in a wider range of countries than are currently reporting data.

Electricity and heat

Data for electricity are expressed in gigawatt hours and heat are expressed in terajoules.

Data for electricity and heat includes disaggregated data on inputs and outputs of ‘combined heat and power’ and on ‘district heating’. Data on heat became available in different years for different countries and thus aggregated country data should be used with caution.

Total electricity production includes production from both main activity producers (formerly known as public) and autoproducers. Generally, the split of total electricity production between main activity producers and autoproducers is available only after 1973.

Electricity

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.

The difference between gross and net production is generally estimated as 7% for conventional thermal stations, 1% for hydro stations, and 6% for nuclear, geothermal and solar stations. Production in hydro stations includes production from pumped storage plants.

Heat

Heat production includes all heat produced by main activity producer CHP and heat plants, as well as heat sold by autoproducer CHP and heat plants to third parties.

Fuels used to produce quantities of heat for sale are included in transformation processes under the rows *CHP plants* and *heat plants*. The use of fuels for heat which is not sold is included under the sectors in which the fuel use occurs.

Flows: energy balance

Coal balances are presented in detail in Parts III and IV. In Part III, Table 1 presents uses in the rows and selected years in the columns. Data are presented in millions of tonnes of coal equivalent (Mtce). One tonne of coal equivalent is 7 million kilocalories.

Each table is divided into three main parts: the first shows supply elements such as trade and production, the second shows the transformation processes and energy industries, while the third shows final consumption broken down into various end-use sectors.

Both primary fuels such as coal and peat, and derived fuels such as coke oven coke and blast furnace gas are included in the calculations. However, derived products manifest themselves as positive outputs in the relevant transformation process used to create them. Generally they should be less than the inputs, which result in a net negative entry in the transformation flow. Given that this balance is restricted to coal and associated products, inputs from other fuel types (such as pitch for patent fuels, or oil, gas and renewable inputs to blast furnaces) are not shown, nor is electricity generated, which differs from a full energy balance.

The energy balance flows detailed below have the following functions, and may also appear in other tables:

Supply

The first block of the energy commodity balances shows the following elements of supply:

$$\begin{aligned}
 & \text{Production} \\
 & + \text{Imports} \\
 & - \text{Exports} \\
 & \pm \text{Stock changes} \\
 & = \text{Domestic supply}
 \end{aligned}$$

Note, exports and stock changes incorporate the algebraic sign directly in the number.

Production

Production is the production of primary energy, i.e. hard coal, brown coal, peat, shale oil, etc. Production is calculated after the removal of impurities on the bases which it is provided for sale. It is important to note that derived products such as coke oven coke and patent fuel, while included in the balances, do not appear in production as they are not primary products.

Imports and exports

Imports and exports comprise amounts having crossed the national territorial boundaries of the country, whether or not customs clearance has taken place. Imports and exports comprise the amount of fuels obtained from or supplied to other countries, whether or not there is an economic or customs union between the relevant countries. Coal in transit should not be included.

Stock changes

Stock changes reflects the difference between opening stock levels on the first day of the year and closing levels on the last day of the year of stocks on national territory held by producers, importers, energy transformation industries and large consumers. A stock build is shown as a negative number and a stock draw as a positive number. It is presented this way as this is how it affects the domestic supply, as opposed to how it describes the changes in stocks.

Total primary energy supply

Total primary energy supply (TPES) consists of production + imports - exports \pm stock changes as an abstract concept. Given that exports and stock builds both are represented as negative numbers, in reality TPES = production + imports + exports + stock changes. Marine and aviation bunkers also are not counted in TPES.

Statistical difference

Statistical difference is essentially the difference between supply and demand. It includes the sum of the

unexplained statistical differences for individual fuels, as they appear in the basic energy statistics. It also includes the statistical differences that arise because of the variety of conversion factors in the coal and oil columns. See the introduction to *World Energy Statistics* for further details.

For countries that are unable to collect stock change data, stock builds and draws will contribute to statistical differences.

Transformation processes

Transformation processes record the transformation of one kind of fuel or energy into another with both inputs and outputs being measured. This may bridge several transformation processes. For instance:

Coking coal used to manufacture coke oven coke would be reported as a negative input to the coke oven transformation process.

- The resulting coke oven coke, coal tar and coke oven gas would be reported as a positive output to the coke oven transformation process flow.
- Energy inputs from other sources, including electricity, will not be reported in this particular instance of an exclusive coal and coal products balance. Therefore, numbers may not be indicative of true efficiencies, but rather map the flow of coal.
- The coke oven coke will largely be used to produce pig-iron in a blast furnace. Therefore, it will be reported where it is used – mainly as an input to the blast furnace transformation process.
- The by-product blast furnace gas will appear as an output in the blast furnace transformation flow. However, a significant amount of energy is lost in the process of making the pig-iron, so the net negative value in the blast furnace transformation flow will tend to be approximately 60% of the total energy inputs.
- The blast furnace gas (and coal tar and coke oven gas) will likewise be reported where used. Some of this will appear in the relevant consumption flows, other parts might be used to generate electricity and appear in electricity transformation.
- In a complete energy balance, the electricity generated would be converted to the appropriate energy unit and reported as a positive output in the applicable electricity transformation flow. This is not the case in the coal balance, so the number displayed in the electricity transformation flow is the fuel input, not the process efficiency loss.

The main transformation processes reported either create a derived coal product or by-product, and have been described earlier in the Energy sources section or are mentioned below.

Electricity and heat generation

Electricity and heat generation can refer to electricity plants, combined heat and power plants (CHP), or heat plants. Both main activity producer³ and auto-producer⁴ plants are included here.

Electricity plants are plants which are designed to produce electricity only. If one or more units of the plant is a CHP unit (and the inputs and outputs cannot be distinguished on a unit basis), then the whole plant is designated as a CHP plant.

Note that for autoproducer CHP plants, all fuel inputs used to generate electricity are taken into account. However, only the part of the fuel inputs used to produce the heat that is sold is shown. Fuel inputs for the production of heat that is consumed within the auto-producer's establishment are not included here but are included in the final consumption of fuels in the appropriate consumption sector.

Heat plants (including heat pumps and electric boilers) are designed to produce heat only, which is sold to a third party under the provisions of a contract. Heat pumps that are operated within the residential sector, where the heat is not sold, are not considered a transformation process and are not included here, despite the fact that equivalent electricity consumption will appear as residential use.

Blast furnaces

Blast furnaces covers the quantities of fuels used for the production of recovered gases (e.g. blast furnace gas and oxygen steel furnace gas). The production of pig-iron from iron ore in blast furnaces uses fuels for supporting the blast furnace charge and providing heat and carbon for the reduction of the iron ore. Accounting for the calorific content of the fuels entering the process is a complex matter as transformation (into blast furnace gas) and consumption (heat of combustion) occur simultaneously. Some carbon is also

retained in the pig-iron; almost all of this reappears later in the oxygen steel furnace gas (or converter gas) when the pig-iron is converted to steel. In the 1992/1993 annual questionnaires, member countries were asked for the first time to report in *transformation processes* the quantities of all fuels (e.g. pulverised coal injection [PCI] coal, coke oven coke, natural gas and oil) entering blast furnaces and the quantity of blast furnace gas and oxygen steel furnace gas produced. The IEA Secretariat then needed to split these inputs into the transformation and consumption components. The transformation component is shown in the row *blast furnaces* in the column appropriate for the fuel, and the consumption component is shown in the row *iron and steel*, in the column appropriate for the fuel. Originally, the IEA Secretariat assumed that there was a transformation efficiency of 100%, which meant that the energy going into the transformation process was equal to the energy coming out i.e. equivalent to the energy content of the gases produced). However, when the IEA data were used to calculate CO₂ emissions from fuel combustion using the Intergovernmental Panel on Climate Change (IPCC) methodology, as published in the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*,⁵ the blast furnaces were showing a carbon gain. Starting with the 1998 edition, the IEA Secretariat decided to assume a transformation efficiency such that the carbon input into the blast furnaces should equal the carbon output. This is roughly equivalent to assuming an energy transformation efficiency of 40%.

Gas works

Gas works covers the quantities of fuels used for the production of town gas. Note, this item also includes other gases blended with natural gas.

Coke/patent fuel/BKB/PB plants

Coke/patent fuel/BKB/PB plants covers the use of fuels for the manufacture of coke, coke oven gas, patent fuels, BKB and peat briquettes (PB).

Other transformation

Other transformation covers non-specified transformation and transformations not shown elsewhere, such as coal liquefaction.

3. Main activity producer 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.

4. Autoproducer undertakings generate electricity and/or heat, wholly or partly for their own use as an activity which supports their primary activity. They may be privately or publicly owned.

5. The *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories* are available from the IPCC National Greenhouse Gas Inventories Programme at www.ipcc-nggip.iges.or.jp.

Energy industry own use

Energy industry own use contains the primary and secondary energy consumed by transformation industries for heating, pumping, traction and lighting purposes [ISIC⁶ 05, 06, 19 and 35, Group 091 and Classes 0892 and 0721]. These quantities are shown as negative figures. Included here is, for example, own use of energy in coal mines.

Fuel mining and extraction

Fuel mining and extraction includes both coal mining and oil and gas extraction. For hard coal and lignite mining, this represents the energy which is used directly within the coal industry. It excludes coal burned in pithead power stations (included under electricity plants in transformation processes) and free allocations to miners and their families (considered as part of household consumption and therefore included under residential). For oil and gas extraction, flared gas is not included.

Other energy industry own use

Other energy industry own use (including own consumption in patent fuel plants, coke ovens, gas works, blast furnaces, BKB, peat briquette and lignite coke plants, coal liquefaction plants, gas-to-liquids plants, charcoal production plants, nuclear plants as well as use in non-specified energy industries).

Losses

Losses includes losses in gas distribution, flaring or venting of manufactured gases, electricity transmission and coal transport.

Consumption

Total final consumption (TFC) is the sum of consumption by the different end-use sectors.

Industry consumption is specified in the following sub-sectors. Note that energy used for transport by industry is not included here but is reported under transport.

Also note that if a particular industry makes another energy product, either as part of the industrial process (e.g. coke oven coke manufacture in an integrated iron and steel plant), or as an autoproducer (which may still be part of the industrial process), consumption does not

appear within the particular industry, but instead appears within the relevant transformation flow.

Iron and steel industry

Iron and steel industry [ISIC Group 241 and Class 2431];

Chemical and petrochemical industry

Chemical and petrochemical industry [ISIC Divisions 20 and 21] excluding petrochemical feedstocks;

Non-ferrous metals

Non-ferrous metals basic industries [ISIC Group 242 and Class 2432];

Non-metallic minerals

Non-metallic minerals such as glass, ceramic, cement, etc. [ISIC Division 23];

Transport equipment

Transport equipment [ISIC Divisions 29 and 30];

Machinery

Machinery: fabricated metal products, machinery and equipment other than transport equipment [ISIC Divisions 25 to 28];

Mining and quarrying

Mining (excluding fuels) and quarrying [ISIC Divisions 07 and 08 and Group 099];

Food and tobacco

Food and tobacco [ISIC Divisions 10 to 12];

Paper, pulp and printing

Paper, pulp and printing [ISIC Divisions 17 and 18];

Wood and wood products

Wood and wood products (other than pulp and paper) [ISIC Division 16];

Construction

Construction [ISIC Divisions 41 to 43];

Textile and leather

Textile and leather [ISIC Divisions 13 to 15];

Non-specified (Industry)

Non-specified (any manufacturing industry not included above) [ISIC Divisions 22, 31 and 32].

6. International Standard Industrial Classification of All Economic Activities, Series M, No. 4 / Rev. 4, United Nations, New York, 2008.

Note: Most countries have difficulties supplying an industrial breakdown for all fuels. In these cases, the *non-specified* industry row has been used. Regional aggregates of industrial consumption should therefore be used with caution.

Non-energy use covers those fuels that are used as raw materials in the different sectors and are not consumed as a fuel or transformed into another fuel.

Transport includes all fuels used for the transport [ISIC Divisions 49 to 51] of goods or persons between points of departure and destination within the national territory irrespective of the economic sector within which the activity occurs.

Other

Residential

Residential includes consumption by households, excluding fuels used for transport. It includes households with employed persons [ISIC Divisions 97 and 98] which is a small part of total residential consumption.

Commercial and public services

Commercial and public services [ISIC Divisions 33, 36-39, 45-47, 52, 53, 55, 56, 58-66, 68-75, 77-82, 84 (excluding Class 8422), 85-88, 90-96 and 99].

Agriculture/forestry

Agriculture/forestry includes deliveries to users classified as agriculture, hunting and forestry by the ISIC, and therefore includes energy consumed by such users whether for traction (excluding agricultural highway use), power or heating (agricultural and domestic) [ISIC Divisions 01 and 02].

Fishing

Fishing includes fuels used for inland, coastal and deep-sea fishing. Fishing covers fuels delivered to ships of all flags that have refuelled in the country (including international fishing) as well as energy used in the fishing industry [ISIC Division 03]. *Prior to the 2007 edition, fishing was included with agriculture/forestry and this may continue to be the case for some countries.*

Non-specified

Non-specified includes all fuel use not elsewhere specified as well as consumption in the above-designated categories for which separate figures have not been provided. Military fuel use for all mobile and stationary consumption is included here

(e.g. ships, aircraft, road and energy used in living quarters) regardless of whether the fuel delivered is for the military of that country or for the military of another country.

Non-energy use

Non-energy use covers those fuels that are used as raw materials in the different sectors and are not consumed as a fuel or transformed into another fuel. Non-energy use is shown separately within final consumption.

Coal resources and reserves

Quantifying mineable coal is based on a consideration of geological, mining and economic criteria. The amount of coal in place and, in some cases, the amount of mineable coal is influenced by national resource measurement criteria. The basis for computing these resources varies from country to country and, therefore, it must be borne in mind that for this reason, direct comparisons are sometimes not possible. During the 1990s, there was a considerable discussion on the adoption of internationally recognised standards for reporting reserves. This largely stems from the requirements of capital markets for improved transparency in reserve estimation where project financing is being sought. However, to date, while there has been adoption of some international recommendations incorporated into national or regional standards, there has not been the adoption of one set of universal international standards. There are, however, some generally recognised definitions that can be applied.

Resources

Resources refer to the amount of coal that may be present in a deposit or a coalfield subject to some broad restrictions as to its viability as a potential resource. Resources can be measured, indicated or inferred, based upon the level of understanding.

Calculation of total resources does not take into account the feasibility of mining the coal under current technological and economic conditions. Not all resources are recoverable using current technology, and not all resources are recoverable under current market conditions.

Reserves constitute that subset of resources that are either known to be recoverable, or estimated to be recoverable with a medium to high level of confidence.

Reserves

Reserves may be further defined further in terms of proven (or measured) reserves, and probable (or indicated) reserves, based on exploration results and the degree of confidence in those results. Probable reserves have been estimated with a lower degree of confidence than proven reserves. Estimates take account of coal-fields' geological characteristics, in particular the regularity, thickness and quality of seams, the spacing of exploration boreholes and other exposures, and geological discontinuities such as faults or folding, all of which affect the practical recoverability of the coal.

Proven reserves

Proven reserves are those reserves that are not only confidently considered to be recoverable, but can also be recovered economically under current market conditions. In other words, they take into account what current mining technology can achieve, as well as the economics of recovery (mining, transportation and other relevant recovery costs, such as government royalties, and coal prices). Proven reserves will, therefore, fluctuate according to economic pressures, especially price.

Units and conversions

Balance 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 ton of average crude oil. This unit is used by the IEA/OECD in the majority of its energy balances.

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.

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, obtained specific calorific factors supplied by the national administrations

for the main categories of each quality of coal and for each main flow or use (i.e. production, imports, exports, electricity generation, coke ovens, blast furnaces and industry). The supply side average of this particular set of national calorific values, that allow for the conversion of energy sources from original (physical) units to joules, are presented later in Part III.

The balances are expressed in terms of net calorific value. The difference between net and gross predominantly being the latent heat of vaporisation of any moisture and the water produced during combustion of any hydrogen within the fuel. For coal and oil products, net calorific value is usually around 5% less than gross, and for most forms of hydrogen-rich natural and manufactured gas, the difference is 9-10%. The use of net calorific value is consistent with the practice of the Statistical Offices of the European Communities and the United Nations.

Note that throughout this publication, 1 tonne means 1 metric tonne or 1000 kg. Billion refers to 1 thousand million (10^9). Also, in many cases, totals shown in the tables may not be the exact sum of their components due to independent rounding.

Conversion (to toe and tce)

In this report some data are reported in terms of tonnes of coal equivalent (tce) because this unit is more widely used in the international coal industry. A tonne of coal equivalent is defined as 7 million kilocalories (29.3076 GJ). The relation between tonne of oil equivalent (toe) and tonne of coal equivalent (tce) is therefore:

$$1 \text{ tce} = 0.7 \text{ toe}$$

Units for gases

In the IEA/OECD publication *World Energy Statistics* all data on gases are expressed in terajoules (TJ), on the basis of their gross calorific value.

$$1 \text{ terajoule} = 0.0002388 \text{ Mtoe.}$$

To calculate the net heat content of a gas from its gross heat content, multiply the gross heat content by the appropriate following factor:

Gas	Ratio of NCV to GCV
Natural gas	0.9
Gas works gas	0.9
Coke oven gas	0.9
Blast furnace gas	1.0
Other recovered gases	1.0

Please note that this means in order to calculate gross from net, if necessary, you must divide the net value by 0.9 (rather than multiply by 1.1).

2. 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.

Energy data for member countries reported for 2016 (shown as 2016p) are provisional data based on the submissions received in early 2017 and on quarterly submissions to the IEA. In some instances it has been necessary for the IEA to estimate some data. Explanations of these estimates are provided in the country notes. Final 2016 data on solid fuels and manufactured gases will be submitted by OECD member countries to the Secretariat in annual questionnaires in late 2017. As a result, final data for 2016 and provisional 2017 data will be published in the 2018 edition of *Coal Information*.

Additional information on methodologies and reporting conventions are included in the notes in *World Energy Balances 2017* edition and *World Energy Statistics 2017* edition.

Qualifiers

Data marked as “e” are estimates of the IEA Secretariat. Data marked as “c” mean that the data are confidential due to country specific regulations. Data marked as “.” mean that data are not available (either not collected or not submitted by national government). Data marked as ‘x’ mean that the data point is not applicable or there is no meaningful explanation of a value there. For example, the price cannot be shown if the consumption in the country is forbidden or the country itself did not exist as an independent

entity at a given point in time. The year marked as “p” (e.g. 2016p) refers to provisional data.

Treatment of blast furnace coke and PCI data

Data on coke used in and pulverised coal injected into blast furnaces (PCI), are harmonized for all OECD countries in order to ensure that blast furnace transformation data are consistently presented and that comparisons between countries for consumption are meaningful. The main effect of these revisions has been, where necessary, to revise the reported consumption of coal in the iron and steel industry and in blast furnace transformation, so discrepancies between IEA and national accounts may ensue. In effect, inputs to blast furnaces may be calibrated to be proportionate to production of blast furnace gas and some inputs to blast furnace consumption may be reported as consumption in the iron and steel industry if there are lower than normal outputs of blast furnace gas.

It should be noted that in IEA statistics of coal trade and consumption, PCI is not separately specified as a product in its own right. Rather it is included in some form of hard coal. This methodology is based on the fact that pulverised coal injection is a process, and this process, unlike for coke oven coke manufacture, is somewhat independent of coal type.

For Japan and Korea, PCI consumption is reported in this book as a coking coal to be consistent with the national practice of including imports of PCI coal with coking coal without regard to coal type. Other countries that report some usage of coking coal as inputs to blast furnaces (the Netherlands, Poland, the Slovak Republic, Turkey and the United Kingdom) may do so for this reason, or because of the respective coal quality.

People's Republic of China

General notes

The People's Republic of China (China) joined the IEA as an Association country in November 2015.

Revisions of China's 2000 - 2010 energy data

In early 2016, the National Bureau of Statistics (NBS) of the People's Republic of China (China) supplied the IEA with detailed energy balances for 2000 to 2010 and the IEA revised its data accordingly.

In September 2015, the NBS published China's energy statistics for 2013, as well as revised statistics for the years 2011 and 2012. These have already been taken into account by the IEA in the "Special data release with revisions for the People's Republic of China" in November 2015.

All revisions show significant changes both on the supply and demand side for a number of energy products, resulting in breaks in time series between 1999 and 2000. Most importantly, the previously significant statistical difference for coal has now been allocated in industrial consumption based on findings from a national economic census.

Methodology

Net calorific values (NCV) for coal inputs to power generation from 2000 are estimated by applying assumptions used by China on the average thermal efficiency of coal-fired power stations in these years. NCVs are also estimated for bituminous coal production from 2000 as well as for inputs to main activity heat plants from 2008.

A collaborative effort between NBS and IEA continues, with the objective of providing additional detail on energy production, transformation and consumption of all five different types of coal (e.g. anthracite, coking coal, other bituminous, sub-bituminous and lignite). At the moment NBS only provides quantities of raw coal and washed coal in their energy balances and the IEA Secretariat has attributed these quantities to coking coal and other bituminous coal. It is expected that the continuing work to provide disaggregated data on the five different coals will result in greater detail in future editions.

Since 2000, imports and exports of cleaned coal are no longer reported in the national energy balance of China. The IEA Secretariat has used secondary

sources of information to report this coking coal trade and corresponding quantities have been removed from bituminous coal trade. Consumption of this coking coal is assumed to be in coke ovens.

The IEA data of coal stocks for the years 1985 and 1990 as well as coal production for the years 1997-1999 are estimates and do not represent official data released by the Chinese government. Those estimates were based on the assumption that coal consumption statistics are more reliable than coal production statistics and that the production-consumption relationship should maintain a balance over time.

Observations

In recent years, China has reported large increases in stocks for crude oil, oil products and for different types of coal. These stock increases are seen as consistent with trends in economic growth and development in China; however, information is currently lacking on the scale of the infrastructure available for this magnitude of stock increases.

Starting with 2010 data, NBS increased the level of detail of the national energy balance regarding oil products and coal gases. Breaks in time series may occur between 2009 and 2010.

Data for coal trade in this publication may not match data from secondary sources of information.

Sources 1990 to 2015:

- *China Energy Statistical Yearbook*, National Bureau of Statistics, Beijing, various editions up to 2016.
- Direct communication with the China National Renewable Energy Centre (CNREC), National Energy Administration (NEA), Beijing.
- China Electricity Council, online statistics, various editions up to 2014.
- Zhang G., *Report on China's Energy Development 2010*, China's National Energy Administration, Beijing, editions 2009 to 2011.
- IEA Secretariat estimates.

Sources up to 1990:

- *Electric Industry in China in 1987*, Ministry of Water Resources and Electric Power, Department of Planning, Beijing, 1988.
- *Outline of Rational Utilization and Conservation of Energy in China*, Bureau of Energy Conservation State Planning Commission, Beijing, June 1987.

- *China Coal Industry Yearbook*, Ministry of Coal Industry, People's Republic of China, Beijing, 1983, 1984, 1985 and 2000.
- *Energy in China 1989*, Ministry of Energy, People's Republic of China, Beijing, 1990.
- *China: A Statistics Survey 1975-1984*, State Statistical Bureau, Beijing, 1985.
- *Almanac of China's Foreign Economic Relations and Trade*, The Editorial Board of the Almanac, Beijing, 1986.

Other sources

Quarterly energy statistics

Readers who are interested in more recent data should consult the OECD/IEA publication *Oil, Gas, Coal and Electricity Quarterly Statistics* which is published in January, April, July and October each year.

This book provides current, 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.

Coal quarterly data include

- World steam and coking coal, and lignite production;
- World steam coal and coking coal trade; and
- Coking coal and steam coal imports and exports for major OECD countries.

OECD Main Economic Indicators

OECD Main Economic Indicators is a monthly compilation of a range of indicators on recent economic developments for the 35 OECD member countries. Please refer to this publication for detailed notes regarding the selected indicators.

Price data

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

IEA data on coal prices are managed in two sub-systems, which vary not only in content, but also with respect to the data collection methods.

Import and export unit values

Import and export unit values are calculated quarterly (March, June, September and December) from national

customs statistics import and export volumes and values. The basic data are collected from monthly national trade sources (Chile, Japan, Korea, United States, Australia and Canada) or provided monthly to the IEA by the Statistical Office of the European Communities (Eurostat).

Values recorded at the import stage are the sum of cost, insurance and freight (CIF – cost including freight/fees), but exclude import duties. Values recorded at the export stage (FOB – free on board), exclude seaborne or international transport, but include inland transport costs of the exporting country.

As far as possible, the concept of ‘general imports and exports’ is used. This includes coal imports for re-export with or without processing, but excludes transit trade.

The definitions of coal categories and the volume and value units used in each of the above source systems vary considerably. A certain amount of regrouping and unit conversions is necessary once the basic data are compiled.

The rules for regrouping coal categories are consistent with the definitions used in the annual IEA/OECD coal statistics. Prices are compiled for steam coal and for coking coal. Definitions and the correspondence to national and European classifications are discussed in detail in the quarterly IEA publication *Energy Prices and Taxes*. Comments in *Energy Prices and Taxes* on certain data items, as well as general background information, are developed systematically. Data comments relate mainly to calorific values of specific coal trade flows and to national coal definitions. Background information covers duties and trade regulations.

End-user prices

End-user prices are collected quarterly from national administrations and other relevant bodies and supplemented with data extracted from national publications. Although a standard approach to reporting the data has been developed, differences in definitions between countries are explained in the notes published in *Energy Prices and Taxes*.

The standard approach to reporting end-use prices can be summarised as follows:

- includes transport costs to the consumer;
- shows prices actually paid, i.e. net of rebates; and
- includes taxes which have to be paid by the consumer as part of the transaction and which are not refundable. This excludes value added taxes paid in many European countries by industry (including

electric power stations) for all goods and services (including energy). In these cases, value added taxes are refunded to the customer, usually in the form of a tax credit. Therefore, it is not shown as part of the prices.

A standard coal quality for all international comparisons of end-use prices is not possible given the wide variety of coal qualities in domestic and international coal trade. As a result, only average prices covering a range of different qualities are collected, along with the calorific value of these averaged sales. If average prices are not available, prices of a selected coal may be chosen. Accordingly, international comparisons of coal end-use prices may be misleading if read at face value. Detailed notes concerning these price series are published in *Energy Prices and Taxes*. Also, please refer to *Energy Prices and Taxes* for the detailed description of price mechanisms in each country and country specific notes.

Derived price data

The information collected on prices is converted by the IEA Secretariat into a variety of secondary data in order to facilitate its analysis. Inter-fuel price comparisons for one country are usually made on the basis of prices per heat unit such as a tonne of coal equivalent. In the end-user price tables, the conversion factor used for converting gross calories to net calories for natural gas is 0.9.

Inter-country price comparisons are made on the basis of a standard currency unit, e.g. US dollars. Prices for regional totals are calculated as the weighted average only of the available price data in the region and, therefore, prices shown should be considered as only indicative.

For coal exports and imports, customs unit values are prices reported by OECD member countries.

Customs unit values are average values derived from customs' administrations total volume and total value data. These data indicate broad price movements as they are averages of all qualities of coal without regard to the end-use of the coal or to the contract terms and conditions under which the trade occurs.

End-user prices are those paid by end-users in the power sector and in industry and are reported by member countries in a quarterly reporting system which the IEA's Standing Group on Long Term Co-operation initiated in 1981. Data received are published in the IEA quarterly publication *Energy Prices and Taxes*.

Unless otherwise stated, prices are reported in US dollars in the year specified (i.e. current US dollars).

In addition to the official price statistics presented, coal price statistics published in the industry press are used to summarise short-term spot steam and coking coal price trends. Although not "official" in that they are not provided by member countries, there is a high correlation between prices published by the industry press and national coal price statistics.

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), Slovenia (fixed rate as of 1 January 2007), Malta and Cyprus¹ (both fixed rate as of 1 January 2008), the Slovak Republic (fixed rate as of 1 January 2009), and Estonia (fixed rate as of 1 January 2012).

Country	Rate	Country	Rate
Austria	13.7603	Italy	1936.27
Belgium	40.3399	Luxembourg	40.3399
Cyprus ⁶	0.585274	Malta	0.4293
Estonia	15.6466	Netherlands	2.20371
Finland	5.94573	Portugal	200.482
France	6.55957	Slovak Republic	30.126
Germany	1.95583	Slovenia	239.64
Greece	340.75	Spain	166.386
Ireland	0.787564		

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 notional units 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.

Energy end-use prices in US dollars

In general, country differentials between national end-use prices expressed in US dollars are heavily influenced by exchange rate differentials. However, world market prices of primary fuels in US dollars are an important parameter for the pricing of final energy

1. Please refer to Part I Section 4, Geographical Coverage.

consumption, particularly for countries which rely heavily on energy imports.

The difference between world market prices and national end-use prices in US 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***

Over time, 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* in each currency.

An alternative method of comparison is provided by Purchasing Power Parities (PPPs) 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.

The Purchasing Power Parities used here were developed jointly by the OECD statistics directorate and Eurostat (the Statistical Office of the European Communities) to enable international price comparisons to be made for GDP and its components. (For more information on the methodology, see www.oecd.org/std/ppp.)

3. GEOGRAPHICAL COVERAGE

The **Organisation for Economic Co-Operation and Development (OECD)** includes Australia; Austria; Belgium; Canada; Chile; the Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Iceland; Ireland; Israel; Italy; Japan; Korea; Latvia¹; Luxembourg; Mexico; the Netherlands; New Zealand; Norway; Poland; Portugal; the Slovak Republic; Slovenia; Spain; Sweden; Switzerland; Turkey; the United Kingdom and the United States.

OECD Americas includes Canada; Chile; Mexico and the United States.

OECD Asia Oceania includes Australia; Israel; Japan; Korea and New Zealand.

OECD Europe includes Austria; Belgium; the Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Iceland; Ireland; Italy; Latvia¹; Luxembourg; the Netherlands; Norway; Poland; Portugal; the Slovak Republic; Slovenia; Spain; Sweden; Switzerland; Turkey and the United Kingdom.

Estonia, Latvia and Slovenia are included starting in 1990. Prior to 1990, Estonia and Latvia are included in Former Soviet Union and Slovenia is included in Former Yugoslavia.

Within the **OECD**:

- **Australia** excludes the overseas territories;
- **Denmark** excludes Greenland and the Faroe Islands, except prior to 1990, where data on oil for Greenland were included with the Danish statistics. The administration is planning to revise the series back to 1974 to exclude these amounts;
- **France** includes Monaco and excludes the following overseas departments: Guadeloupe; French Guiana;

Martinique; Mayotte; and Réunion; and collectivities: New Caledonia; French Polynesia; Saint Barthélemy; Saint Martin; Saint Pierre and Miquelon; and Wallis and Futuna;

- **Germany** includes the new federal states of Germany from 1970 onwards;
- 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.
- **Italy** includes San Marino and the Holy See;
- **Japan** includes Okinawa;
- **Netherlands** excludes Suriname, Aruba and the other former Netherlands Antilles (Bonaire, Curaçao, Saba, Saint Eustatius and Sint Maarten);
- **Portugal** includes the Azores and Madeira;
- **Spain** includes the Canary Islands;
- **Switzerland** includes Liechtenstein for oil data; data for other fuels do not include Liechtenstein;
- Shipments of coal and oil to the Channel Islands and the Isle of Man from the **United Kingdom** are not classed as exports. Supplies of coal and oil to these islands are, therefore, included as part of UK supply. Exports of natural gas to the Isle of Man are included with the exports to Ireland;
- **United States** includes the 50 states and the District of Columbia but generally excludes all territories, and all trade between the US and its territories. Oil statistics include Guam, Puerto Rico² and the United States Virgin Islands; trade statistics for coal include international trade to and from Puerto Rico and the United States Virgin Islands.

1. Latvia became an OECD member in July 2016. Accordingly, Latvia appears in the list of OECD members and is included in the zone aggregates for data starting in 1990, starting with the 2017 edition. Prior to 1990, data for Latvia are included in Former Soviet Union.

2. Natural gas and electricity data for Puerto Rico are included under Other Non-OECD Americas.

The **International Energy Agency (IEA)** includes Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Estonia³, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Korea, Luxembourg, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.

World includes OECD Total; Africa; Non-OECD Americas; Non-OECD Asia (excluding China); China (People's Republic of China and Hong Kong, China); Non-OECD Europe and Eurasia; Middle East; World aviation bunkers and World marine bunkers.

Africa includes Algeria; Angola; Benin; Botswana (from 1981); Cameroon; the Republic of the Congo (Congo)⁴; Côte d'Ivoire; the Democratic Republic of the Congo; Egypt; Eritrea; Ethiopia; Gabon; Ghana; Kenya; Libya; Mauritius; Morocco; Mozambique; Namibia (from 1991); Niger (from 2000); Nigeria; Senegal; South Africa; South Sudan (from 2012); Sudan; the United Republic of Tanzania (Tanzania); Togo; Tunisia; Zambia; Zimbabwe and **Other Africa**.

Other Africa includes Botswana (until 1980); Burkina Faso; Burundi; Cabo Verde; Central African Republic; Chad; Comoros; Djibouti; Equatorial Guinea; Gambia; Guinea; Guinea-Bissau; Lesotho; Liberia; Madagascar; Malawi; Mali; Mauritania; Namibia (until 1990); Niger (until 1999); Réunion; Rwanda; Sao Tome and Principe; the Seychelles; Sierra Leone; Somalia; Swaziland; Uganda.

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

Non-OECD Europe and Eurasia includes Albania; Armenia; Azerbaijan; Belarus; Bosnia and Herzegovina; Bulgaria; Croatia; Cyprus⁵; the Former Yugoslav

Republic of Macedonia; Georgia; Gibraltar; Kazakhstan; Kosovo; Kyrgyzstan; Lithuania; Malta; the Republic of Moldova (Moldova); Montenegro; Romania; the Russian Federation; Serbia⁶; Tajikistan; Turkmenistan; Ukraine; Uzbekistan; the Former Soviet Union and Former Yugoslavia.⁷

Non-OECD Americas includes Argentina; the Plurinational State of Bolivia (Bolivia); Brazil; Colombia; Costa Rica; Cuba; Curaçao⁸; the Dominican Republic; Ecuador; El Salvador; Guatemala; Haiti; Honduras; Jamaica; Nicaragua; Panama; Paraguay; Peru; Suriname (from 2000), Trinidad and Tobago; Uruguay; the Bolivarian Republic of Venezuela (Venezuela) and **Other Non-OECD Americas**.

Other Non-OECD Americas includes Antigua and Barbuda; Aruba; the Bahamas; Barbados; Belize; Bermuda; Bonaire (from 2012); the British Virgin Islands; the Cayman Islands; Dominica; the Falkland Islands (Malvinas); French Guiana; Grenada; Guadeloupe; Guyana; Martinique; Montserrat; Puerto Rico⁹ (for natural gas and electricity); Saba (from 2012); Saint Eustatius (from 2012); Saint Kitts and Nevis; Saint Lucia; Saint Pierre and Miquelon; Saint Vincent and the Grenadines; Sint Maarten (from 2012); Suriname (until 1999); and the Turks and Caicos Islands.

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

Non-OECD Asia excluding China includes Bangladesh; Brunei Darussalam; Cambodia (from 1995); India; Indonesia; the Democratic People's Republic of Korea; Malaysia; Mongolia (from 1985); Myanmar; Nepal; Pakistan; the Philippines; Singapore; Sri Lanka; Chinese Taipei; Thailand; Viet Nam and **Other non-OECD Asia**.

3. Estonia is included starting in 1990. Prior to 1990, data for Estonia are included in Former Soviet Union.

4. Short country names are included in parentheses.

5. **Note 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 recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union member states of the OECD and the European Union:

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

6. Serbia includes Montenegro until 2004 and Kosovo until 1999.

7. Latvia became an OECD member in July 2016. Accordingly, Latvia appears in the list of OECD members and is not included in the non-OECD aggregates for data starting in 1990, starting with the 2017 edition. Prior to 1990, data for Latvia are included in Former Soviet Union.

8. The Netherlands Antilles was dissolved on 10 October 2010 resulting in two new "constituent countries" (Curaçao and Sint Maarten) with the other islands joining The Netherlands as "special municipalities". However, due to lack of detailed data the IEA Secretariat's data and estimates under the "Netherlands Antilles" still refer to the whole territory of the Netherlands Antilles as it was known prior to 10 October 2010 up to the end of 2011. Data refer only to the island of Curaçao from 2012. The other islands of the former Netherlands Antilles are added to Other Non-OECD Americas from 2012.

9. Oil statistics as well as coal trade statistics for Puerto Rico are included under the United States.

Other non-OECD Asia includes Afghanistan; Bhutan; Cambodia (until 1994); Cook Islands; Fiji; French Polynesia; Kiribati; Lao People's Democratic Republic; Macau, China; the Maldives; Mongolia (until 1984); New Caledonia; Palau (from 1994); Papua New Guinea; Samoa; the Solomon Islands; Timor-Leste; Tonga and Vanuatu.

The **European Union - 28 (EU-28)** includes Austria; Belgium; Bulgaria; Croatia; Cyprus⁵; the Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Ireland; Italy; Latvia; Lithuania; Luxembourg; Malta; the Netherlands; Poland; Portugal; Romania; the Slovak Republic; Slovenia; Spain; Sweden and the United Kingdom.

Please note that in the interest of having comparable data, all these countries are included since 1990 despite different entry dates into the European Union.

Please note that the following countries have not been considered due to lack of data:

- **Non-OECD Europe and Eurasia:** Andorra; Faroe Islands; Liechtenstein¹⁰ (except for oil data); the Palestinian Authority; Svalbard; Jan Mayen Islands;
- **Africa:** British Indian Ocean Territory; French Southern and Antarctic Lands; Mayotte; Saint Helena; Western Sahara;
- **Non-OECD Americas:** Anguilla; Bouvet Island; Saint Barthélemy; Greenland (after 1990); Saint Martin (French Part); South Georgia and the South Sandwich Islands;
- Antarctica;

Non-OECD Asia excluding China: American Samoa; Cocos (Keeling) Islands; Christmas Island; Heard Island and McDonald Islands; Marshall Islands; Micronesia (Federated States of); Nauru; Niue; Norfolk Island; Northern Mariana Islands; Pitcairn; Tokelau; Tuvalu; United States Minor Outlying Islands; Wallis and Futuna Islands.

10. Oil data for Liechtenstein are included under Switzerland.

4. ABBREVIATIONS AND CONVERSION FACTORS

Units and technical abbreviations

t	: metric ton = tonne = 1000 kg
kt	: thousand tonnes
Mt	: million tonnes
toe	: tonne of oil equivalent
Mtoe	: million tonnes of oil equivalent
tce	: tonne of coal equivalent (= 0.7 toe)
Mtce	: million tonnes of coal equivalent
kcal	: kilocalories (10^3 calories)
MBtu	: million British thermal units
GWh	: million kilowatt hours
USD	: US dollars
CCS	: carbon capture and storage
CIF	: cost, insurance and freight
FAS	: free alongside ship
FOB	: free on board
GDP	: Gross Domestic Product
GCV	: gross calorific value
PCI	: pulverised coal injection
TPES	: Total primary energy supply
EU	: European Union
FSU	: Former Union of Soviet Socialist Republics/Soviet Union
OECD	: Organisation for Economic Co-operation and Development
UNECE	: United Nations Economic Commission for Europe
0 or 0.0	: negligible
p	: provisional (shown for the year)
c	: confidential
e	: estimated
..	: not available
-	: nil
x	: not applicable

General conversion factors for energy

To:	TJ	Gcal	Mtoe	MBtu	GWh
From:	multiply by:				
terajoule (TJ)	1	2.388x10 ²	2.388x10 ⁻⁵	9.478x10 ²	2.778x10 ⁻¹
gigacalorie (Gcal)	4.187x10 ⁻³	1	1.000x10 ⁻⁷	3.968	1.163x10 ⁻³
million tonnes of oil equivalent (Mtoe)	4.187x10 ⁴	1.000x10 ⁷	1	3.968x10 ⁷	1.163x10 ⁴
million British thermal units (MBtu)	1.055x10 ⁻³	2.520x10 ⁻¹	2.520x10 ⁻⁸	1	2.931x10 ⁻⁴
gigawatt hour (GWh)	3.600	8.598x10 ²	8.598x10 ⁻⁵	3.412x10 ³	1

Conversion factors for mass

To:	kg	t	lt	st	lb
From:	multiply by:				
kilogramme (kg)	1	1.000x10 ⁻³	9.842x10 ⁻⁴	1.102x10 ⁻³	2.205
tonne (t)	1.000x10 ³	1	9.842x10 ⁻¹	1.102	2.205x10 ³
long ton (lt)	1.016x10 ³	1.016	1	1.120	2.240x10 ³
short ton (st)	9.072x10 ²	9.072x10 ⁻¹	8.929x10 ⁻¹	1	2.000x10 ³
pound (lb)	4.536x10 ⁻¹	4.536x10 ⁻⁴	4.464x10 ⁻⁴	5.000x10 ⁻⁴	1

Conversion factors for volume

To:	gal US	gal UK	bbl	ft ³	l	m ³
From:	multiply by:					
US gallon (gal)	1	8.327x10 ⁻¹	2.381x10 ⁻²	1.337x10 ⁻¹	3.785	3.785x10 ⁻³
UK gallon (gal)	1.201	1	2.859x10 ⁻²	1.605x10 ⁻¹	4.546	4.546x10 ⁻³
Barrel (bbl)	4.200x10 ¹	3.497x10 ¹	1	5.615	1.590x10 ²	1.590x10 ⁻¹
Cubic foot (ft ³)	7.481	6.229	1.781x10 ⁻¹	1	2.832x10 ¹	2.832x10 ⁻²
Litre (l)	2.642x10 ⁻¹	2.200x10 ⁻¹	6.290x10 ⁻³	3.531x10 ⁻²	1	1.000x10 ⁻³
Cubic metre (m ³)	2.642x10 ²	2.200x10 ²	6.290	3.531x10 ¹	1.000x10 ³	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)

The conversion factors shown above are available online with greater precision at: www.iea.org/statistics/resources/unitconverter/.

Coal classification

The definitions of products presented are based on those of the *Joint IEA/Eurostat/UNECE annual energy questionnaires*, and on the United Nations *International Recommendations on Energy Statistics*.

The IEA collects statistics on coal production, trade and consumption according to a technically precise classification based on the quality of coal as follows:

- Anthracite is a high rank, non-agglomerating coal with a gross calorific value not less than 24 000 kJ/kg (5 732 kcal/kg) on an ash-free but moist basis and with a mean random reflectance of vitrinite of at least 2.0;
- Coking coal is hard coal suitable for the production of coke which can support a blast furnace charge;
- Other bituminous coal is an agglomerating coal with a gross calorific value not less than 24 000 kJ/kg (5 732 kcal/kg) on an ash-free but moist basis and with a mean random reflectance of vitrinite of at least 0.6;
- Sub-bituminous coal is a non-agglomerating coal with a gross calorific value between 20 000 kJ/kg (4 777 kcal/kg) and 24 000 kJ/kg (5 732 kcal/kg) and with a mean random reflectance of vitrinite of less than 0.6; and
- Lignite is a non-agglomerating coal with a gross calorific value less than 20 000 kJ/kg (4 777 kcal/kg).

However, when publishing these data, the IEA sometimes adopts a simplified classification of hard coal, steam coal and brown coal. The correspondence is as follows:

- Total coal is the sum of hard coal and brown coal;
- Hard coal is the sum of coking coal, anthracite and other bituminous coal for all countries, plus, prior to 1978, this may include sub-bituminous coal for Australia, Belgium, Chile, Finland, France, Iceland, Japan, Korea, Mexico, New Zealand, Portugal and the United States;
- Brown coal contains lignite and sub-bituminous coal for all countries barring the exceptions prior to 1978 above; and Steam coal consists of anthracite, other bituminous coal and sub-bituminous coal.

The term *total coal* also refers to the sum of hard coal and brown coal after conversion to a common energy unit (tonne of coal equivalent - tce). The conversion is done by multiplying the calorific value of the coal in question (the conversion factors are submitted by national administrations to the IEA Secretariat each year) by the total volume of hard and brown coal used, measured in physical units, i.e. in tonnes. One tce has an energy content of 29.3 Gigajoules (GJ) or 7 000 kcal and corresponds to 0.7 tonnes of oil equivalent (toe).

Defining coal consumption

Energy statistics are compiled and presented to take account of the complexity in the way fuels are used and to avoid double counting. Misunderstandings can arise when statistics on coal consumption are used because of the particular terminology used by energy statisticians.

Coal is used in four possible ways:

- As a primary input to produce electricity or a secondary/tertiary fuel that is used elsewhere or sold - this is referred to as use in transformation processes;
e.g. coking coal used to produce coke in a coke oven or steam coal used to produce electricity.
- As a fuel used to support a transformation process - this is referred to as energy industry own use;
e.g. coke oven gas used to heat the coke oven or steam coal used to operate the power plant.
- As a fuel consumed in manufacturing, industry, mining and construction, in transport, in agriculture, in commercial and public services and in households - this is referred to as use in the final consumption sectors;
e.g. steam coal used to produce heat in cement kilns, steam coal used to produce industrial process steam.
- As a raw material - this is referred to as non-energy use;
e.g. coal tar used as a chemical feedstock.

In the wider community, the term “consumption” is commonly understood to include all of the above end-uses. In Parts III and IV of this book, the term “consumption” refers only to use in the *final consumption* sectors (i.e. in the third item above). In Parts II and VI, “consumption”, unless otherwise specified, refers to Total Primary Energy Supply as defined in the section in *Flows: energy balance* in Part I, Definitions.

PART II

WORLD AND OECD COAL OVERVIEW

Table 1: World energy balance in 2015

Million tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal ¹	Crude oil ²	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	3871.53	4416.26	-	2975.71	670.73	334.40	200.56	1319.00	-	1.83	13790.02
Imports	791.76	2303.19	1258.87	868.66	-	-	-	20.75	64.66	0.01	5307.89
Exports	-820.39	-2262.47	-1350.24	-883.43	-	-	-	-16.58	-62.37	-0.01	-5395.47
Stock changes	-6.83	-14.88	-16.46	-17.22	-	-	-	0.31	-	-	-55.08
TPES	3836.09	4442.11	-107.83	2943.72	670.73	334.40	200.56	1323.47	2.28	1.83	13647.37
Transfers	-0.97	-230.46	259.77	-	-	-	-	-0.42	-	-	27.92
Statistical differences	-14.63	-0.75	11.34	2.20	-	-	-0.02	0.50	-1.24	-0.07	-2.68
Electricity plants	-2060.04	-42.30	-192.28	-835.51	-663.14	-334.40	-158.36	-100.35	1903.83	-0.95	-2483.50
CHP plants	-171.02	-0.01	-19.16	-303.06	-7.58	-	-2.73	-58.50	182.09	145.47	-234.52
Heat plants	-136.72	-0.65	-11.51	-67.52	-	-	-1.16	-11.27	-0.43	180.13	-49.13
Blast furnaces	-205.36	-	-0.21	-0.07	-	-	-	-0.05	-	-	-205.70
Gas works	-11.18	-0.00	-2.51	4.61	-	-	-	-0.11	-	-	-9.20
Coke/pat.fuel/BKB/PB plants	-85.69	-	-2.56	-0.03	-	-	-	-0.12	-	-	-88.40
Oil refineries	-	-4188.73	4128.69	-	-	-	-	-	-	-	-60.04
Petrochemical plants	-	34.97	-34.75	-	-	-	-	-	-	-	0.22
Liquefaction plants	-10.10	14.34	-	-17.41	-	-	-	-	-	-	-13.18
Other transformation	-0.37	10.70	-0.58	-12.78	-	-	-	-86.53	-	-0.85	-90.40
Energy industry own use	-91.78	-11.51	-207.51	-293.73	-	-	-0.00	-14.28	-178.57	-36.74	-834.11
Losses	-4.13	-8.61	-0.42	-19.28	-	-	-0.01	-0.13	-170.73	-17.75	-221.06
TFC	1044.09	19.10	3820.49	1401.13	-	-	38.27	1052.21	1737.23	271.08	9383.60
INDUSTRY	826.39	9.07	298.93	529.81	-	-	0.70	192.71	730.66	124.09	2712.37
Iron and steel	305.47	-	6.71	53.35	-	-	-	3.69	94.71	15.15	479.07
Chemical and petrochemical	109.25	0.05	55.16	118.37	-	-	0.00	1.88	102.46	51.96	439.15
Non-ferrous metals	24.54	-	5.07	16.62	-	-	0.00	0.10	89.88	4.00	140.21
Non-metallic minerals	231.71	0.00	44.84	53.53	-	-	0.00	8.85	50.79	3.02	392.73
Transport equipment	3.13	-	2.09	11.78	-	-	0.00	0.03	24.06	3.77	44.86
Machinery	13.22	-	6.39	24.27	-	-	0.00	0.16	75.52	5.03	124.59
Mining and quarrying	8.76	-	22.53	8.12	-	-	0.00	0.16	28.33	1.99	69.89
Food and tobacco	30.94	0.01	10.11	44.99	-	-	0.00	29.42	41.83	10.56	167.86
Paper pulp and printing	17.70	-	4.14	23.80	-	-	0.10	59.27	36.89	12.09	153.99
Wood and wood products	2.88	-	2.14	3.10	-	-	0.00	7.94	8.75	1.75	26.56
Construction	4.65	-	30.26	6.47	-	-	0.00	0.31	15.66	0.98	58.34
Textile and leather	13.13	0.01	3.30	6.56	-	-	0.00	0.23	29.14	7.99	60.38
Non-specified	61.02	9.00	106.20	158.84	-	-	0.60	80.66	132.62	5.81	554.75
TRANSPORT	2.53	0.01	2490.99	97.59	-	-	0.00	75.99	35.90	-	2703.00
World aviation bunkers	-	-	176.95	-	-	-	-	-	-	-	176.95
Domestic aviation	-	-	112.71	-	-	-	-	-	-	-	112.71
Road	-	-	1907.05	40.99	-	-	-	75.55	10.63	-	2034.22
Rail	2.49	-	29.40	-	-	-	-	0.20	20.37	-	52.45
Pipeline transport	-	0.01	0.33	56.34	-	-	-	-	2.54	-	59.22
World marine bunkers	-	-	204.68	-	-	-	-	0.17	-	-	204.84
Domestic navigation	-	-	50.72	0.10	-	-	-	0.07	-	-	50.89
Non-specified	0.04	-	9.16	0.15	-	-	0.00	0.00	2.36	-	11.72
OTHER	154.20	0.07	425.88	613.33	-	-	37.57	783.51	970.67	146.99	3132.22
Residential	74.14	-	210.56	419.82	-	-	28.30	745.27	470.05	102.43	2050.57
Comm. and public services	35.85	-	85.85	181.48	-	-	6.74	25.47	386.33	34.60	756.31
Agriculture/forestry	15.30	0.01	104.98	8.93	-	-	1.48	10.08	50.64	3.08	194.49
Fishing	0.00	-	5.60	0.10	-	-	0.04	0.01	0.55	0.03	6.33
Non-specified	28.91	0.06	18.90	3.01	-	-	1.00	2.68	63.10	6.85	124.51
NON-ENERGY USE	60.96	9.95	604.69	160.41	-	-	-	-	-	-	836.01
in industry/transf./energy	60.62	9.95	563.73	160.41	-	-	-	-	-	-	794.70
of which: chem./petrochem.	3.01	9.89	419.14	158.87	-	-	-	-	-	-	590.93
in transport	-	-	9.85	-	-	-	-	-	-	-	9.85
in other	0.35	-	31.11	-	-	-	-	-	-	-	31.46
Electricity and Heat Output											
Electr. Generated - TWh	9538.30	147.03	842.84	5543.36	2571.37	3888.32	1191.62	528.05	-	3.96	24254.84
Electricity plants	8935.27	147.02	780.68	4346.00	2544.63	3888.32	1182.15	309.53	-	2.65	22136.24
CHP plants	603.03	0.01	62.16	1197.36	26.74	-	9.46	218.53	-	1.31	2118.60
Heat Generated - PJ	5941.04	18.00	584.07	5703.41	25.82	-	401.32	940.49	9.08	87.97	13711.20
CHP plants	1835.32	0.14	189.67	3449.38	25.82	-	14.04	577.19	0.32	44.65	6136.52
Heat plants	4105.73	17.86	394.40	2254.02	-	-	387.28	363.30	8.76	43.32	7574.68

1. Includes peat and oil shale.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

Source: IEA/OECD World Energy Balance

Table 2: Total OECD energy balance in 2015

SUPPLY AND CONSUMPTION	Million tonnes of oil equivalent										Total
	Coal ¹	Crude oil ²	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	
Production	921.66	1125.77	-	1080.13	513.69	118.74	108.37	294.91	-	0.82	4164.09
Imports	400.14	1422.20	600.29	632.55	-	-	-	18.72	44.22	0.01	3118.12
Exports	-358.33	-411.15	-646.77	-326.55	-	-	-	-11.66	-43.70	-0.01	-1798.17
Intl. marine bunkers	-	-	-70.36	-	-	-	-	-0.17	-	-	-70.53
Intl. aviation bunkers	-	-	-95.41	-	-	-	-	-	-	-	-95.41
Stock changes	-15.84	-16.75	-13.47	-12.09	-	-	-	-0.49	-	-	-58.65
TPES	947.63	2120.07	-225.74	1374.05	513.69	118.74	108.37	301.31	0.52	0.82	5259.45
Transfers	-	-103.43	119.04	-	-	-	-	-0.42	-	-	15.20
Statistical differences	-4.75	-3.53	10.85	1.75	-	-	-0.02	0.49	1.22	-0.68	5.34
Electricity plants	-666.26	-4.94	-41.86	-397.25	-506.60	-118.74	-94.50	-50.61	839.91	-0.52	-1041.38
CHP plants	-77.54	-	-12.95	-107.76	-7.08	-	-2.73	-46.00	93.91	54.63	-105.53
Heat plants	-3.78	-	-1.02	-8.18	-	-	-1.14	-6.44	-0.43	17.15	-3.84
Blast furnaces	-53.34	-	-0.21	-0.07	-	-	-	-	-	-	-53.63
Gas works	-2.22	-	-2.20	3.24	-	-	-	-0.10	-	-	-1.28
Coke/pat. fuel/BKB/PB plants	-7.55	-	-1.09	-0.03	-	-	-	-0.11	-	-	-8.79
Oil refineries	-	-2042.01	2021.04	-	-	-	-	-	-	-	-20.97
Petrochemical plants	-	30.93	-31.26	-	-	-	-	-	-	-	-0.33
Liquefaction plants	-1.29	0.80	-	-	-	-	-	-	-	-	-0.49
Other transformation	-0.19	9.08	-0.00	-9.37	-	-	-	-0.22	-	-0.85	-1.54
Energy industry own use	-18.56	-0.06	-107.71	-136.43	-	-	-0.00	-0.85	-67.50	-7.73	-338.84
Losses	-1.16	-	-0.05	-1.85	-	-	-0.01	-0.04	-59.46	-5.30	-67.87
TFC	110.99	6.90	1726.83	718.10	-	-	9.96	197.01	808.17	57.53	3635.50
INDUSTRY	89.44	0.04	92.39	257.42	-	-	0.45	72.38	255.18	24.27	791.57
Iron and steel	37.60	-	2.58	25.41	-	-	-	0.09	26.73	0.67	93.08
Chemical and petrochemical	11.03	0.03	19.75	70.51	-	-	0.00	1.65	37.38	11.09	151.43
Non-ferrous metals	1.86	-	1.61	11.61	-	-	0.00	0.09	24.23	0.22	39.61
Non-metallic minerals	20.61	-	13.84	26.46	-	-	0.00	5.84	14.78	0.27	81.81
Transport equipment	0.20	-	1.06	8.04	-	-	0.00	0.02	13.38	0.67	23.37
Machinery	0.31	-	2.87	18.68	-	-	0.00	0.14	30.21	0.63	52.85
Mining and quarrying	0.39	-	10.85	4.36	-	-	0.00	0.11	10.64	0.12	26.47
Food and tobacco	5.68	0.00	4.50	36.19	-	-	0.00	4.61	22.00	1.81	74.80
Paper, pulp and printing	5.17	-	2.65	20.25	-	-	0.10	49.36	24.44	3.13	105.11
Wood and wood products	0.09	-	1.36	2.56	-	-	-	7.20	4.71	0.66	16.58
Construction	0.03	-	16.74	2.77	-	-	0.00	0.30	7.91	0.04	27.79
Textile and leather	0.87	0.01	1.03	5.15	-	-	0.00	0.08	6.09	0.66	13.89
Non-specified	5.59	-	13.55	25.44	-	-	0.35	2.87	32.67	4.32	84.79
TRANSPORT	0.01	-	1148.14	25.17	-	-	0.00	49.63	9.25	-	1232.20
Domestic aviation	-	-	73.41	-	-	-	-	-	-	-	73.41
Road	-	-	1035.30	4.07	-	-	-	49.37	0.48	-	1089.22
Rail	0.01	-	18.14	-	-	-	-	0.20	7.33	-	25.69
Pipeline transport	-	-	0.04	20.86	-	-	-	-	0.48	-	21.38
Domestic navigation	-	-	20.70	0.10	-	-	-	0.06	-	-	20.86
Non-specified	-	-	0.56	0.12	-	-	0.00	0.00	0.95	-	1.64
OTHER	18.65	-	182.19	402.36	-	-	9.51	75.01	543.75	33.25	1264.72
Residential	11.63	-	81.02	249.50	-	-	5.56	63.45	251.61	21.71	684.48
Comm. and public services	5.94	-	51.83	146.02	-	-	2.96	8.40	257.74	11.08	483.97
Agriculture/forestry	1.04	-	42.14	5.57	-	-	0.83	3.12	11.54	0.22	64.47
Fishing	-	-	3.47	0.05	-	-	0.04	0.01	0.39	0.02	3.98
Non-specified	0.04	-	3.73	1.21	-	-	0.12	0.02	22.47	0.21	27.81
NON-ENERGY USE	2.89	6.86	304.11	33.15	-	-	-	-	-	-	347.01
in industry/transf./energy	2.68	6.86	287.94	33.15	-	-	-	-	-	-	330.63
of which: chem./petrochem.	1.54	6.86	218.76	33.15	-	-	-	-	-	-	260.30
in transport	-	-	8.19	-	-	-	-	-	-	-	8.19
in other	0.21	-	7.98	-	-	-	-	-	-	-	8.19
Electricity and Heat Output											
Electr. generated - TWh	3227.78	24.68	236.21	2847.22	1970.68	1380.71	816.32	353.55	-	1.23	10858.37
Electricity plants	2932.84	24.68	193.88	2292.39	1943.94	1380.71	806.86	189.88	-	0.65	9765.83
CHP plants	294.93	-	42.33	554.83	26.74	-	9.46	163.67	-	0.58	1092.54
Heat generated - PJ	759.84	-	163.21	1266.05	4.77	-	61.67	730.38	8.53	45.64	3040.11
CHP plants	632.06	-	129.49	985.28	4.77	-	14.04	521.92	0.32	20.05	2307.93
Heat plants	127.79	-	33.73	280.77	-	-	47.63	208.46	8.21	25.59	732.18

1. Includes peat and oil shale.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

Source: IEA/OECD World Energy Balances

Table 3: World total coal supply and end use 2015
(million tonnes)¹

	Production	Imports	Exports	End-use sectors			
				Power and heat plants	Steel industry	Residential	Other Sectors
Total OECD	1938.4	636.0	547.1	1643.0	214.6	18.0	123.6
Australia ²	512.4	0.1	392.3	109.0	4.0	x	3.7
Austria	0.0	3.1	0.0	1.0	2.5	0.0	0.3
Belgium	0.0	4.1	0.1	0.8	2.9	0.1	0.3
Canada	61.9	7.6	30.5	36.2	3.2	0.0	1.7
Czech Republic	46.8	4.2	4.5	37.0	3.4	1.8	3.6
Denmark	x	2.8	0.1	3.0	x	x	0.2
Finland	3.5	3.6	0.0	7.2	1.3	0.0	1.0
France	x	12.8	x	3.9	7.5	0.0	1.6
Germany	184.7	54.5	1.1	203.5	18.0	0.2	18.0
Greece	46.2	0.3	x	44.0	x	0.0	0.5
Hungary	9.3	1.6	0.4	8.9	1.3	0.4	0.1
Ireland	3.5	2.4	0.0	4.6	x	0.7	0.6
Italy	0.1	19.6	0.1	16.3	2.8	x	0.3
Japan ²	x	189.6	0.0	104.6	68.4	x	13.6
Korea	1.8	133.9	x	89.8	37.8	x	7.1
Mexico	15.3	7.7	0.0	15.7	2.6	x	5.5
Netherlands	x	57.1	36.6	13.5	4.5	x	0.1
New Zealand	3.4	0.4	1.4	0.6	0.9	0.0	1.2
Poland	135.8	8.6	9.4	104.9	13.3	10.1	7.4
Portugal	x	5.4	x	5.5	0.0	x	0.0
Spain	3.1	18.7	1.1	22.7	3.0	0.1	0.3
Turkey	58.4	34.0	0.2	66.6	7.1	3.8	14.8
United Kingdom	8.6	24.2	0.4	29.4	5.2	0.6	2.2
United States	813.7	10.3	67.1	672.7	18.7	x	31.7
<i>Other OECD</i> ³	29.9	29.4	2.0	41.7	6.0	0.1	7.8
Non-OECD Europe and Eurasia	626.6	47.3	188.3	344.0	97.1	10.7	38.5
Kazakhstan	107.3	0.0	31.2	42.2	11.0	4.4	18.8
Russian Federation	352.6	24.2	155.3	143.1	70.2	3.9	7.0
Ukraine	30.9	14.6	0.5	29.4	13.8	0.5	2.1
<i>Oth. non-OECD Eur. and Eurasia</i>	135.8	8.6	1.3	129.3	2.1	1.9	10.7
Non-OECD Asia	4823.6	587.2	413.0	2906.6	905.3	97.0	1103.2
China, People's Republic of	3563.2	204.1	5.2	2034.1	775.9	88.1	893.9
Hong Kong, China	x	11.2	x	9.1	x	x	2.0
India ²	683.1	215.6	1.6	649.4	117.6	6.4	116.0
Indonesia	453.5	3.0	366.7	70.1	0.4	x	19.3
DPR of Korea	27.5	1.0	19.9	1.1	x	x	7.5
Taipei, Chinese	x	64.8	x	42.7	9.6	x	9.5
<i>Other Asia</i>	96.3	87.6	19.6	100.0	1.8	2.5	54.9
Non-OECD Africa and Middle East	273.7	14.5	81.2	139.7	8.1	5.4	62.8
South Africa	258.6	0.8	75.5	126.9	5.7	5.4	56.9
<i>Other Africa / Middle East</i>	15.1	13.7	5.7	12.8	2.4	0.0	6.0
Non-OECD Americas	94.7	26.7	78.7	16.9	18.8	0.1	6.1
Brazil	8.0	20.3	x	9.9	14.1	x	3.4
Colombia	85.5	x	77.8	3.0	3.5	0.1	1.2
<i>Other non-OECD Americas</i>	1.1	6.4	0.9	4.0	1.3	0.0	1.6
Total non-OECD	5818.5	675.7	761.2	3407.3	1029.4	113.2	1210.7
Total World	7756.9	1311.7	1308.3	5050.3	1244.0	131.3	1334.3

1. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite, peat and, oil shale and oil sands.

2. Fiscal year. See the explanatory notes and definitions in Part I.

3. Chile, Estonia, Iceland, Israel, Latvia, Luxembourg, Norway, Slovak Republic, Slovenia, Sweden and Switzerland.

Note: Steel industry consumption includes consumption in coke ovens. Power and heat stations column includes hard coal used in electricity and CHP production by public utilities and autoproducers, and in district heating. Other sectors includes consumption in non-ferrous industries, non-energy use, other transformation, losses and consumption in other sectors.

Source: IEA/OECD World Energy Statistics

Table 3: World total coal supply and end use 2016p
(million tonnes)¹

	Production	Imports	Exports	End-use sectors			
				Power and heat plants	Steel industry	Residential	Other Sectors
Total OECD	1747.6	607.2	533.2	..	..	..	..
Australia ²	503.3	0.0	389.3	..	..	..	..
Austria	0.0	3.4	x	..	..	..	..
Belgium	0.0	3.5	0.1	..	..	..	..
Canada	61.0	6.3	30.3	..	..	..	..
Czech Republic	45.4	3.4	4.4	..	..	..	..
Denmark	x	2.9	0.0	..	..	..	..
Finland	3.0	4.0	x	..	..	..	..
France	x	11.8	x	..	..	..	..
Germany	175.6	53.6	0.3	..	..	..	..
Greece	32.3	0.3	0.0	..	..	..	..
Hungary	9.2	1.5	0.2	..	..	..	..
Ireland	3.2	1.9	0.0	..	..	..	..
Italy	0.1	16.8	0.1	..	..	..	..
Japan ²	x	189.4	0.0	..	..	..	..
Korea	1.7	134.5	x	..	..	..	..
Mexico	11.9	8.3	0.0	..	..	..	..
Netherlands	x	55.5	40.6	..	..	..	..
New Zealand	2.9	0.4	1.2	..	..	..	..
Poland	130.9	8.6	9.3	..	..	..	..
Portugal	x	4.9	x	..	..	..	..
Spain	1.8	13.8	0.5	..	..	..	..
Turkey	59.4	36.2	0.1	..	..	..	..
United Kingdom	4.2	8.3	0.4	..	..	..	..
United States	671.8	8.9	54.7	..	..	..	..
<i>Other OECD³</i>	<i>29.9</i>	<i>28.8</i>	<i>1.8</i>	..	..	..	..
Non-OECD Europe and Eurasia	623.8	47.1	197.8	..	..	..	..
Kazakhstan	97.9	0.0	25.7	..	..	..	..
Russian Federation	366.6	24.0	171.2	..	..	..	..
Ukraine	29.5	15.6	0.5	..	..	..	..
<i>Oth. non-OECD Eur. and Eurasia</i>	<i>129.8</i>	<i>7.4</i>	<i>0.4</i>	..	..	..	..
Non-OECD Asia	4556.4	636.9	436.6	..	..	..	..
China, People's Republic of	3242.5	255.6	8.6	..	..	..	..
Hong Kong, China	x	11.2	x	..	..	..	..
India ²	707.6	200.1	0.7	..	..	..	..
Indonesia	460.5	2.8	369.9	..	..	..	..
DPR of Korea	35.2	1.2	22.5	..	..	..	..
Taipei, Chinese	x	65.6	x	..	..	..	..
<i>Other Asia</i>	<i>110.6</i>	<i>100.4</i>	<i>34.9</i>	..	..	..	..
Non-OECD Africa and Middle East	270.6	14.6	82.0	..	..	..	..
South Africa	256.9	0.8	76.5	..	..	..	..
<i>Other Africa / Middle East</i>	<i>13.7</i>	<i>13.8</i>	<i>5.6</i>	..	..	..	..
Non-OECD Americas	98.8	25.6	83.9	..	..	..	..
Brazil	7.0	19.5	x	..	..	..	..
Colombia	90.5	x	83.3	..	..	..	..
<i>Other non-OECD Americas</i>	<i>1.3</i>	<i>6.1</i>	<i>0.6</i>	..	..	..	..
Total non-OECD	5549.6	724.2	800.4	..	..	..	..
Total World	7297.2	1331.4	1333.6	..	..	..	..

1. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite, peat and, oil shale and oil sands.

2. Fiscal year. See the explanatory notes and definitions in Part I.

3. Chile, Estonia, Iceland, Israel, Latvia, Luxembourg, Norway, Slovak Republic, Slovenia, Sweden and Switzerland.

Note: Steel industry consumption includes consumption in coke ovens. Power and heat stations column includes hard coal used in electricity and CHP production by public utilities and autoproducers, and in district heating. Other sectors includes consumption in non-ferrous industries, non-energy use, other transformation, losses and consumption in other sectors.

Source: IEA/OECD World Energy Statistics

Table 4: World coal¹ production
(thousand tonnes)

	1973	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p
Australia	79604	104504	160726	204562	241807	306722	370590	435876	488794	512431	503274
Austria	3328	2865	3081	2448	1298	1249	-	-	-	-	-
Belgium	10362	8018	7666	2357	637	375	109	16	19	15	14
Canada	20472	36688	60853	68332	74981	69163	70028	67894	70036	61931	60978
Chile	1435	1165	1326	2183	1038	366	544	619	4164	3143	2525
Czech Republic	103745	116807	121037	101398	74901	65162	62026	55367	47074	46782	45428
France	29114	22750	18894	13532	9896	4100	617	261	300	-	-
Germany	470816	484218	522886	434021	251614	205067	205925	183511	186515	184714	175626
Greece	13301	23198	35888	51896	57662	63887	69398	56520	50845	46246	32255
Hungary	27111	26025	24092	17830	14772	14033	9570	9113	9551	9261	9215
Ireland	64	60	57	25	1	-	-	-	-	-	-
Italy	1190	1286	1892	1014	172	14	95	101	86	81	54
Japan	25190	18054	16381	7985	6317	2964	-	-	-	-	-
Korea	13571	18625	22543	17217	5720	8300	2832	2084	1748	1764	1726
Mexico	2578	3089	5193	6933	9320	11344	13475	15304	15387	15269	11925
Netherlands	1829	-	101	-	-	-	-	-	-	-	-
New Zealand	2468	2138	2526	2578	3577	3459	5267	5331	3977	3389	2885
Norway	415	288	507	303	292	632	1471	1935	1675	1106	818
Poland	195845	229987	249388	215320	200713	162815	159540	133238	137148	135814	130939
Portugal	221	177	237	281	-	-	-	-	-	-	-
Slovak Republic	5804	5796	5731	4766	3759	3648	2511	2378	2188	1939	1847
Slovenia	x	x	x	5583	4884	4480	4540	4430	3108	3168	3349
Spain	12994	28292	39663	35682	28305	23471	19481	8430	3899	3064	1800
Sweden	12	18	13	11	-	-	-	-	-	-	-
Turkey	12396	18625	39997	47428	55073	63268	58340	73399	65249	58414	59399
United Kingdom	131985	130097	94111	92762	53037	31198	20498	18346	11647	8598	4178
United States	543012	752961	801636	933561	937098	971591	1038591	996107	918197	813690	671842
IEA Total	1704849	2031477	2229906	2255309	2021632	2001118	2096889	2049907	1998948	1889239	1702278
OECD Total	1708862	2035731	2236425	2270008	2036874	2017308	2115448	2070260	2021607	1910819	1720077
Algeria	333	3	23	-	-	-	-	-	-	-	-
Botswana	..	..	437	794	898	947	985	988	1712	2085	1873
Dem. Rep. of Congo	130	138	121	126	-	-	-	-	-	-	-
Egypt	-	-	-	-	-	58	25	-	-	-	-
Ethiopia	-	-	-	-	-	-	-	36	-	-	-
Morocco	565	680	775	526	650	31	12	-	-	-	-
Mozambique	394	207	35	40	38	16	3	38	6332	6601	6763
Niger	..	..	..	..	..	158	182	275	263	226	264
Nigeria	327	176	140	90	20	3	8	38	46	47	44
South Africa	62352	115120	173500	174800	206211	224200	244986	254522	260540	258550	256919
Tanzania	-	1	15	4	44	79	31	-	246	257	276
Zambia	940	570	511	377	152	196	150	1	159	159	200
Zimbabwe	2806	2768	3104	5345	4693	4485	3622	2848	5783	4336	2702
Other Africa	160	567	317	314	342	427	496	543	279	285	312

Table 4: World coal¹ production (continued)
(thousand tonnes)

	1973	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p
Argentina	451	390	400	276	305	259	25	65	57	34	83
Brazil	2339	5242	7712	4595	5199	6806	6255	5415	7937	8029	7005
Colombia	2834	4164	8766	21375	25651	38242	59064	74350	88578	85548	90512
Peru	33	41	127	97	51	17	43	88	211	243	266
Venezuela	50	42	40	2189	4064	7885	7195	2730	1200	830	947
Bangladesh	-	-	-	-	-	-	178	705	947	676	1022
India	79908	116110	158508	225258	290426	335675	437267	570427	657449	683072	707617
Indonesia	149	304	1908	10230	41828	79377	170541	325000	488306	453522	460482
DPR of Korea	30198	44106	52000	46353	31300	29743	34610	25500	27090	27490	35208
Malaysia	-	-	-	111	135	384	788	2397	2687	2559	2413
Mongolia	..	..	6523	7157	5019	5185	7516	25213	26364	22825	33480
Myanmar	10	38	86	78	35	580	592	686	692	751	577
Nepal	-	-	-	-	-	17	12	15	18	19	5
Pakistan	1143	1569	2238	2746	3637	3094	4871	3451	3711	3793	3989
Philippines	39	326	1256	1232	1293	1357	2880	6650	7601	7378	10975
Chinese Taipei	3327	2574	1858	472	235	83	-	-	-	-	-
Thailand	361	1525	5188	12421	18421	17708	20878	18344	18042	15151	16978
Viet Nam	2990	5200	5594	4638	8350	11609	34093	44835	41068	41484	39361
Other Asia	2441	4496	151	108	97	463	740	1754	1769	1677	1804
PR of China	417000	620150	837272	1039820	1338746	1354886	2317325	3316101	3640167	3563165	3242479
Albania	811	1420	2150	2071	80	30	45	10	-	99	-
Bosnia and Herzegovina	x	x	x	19670	1640	7439	9119	10985	11651	12173	13586
Bulgaria	26810	30213	30880	31675	30830	26432	24695	29424	31303	35910	31283
Croatia	x	x	x	174	82	-	-	-	-	-	-
F.Y.R. of Macedonia	x	x	x	6644	7249	7516	6881	6724	6482	5936	5139
Georgia	x	x	x	1103	34	7	5	105	299	306	287
Kazakhstan	x	x	x	131443	84494	77444	87197	110929	113985	107319	97942
Kosovo	x	x	x	..	..	4989	6554	8649	7204	8241	8801
Kyrgyzstan	x	x	x	3635	463	425	335	575	1803	1929	2525
Montenegro	x	x	x	..	..	..	1297	1938	1655	1773	1397
Romania	24851	35164	46581	38183	41121	29285	31106	31127	23565	25493	23022
Russian Federation	x	x	x	371899	245728	240324	282881	298698	332935	351662	365464
Serbia	x	x	x	45937	40595	37094	35100	37976	30011	37826	38440
Tajikistan	x	x	x	925	41	22	99	200	878	1042	1384
Ukraine	x	x	x	152763	76298	62403	60361	57659	56002	30411	29523
Uzbekistan	x	x	x	6400	3054	2570	3076	3630	4397	3957	3900
Former Soviet Union	667600	716000	726000	x	x	x	x	x	x	x	x
Former Yugoslavia	32450	41301	68472	x	x	x	x	x	x	x	x
Islam. Rep. of Iran	903	925	1106	835	1084	1148	1556	1089	1075	1095	1226
Non-OECD Total	1364705	1751530	2143794	2374929	2520633	2621098	3905680	5282733	5912499	5815964	5548475
World	3073567	3787261	4380219	4644937	4557507	4638406	6021128	7352993	7934106	7726783	7268552

1. Coal comprises primary coals (anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite).

For further information, see the explanatory notes and definitions in Part I.

Source: IEA/OECD World Energy Statistics

Table 5: World coal¹ production
(kilotonnes of coal equivalent)

	1973	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p
Australia	57501	74140	119913	151576	182605	235112	287969	352234	407771	426545	419457
Austria	1455	1203	1324	911	483	418	-	-	-	-	-
Belgium	9178	6726	6745	1687	436	294	82	12	15	12	11
Canada	16714	28924	48205	54182	58352	49153	49362	48493	50534	43727	42981
Chile	1369	1115	1273	2073	986	348	385	362	3956	2986	2399
Czech Republic	54023	57642	58983	51877	39390	35784	33671	29752	24253	24374	22941
France	25766	19108	15573	11772	8594	3546	547	232	266	-	-
Germany	202003	204491	207193	173842	112722	86571	80655	65580	63047	61434	56900
Greece	2419	4219	6911	10169	10729	11745	12197	10451	9120	8108	5655
Hungary	8647	9059	8202	6034	4665	4133	2497	2276	2269	2169	2158
Ireland	65	60	51	22	0.9	-	-	-	-	-	-
Italy	425	459	676	393	61	5.0	86	92	78	74	49
Japan	25576	15577	14144	6163	4923	2174	-	-	-	-	-
Korea	9500	11707	14170	10822	3521	5197	1801	1370	1111	1121	1097
Mexico	2147	2475	3894	5346	6460	8114	10115	11437	11075	11409	9119
Netherlands	1623	-	93	-	-	-	-	-	-	-	-
New Zealand	1647	1632	1868	2033	3086	2962	4520	4482	3342	2765	2366
Norway	415	288	507	291	280	606	1410	1855	1606	1060	784
Poland	143895	171922	175068	141385	130101	101855	98367	79116	77191	76952	74627
Portugal	189	104	139	165	-	-	-	-	-	-	-
Slovak Republic	2428	2424	2397	1995	1452	1455	910	876	828	708	674
Slovenia	x	x	x	1929	1703	1517	1691	1709	1169	1232	1303
Spain	9251	14035	19098	16779	14505	11380	8950	4709	2326	1780	1045
Sweden	12	8.7	6.3	5.3	-	-	-	-	-	-	-
Turkey	7445	8790	15248	17671	17261	17836	15438	25034	23146	18284	18661
United Kingdom	108416	105652	76771	76593	45820	26654	17237	15486	9892	7307	3554
United States	476228	639884	664373	774742	756835	766936	807545	759771	692901	616117	507107
IEA Total	1164818	1378054	1457658	1511106	1395823	1363815	1423245	1401821	1369695	1292536	1160067
OECD Total	1168334	1381644	1462825	1520454	1404971	1373794	1435437	1415328	1385894	1308163	1172887
Algeria	299	2.9	22	-	-	-	-	-	-	-	-
Botswana	..	..	352	639	723	763	793	796	1378	1679	1508
Dem. Rep. of Congo	117	119	104	109	-	-	-	-	-	-	-
Egypt	-	-	-	-	-	51	22	-	-	-	-
Ethiopia	-	-	-	-	-	-	-	32	-	-	-
Morocco	507	599	620	421	520	25	9.6	-	-	-	-
Mozambique	336	177	30	34	32	14	2.6	32	5814	6153	6337
Niger	..	..	..	..	..	64	74	112	107	92	107
Nigeria	293	155	123	79	18	2.6	7.0	34	41	41	39
South Africa	50203	95366	142506	143090	168597	181323	197664	205634	210590	208923	207733
Tanzania	-	0.9	13	3.6	39	70	27	-	217	226	243
Zambia	792	481	431	318	128	165	126	0.8	134	134	169
Zimbabwe	2585	2550	2859	4923	4323	4131	3336	2623	5327	3994	2489
Other Africa	144	499	279	276	301	376	437	478	246	251	275

Table 5: World coal¹ production (continued)
(kilotonnes of coal equivalent)

	1973	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p
Argentina	380	329	337	233	257	218	21	55	48	29	70
Brazil	1257	3560	5059	2759	2931	3759	3548	3007	4338	4360	3738
Colombia	2632	3867	8140	19848	23819	35510	54845	69039	82250	79437	84046
Peru	33	41	127	97	51	17	43	88	211	243	266
Venezuela	52	44	42	2283	4238	8223	7503	2847	1251	866	988
Bangladesh	-	-	-	-	-	-	127	503	676	483	730
India	46771	68348	93785	133343	168261	186625	233298	304106	362123	376453	389859
Indonesia	134	248	1557	8353	34133	64935	140329	266162	377398	348906	352732
DPR of Korea	25018	36338	42618	38026	25424	24153	28383	20723	23279	24101	30778
Malaysia	-	-	-	100	122	346	710	2159	2420	2305	2173
Mongolia	..	..	3438	3805	3091	2582	5218	21701	22700	19306	29292
Myanmar	9.0	21	55	51	20	458	488	585	586	636	488
Nepal	-	-	-	-	-	15	10	13	15	16	4.3
Pakistan	731	896	1278	1568	2077	1767	2652	1955	2117	2179	2275
Philippines	17	246	946	928	974	1022	2171	5014	5731	5563	8275
Chinese Taipei	2994	2280	1646	418	208	74	-	-	-	-	-
Thailand	119	588	2149	5146	7634	7336	8650	7600	6603	5545	6214
Viet Nam	2392	4160	4475	3710	6680	9287	27148	35868	32854	33187	31489
Other Asia	1295	2408	133	95	85	322	527	1349	1547	1467	1578
PR of China	295410	443884	584359	740559	962323	1019291	1752902	2460699	2706212	2668799	2512092
Albania	406	710	1075	696	27	10	15	3.4	-	48	-
Bosnia and Herzegovina	x	x	x	5969	498	3512	4210	5001	5383	5612	6078
Bulgaria	6646	7412	7546	7690	7554	6135	5969	7057	7314	8359	7285
Croatia	x	x	x	144	68	-	-	-	-	-	-
F.Y.R. of Macedonia	x	x	x	1735	1893	1732	1755	1706	1409	1252	1084
Georgia	x	x	x	944	20	4.2	3.0	63	173	178	167
Kazakhstan	x	x	x	82873	53068	48757	54692	69353	71343	67300	61385
Kosovo	x	x	x	..	..	1328	1745	2303	1918	2194	2343
Kyrgyzstan	x	x	x	2018	256	226	173	298	941	1011	1295
Montenegro	x	x	x	..	..	..	410	609	520	557	439
Romania	8644	11575	14698	12355	11266	8002	8276	8433	6355	6836	6193
Russian Federation	x	x	x	273224	185302	182946	224334	237295	270671	285771	297549
Serbia	x	x	x	14531	12643	11931	10658	10327	8161	10287	10454
Tajikistan	x	x	x	526	22	12	61	123	549	653	867
Ukraine	x	x	x	121864	60584	51760	49302	48021	45968	24727	24050
Uzbekistan	x	x	x	3227	1537	1294	1548	1824	2253	2028	1999
Former Soviet Union	451456	476897	439907	x	x	x	x	x	x	x	x
Former Yugoslavia	10926	13748	22226	x	x	x	x	x	x	x	x
Islam. Rep. of Iran	810	883	1056	797	1029	1087	1446	1039	1021	1038	1163
Non-OECD Total	913407	1178431	1383991	1639807	1752775	1871659	2835668	3806668	4280192	4213222	4098333
World	2081740	2560075	2846816	3160261	3157745	3245453	4271105	5221996	5666086	5521385	5271221

1. Coal comprises all primary coals (anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite).

For further information, see the explanatory notes and definitions in Part I.

Source: IEA/OECD World Energy Statistics

Table 6: World coal¹ consumption
(thousand tonnes)

	1973	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p ²
Australia	51413	67316	78360	95289	102491	128123	139601	134035	111395	117161	119890
Austria	6184	6145	7046	6663	5135	5105	5319	3840	3203	3762	3544
Belgium	17169	17099	15851	16429	12589	11046	7551	5684	4498	4142	3659
Canada	25614	37272	48175	49146	52634	62968	61834	49901	43010	40057	34747
Chile	1772	1718	1827	3720	3391	4590	4571	8351	11062	12193	13089
Czech Republic	103745	103759	105884	91832	66480	61089	56843	52179	46013	45953	45641
Denmark	3146	9669	11935	9992	11003	6641	6293	6496	4271	3137	3595
Estonia	x	x	x	382	85	87	56	60	78	29	9
Finland	3035	5692	5318	5648	6540	5193	4598	6980	4558	3993	4825
France	43064	50650	38925	30885	24127	22156	21178	17385	13561	13192	12835
Germany	478298	488138	525987	451015	269035	238905	241918	231418	238686	238519	229915
Greece	13651	23237	37964	53433	58442	65685	70659	58318	52152	44548	34209
Hungary	29033	27544	25626	20305	16931	15173	11588	10989	10723	10705	10503
Iceland	1	12	69	65	65	101	117	106	100	116	125
Ireland	822	1066	1586	3198	2689	2938	2988	2001	2001	2315	2125
Israel	-	-	2927	3720	6568	10591	12124	12310	10921	11036	9185
Italy	12902	18409	23935	22416	17642	18043	24248	21767	20106	19459	16811
Japan	81790	87726	109391	115698	133411	153636	177667	186676	188067	189591	189413
Korea	16329	27790	42505	44776	44634	71799	82272	120048	134931	133890	137515
Latvia	x	x	x	920	252	97	120	167	102	81	72
Luxembourg	305	374	199	197	217	172	122	102	85	73	80
Mexico	2894	3973	5317	7376	10621	12570	21186	23354	22494	23746	19879
Netherlands	4814	6129	10379	12884	14278	12742	13006	11894	14641	18040	16778
New Zealand	2460	1976	2074	2243	2138	2096	4286	2645	2869	2832	2455
Norway	772	951	1118	749	1018	999	795	706	803	788	711
Poland	156379	199086	214135	187622	171019	142859	142027	141381	137404	134968	136082
Portugal	805	604	1050	4397	5708	6154	5476	2702	4520	5419	4806
Slovak Republic	18618	21412	21593	18360	12551	8869	8290	7214	6299	6363	5930
Slovenia	x	x	x	6090	5239	4925	5192	4917	3580	3599	3760
Spain	16322	31222	48440	46823	42542	45654	44498	14661	21385	24414	19306
Sweden	1060	2138	4158	3709	3444	2861	3070	2859	2672	2802	2669
Switzerland	258	315	640	494	253	179	218	230	224	207	181
Turkey	12237	20431	41490	54324	61019	79932	76736	95608	96891	92513	94795
United Kingdom	133527	123610	105980	106722	75916	59839	61779	51377	48474	37545	17904
United States	505515	650167	744671	815949	863552	966391	1029721	949702	839046	718794	665220
IEA Americas	531129	687439	792846	865095	916186	1029359	1091555	999603	882056	758851	699967
IEA Asia Oceania	151992	184808	232330	258006	282674	355654	403826	443404	437262	443474	449273
IEA Europe	1056146	1157680	1249239	1148479	878663	812321	809256	745851	733248	712886	666913
OECD Americas	535795	693130	799990	876191	930198	1046519	1117312	1031308	915612	794790	732935
OECD Asia Oceania	151992	184808	235257	261726	289242	366245	415950	455714	448183	454510	458458
OECD Europe	1056147	1157692	1249308	1155554	884219	817444	814685	751041	737030	716682	670870
IEA Total	1739267	2029927	2274415	2271580	2077523	2197334	2304637	2188858	2052566	1915211	1816153
OECD Total	1743934	2035630	2284555	2293471	2103659	2230208	2347947	2238063	2100825	1965982	1862263

Table 6: World coal¹ consumption (continued)
(thousand tonnes)

	1973	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p ²
Algeria	63	93	1226	1005	632	689	950	-	21	11	20
Benin	-	-	-	-	-	-	-	-	70	41	120
Botswana	..	..	466	815	912	1040	1002	932	1799	1836	1694
Dem. Rep. of Congo	170	167	156	169	-	-	-	-	-	-	-
Egypt	487	894	1192	1340	1540	1820	1810	987	436	341	256
Ethiopia	-	-	-	-	-	-	-	50	405	411	442
Kenya	70	16	90	151	156	107	145	268	533	566	557
Mauritius	-	-	34	56	63	253	364	668	742	720	701
Morocco	582	635	1110	1774	2665	4018	4762	4230	6116	6734	6491
Mozambique	587	288	106	58	56	-	-	10	171	741	1519
Namibia	..	..	..	..	16	3	20	13	-	4	4
Niger	..	..	..	..	..	158	177	273	275	230	264
Nigeria	289	151	94	55	20	3	8	38	46	47	44
Senegal	-	-	-	-	-	-	152	287	365	389	416
South Africa	60408	86961	125870	124900	147205	157135	175403	189358	192856	183878	181251
Tanzania	-	1	15	4	44	79	31	-	246	257	276
Tunisia	33	21	21	15	-	-	-	-	-	-	-
Zambia	941	618	471	375	148	130	140	1	159	159	200
Zimbabwe	2758	2614	3026	5355	4494	4497	3674	2882	3314	3460	3428
Other Africa	233	648	361	351	373	597	638	896	889	907	804
Argentina	1072	1425	1247	1367	1439	1058	1383	1504	2059	2045	1857
Brazil	4122	9142	16861	15436	17120	20270	20003	21707	27828	27413	25647
Colombia	2859	2801	3142	4825	5608	4231	4173	6202	7388	7738	7187
Costa Rica	1	1	1	-	-	1	2	1	10	1	-
Cuba	63	95	126	153	77	22	22	23	3	3	3
Dominican Republic	-	-	224	17	80	-	542	648	1152	1087	1085
Guatemala	-	22	-	-	-	215	409	492	720	1528	1803
Haiti	-	-	61	12	-	-	-	-	-	-	-
Honduras	-	-	-	-	-	135	241	107	119	113	117
Jamaica	-	-	-	52	55	53	58	54	85	98	66
Panama	13	-	32	32	51	60	-	-	337	339	313
Peru	86	74	107	149	389	708	1075	1182	1116	1119	797
Uruguay	32	4	-	1	-	1	1	4	3	4	5
Venezuela	53	42	42	355	7	181	52	273	270	187	402
Oth. non-OECD Americas	1	1	-	-	-	-	-	-	200	203	243
Bangladesh	243	235	98	563	642	660	845	1622	1852	4556	4384
Cambodia	..	..	..	..	-	-	-	27	509	1235	1475
Hong Kong (China)	12	3	5523	8928	9109	6058	10824	10324	13789	11184	11161
India	77172	107796	156229	220707	294875	357009	463510	683027	888609	889451	913863
Indonesia	129	236	925	6320	11892	22720	42031	60055	81640	89822	93394
DPR of Korea	30580	44456	54200	48453	31940	29383	31806	20947	11593	8580	13929
Malaysia	13	84	574	2150	2558	3661	10926	23161	24219	27787	31031
Mongolia	..	..	6167	6649	5204	5212	5473	6957	8512	7904	8508
Myanmar	74	248	266	118	38	580	592	686	692	751	830
Nepal	78	83	17	81	123	430	413	505	806	929	925
Pakistan	1270	1667	2954	4246	4722	4044	7714	7718	8715	9033	10605
Philippines	40	558	2419	2576	3004	8603	9909	13125	19871	21769	22964
Singapore	1	1	2	2	-	-	1	-	632	649	701
Sri Lanka	-	-	1	8	5	-	93	95	1462	1966	2340
Chinese Taipei	3572	5956	11085	17230	26229	46780	59716	63415	66304	63902	65627

Table 6: World coal¹ consumption (continued)
(thousand tonnes)

	1973	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p ²
Thailand	362	1619	5344	12707	20801	21270	29525	35419	35938	35821	34599
Viet Nam	2770	4052	4990	3951	5917	7808	14812	26146	35639	44763	51384
Other Asia	2548	4857	345	303	244	575	727	1886	2353	2229	2298
PR of China	414180	626010	803907	1049632	1312632	1289609	2307285	3444796	3885092	3787600	3609583
Albania	899	1580	2370	2145	80	73	54	177	133	201	81
Armenia	x	x	x	552	3	-	-	1	-	1	1
Azerbaijan	x	x	x	200	6	-	-	-	-	-	-
Belarus	x	x	x	2389	1125	504	168	79	744	680	618
Bosnia and Herzegovina	x	x	x	19670	1640	7437	9457	12090	12977	13094	14651
Bulgaria	32447	36703	38934	37824	34316	29223	29231	32598	33288	36857	31897
Croatia	x	x	x	1893	331	703	1140	1171	1074	996	1085
Cyprus ³	-	-	74	97	20	49	53	27	4	6	6
F.Y.R. of Macedonia	x	x	x	6937	7435	7769	7473	6939	6717	6053	5417
Georgia	x	x	x	1323	44	27	18	113	422	424	390
Kazakhstan	x	x	x	89249	64825	44090	63767	78029	82789	76488	72309
Kosovo	x	x	x	..	..	5163	6619	8903	7246	8336	8797
Kyrgyzstan	x	x	x	6154	792	1129	1307	1688	2762	2621	3768
Lithuania	x	x	x	1303	372	131	287	300	308	252	247
Malta	-	-	192	300	52	-	-	-	-	-	-
Republic of Moldova	x	x	x	4510	1315	181	183	186	158	171	122
Montenegro	x	x	x	..	..	..	1287	1908	1630	1720	1360
Romania	26180	39373	53109	46223	45700	31962	36002	31606	26235	27032	23848
Russian Federation	x	x	x	374080	245331	230479	214594	200817	201099	223189	215578
Serbia	x	x	x	45937	40605	37324	35391	37679	30858	38641	38849
Tajikistan	x	x	x	1494	41	29	103	207	889	1055	1384
Turkmenistan	x	x	x	670	-	-	-	-	-	-	-
Ukraine	x	x	x	147423	89898	66680	64023	66095	60575	45285	46866
Uzbekistan	x	x	x	8940	3028	3543	3185	3713	4356	3920	3900
Former Soviet Union	647358	692140	700445	x	x	x	x	x	x	x	x
Former Yugoslavia	33896	44306	73306	x	x	x	x	x	x	x	x
Islam. Rep. of Iran	948	1783	1444	1061	1546	1781	2074	1025	1010	1310	1351
Jordan	-	-	-	-	-	-	-	-	521	253	316
Lebanon	1	1	-	-	180	200	200	225	250	253	257
Syrian Arab Republic	1	1	-	-	-	-	-	-	-	-	-
United Arab Emirates	-	-	-	-	-	-	236	970	2939	2576	2322
Yemen	-	-	-	-	-	-	-	170	185	133	140
Non-OECD Total	1349697	1720462	2081001	2343820	2451770	2470343	3690291	5119717	5817129	5744088	5593173
World	3093631	3756092	4365556	4637291	4555429	4700551	6038238	7357780	7917954	7710070	7455436

1. Coal comprises all coals from anthracite through lignite, however excludes peat, oil shale and oil sands and all derived products.

For further information, see the explanatory notes and definitions in Part I.

2. Consumption data for 2016p are supplied by OECD member countries. Non-OECD country data are calculated from production and net trade data from varied sources. Stock changes are generally not accounted for, for non-OECD countries, but may be provided or sourced on an ad hoc basis.

3. Please refer to the Geographical notes in Part I.

Source: IEA/OECD World Energy Statistics

Table 7: World coal¹ consumption
(thousand tonnes of coal equivalent)

	1973	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p ²
Australia	32250	38985	42658	51281	54535	61871	73542	72459	60043	62048	65496
Austria	4311	4078	4742	4990	3959	4103	4367	3642	3090	3592	3390
Belgium	15207	15703	14806	15196	11781	10367	7016	5311	4267	3919	3484
Canada	21724	29109	36434	34958	35773	45077	41054	32807	27534	25951	22437
Chile	1695	1651	1759	3532	3219	4358	3825	6419	9544	10291	10926
Czech Republic	54023	50102	50264	46361	33756	31193	29155	26277	22648	23267	22951
Denmark	2697	8288	10334	8653	9237	5655	5272	5417	3419	2450	2808
Estonia	x	x	x	332	74	79	52	56	72	27	8.3
Finland	2732	5123	4786	5083	5886	4691	4186	6151	4053	3553	4260
France	38773	44811	34151	28237	22212	20551	19732	16099	12850	12305	12009
Germany	205035	206438	211082	185042	127443	115683	113839	109189	111759	111875	106997
Greece	2992	4649	8616	11481	11972	12910	12812	11232	9553	8009	6223
Hungary	9784	10441	9688	7908	6596	5643	4238	4226	3616	3667	3556
Iceland	0.9	11	62	64	62	97	112	101	96	111	120
Ireland	828	1072	1618	2918	2508	2564	2654	1704	1737	2027	1863
Israel	-	-	2639	3235	5711	9210	10538	10537	9317	9399	7823
Italy	12067	17541	21980	20845	17069	17405	22837	19704	17741	17225	14957
Japan	83146	86700	107436	110588	123227	138930	156684	163949	166427	165836	165690
Korea	11599	19214	32003	36262	38014	59927	70622	104305	116313	115098	118364
Latvia	x	x	x	892	245	94	107	149	84	66	59
Luxembourg	298	359	199	164	181	145	104	87	72	62	67
Mexico	2460	3334	4088	5780	7803	9214	17005	18569	17598	18839	15863
Netherlands	4293	5477	9808	12013	13154	11194	11711	10594	12915	15797	14693
New Zealand	1641	1465	1430	1692	1624	1581	3135	1874	1996	1955	1723
Norway	772	951	1118	718	976	958	762	677	770	756	682
Poland	109504	144229	141978	116130	103604	83488	83266	84972	76900	75680	77726
Portugal	690	510	975	3929	5178	5482	4780	2365	3820	4574	4057
Slovak Republic	10095	11381	11689	10549	7597	6003	5989	5203	4748	4721	4436
Slovenia	x	x	x	2180	1913	1794	2141	2043	1460	1505	1568
Spain	12000	17736	27488	27157	26464	30446	29997	11365	16219	18843	15262
Sweden	1015	2019	3760	3566	3332	2832	3034	2839	2627	2761	2632
Switzerland	247	302	613	469	240	167	192	196	186	172	149
Turkey	7356	9975	17141	23992	23701	31496	31887	45789	51001	48981	51072
United Kingdom	109682	100725	88660	90092	67343	52285	53525	44821	42584	32981	15731
United States	443017	541605	607029	657331	676611	760167	796245	718146	617435	535644	494065
IEA Americas	464741	570714	643462	692289	712384	805244	837299	750953	644970	561596	516502
IEA Asia Oceania	128637	146364	183527	199824	217401	262309	303983	342588	344780	344936	351273
IEA Europe	604401	661907	675496	625827	504261	455342	451409	417915	406649	397243	369012
OECD Americas	468896	575699	649309	701600	723406	818816	858129	775941	672112	590726	543292
OECD Asia Oceania	128637	146364	186166	203058	223112	271518	314520	353125	354096	354336	359096
OECD Europe	604402	661917	675558	628963	506481	457326	453769	420209	408289	398925	370758
IEA Total	1197778	1378985	1502486	1517939	1434045	1522895	1592690	1511455	1396399	1303775	1236787
OECD Total	1201934	1383981	1511033	1533622	1453000	1547660	1626419	1549274	1434497	1343987	1273146

Table 7: World coal¹ consumption (continued)
(thousand tonnes of coal equivalent)

	1973	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p ²
Algeria	57	89	1180	967	608	663	914	-	20	11	19
Benin	-	-	-	-	-	-	-	-	62	36	106
Botswana	..	..	375	656	734	837	807	750	1448	1478	1364
Dem. Rep. of Congo	151	144	134	145	-	-	-	-	-	-	-
Egypt	428	785	1047	1177	1353	1599	1590	867	383	300	225
Ethiopia	-	-	-	-	-	-	-	44	357	362	389
Kenya	63	14	79	133	137	94	128	236	469	498	490
Mauritius	-	-	30	49	55	223	320	588	653	634	617
Morocco	522	559	947	1595	2417	3784	4488	3988	5767	6349	6120
Mozambique	501	246	90	49	48	-	-	8.5	162	711	1460
Namibia	..	..	..	..	12	2.3	15	10	-	3.1	3.1
Niger	..	..	..	..	..	64	72	111	112	93	107
Nigeria	259	133	83	48	18	2.6	7.0	33	40	41	39
Senegal	-	-	-	-	-	-	134	254	323	344	368
South Africa	48346	68117	96486	95056	111564	116825	131339	143535	145761	137628	135436
Tanzania	-	0.9	13	3.6	39	70	27	-	217	226	243
Tunisia	30	18	18	13	-	-	-	-	-	-	-
Zambia	793	521	397	316	125	110	118	0.8	134	134	169
Zimbabwe	2540	2408	2787	4933	4140	4142	3384	2655	3053	3187	3158
Other Africa	209	570	318	309	328	526	562	789	783	798	708
Argentina	1030	1350	1204	1366	1367	1014	1363	1455	2015	2004	1816
Brazil	3163	8022	14334	13882	15248	17074	17043	18970	23309	22912	21647
Colombia	2655	2601	2918	4480	5207	3929	3875	5759	6860	7185	6674
Costa Rica	0.9	0.9	0.9	-	-	0.9	1.8	0.9	8.8	0.9	-
Cuba	57	86	114	139	70	20	20	21	2.7	2.7	2.7
Dominican Republic	-	-	197	15	70	-	477	570	1014	957	955
Guatemala	-	19	-	-	-	189	360	433	634	1345	1587
Haiti	-	-	54	11	-	-	-	-	-	-	-
Honduras	-	-	-	-	-	119	212	94	105	99	103
Jamaica	-	-	-	46	48	47	51	48	75	86	58
Panama	12	-	28	28	45	53	-	-	297	298	276
Peru	86	74	107	149	389	708	1075	1182	1116	1119	797
Uruguay	29	3.5	-	0.9	-	0.9	0.9	3.5	2.6	3.5	4.4
Venezuela	55	44	44	370	7.3	189	54	285	282	195	419
Oth. non-OECD Americas	0.9	0.9	-	-	-	-	-	-	176	179	214
Bangladesh	174	168	70	402	458	471	603	1158	1322	3243	3121
Cambodia	..	..	..	..	-	-	-	18	345	838	1001
Hong Kong (China)	11	2.6	4862	7859	8019	5333	9529	9088	12139	9845	9825
India	45019	63298	93304	132278	175028	206139	260808	397878	536850	538494	549774
Indonesia	116	193	735	5024	9043	17156	31610	45485	53197	58625	60830
DPR of Korea	25360	36683	44759	40087	26072	23836	25828	16573	9157	6844	11354
Malaysia	10.0	76	517	1936	2304	3297	9840	20858	21811	25025	27946
Mongolia	..	..	3263	3556	3182	2595	3219	4156	5399	4907	5281
Myanmar	66	206	214	86	23	457	488	585	585	636	711
Nepal	67	71	15	69	105	369	354	433	691	796	793
Pakistan	822	988	1951	2859	3097	2660	5332	5979	6836	7121	8514
Philippines	17	407	1755	1869	2436	7121	8101	10715	16352	17812	18848
Singapore	0.3	0.4	0.8	0.8	-	-	0.9	-	556	571	617
Sri Lanka	-	-	0.9	7.0	5.0	-	93	95	1462	1966	2340
Chinese Taipei	3220	5529	10285	16102	24515	42395	54422	58055	58206	56479	57764

Table 7: World coal¹ consumption (continued)
(thousand tonnes of coal equivalent)

	1973	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p ²
Thailand	120	673	2317	5386	9737	10601	16350	23115	22491	24020	22117
Viet Nam	2216	3242	3992	3161	4734	6246	11723	20917	28433	35630	40732
Other Asia	1391	2642	304	267	215	489	603	1624	2061	1953	2013
PR of China	292827	446734	559341	742870	937586	961075	1732248	2557327	2891838	2838780	2787544
Albania	488	859	1279	899	27	25	18	158	124	136	70
Armenia	x	x	x	350	1.9	-	-	0.9	-	0.9	0.9
Azerbaijan	x	x	x	127	3.8	-	-	-	-	-	-
Belarus	x	x	x	2009	980	439	138	63	650	594	540
Bosnia and Herzegovina	x	x	x	5969	498	3517	4725	6232	6802	6871	7295
Bulgaria	11487	13028	14334	12761	10773	9105	9791	9769	9042	9333	8057
Croatia	x	x	x	1455	219	598	954	949	895	840	918
Cyprus ³	-	-	65	92	19	46	51	24	3.2	5.3	5.3
F.Y.R. of Macedonia	x	x	x	1896	2036	1835	1981	1837	1546	1366	1259
Georgia	x	x	x	1277	30	19	14	70	280	279	255
Kazakhstan	x	x	x	56122	40613	27626	39866	48761	51923	48135	45403
Kosovo	x	x	x	..	..	1380	1770	2392	1936	2225	2344
Kyrgyzstan	x	x	x	3615	464	670	789	1002	1672	1611	2181
Lithuania	x	x	x	1117	319	102	222	244	264	216	212
Malta	-	-	169	264	46	-	-	-	-	-	-
Republic of Moldova	x	x	x	2859	834	115	116	133	131	139	97
Montenegro	x	x	x	..	..	..	409	600	512	541	427
Romania	9864	15252	20352	17589	15559	10296	11983	9021	7509	7745	6896
Russian Federation	x	x	x	269907	183719	171794	163110	145926	150379	168162	161928
Serbia	x	x	x	14531	12649	12086	10912	10419	8635	10636	10670
Tajikistan	x	x	x	887	22	17	63	127	556	661	867
Turkmenistan	x	x	x	425	-	-	-	-	-	-	-
Ukraine	x	x	x	120887	72331	55805	53033	55965	50317	37356	38813
Uzbekistan	x	x	x	4837	1525	1781	1602	1865	2233	2009	1999
Former Soviet Union	436639	459831	423673	x	x	x	x	x	x	x	x
Former Yugoslavia	12816	17229	27070	x	x	x	x	x	x	x	x
Islam. Rep. of Iran	851	1709	1381	1015	1475	1701	1947	977	958	1244	1283
Jordan	-	-	-	-	-	-	-	-	475	230	288
Lebanon	0.9	0.9	-	-	170	189	189	212	236	239	243
Syrian Arab Republic	0.9	0.9	-	-	-	-	-	-	-	-	-
United Arab Emirates	-	-	-	-	-	-	208	931	2818	2448	2206
Yemen	-	-	-	-	-	-	-	150	163	117	123
Non-OECD Total	904567	1154629	1338994	1610650	1694901	1741671	2643484	3654577	4165429	4125946	4091079
World	2106501	2538609	2850027	3144272	3147901	3289332	4269902	5203851	5599925	5469933	5364225

- Coal comprises all coals from anthracite through lignite, however excludes peat, oil shale and oil sands and all derived products.
For further information, see the explanatory notes and definitions in Part I.
- Consumption data for 2016p are supplied by OECD member countries. Non-OECD country data are calculated from production and net trade data from varied sources. Stock changes are generally not accounted for, for non-OECD countries, but may be provided or sourced on an ad hoc basis.
- Please refer to the Geographical notes in Part I.

Source: IEA/OECD World Energy Statistics

Table 8: World use of coal for selected end-uses¹
(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	3545.47	4637.29	4700.55	7357.78	7987.35	7917.95	7710.07	2.26	2.05
Total electricity and heat	1714.29	2691.77	3309.82	4705.72	5215.45	5146.17	5028.46	3.83	2.53
<i>Main activity producers</i>	1623.79	2562.95	3191.18	4558.90	5052.94	4971.99	4864.25	3.88	2.60
<i>Autoproducers</i>	90.51	128.82	118.64	146.81	162.51	174.19	164.22	2.99	0.98
Patent fuel/BKB plants	167.58	157.94	31.94	45.53	48.53	48.48	43.65	-0.49	-5.01
Coke ovens/Liquefaction ³	507.53	538.10	510.07	827.74	958.09	971.90	947.65	0.49	2.29
Blast furnace inputs	0.01	10.46	28.63	40.12	45.16	45.69	47.24	89.11	6.22
Gas manufacture	18.25	17.03	21.73	27.98	24.78	28.35	33.60	-0.58	2.75
Industry	570.09	641.37	536.52	1137.73	1163.77	1158.23	1126.68	0.99	2.28
<i>Iron and steel</i>	21.30	50.54	65.56	181.98	223.42	239.78	226.65	7.46	6.19
<i>Chemical</i>	37.96	80.66	70.24	152.87	158.55	148.95	163.99	6.48	2.88
<i>Non-metallic minerals</i>	59.39	174.03	174.82	402.72	429.20	445.94	426.03	9.37	3.65
<i>Paper, pulp and print</i>	15.64	35.78	28.37	50.65	39.87	34.00	32.95	7.14	-0.33
<i>Other industry</i>	435.79	300.37	197.53	349.53	312.74	289.56	277.06	-3.05	-0.32
Other sectors ⁴	431.36	440.28	200.75	279.57	283.51	283.06	283.58	0.17	-1.74
Non-energy use	11.31	37.02	34.73	56.66	73.48	81.73	88.32	10.38	3.54
Steam coal	2108.74	2952.80	3373.41	5604.68	6093.91	6010.48	5852.06	2.85	2.77
Total electricity and heat	1058.83	1813.87	2508.22	3902.71	4406.08	4349.34	4231.33	4.59	3.45
<i>Main activity producers</i>	986.26	1726.58	2420.69	3785.56	4270.36	4197.25	4085.76	4.78	3.51
<i>Autoproducers</i>	72.56	87.29	87.53	117.15	135.72	152.09	145.57	1.55	2.07
Patent fuel/BKB plants	26.33	32.56	13.12	26.85	27.57	28.54	25.77	1.79	-0.93
Coke ovens/Liquefaction ³	3.75	72.12	102.44	47.70	43.61	48.82	55.58	27.93	-1.04
Blast furnace inputs	0.01	3.89	12.94	18.67	18.39	19.85	22.18	74.13	7.22
Gas manufacture	4.91	6.47	10.90	16.43	16.13	19.94	25.31	2.33	5.61
Industry	506.53	525.48	487.23	1047.58	1072.90	1057.72	1033.20	0.31	2.74
<i>Iron and steel</i>	18.48	42.01	58.47	156.72	193.17	201.75	190.81	7.08	6.24
<i>Chemical</i>	23.23	64.57	62.97	145.41	151.77	141.19	155.97	8.89	3.59
<i>Non-metallic minerals</i>	57.44	167.66	168.42	388.16	411.01	432.18	415.13	9.34	3.69
<i>Paper, pulp and print</i>	11.14	32.78	27.50	47.56	37.95	32.75	31.95	9.41	-0.10
<i>Other industry</i>	396.24	218.46	169.87	309.72	279.00	249.85	239.34	-4.84	0.37
Other sectors ⁴	387.33	381.43	183.76	264.28	270.43	271.35	273.47	-0.13	-1.32
Non-energy use	10.48	36.13	32.15	50.06	67.82	74.59	81.25	10.86	3.29
Coking coal	521.59	555.51	477.50	915.37	1063.42	1088.85	1051.65	0.53	2.59
Total electricity and heat	7.14	22.03	22.07	35.51	45.56	46.12	45.48	9.84	2.94
<i>Main activity producers</i>	6.19	18.09	18.86	33.87	42.70	43.46	43.92	9.34	3.61
<i>Autoproducers</i>	0.95	3.94	3.21	1.64	2.85	2.65	1.56	12.59	-3.64
Patent fuel/BKB plants	-	-	-	-	-	0.00	0.00	-	-
Coke ovens/Liquefaction ³	503.77	465.99	407.63	779.48	913.98	922.52	891.53	-0.65	2.63
Blast furnace inputs	-	6.57	15.69	21.45	26.74	25.84	25.07	-	5.50
Gas manufacture	6.95	2.10	3.81	4.41	2.20	1.56	1.32	-9.50	-1.83
Industry	1.91	55.60	21.07	65.33	68.39	79.51	76.34	32.41	1.28
<i>Iron and steel</i>	1.73	6.77	6.84	24.97	29.96	37.84	35.68	12.07	6.87
<i>Chemical</i>	0.01	3.37	2.37	3.96	4.52	5.28	5.94	62.43	2.29
<i>Non-metallic minerals</i>	0.00	1.67	1.83	9.80	9.28	6.46	6.24	69.39	5.40
<i>Paper, pulp and print</i>	-	0.84	0.14	0.25	0.17	0.17	0.16	-	-6.45
<i>Other industry</i>	0.18	42.93	9.90	26.37	24.47	29.76	28.32	58.10	-1.65
Other sectors ⁴	0.28	0.78	0.47	0.22	0.07	0.13	0.02	8.99	-13.16
Non-energy use	-	0.21	1.98	6.04	5.12	6.75	6.73	-	14.81

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Indirect liquefaction may be reported here or under gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

Table 8: World use of coal for selected end-uses¹
(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	915.14	1128.98	849.65	837.73	830.03	818.63	806.36	1.77	-1.34
Total electricity and heat	648.33	855.88	779.54	767.49	763.82	750.72	751.65	2.34	-0.52
<i>Main activity producers</i>	631.33	818.28	751.63	739.48	739.88	731.27	734.57	2.18	-0.43
<i>Autoproducers</i>	16.99	37.59	27.91	28.02	23.94	19.45	17.09	6.84	-3.11
Patent fuel/BKB plants	141.26	125.38	18.82	18.67	20.97	19.93	17.87	-0.99	-7.50
Coke ovens/Liquefaction ²	-	-	0.00	0.57	0.50	0.56	0.55	-	-
Blast furnace inputs	-	-	-	-	0.03	0.00	0.00	-	-
Gas manufacture	6.40	8.47	7.02	7.14	6.46	6.86	6.97	2.36	-0.78
Industry	61.64	60.30	28.22	24.82	22.49	21.00	17.14	-0.18	-4.91
<i>Iron and steel</i>	1.10	1.75	0.25	0.29	0.29	0.19	0.16	3.98	-9.22
<i>Chemical</i>	14.72	12.71	4.90	3.50	2.26	2.48	2.08	-1.21	-6.98
<i>Non-metallic minerals</i>	1.95	4.70	4.57	4.76	8.91	7.30	4.66	7.60	-0.03
<i>Paper, pulp and print</i>	4.51	2.16	0.73	2.84	1.75	1.08	0.84	-5.95	-3.70
<i>Other industry</i>	39.37	38.98	17.77	13.44	9.28	9.96	9.40	-0.08	-5.53
Other sectors ³	43.75	58.06	16.52	15.07	13.01	11.58	10.09	2.39	-6.76
Non-energy use	0.83	0.67	0.59	0.56	0.54	0.40	0.34	-1.78	-2.73
Peat	39.17	30.32	17.17	19.00	14.98	14.41	12.82	-2.11	-3.38
Total electricity and heat	34.90	12.62	10.93	13.55	10.59	10.47	9.34	-8.13	-1.20
<i>Main activity producers</i>	34.42	11.75	9.85	12.71	9.62	9.38	8.48	-8.57	-1.30
<i>Autoproducers</i>	0.48	0.87	1.09	0.84	0.97	1.09	0.86	5.04	-0.04
Patent fuel/BKB plants	0.75	5.33	2.98	3.41	2.94	2.40	1.89	17.75	-4.06
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	1.09	3.10	1.24	1.07	0.78	0.84	0.78	9.08	-5.38
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	0.99	0.09	0.03	0.02	0.02	0.01	-	-16.80
<i>Non-metallic minerals</i>	-	0.10	0.02	0.01	0.00	0.00	0.00	-	-13.19
<i>Paper, pulp and print</i>	0.50	1.29	1.04	0.92	0.70	0.75	0.71	8.24	-2.35
<i>Other industry</i>	0.60	0.72	0.09	0.11	0.06	0.07	0.05	1.55	-9.96
Other sectors ³	2.43	7.30	1.65	0.92	0.82	0.69	0.70	9.59	-8.98
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	26.26	13.62	18.32	20.91	21.02	18.32	-	-1.43
Total electricity and heat	-	22.87	11.30	13.98	15.86	15.63	12.50	-	-2.39
<i>Main activity producers</i>	-	22.87	11.10	13.53	15.43	15.23	12.00	-	-2.55
<i>Autoproducers</i>	-	-	0.20	0.45	0.43	0.40	0.50	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	0.88	1.39	3.09	3.82	4.08	4.90	-	7.12
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	0.65	0.61	1.03	0.98	1.04	0.75	-	0.57
Industry	-	1.39	0.22	0.16	0.16	0.16	0.07	-	-11.07
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	0.22	0.16	0.16	0.16	0.07	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	1.39	0.00	-	-	-	-	-	-
Other sectors ³	-	-	0.00	-	-	-	-	-	-
Non-energy use	-	-	0.15	0.06	0.08	0.10	0.14	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to the explanatory notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Indirect liquefaction may be reported here or under gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

Table 9: World coal¹ share of total primary energy supply

	1973	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p ²
Australia	39.6%	39.2%	41.0%	40.7%	40.7%	41.8%	45.0%	39.5%	33.1%	34.2%	34.4%
Austria	18.0%	15.8%	18.9%	16.5%	13.0%	12.6%	12.0%	10.0%	9.5%	9.7%	9.0%
Belgium	24.3%	24.4%	23.5%	22.0%	16.2%	13.8%	8.9%	6.3%	6.3%	6.0%	5.3%
Canada	9.6%	10.7%	13.4%	11.5%	10.8%	12.5%	10.6%	8.7%	7.2%	6.8%	5.8%
Chile	14.1%	12.9%	13.1%	17.8%	12.8%	12.2%	9.5%	14.5%	18.8%	19.8%	20.3%
Czech Republic	78.4%	71.0%	69.1%	63.2%	54.3%	52.4%	44.7%	41.5%	38.2%	39.3%	39.7%
Denmark	10.2%	30.7%	37.8%	35.1%	33.5%	21.4%	19.6%	19.6%	14.9%	10.7%	11.9%
Estonia	x	x	x	2.2%	0.5%	0.9%	0.2%	0.4%	0.6%	0.2%	0.1%
Finland	12.0%	18.0%	16.2%	14.4%	14.9%	11.2%	9.5%	12.5%	8.9%	8.2%	9.1%
France	16.3%	17.2%	12.3%	9.0%	6.8%	6.0%	5.3%	4.6%	3.8%	3.6%	3.6%
Germany	41.6%	39.5%	40.6%	36.6%	27.2%	25.2%	24.3%	24.2%	26.0%	25.8%	24.2%
Greece	17.8%	21.8%	34.6%	37.6%	37.0%	33.4%	29.6%	28.5%	28.9%	24.2%	19.0%
Hungary	37.2%	29.7%	27.0%	21.6%	17.9%	15.4%	11.0%	10.3%	9.3%	9.3%	8.5%
Iceland	0.1%	1.2%	3.7%	2.8%	2.5%	3.1%	3.2%	1.7%	1.5%	1.7%	1.5%
Ireland	8.2%	9.2%	13.3%	21.0%	16.7%	13.1%	12.9%	8.4%	9.6%	10.8%	9.5%
Israel	0.0%	0.0%	24.4%	19.7%	25.8%	35.4%	40.0%	31.8%	30.4%	28.6%	24.5%
Italy	6.8%	8.9%	11.8%	10.0%	7.7%	7.3%	8.8%	7.9%	8.9%	8.1%	7.3%
Japan	18.1%	17.3%	20.0%	17.4%	17.0%	18.8%	21.2%	23.1%	27.0%	27.3%	27.5%
Korea	37.8%	32.8%	42.3%	27.3%	18.4%	22.3%	23.6%	29.4%	30.4%	29.6%	29.2%
Latvia	x	x	x	8.0%	3.8%	1.9%	1.8%	2.4%	1.4%	1.1%	1.0%
Luxembourg	54.9%	51.2%	47.0%	32.8%	15.5%	3.3%	1.8%	1.6%	1.4%	1.3%	1.4%
Mexico	3.5%	2.5%	2.7%	3.3%	4.4%	4.6%	6.7%	7.4%	6.7%	7.3%	6.5%
Netherlands	4.6%	5.9%	10.9%	12.2%	12.1%	10.3%	9.9%	9.0%	12.4%	14.8%	13.6%
New Zealand	14.3%	11.3%	8.9%	9.2%	7.6%	6.5%	13.0%	7.1%	6.8%	6.6%	5.9%
Norway	6.4%	5.5%	5.8%	4.1%	4.4%	4.0%	2.9%	2.3%	3.1%	2.8%	2.7%
Poland	80.4%	78.8%	79.0%	76.5%	70.7%	63.4%	59.3%	54.4%	52.4%	50.9%	49.9%
Portugal	7.4%	4.3%	7.0%	16.4%	17.8%	15.5%	12.7%	7.1%	12.7%	14.6%	13.3%
Slovak Republic	51.3%	41.3%	41.3%	36.7%	30.3%	24.1%	22.5%	21.9%	21.5%	20.0%	19.1%
Slovenia	x	x	x	27.6%	22.7%	20.4%	21.1%	19.8%	15.8%	16.4%	16.5%
Spain	17.4%	18.4%	27.5%	21.4%	18.8%	17.2%	14.5%	6.1%	10.0%	11.2%	8.9%
Sweden	4.2%	4.2%	6.0%	5.8%	5.1%	4.7%	4.5%	4.2%	4.0%	4.4%	3.9%
Switzerland	1.7%	1.6%	2.3%	1.5%	0.8%	0.5%	0.6%	0.6%	0.6%	0.5%	0.5%
Turkey	21.1%	22.2%	30.7%	32.0%	27.0%	29.6%	26.9%	30.2%	29.5%	26.8%	26.8%
United Kingdom	35.0%	34.7%	30.9%	30.6%	21.8%	16.4%	17.0%	15.2%	16.8%	13.2%	6.6%
United States	18.0%	20.8%	24.0%	24.0%	22.9%	23.5%	24.1%	22.7%	19.5%	17.1%	16.0%
IEA Americas	17.3%	19.9%	22.9%	22.8%	21.7%	22.4%	22.7%	21.2%	18.1%	16.0%	14.8%
IEA Asia Oceania	22.1%	21.8%	25.2%	21.9%	20.0%	22.2%	24.8%	26.9%	28.5%	28.6%	28.6%
IEA Europe	30.9%	31.0%	31.1%	27.2%	21.5%	18.6%	17.3%	16.2%	17.1%	16.4%	15.1%
OECD Americas	16.9%	19.1%	21.8%	21.7%	20.7%	21.3%	21.5%	20.2%	17.3%	15.4%	14.3%
OECD Asia Oceania	21.6%	21.5%	25.2%	21.9%	20.2%	22.5%	25.1%	27.0%	28.5%	28.6%	28.5%
OECD Europe	30.8%	30.9%	31.1%	27.0%	21.4%	18.5%	17.2%	16.1%	17.0%	16.4%	15.1%
IEA Total	22.9%	24.3%	26.3%	24.3%	21.4%	21.1%	21.1%	20.4%	19.5%	18.3%	17.3%
OECD Total	22.5%	23.7%	25.7%	23.6%	20.9%	20.6%	20.6%	20.0%	19.1%	17.9%	17.0%

Table 9: World coal¹ share of total primary energy supply (continued)

	1973	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p ²
Algeria	4.9%	1.1%	4.7%	3.1%	3.2%	1.9%	2.4%	0.9%	0.3%	0.3%	..
Benin	-	-	-	-	-	-	-	-	1.0%	0.6%	..
Botswana	..	..	30.5%	37.7%	35.5%	32.6%	30.3%	24.4%	37.3%	38.1%	..
Dem. Rep. of Congo	2.9%	2.5%	2.1%	1.9%	-	-	-	-	-	-	..
Egypt	3.5%	3.6%	2.8%	2.4%	1.8%	2.0%	1.3%	0.6%	0.5%	0.4%	..
Ethiopia	-	-	-	-	-	-	-	0.1%	0.5%	0.5%	..
Kenya	0.8%	0.1%	0.6%	0.9%	0.8%	0.5%	0.6%	0.8%	1.4%	1.4%	..
Mauritius	-	-	4.7%	5.2%	5.0%	15.4%	19.3%	31.3%	32.6%	30.6%	..
Morocco	10.5%	7.5%	11.0%	14.9%	18.1%	24.0%	21.1%	16.3%	21.2%	22.9%	..
Mozambique	5.2%	2.6%	1.0%	0.6%	0.5%	-	-	0.1%	1.0%	3.8%	..
Namibia	..	..	..	..	0.9%	0.2%	0.8%	0.5%	-	0.1%	..
Niger	..	..	..	..	..	3.1%	2.9%	3.5%	2.7%	2.2%	..
Nigeria	0.5%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	..
Senegal	-	-	-	-	-	-	3.4%	4.6%	5.8%	5.9%	..
South Africa	68.8%	72.9%	78.2%	73.2%	75.4%	75.0%	71.7%	71.0%	70.1%	67.8%	..
Sudan	-	0.0%	-	-	-	-	-	-	-	-	..
Tanzania	-	0.0%	0.1%	0.0%	0.3%	0.4%	0.1%	-	0.6%	0.6%	..
Tunisia	3.9%	1.9%	1.6%	1.7%	1.2%	1.1%	-	-	-	-	..
Zambia	14.0%	8.0%	5.6%	4.1%	1.5%	1.2%	1.1%	0.0%	0.9%	0.9%	..
Zimbabwe	29.4%	25.1%	26.3%	37.0%	29.4%	26.9%	23.1%	18.1%	18.1%	18.6%	..
Other Africa	0.6%	1.5%	0.7%	0.5%	0.5%	0.8%	0.7%	0.9%	0.8%	0.8%	..
Argentina	2.0%	2.3%	2.1%	2.0%	1.8%	0.8%	1.3%	1.3%	1.7%	1.6%	..
Plurinational State of Bolivia	-	-	2.4%	-	-	-	-	-	-	-	..
Brazil	2.8%	5.2%	7.8%	6.9%	7.4%	6.9%	6.0%	5.4%	5.8%	5.9%	..
Colombia	13.2%	10.1%	10.1%	12.7%	13.0%	10.2%	10.0%	10.3%	11.3%	12.2%	..
Costa Rica	0.1%	0.0%	0.0%	-	-	0.0%	0.9%	1.4%	1.7%	1.6%	..
Cuba	0.7%	0.7%	0.8%	0.8%	0.6%	0.2%	0.2%	0.2%	0.0%	0.0%	..
Dominican Republic	-	-	4.1%	0.3%	0.9%	0.7%	6.8%	9.0%	13.4%	12.6%	..
El Salvador	-	0.0%	-	-	0.0%	0.0%	0.0%	-	-	-	..
Guatemala	-	0.4%	-	-	-	1.9%	3.2%	3.0%	3.4%	7.4%	..
Haiti	-	-	2.0%	0.5%	-	-	-	-	-	-	..
Honduras	-	-	-	0.0%	0.0%	2.8%	3.6%	2.5%	2.5%	1.2%	..
Jamaica	-	-	-	1.2%	1.1%	0.9%	1.0%	1.2%	1.9%	2.1%	..
Panama	0.4%	-	1.3%	1.3%	1.6%	1.4%	-	-	4.9%	4.9%	..
Peru	1.6%	1.3%	1.1%	1.5%	3.4%	5.2%	7.0%	4.5%	3.5%	3.3%	..
Uruguay	1.0%	0.1%	0.0%	0.0%	-	0.0%	0.0%	0.1%	0.0%	0.0%	..
Venezuela	1.4%	0.5%	0.5%	1.2%	0.0%	0.3%	0.1%	0.3%	0.3%	0.2%	..
Oth. non-OECD Americas	0.5%	0.3%	-	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	1.9%	..
Bangladesh	1.9%	1.5%	0.5%	2.2%	2.0%	1.8%	1.9%	2.7%	2.6%	6.0%	..
Cambodia	..	..	..	..	-	-	-	0.2%	3.8%	8.3%	..
Hong Kong (China)	0.3%	0.1%	51.8%	63.9%	53.0%	27.5%	53.1%	46.5%	60.0%	49.6%	..
India	19.7%	22.2%	26.4%	30.3%	33.2%	33.1%	35.7%	40.3%	45.7%	44.5%	..
Indonesia	0.2%	0.3%	0.8%	3.6%	4.8%	7.7%	12.4%	15.1%	16.6%	18.2%	..
DPR of Korea	86.6%	85.2%	87.6%	85.1%	83.9%	85.3%	85.5%	79.3%	68.1%	62.6%	..
Malaysia	0.1%	0.4%	2.3%	6.2%	4.7%	4.7%	10.5%	19.9%	17.0%	20.4%	..
Mongolia	..	..	73.2%	73.0%	82.7%	75.8%	75.2%	73.8%	71.6%	69.5%	..
Myanmar	0.6%	1.6%	1.4%	0.6%	0.1%	2.5%	2.3%	3.0%	2.2%	2.2%	..
Nepal	1.2%	1.1%	0.2%	0.8%	1.1%	3.2%	2.7%	3.0%	4.1%	4.8%	..
Pakistan	3.1%	2.8%	4.2%	4.7%	4.0%	2.9%	4.9%	5.0%	5.2%	5.3%	..
Philippines	0.1%	2.3%	5.4%	5.3%	5.7%	12.9%	15.0%	18.9%	24.4%	24.2%	..

Table 9: World coal¹ share of total primary energy supply (continued)

	1973	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p ²
Singapore	0.1%	0.1%	0.2%	0.2%	0.1%	-	0.0%	0.0%	1.5%	1.6%	..
Sri Lanka	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.7%	0.7%	9.5%	12.0%	..
Chinese Taipei	17.4%	13.9%	21.7%	23.8%	27.3%	35.2%	37.3%	37.2%	37.1%	36.5%	..
Thailand	0.6%	2.1%	6.7%	9.1%	11.1%	10.6%	11.6%	13.9%	11.8%	12.5%	..
Viet Nam	11.1%	15.8%	17.6%	12.4%	15.2%	15.2%	20.0%	24.9%	29.8%	33.8%	..
Other Asia	16.1%	23.9%	3.3%	2.7%	2.2%	4.2%	4.4%	9.0%	9.8%	9.5%	..
PR of China	48.0%	52.3%	56.7%	60.6%	62.0%	58.8%	67.6%	70.6%	68.3%	66.7%	..
Albania	20.2%	19.8%	33.2%	23.6%	1.4%	1.0%	0.6%	5.2%	3.7%	4.3%	..
Armenia	x	x	x	3.2%	0.1%	-	-	0.0%	-	0.0%	..
Azerbaijan	x	x	x	0.4%	0.0%	-	-	-	-	-	..
Belarus	x	x	x	3.1%	2.8%	1.5%	0.6%	0.3%	1.8%	1.8%	..
Bosnia and Herzegovina	x	x	x	59.5%	23.3%	56.6%	60.1%	62.2%	56.7%	56.2%	..
Bulgaria	40.7%	33.1%	34.2%	31.5%	32.9%	34.4%	34.8%	38.6%	35.8%	35.5%	..
Croatia	x	x	x	8.6%	2.2%	5.1%	7.0%	7.3%	8.0%	7.2%	..
Cyprus ³	-	-	5.0%	4.7%	0.8%	1.5%	1.6%	0.7%	0.1%	0.2%	..
F.Y.R. of Macedonia	x	x	x	53.6%	57.0%	50.2%	49.0%	45.3%	40.3%	35.7%	..
Georgia	x	x	x	7.2%	0.6%	0.5%	0.3%	1.6%	6.6%	5.9%	..
Kazakhstan	x	x	x	54.4%	55.4%	55.4%	56.0%	49.9%	48.3%	43.8%	..
Kosovo	x	x	x	..	..	62.7%	63.8%	67.1%	61.3%	61.9%	..
Kyrgyzstan	x	x	x	33.8%	13.6%	20.2%	21.5%	25.5%	28.7%	28.3%	..
Lithuania	x	x	x	4.9%	2.6%	1.1%	1.9%	2.6%	2.8%	2.2%	..
Malta	-	-	34.3%	26.6%	4.5%	-	-	-	-	-	..
Republic of Moldova	x	x	x	20.2%	12.5%	2.9%	2.4%	2.7%	2.8%	2.9%	..
Montenegro	x	x	x	..	..	..	28.1%	37.2%	37.5%	37.4%	..
Romania	18.2%	19.3%	23.7%	20.8%	23.2%	20.6%	22.7%	19.8%	18.1%	18.6%	..
Russian Federation	x	x	x	21.6%	20.2%	19.3%	17.2%	14.6%	14.3%	16.4%	..
Serbia	x	x	x	51.6%	64.1%	63.0%	50.2%	50.1%	47.1%	52.6%	..
Tajikistan	x	x	x	11.8%	0.7%	0.6%	1.9%	4.1%	15.1%	17.1%	..
Turkmenistan	x	x	x	1.7%	-	-	-	-	-	-	..
Ukraine	x	x	x	32.2%	30.9%	28.7%	26.0%	28.8%	33.6%	30.2%	..
Uzbekistan	x	x	x	7.3%	2.5%	2.5%	2.4%	3.0%	3.6%	3.3%	..
Former Soviet Union	36.0%	29.0%	23.8%	x	x	x	x	x	x	x	x
Former Yugoslavia	40.1%	35.5%	45.9%	x	x	x	x	x	x	x	x
Islam. Rep. of Iran	2.9%	3.1%	1.8%	1.0%	1.0%	1.2%	1.0%	0.7%	0.4%	0.5%	..
Jordan	-	-	-	-	-	-	-	-	4.4%	2.0%	..
Lebanon	0.5%	0.2%	-	-	2.7%	2.7%	2.6%	2.3%	2.2%	2.2%	..
Syrian Arab Republic	0.1%	0.1%	0.0%	-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	..
United Arab Emirates	-	-	-	-	-	-	0.3%	1.0%	2.7%	2.3%	..
Yemen	-	-	-	-	-	-	-	1.3%	1.5%	2.4%	..
Non-OECD Total	29.2%	27.4%	27.4%	28.1%	28.7%	27.3%	32.7%	36.2%	36.6%	36.1%	..
World (incl. bunkers)	24.2%	24.6%	25.9%	25.2%	23.8%	23.0%	26.0%	28.3%	28.8%	28.1%	..

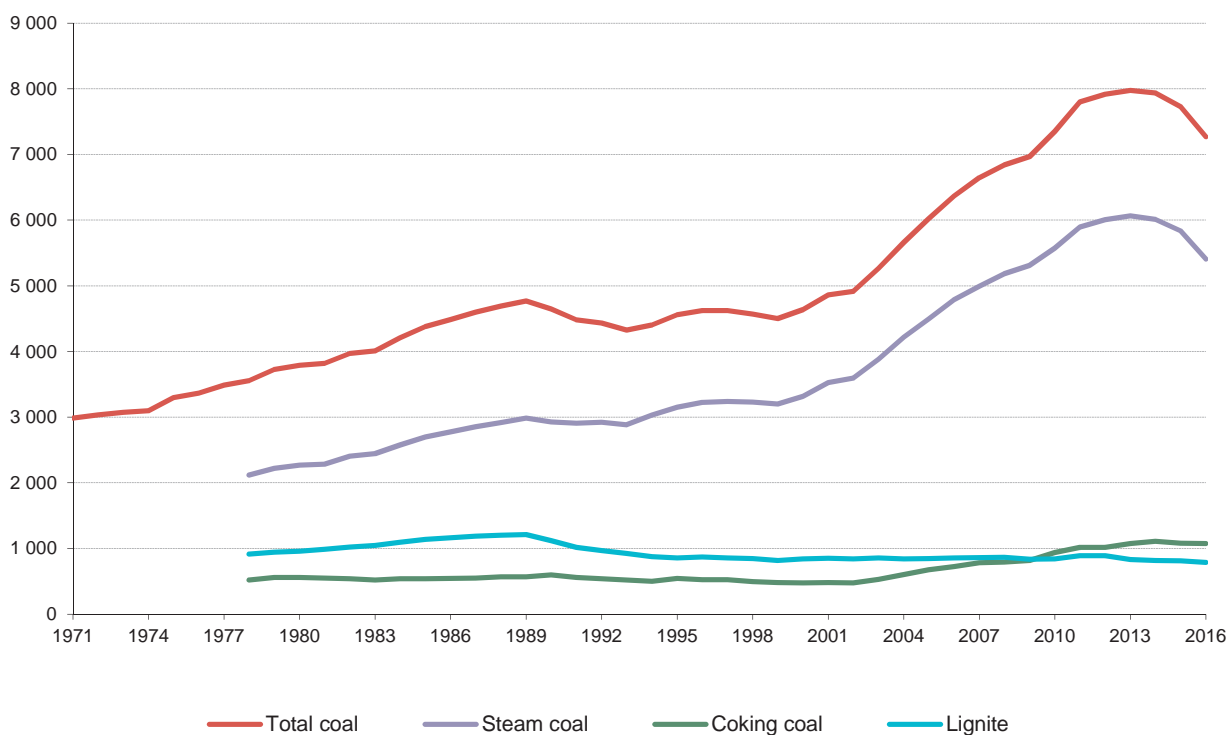
1. Coal comprises all primary coal types and derived coal products, however excludes peat, peat products, and oil shale and oil sands. For further information, see the explanatory notes and definitions in Part I.

2. Consumption data for 2016p are supplied by OECD member countries. Primary coal consumption data are available for non-member countries, however derived solid fossil fuels and manufactured gases are not available, and neither is total primary energy supply for all fuels.

3. Please refer to the Geographical notes in Part I.

Source: IEA/OECD World Energy Statistics

**Figure 1: World coal production
(million tonnes)**



**Figure 2: World steam and coking coal trade
(million tonnes)**

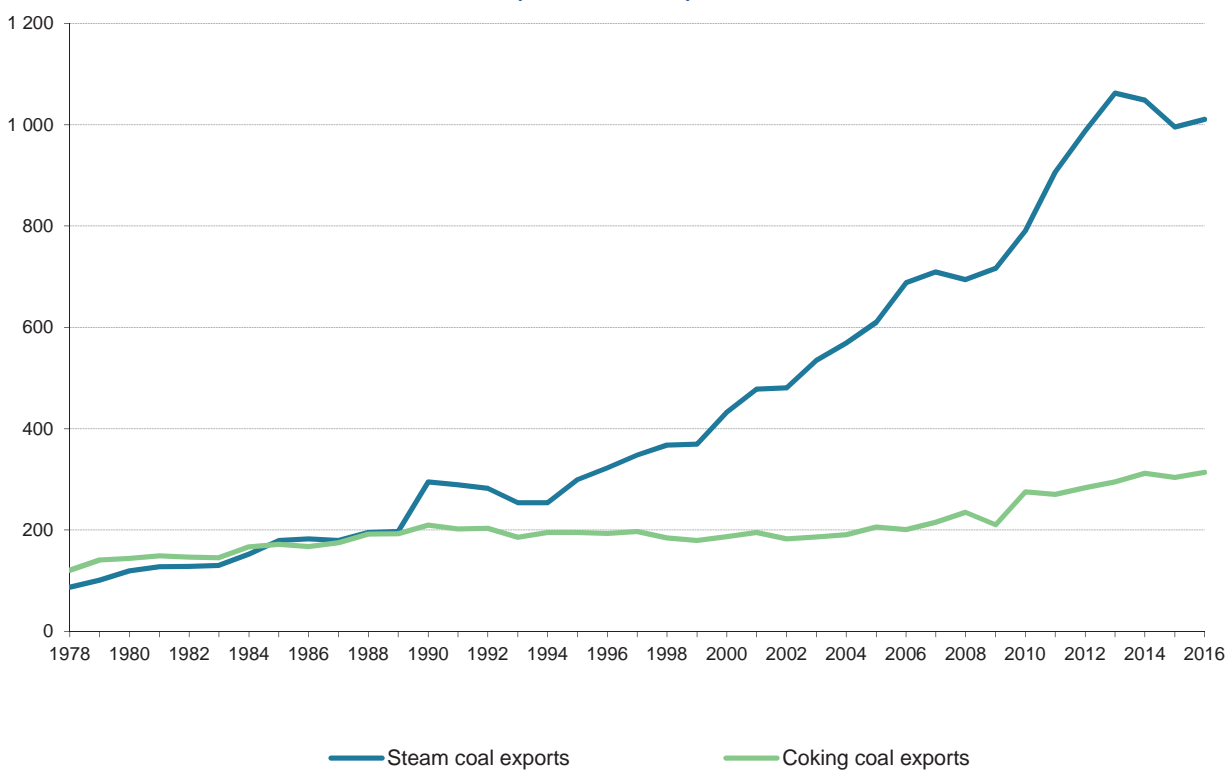


Figure 3: Coal production by region
(million tonnes)

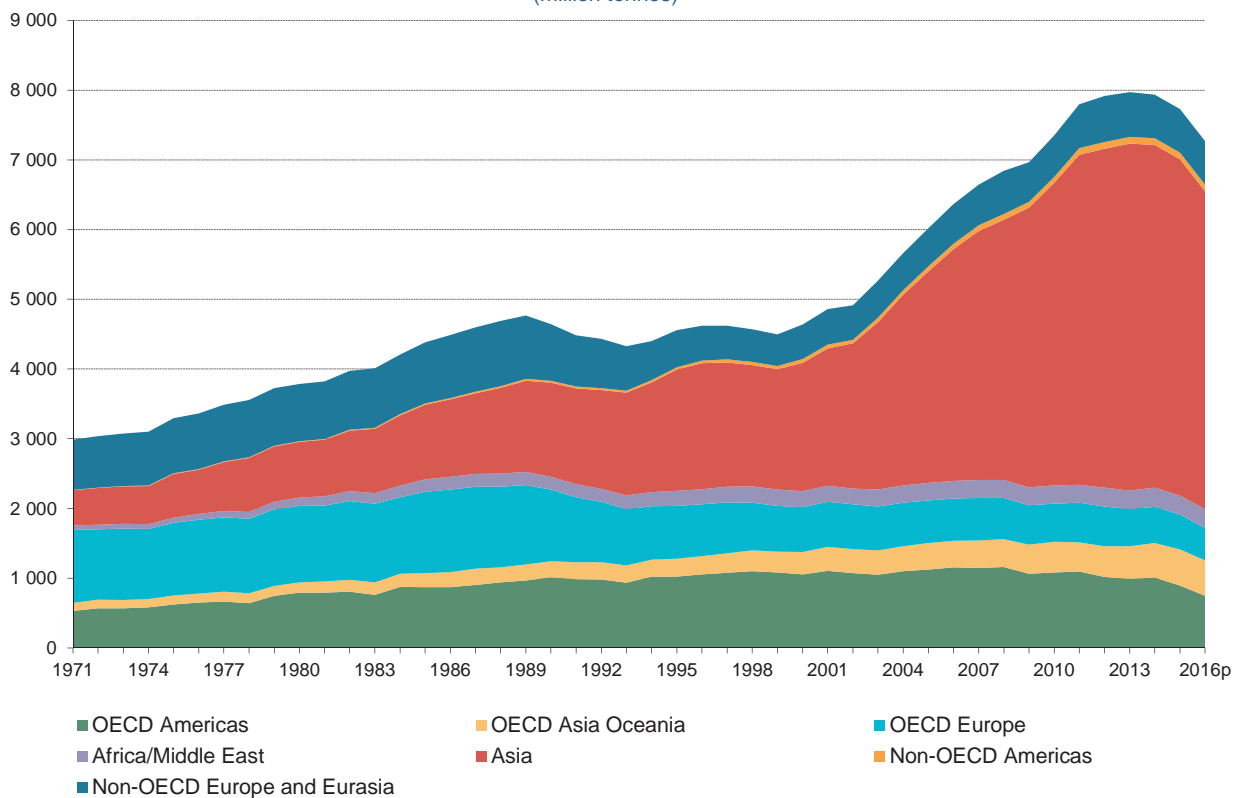


Figure 4: Coal consumption by region
(million tonnes)

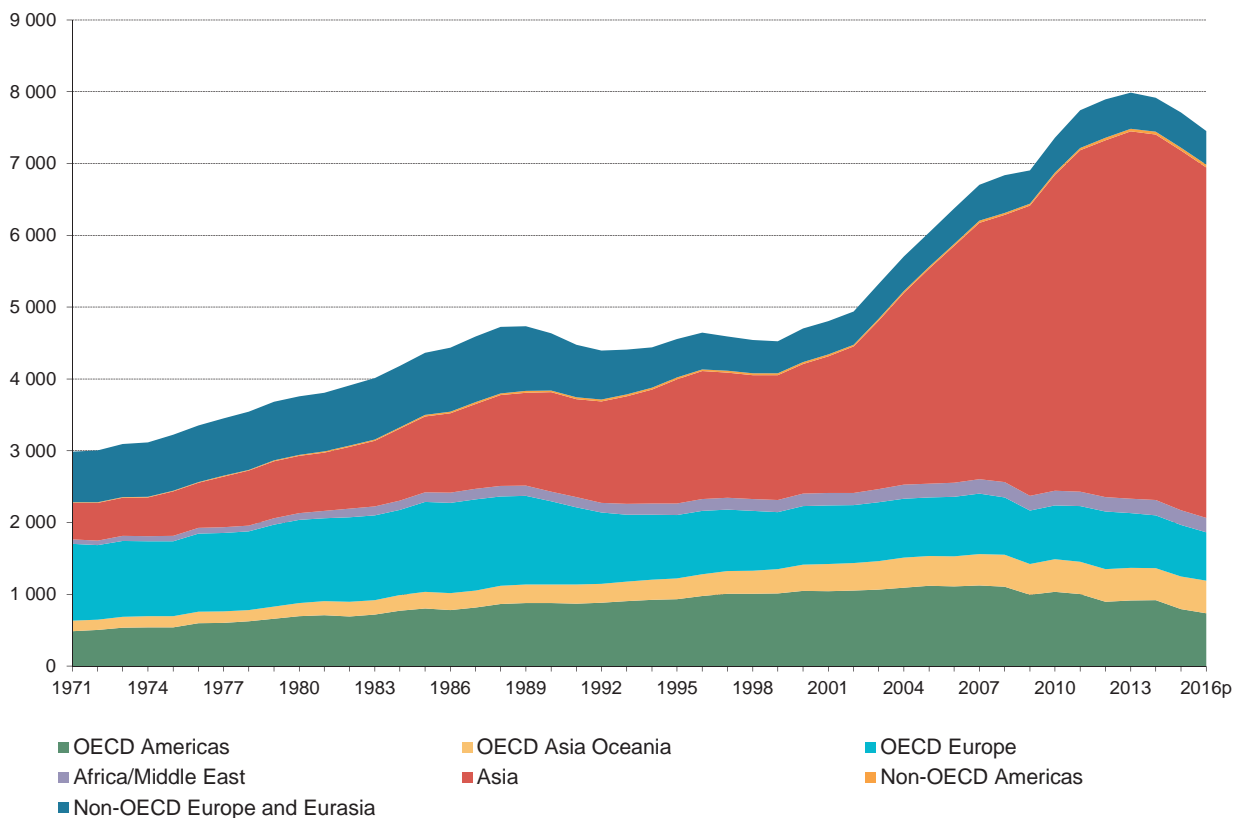


Figure 5: Coal imports by region
(million tonnes)

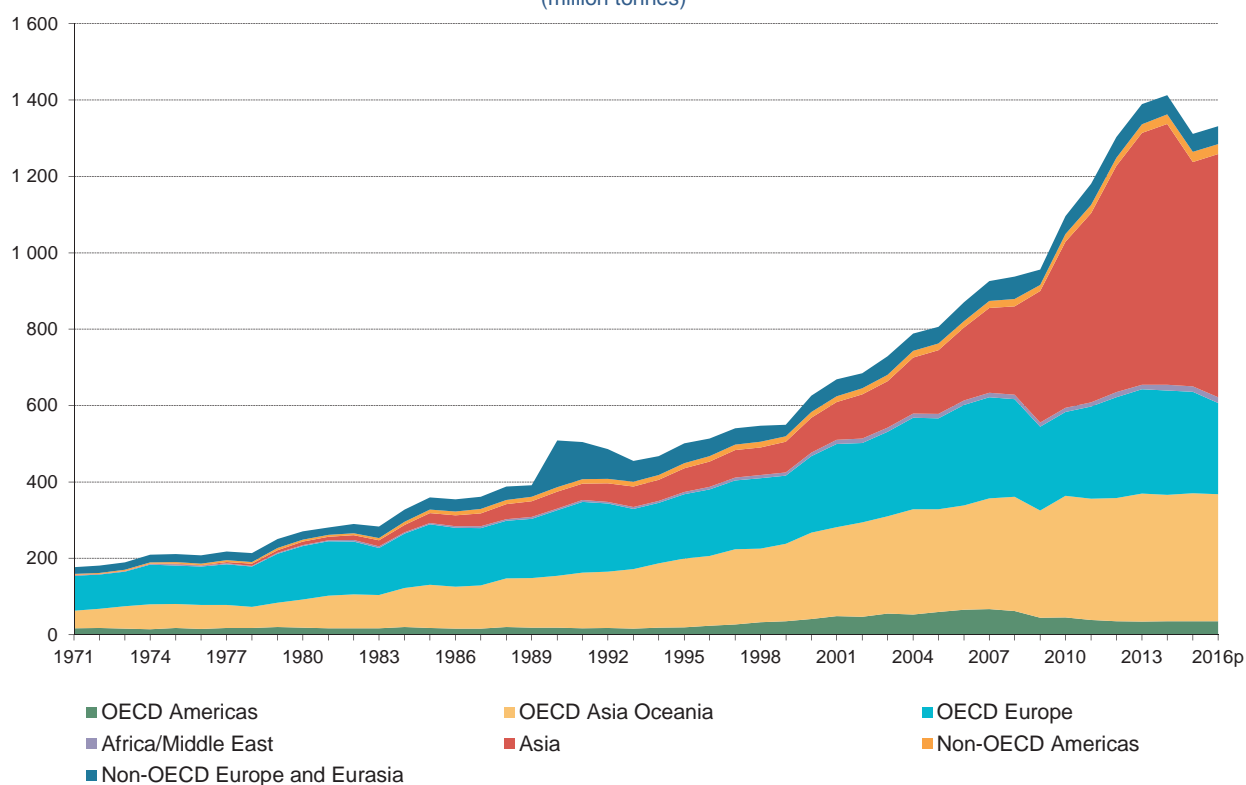
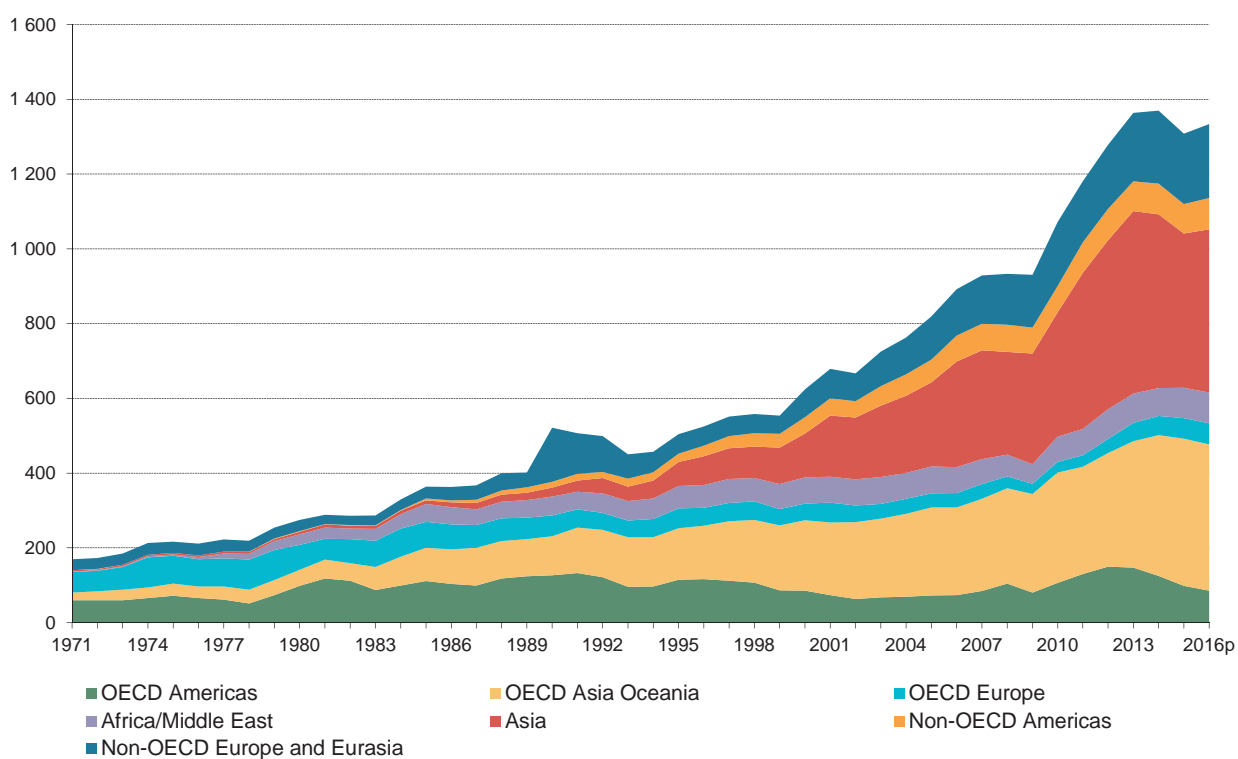
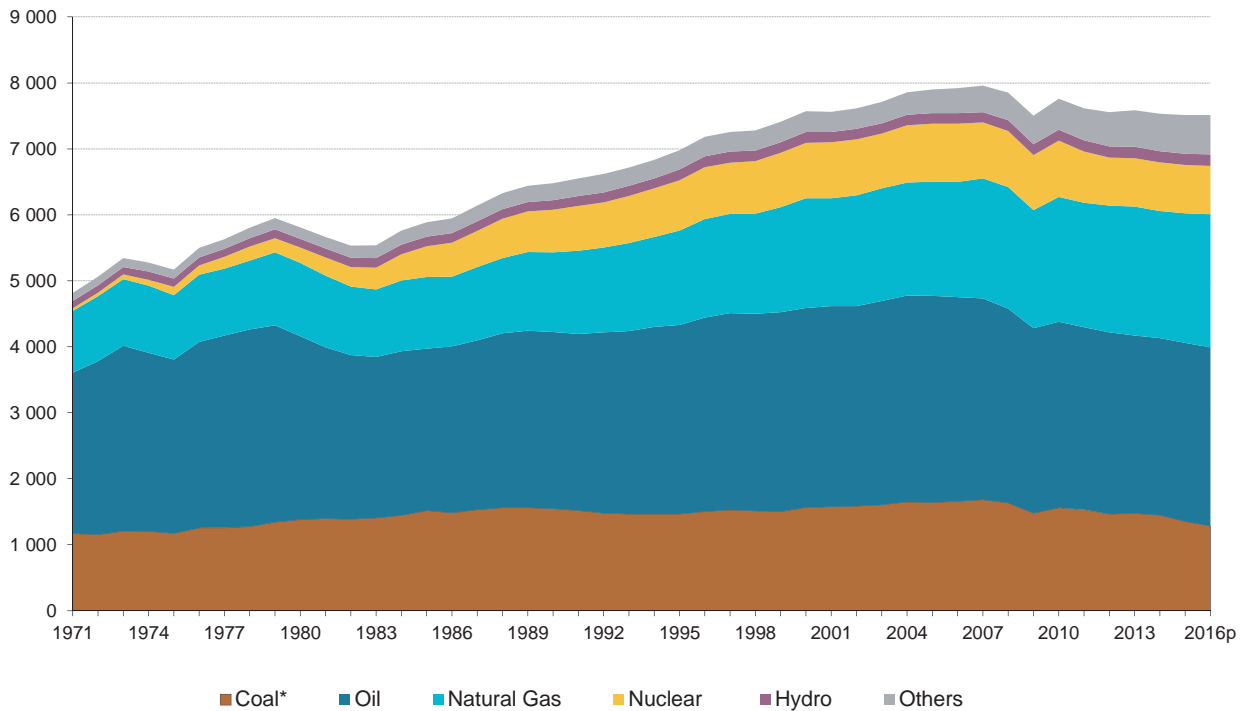


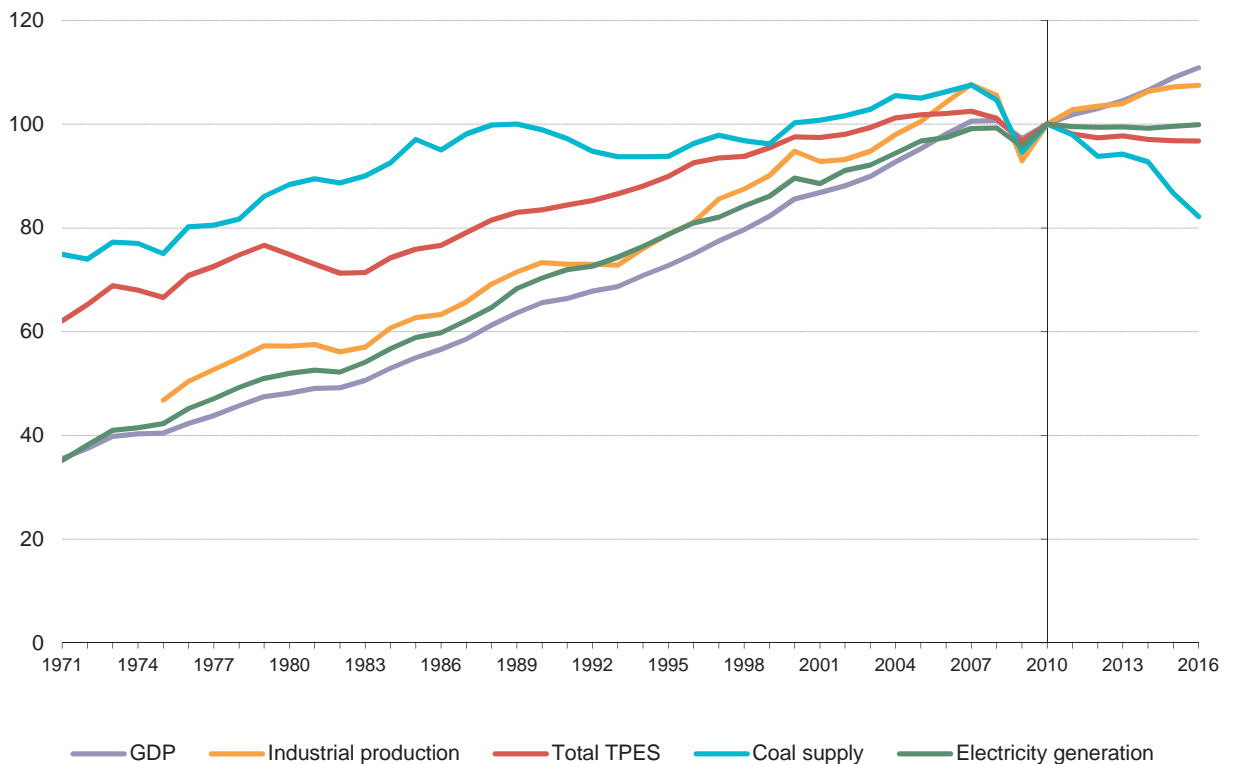
Figure 6: Coal exports by region
(million tonnes)



**Figure 7: OECD total primary energy supply
(Mtce)**



**Figure 8: OECD coal¹ consumption and indicators
(Index: 2010=100)**



1. Coal comprises primary coal (anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite), plus peat and oil shale and oil sands.

PART III

DETAILED OECD COAL DATA

DIRECTORY OF PART III FIGURES AND TABLES

Part III of *Coal Information* contains detailed statistical information on coal for the 35 Member countries of the OECD and for regional aggregates (OECD Total, OECD Americas, OECD Asia Oceania, OECD Europe, and IEA Total). The figures and tables of regional aggregates are presented before the country tables which are set out in alphabetical order.

Data for each region and country are illustrated in figures at the beginning of each section. This is followed by detailed statistical information presented in several tables for each region and country.

Interpreting energy data and comparing statistics between countries can be difficult due to differences in definitions used by countries in the collection and reporting of data, as explained in Part I. The conventions used by the Secretariat in compiling a consistent publication of coal data are also reported.

Readers are strongly advised to read the country notes for individual countries, which are provided at the end of this chapter. Conversion factors are also included for reference.

Figures

1. Coal supply indicators (1971 = 100)
2. Total primary energy supply by fuel (Mtce)
3. Primary coal supply (Mtce)
4. Coal consumption (Mtce)
5. Electricity generation by fuel (TWh)
6. CO₂ emissions by fuel (Mt CO₂)

Tables

Where present, tables presented are numbered as follows:

1. Coal balance
2. Use of coal for selected end-uses
3. Coal and peat production by type
4. Coal and peat trade by type
5. Total coal imports by origin
6. Coking coal exports by destination
7. Steam coal exports by destination
8. Coal import values by origin
9. Coal export values by destination

It should be noted that not all tables are shown for all countries. For example, in the case where a country has no or very few coal exports, the related tables (on export volumes and values) are omitted.

Data for 2016 are provisional with the exception of Tables 8 and 9 where data are final. USD refers to dollars used in the United States of America. Prices for regional totals, weighted by national consumption, are calculated as an average of available price data in the region and therefore prices shown should only be considered as indicative. Data are converted from unit prices to tonnes of coal equivalent (tce) using country specific calorific values.

OECD TOTAL¹

Figure 1: Coal supply indicators (1971 = 100)

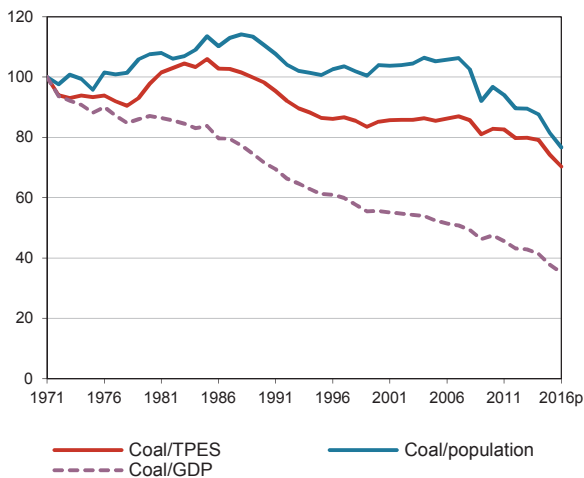


Figure 2: TPES by fuel (Mtce)

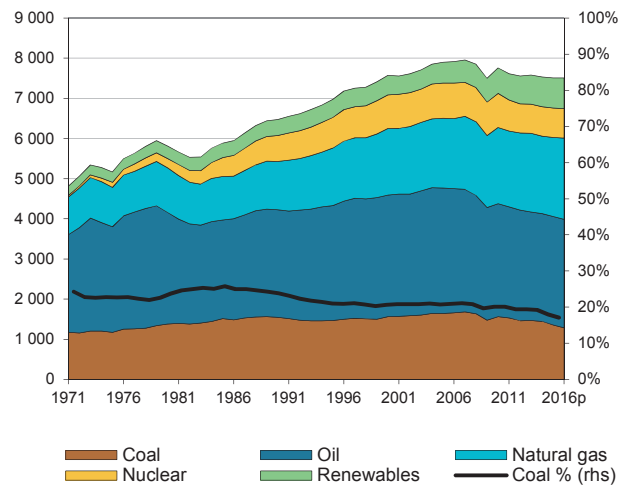


Figure 3: Primary coal supply (Mtce)

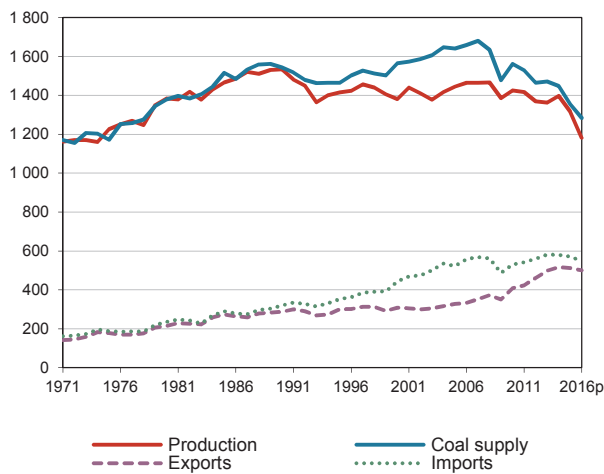


Figure 4: Coal consumption (Mtce)

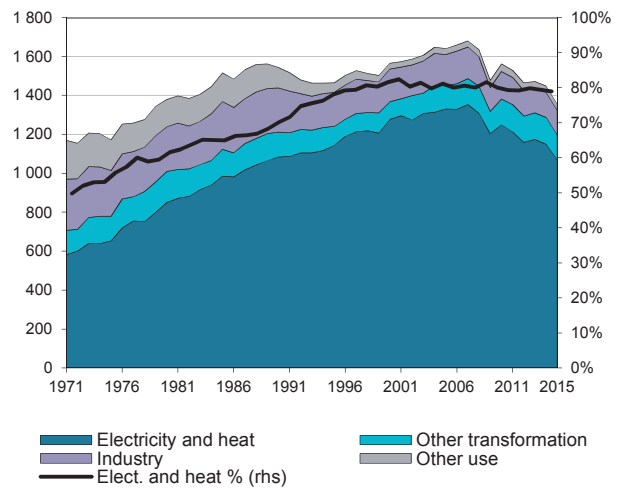
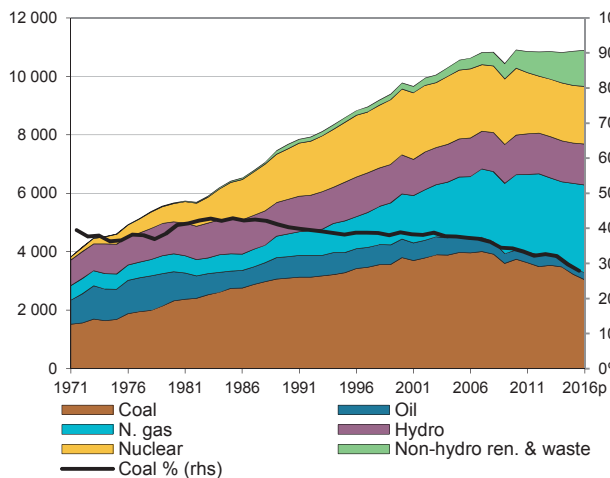
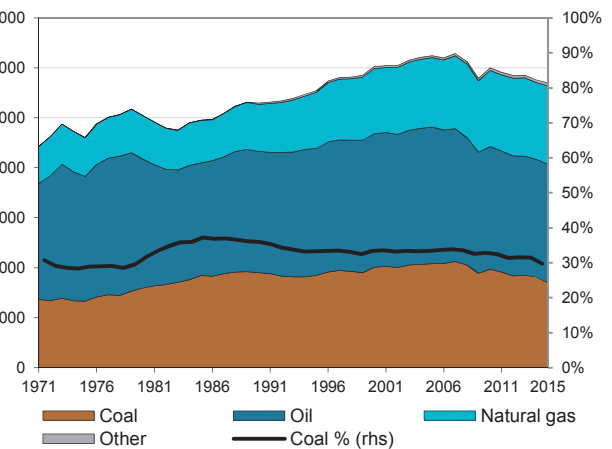


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

OECD TOTAL

1. Coal balance¹
(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	1170.1	1384.3	1533.0	1380.9	1425.3	1396.3	1316.7	1181.4	1.6	-0.6
Imports	174.2	236.3	319.5	443.2	530.8	579.7	571.6	546.8	3.6	2.4
Exports	-158.7	-214.9	-287.6	-308.2	-408.5	-517.7	-511.9	-500.9	3.6	2.3
Stock changes	20.8	-26.2	-20.9	49.3	13.5	-10.5	-22.6	55.6		
Primary supply	1206.4	1379.5	1544.1	1565.2	1561.1	1447.8	1353.8	1282.9	1.5	-0.5
Statistical differences	21.1	-20.0	1.1	30.7	-15.2	-14.5	-6.8	..		
Total transformation	-753.8	-959.5	-1187.1	-1375.5	-1337.5	-1243.2	-1160.2	..	2.7	-0.1
Electricity and heat gen.	-639.2	-849.6	-1083.6	-1276.7	-1248.4	-1149.5	-1068.0	..	3.2	-0.1
<i>Main activity producers</i> ³	-618.1	-786.0	-1015.5	-1222.7	-1205.3	-1110.8	-1027.0	..	3.0	0.0
<i>Autoproducers</i>	-21.1	-63.6	-68.1	-54.0	-43.2	-38.7	-40.9	..	7.1	-2.0
Gas works	15.7	7.8	-0.5	-2.7	-3.1	-3.1	-3.2	..	-	7.5
Coal transformation ⁴	-130.3	-117.7	-102.7	-95.3	-84.5	-88.7	-87.0	..	-1.4	-0.7
<i>BKB plants</i>	2.2	1.4	-1.6	-0.2	0.1	-0.2	-0.4	..	-	-5.8
<i>Blast furnaces</i>	-93.6	-80.0	-79.2	-81.5	-74.1	-78.7	-76.2	..	-1.0	-0.2
<i>Coke ovens</i>	-38.2	-39.2	-17.8	-12.8	-10.6	-9.8	-10.4	..	-4.4	-2.1
<i>Patent fuel plants</i>	-0.8	0.1	-4.1	-0.8	0.1	-0.0	-0.0	..	10.5	-22.8
Other transformation ⁵	-	-	-0.3	-0.7	-1.3	-1.8	-2.1	..	-	8.8
Energy ind. own use	-35.0	-27.7	-24.0	-21.0	-27.1	-28.0	-26.5	..	-2.2	0.4
Losses	-5.4	-2.4	-1.4	-1.2	-1.7	-1.5	-1.7	..		
Final consumption ⁶	433.2	369.8	332.7	198.2	179.7	160.5	158.6	..	-1.5	-2.9
Industry ⁷	261.1	229.0	226.8	168.8	140.9	129.6	127.8	..	-0.8	-2.3
<i>Iron and steel</i>	134.0	106.3	88.1	66.2	56.5	54.2	53.7	..	-2.4	-2.0
<i>Chemical</i>	26.6	24.9	30.1	19.0	16.6	15.8	15.8	..	0.7	-2.6
<i>Non-metallic minerals</i>	21.2	32.7	43.3	38.1	28.2	30.6	29.4	..	4.3	-1.5
<i>Paper, pulp and print</i>	11.6	11.2	16.0	8.4	9.7	7.8	7.4	..	1.9	-3.0
<i>Other industry</i> ⁸	67.6	53.9	49.4	37.2	29.9	21.1	21.5	..	-1.8	-3.3
Transport ⁹	10.5	3.7	0.4	0.1	0.2	0.0	0.0	..	-17.3	-11.9
Other	157.2	133.8	101.6	26.2	34.8	26.1	26.6	..	-2.5	-5.2
<i>Comm. and pub. services</i>	28.5	28.7	23.2	4.3	5.1	7.7	8.5	..	-1.2	-3.9
<i>Residential</i>	109.5	91.2	65.9	19.9	27.5	16.7	16.6	..	-2.9	-5.4
<i>Other sectors</i> ¹⁰	19.2	13.9	12.5	2.0	2.2	1.7	1.5	..	-2.5	-8.0
Non-energy use	4.4	3.3	4.0	3.0	3.8	4.8	4.1	..	-0.7	0.2
Electricity gen. - TWh	1695.2	2319.4	3093.8	3792.9	3741.4	3475.2	3227.8	3044.6	3.6	0.2

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.
2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.
3. Main activity electricity and heat generation includes district heating.
4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.
5. Other transformation includes Liquefaction and Non-specified transformations.
6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).
7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.
8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.
9. Transport includes Rail and Inland waterways.
10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

OECD TOTAL

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	1874.32	2293.47	2230.21	2238.06	2131.99	2100.83	1965.98	1.70	-0.61
Total electricity and heat	1136.93	1649.14	1853.53	1857.15	1767.64	1733.20	1622.44	3.15	-0.07
<i>Main activity producers</i>	1069.22	1566.70	1808.77	1821.29	1738.49	1703.24	1590.92	3.23	0.06
<i>Autoproducers</i>	67.71	82.45	44.76	35.86	29.14	29.96	31.52	1.65	-3.77
Patent fuel/BKB plants	162.40	133.90	16.35	15.34	16.66	16.86	16.19	-1.60	-8.10
Coke ovens/Liquefaction ³	278.26	236.96	186.88	173.93	168.74	170.71	166.00	-1.33	-1.41
Blast furnace inputs	0.01	10.33	25.40	32.38	37.16	37.02	37.34	88.91	5.28
Gas manufacture	15.16	9.13	7.02	7.14	6.46	6.86	6.97	-4.14	-1.08
Industry	144.77	165.27	122.24	101.48	94.19	91.53	89.61	1.11	-2.42
<i>Iron and steel</i>	10.78	11.46	9.78	10.53	10.90	11.12	11.15	0.51	-0.11
<i>Chemical</i>	28.22	33.75	20.86	16.93	16.21	16.18	15.66	1.50	-3.03
<i>Non-metallic minerals</i>	28.95	45.77	39.39	29.70	32.77	32.56	30.73	3.89	-1.58
<i>Paper, pulp and print</i>	13.53	17.64	9.20	10.64	8.53	8.51	8.01	2.24	-3.11
<i>Other industry</i>	63.30	56.65	43.01	33.69	25.79	23.16	24.05	-0.92	-3.37
Other sectors ⁴	104.61	82.96	29.41	38.35	30.89	27.73	28.28	-1.91	-4.21
Non-energy use	0.91	0.98	0.84	1.01	1.22	1.01	0.94	0.60	-0.13
Steam coal	929.13	1242.44	1427.12	1478.51	1392.69	1357.91	1251.03	2.45	0.03
Total electricity and heat	714.31	1041.75	1288.52	1329.20	1248.21	1215.33	1121.37	3.19	0.30
<i>Main activity producers</i>	664.54	991.91	1255.52	1303.48	1225.46	1190.53	1094.75	3.39	0.40
<i>Autoproducers</i>	49.77	49.83	33.00	25.72	22.76	24.80	26.62	0.01	-2.48
Patent fuel/BKB plants	25.54	23.75	3.24	2.09	2.18	1.89	1.70	-0.60	-10.02
Coke ovens/Liquefaction ³	2.40	7.96	12.69	13.36	16.72	16.24	15.98	10.49	2.83
Blast furnace inputs	0.01	3.76	9.71	10.93	10.39	11.17	12.27	73.63	4.85
Gas manufacture	1.85	0.41	-	-	-	-	-	-11.86	-
Industry	93.80	120.79	103.96	84.43	81.76	80.99	77.05	2.13	-1.78
<i>Iron and steel</i>	9.78	8.05	8.97	8.91	8.88	8.61	8.29	-1.61	0.12
<i>Chemical</i>	13.86	22.82	17.49	15.05	14.52	14.43	14.06	4.24	-1.92
<i>Non-metallic minerals</i>	27.37	44.13	39.11	29.34	30.27	30.34	29.35	4.06	-1.62
<i>Paper, pulp and print</i>	9.02	15.53	8.63	10.44	8.26	8.20	7.68	4.63	-2.78
<i>Other industry</i>	33.76	30.26	29.76	20.70	19.83	19.42	17.67	-0.91	-2.13
Other sectors ⁴	71.43	46.95	18.90	28.99	23.42	21.98	22.80	-3.44	-2.85
Non-energy use	0.08	0.30	0.45	0.27	0.54	0.52	0.53	12.00	2.24
Coking coal	293.19	256.52	209.00	192.84	182.66	185.79	177.95	-1.11	-1.45
Total electricity and heat	7.14	18.23	13.37	6.04	2.44	3.70	1.03	8.12	-10.85
<i>Main activity producers</i>	6.19	14.32	10.17	5.01	1.73	3.35	0.93	7.23	-10.37
<i>Autoproducers</i>	0.95	3.91	3.20	1.04	0.71	0.36	0.11	12.52	-13.44
Patent fuel/BKB plants	-	-	-	-	-	0.00	0.00	-	-
Coke ovens/Liquefaction ³	275.86	229.00	174.19	160.00	151.52	153.91	149.47	-1.54	-1.69
Blast furnace inputs	-	6.57	15.69	21.45	26.74	25.84	25.07	-	5.50
Gas manufacture	6.91	0.26	-	-	-	-	-	-23.92	-
Industry	0.26	2.37	2.99	5.85	3.89	2.90	5.37	20.27	3.32
<i>Iron and steel</i>	0.07	2.04	0.59	1.47	1.99	2.50	2.85	32.43	1.35
<i>Chemical</i>	0.01	-	0.00	-	-	-	-	-	-
<i>Non-metallic minerals</i>	0.00	-	0.00	0.00	0.05	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.18	0.34	2.39	4.39	1.86	0.40	2.52	5.54	8.40
Other sectors ⁴	0.28	0.14	0.10	0.20	0.07	0.06	0.00	-5.70	-17.89
Non-energy use	-	0.00	0.23	0.18	0.18	0.13	0.10	-	16.75

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

OECD TOTAL

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	652.00	794.51	594.10	566.71	556.64	557.13	537.00	1.66	-1.55
Total electricity and heat	415.48	589.17	551.64	521.91	516.98	514.16	500.04	2.95	-0.65
<i>Main activity producers</i>	398.48	560.47	543.07	512.80	511.31	509.36	495.25	2.88	-0.49
<i>Autoproducers</i>	16.99	28.70	8.57	9.11	5.68	4.80	4.79	4.46	-6.91
Patent fuel/BKB plants	136.86	110.15	13.11	13.25	14.48	14.97	14.49	-1.79	-7.79
Coke ovens/Liquefaction ²	-	-	0.00	0.57	0.50	0.56	0.55	-	-
Blast furnace inputs	-	-	-	-	0.03	0.00	0.00	-	-
Gas manufacture	6.40	8.47	7.02	7.14	6.46	6.86	6.97	2.36	-0.78
Industry	50.71	42.10	15.30	11.20	8.54	7.63	7.18	-1.54	-6.83
<i>Iron and steel</i>	0.93	1.37	0.22	0.16	0.04	0.02	0.02	3.32	-15.91
<i>Chemical</i>	14.35	10.93	3.37	1.88	1.69	1.76	1.60	-2.24	-7.41
<i>Non-metallic minerals</i>	1.57	1.63	0.28	0.35	2.46	2.21	1.38	0.32	-0.67
<i>Paper, pulp and print</i>	4.51	2.11	0.57	0.20	0.26	0.31	0.33	-6.14	-7.18
<i>Other industry</i>	29.36	26.06	10.86	8.61	4.10	3.34	3.86	-0.99	-7.35
Other sectors ³	32.90	35.87	10.42	9.17	7.41	5.69	5.48	0.72	-7.24
Non-energy use	0.83	0.67	0.16	0.56	0.50	0.35	0.32	-1.78	-2.93
Peat	7.98	13.75	11.30	14.81	10.60	10.42	9.81	4.64	-1.34
Total electricity and heat	3.71	7.72	8.51	12.39	8.58	8.49	8.11	6.29	0.19
<i>Main activity producers</i>	3.23	7.50	8.01	11.97	8.29	8.17	7.80	7.26	0.16
<i>Autoproducers</i>	0.48	0.23	0.50	0.42	0.29	0.32	0.31	-6.02	1.24
Patent fuel/BKB plants	0.75	1.64	0.88	0.81	0.76	0.66	0.40	6.74	-5.54
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	1.09	1.55	1.22	1.05	0.78	0.83	0.77	2.94	-2.75
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	0.16	0.09	0.02	0.02	0.02	0.01	-	-10.45
<i>Non-metallic minerals</i>	-	-	0.00	0.00	-	-	-	-	-
<i>Paper, pulp and print</i>	0.50	1.29	1.04	0.92	0.70	0.75	0.71	8.24	-2.35
<i>Other industry</i>	0.60	0.10	0.09	0.11	0.05	0.07	0.05	-13.81	-2.81
Other sectors ³	2.42	2.73	0.71	0.79	0.65	0.58	0.57	1.02	-6.11
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	26.26	13.62	18.32	20.91	21.02	18.32	-	-1.43
Total electricity and heat	-	22.87	11.30	13.98	15.86	15.63	12.50	-	-2.39
<i>Main activity producers</i>	-	22.87	11.10	13.53	15.43	15.23	12.00	-	-2.55
<i>Autoproducers</i>	-	-	0.20	0.45	0.43	0.40	0.50	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	0.88	1.39	3.09	3.82	4.08	4.90	-	7.12
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	0.65	0.61	1.03	0.98	1.04	0.75	-	0.57
Industry	-	1.39	0.22	0.16	0.16	0.16	0.07	-	-11.07
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	0.22	0.16	0.16	0.16	0.07	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	1.39	0.00	-	-	-	-	-	-
Other sectors ³	-	-	0.00	-	-	-	-	-	-
Non-energy use	-	-	0.15	0.06	0.08	0.10	0.14	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

OECD TOTAL

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	290.52	282.03	229.11	239.15	281.39	291.29	279.70	-0.25	0.13
Steam coal	748.82	985.43	952.08	1004.61	945.33	842.32	723.15	2.31	-0.63
Lignite	205.58	253.00	192.60	191.67	188.60	174.55	170.03	1.74	-1.47
Peat	2.30	5.61	3.35	4.69	4.45	2.49	2.24	7.71	-3.20
Oil shale and oil sands	-	6.94	3.74	4.46	5.55	6.01	6.24	-	-0.57
								-0.40	0.26
Mt:									
Coking coal	296.47	282.54	234.94	248.86	293.27	301.33	289.49	2.39	-0.45
Steam coal	905.35	1201.87	1191.59	1270.68	1210.39	1073.88	917.07	1.56	-1.52
Lignite	652.37	785.60	590.78	595.90	566.60	535.61	513.51	6.25	-3.13
Peat	8.05	16.66	10.34	14.32	13.65	7.52	6.75	-	-0.51
Oil shale and oil sands	-	22.79	12.12	15.02	18.37	20.04	20.78	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	185.87	318.84	442.87	522.69	530.76	581.98	579.69	571.63	546.76
Bituminous coal ⁴	58.79	157.53	272.95	356.92	364.15	425.39	415.66	412.38	388.10
Coking coal	99.77	141.39	139.05	135.79	142.81	137.12	139.85	134.53	134.21
Sub-bituminous coal	0.60	1.40	7.50	9.63	7.78	4.05	6.07	8.60	8.81
Lignite	4.69	4.40	1.46	0.48	0.61	0.74	1.14	0.99	0.64
Peat	-	0.10	0.10	0.14	0.16	0.08	0.07	0.06	0.04
Coal products ⁵	22.01	14.03	21.82	19.73	15.24	14.60	16.91	15.08	14.96
Total exports	176.71	287.57	308.19	327.35	408.43	498.39	517.66	511.89	500.91
Bituminous coal ⁴	44.50	104.67	130.92	132.68	157.66	234.49	239.86	242.97	237.00
Coking coal	105.43	161.25	162.61	176.98	231.73	242.26	259.35	251.05	247.22
Sub-bituminous coal	-	0.04	0.77	4.43	4.40	7.08	3.64	3.62	1.94
Lignite	4.38	4.34	1.33	0.82	0.80	0.86	1.21	1.06	0.71
Peat	0.01	0.12	0.08	0.06	0.04	0.01	0.00	0.02	-
Coal products ⁵	22.40	17.16	12.47	12.38	13.80	13.69	13.59	13.17	14.04

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

OECD TOTAL

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	178767	325257	467427	566617	583030	642586	639417	635869	607078
Coking coal	99172	136967	141834	138332	145725	139943	142733	137645	137389
Australia	29796	44481	71235	72918	77656	69320	66043	76199	72666
Canada	11598	22719	25692	19676	19062	16854	14653	15745	15877
Czech Republic	909	774	3388	3366	3704	2370	2533	2068	2294
Germany	10948	3141	2	289	1	2	87	3	-
Poland	6619	2570	3118	3246	1821	2116	2265	2913	2417
United Kingdom	79	52	-	6	1	2	-	-	-
United States	25075	45007	23113	21353	31684	32615	32277	23319	19714
Other OECD	116	335	380	817	464	425	635	317	6606
China, People's Rep.	420	1516	6602	8110	2428	1248	2471	1104	1038
Colombia	-	64	140	313	858	428	1284	1215	1384
Indonesia	-	83	779	129	126	964	515	760	427
South Africa	2566	1511	705	295	574	106	19	10	-
Former Soviet Union ⁴	5249	9136	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	5221	6264	6473	8708	13747	10562	11024
<i>Other FSU</i>	x	x	26	316	80	1316	480	580	419
Venezuela	-	-	510	872	187	90	91	-	77
Viet Nam	-	-	150	-	37	-	-	-	-
Non-specified/other	5797	5578	773	362	567	3379	5633	2850	3446
Steam coal	66833	178257	322549	427241	436094	501000	494073	495958	468366
Australia	4556	39634	75080	94139	109164	126877	127094	138124	128786
Canada	970	4471	4040	2254	8390	12260	15766	7540	4699
Czech Republic	243	327	2443	1415	2889	2772	2011	1452	925
Germany	6716	2123	470	641	627	474	613	4379	464
Poland	16292	13084	18894	15564	10730	9046	6857	6160	5811
United Kingdom	2285	2441	593	322	315	231	154	155	203
United States	9296	33754	27977	17245	22271	48403	42979	33398	29328
Other OECD	986	3563	4529	3800	4361	3545	4422	2827	3531
China, People's Rep.	534	7586	37351	38740	11475	4077	3016	2326	5378
Colombia	-	10436	29531	47805	61607	77366	78245	82099	80520
Indonesia	-	1490	29670	63464	87140	79825	75136	74418	74232
South Africa	11967	34928	47234	53103	25897	23252	29415	24568	25072
Former Soviet Union ⁴	3012	9725	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	21030	60479	71652	94790	94481	102721	98684
<i>Other FSU</i>	x	x	835	2690	2038	3347	5111	1547	1560
Venezuela	-	1752	5096	5135	1382	525	495	439	130
Viet Nam	-	150	1597	2699	3512	2138	1803	995	612
Non-specified/other	9976	12793	16048	17746	12643	12072	6373	12626	8304
Lignite	12762	10033	3044	1044	1211	1643	2611	2266	1323

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

OECD TOTAL

6. Coking coal exports by destination¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	107072	162292	168629	186165	243317	255435	272293	262974	258889
Total OECD	90313	122941	128525	132468	139829	135440	139578	128509	129164
Australia	-	-	122	49	-	-	-	-	-
Austria	1283	1351	1844	1753	1724	1705	1440	1202	1336
Belgium	3860	7450	4551	3428	2786	1585	976	1826	1742
Canada	5410	4018	3501	4034	3091	3363	3945	3886	3425
Chile	32	492	1088	1183	659	966	903	684	557
Czech Republic	-	-	214	523	720	845	1500	1366	1280
Denmark	-	50	-	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	330	1005	1172	749	1199	1207	878	928
France	8972	8494	6629	5527	4478	5678	4754	4758	5020
Germany	714	877	4891	4343	4027	3285	3721	3277	3458
Greece	245	-	-	-	-	-	-	-	-
Hungary	-	-	1075	449	542	201	290	346	443
Iceland	-	28	48	57	59	71	56	41	18
Ireland	-	3	4	15	-	8	1	1	1
Israel	-	50	56	129	55	-	-	-	-
Italy	8393	8734	7381	6469	4951	4184	3280	2796	2571
Japan	43380	55410	52798	54110	60233	52428	52949	50046	52094
Korea	2503	7852	15305	17873	23819	26690	28237	28414	28871
Latvia	x	-	-	-	96	71	-	-	-
Luxembourg	286	-	-	-	77	-	-	-	-
Mexico	10	3	1406	1575	1335	3278	2074	769	456
Netherlands	3347	5273	4745	8042	8971	10996	13238	11434	12352
New Zealand	-	-	-	-	-	-	-	-	-
Norway	193	99	95	18	75	90	75	49	58
Poland	-	-	538	592	2882	1502	2372	2557	2308
Portugal	387	805	198	-	-	218	75	-	85
Slovak Republic	5126	3681	1570	1909	2091	1645	1422	1142	1232
Slovenia	x	-	-	163	223	114	420	198	374
Spain	3257	4499	4163	4592	2530	2446	1965	2453	2031
Sweden	840	1568	2128	1690	1887	1307	1984	1627	1622
Switzerland	18	3	46	-	37	1	1	-	-
Turkey	498	2869	3954	3581	3893	5090	4459	3859	4259
United Kingdom	1402	8230	8626	7339	6422	5614	7479	4032	1938
United States	157	772	544	1853	1417	860	755	868	705
Total non-OECD	8808	30067	36647	49263	96922	117565	130790	132321	126698
Brazil	2121	8867	10695	8020	12980	12197	12694	12304	13451
China ³	-	860	265	5269	35663	53060	57102	49181	44265
Chinese Taipei	1186	3155	7713	8343	6215	9237	9941	10884	10645
Egypt	218	1009	1211	1406	1366	305	434	341	257
India	232	5179	10795	19117	34749	35897	42501	48734	49476
Romania	1348	3915	505	593	812	1017	773	544	255
Oth. Africa & Mid. East	521	1068	1825	3184	229	643	349	129	647
Oth. non-OECD Americas	919	2129	781	991	924	773	975	1191	982
Other Asia & Oceania	69	963	1051	839	408	238	1088	2835	1825
Other non-OECD Europe and Eurasia	2194	2922	1806	1501	3576	4198	4933	6178	4895
Non-specified/Other	7951	9284	3457	4133	4584	592	-	20	32

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

OECD TOTAL

7. Steam coal exports by destination¹

(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	49931	113417	146919	157400	184895	276800	278106	281595	272897
Total OECD	40497	95379	127191	132751	140050	200762	190335	191317	194204
Australia	-	2	-	-	105	148	30	41	45
Austria	275	1216	1643	2183	1447	1366	1183	1528	719
Belgium	2660	3778	1473	1298	977	2768	2402	3705	3328
Canada	8782	10083	13524	13644	7269	3085	2161	1520	1134
Chile	-	514	1349	664	1399	2530	1321	1997	3209
Czech Republic	274	2282	864	719	685	782	1157	1257	1525
Denmark	4620	5857	2594	1220	873	820	493	385	332
Estonia	x	-	3	-	-	13	3	1	3
Finland	4095	2815	1228	965	356	319	190	85	157
France	6755	3859	3416	3624	3052	3604	1548	1264	1594
Germany	4157	5451	16487	13657	9781	31661	33225	35717	39847
Greece	1	-	112	144	47	101	49	32	17
Hungary	-	-	322	321	158	28	22	67	127
Iceland	-	33	7	44	56	43	58	102	75
Ireland	540	2248	1208	1164	605	510	441	494	385
Israel	-	1058	2623	1170	516	678	342	172	-
Italy	1552	5051	1430	422	1786	4168	3813	2133	565
Japan	1732	30637	51874	58521	68258	81024	83711	83681	84160
Korea	356	4352	13730	18716	28754	38582	38092	38496	40372
Latvia	x	-	-	-	33	-	42	104	49
Luxembourg	52	3	164	38	50	61	72	46	49
Mexico	-	188	373	4579	4421	4722	4398	4337	7393
Netherlands	1285	9559	3556	2240	2196	8188	7024	9159	5903
New Zealand	-	1	16	56	59	-	94	61	76
Norway	167	401	678	497	403	343	377	500	371
Poland	-	1	117	128	1451	1429	1272	568	261
Portugal	15	1572	348	580	776	145	137	147	14
Slovak Republic	237	198	1217	721	449	487	515	522	587
Slovenia	x	-	12	10	186	149	2	19	17
Spain	21	762	2328	730	416	179	590	310	573
Sweden	244	1040	255	443	659	250	233	231	108
Switzerland	90	81	20	8	32	1316	13	12	9
Turkey	79	15	110	178	438	987	384	152	441
United Kingdom	1081	2097	3874	3677	2118	10191	4852	2304	452
United States	1427	225	236	390	239	85	89	168	307
Total non-OECD	384	13032	19134	24440	44316	75029	85373	89408	75175
Brazil	11	345	22	726	129	370	602	192	162
China ³	-	2554	1440	2121	17878	40826	48627	43374	30810
Chinese Taipei	76	6866	10034	14332	19554	18225	19570	21999	21248
Egypt	-	1	2	4	168	1	79	184	570
India	-	48	2469	1679	783	4286	4505	10516	9141
Romania	-	49	-	844	-	38	37	67	74
Oth. Africa & Mid. East	32	1057	828	499	1075	2713	2568	528	858
Oth. non-OECD Americas	82	128	89	14	134	312	276	176	12
Other Asia & Oceania	129	1621	3303	4019	4374	8073	9004	12150	11763
Other non-OECD Europe and Eurasia	54	363	947	202	221	185	105	222	537
Non-specified/Other	9050	5006	594	209	529	143	1839	420	1482

1. Please refer to the explanatory notes and definitions in Part I. Steam coal includes all sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

OECD AMERICAS¹

Figure 1: Coal supply indicators (1971 = 100)

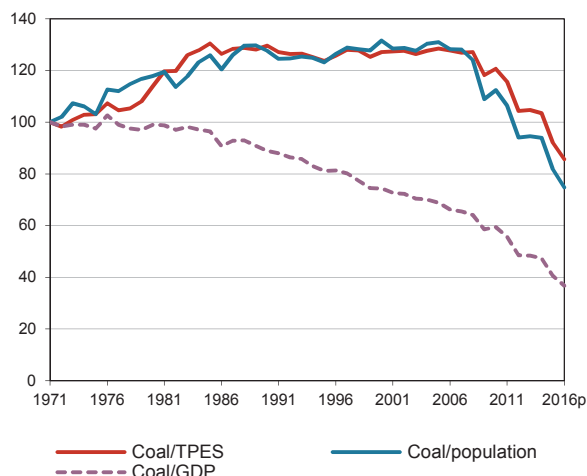


Figure 2: TPES by fuel (Mtce)

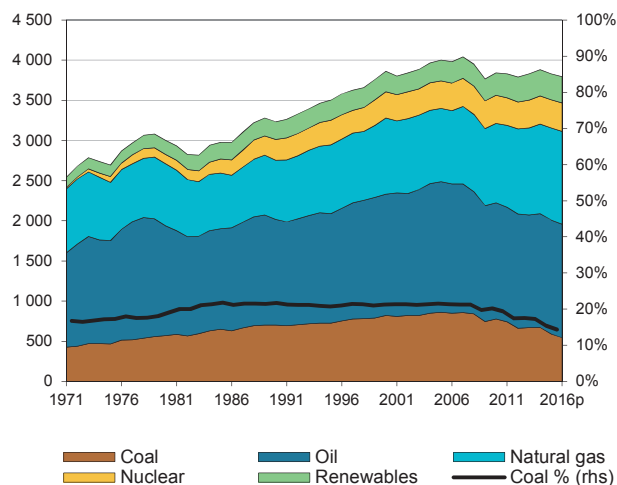


Figure 3: Primary coal supply (Mtce)

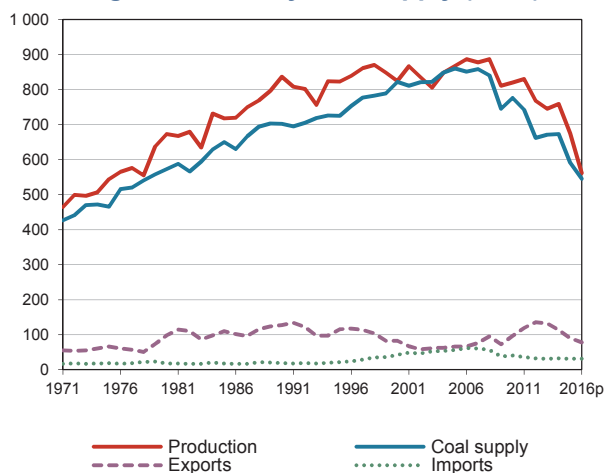


Figure 4: Coal consumption (Mtce)

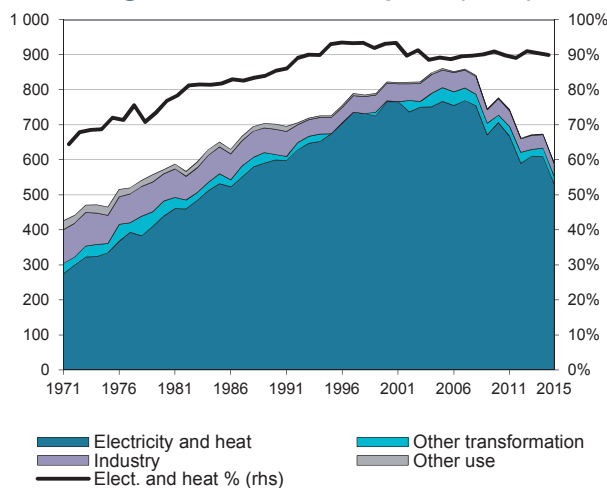
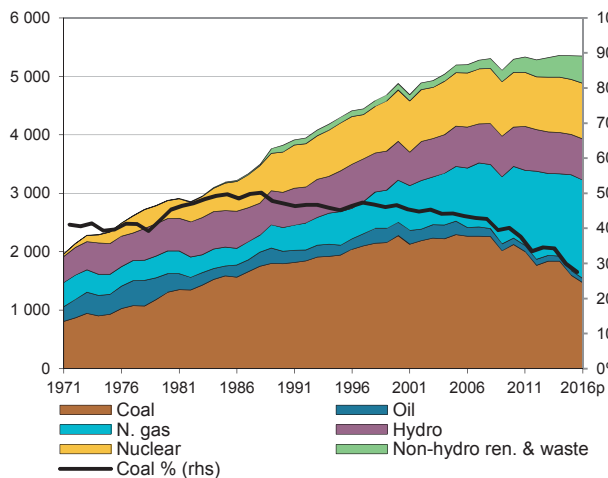
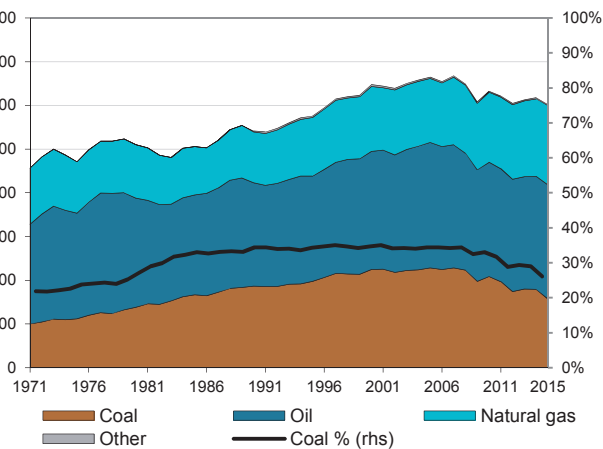


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

OECD AMERICAS

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	496.5	672.4	836.3	824.6	820.1	758.5	674.2	561.6	3.1	-0.9
Imports	16.7	18.2	18.6	42.9	40.6	32.2	31.6	31.4	0.7	2.1
Exports	-55.3	-98.0	-127.8	-82.3	-96.6	-113.4	-89.7	-78.5	5.1	-1.4
Stock changes	12.6	-20.7	-25.6	36.7	12.4	-4.5	-25.7	30.0		
Primary supply	470.5	572.0	701.6	821.8	776.5	672.7	590.5	544.5	2.4	-0.7
Statistical differences	18.6	-10.2	9.4	21.7	-2.9	-5.5	-3.0	..		
Total transformation	-363.7	-468.5	-621.8	-786.9	-721.3	-624.3	-547.3	..	3.2	-0.5
Electricity and heat gen.	-322.2	-439.3	-599.1	-764.8	-705.8	-608.4	-530.8	..	3.7	-0.5
<i>Main activity producers</i> ³	-322.2	-439.3	-592.1	-747.3	-699.2	-603.6	-526.7	..	3.6	-0.5
<i>Autoproducers</i>	-0.0	-0.0	-7.0	-17.5	-6.6	-4.8	-4.1	..	51.8	-2.1
Gas works	0.5	0.0	-2.6	-2.6	-2.7	-2.7	-2.8	..	-	0.4
Coal transformation ⁴	-42.0	-29.2	-20.1	-19.5	-12.8	-13.1	-13.7	..	-4.2	-1.5
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-27.8	-18.5	-14.2	-13.7	-8.4	-9.1	-8.1	..	-3.9	-2.2
<i>Coke ovens</i>	-14.2	-10.7	-5.9	-5.8	-4.4	-4.1	-5.6	..	-5.0	-0.3
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-8.8	-3.7	-2.6	-2.7	-3.0	-3.1	-2.7	..	-6.9	0.0
Losses	-0.1	-0.1	-0.0	-0.1	-0.0	-0.0	-0.0	..		
Final consumption ⁶	116.5	89.5	86.5	53.8	49.2	39.9	37.5	..	-1.7	-3.3
Industry ⁷	95.7	77.7	71.9	50.0	46.6	38.0	36.3	..	-1.7	-2.7
<i>Iron and steel</i>	54.4	36.2	22.1	15.3	10.6	8.8	7.5	..	-5.2	-4.2
<i>Chemical</i>	11.9	11.2	12.5	9.6	6.1	5.2	4.6	..	0.3	-3.9
<i>Non-metallic minerals</i>	6.0	10.5	11.8	12.5	8.2	9.3	9.0	..	4.0	-1.1
<i>Paper, pulp and print</i>	7.1	7.4	10.5	3.8	5.8	3.8	3.3	..	2.3	-4.5
<i>Other industry</i> ⁸	16.1	12.4	15.0	8.9	15.9	10.9	11.9	..	-0.4	-0.9
Transport ⁹	0.4	0.1	-	-	-	-	-	..	-	-
Other	20.5	11.6	14.0	3.3	2.2	1.3	1.0	..	-2.2	-10.1
<i>Comm. and pub. services</i>	4.9	2.7	3.5	1.3	2.2	1.2	1.0	..	-2.0	-5.0
<i>Residential</i>	5.2	2.4	2.3	2.0	0.1	0.0	0.0	..	-4.7	-18.8
<i>Other sectors</i> ¹⁰	10.4	6.5	8.3	0.0	0.0	-	-	..	-1.4	-
Non-energy use	-	0.2	0.7	0.6	0.3	0.6	0.2	..	-	-4.1
Electricity gen. - TWh	943.7	1304.6	1796.2	2274.5	2122.9	1838.7	1598.8	1471.1	3.9	-0.5

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

OECD AMERICAS

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	621.30	876.19	1046.52	1031.31	913.57	915.61	794.79	2.91	-0.39
Total electricity and heat	459.93	757.64	974.07	958.15	845.10	837.54	735.84	4.25	-0.12
<i>Main activity producers</i>	459.91	749.47	957.33	950.42	840.32	833.08	732.04	4.15	-0.09
<i>Autoproducers</i>	0.03	8.18	16.74	7.74	4.78	4.47	3.80	62.01	-3.02
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	76.10	44.16	33.91	26.67	26.61	26.19	23.92	-4.43	-2.42
Blast furnace inputs	-	0.17	2.39	1.28	1.14	0.94	0.71	-	5.77
Gas manufacture	0.03	5.64	5.67	5.57	5.10	5.39	5.55	56.55	-0.06
Industry	48.89	55.78	40.23	40.89	35.99	33.94	32.82	1.10	-2.10
<i>Iron and steel</i>	3.73	2.01	1.76	0.98	0.63	0.57	0.46	-5.04	-5.69
<i>Chemical</i>	10.34	14.49	10.75	7.09	6.50	6.25	5.37	2.85	-3.89
<i>Non-metallic minerals</i>	12.00	12.85	13.50	9.18	9.74	10.45	9.94	0.57	-1.02
<i>Paper, pulp and print</i>	7.99	11.47	4.24	6.50	4.40	4.28	3.64	3.06	-4.49
<i>Other industry</i>	14.83	14.96	9.98	17.13	14.72	12.40	13.41	0.08	-0.44
Other sectors ⁴	19.39	15.64	3.84	2.61	1.35	1.54	1.24	-1.78	-9.64
Non-energy use	-	0.35	0.47	0.19	0.26	0.09	0.09	-	-5.35
Steam coal	505.43	743.62	926.90	922.02	806.67	802.09	691.12	3.27	-0.29
Total electricity and heat	426.81	676.52	893.20	886.13	772.57	765.95	666.63	3.91	-0.06
<i>Main activity producers</i>	426.79	669.44	877.71	880.97	767.79	761.49	662.84	3.82	-0.04
<i>Autoproducers</i>	0.03	7.08	15.49	5.16	4.77	4.46	3.80	60.08	-2.46
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	0.17	2.39	1.28	1.14	0.94	0.71	-	5.77
Gas manufacture	0.03	-	-	-	-	-	-	-	-
Industry	46.43	54.06	38.34	35.53	32.80	31.99	28.78	1.28	-2.49
<i>Iron and steel</i>	3.73	1.71	1.46	0.68	0.33	0.27	0.16	-6.32	-8.96
<i>Chemical</i>	10.34	14.26	10.51	6.84	6.26	5.82	4.97	2.71	-4.13
<i>Non-metallic minerals</i>	12.00	12.85	13.50	9.18	9.73	10.45	9.94	0.57	-1.02
<i>Paper, pulp and print</i>	7.82	11.38	4.14	6.50	4.40	4.28	3.64	3.17	-4.46
<i>Other industry</i>	12.53	13.88	8.74	12.34	12.08	11.17	10.07	0.86	-1.28
Other sectors ⁴	19.19	15.52	3.75	2.52	1.31	1.51	1.22	-1.75	-9.67
Non-energy use	-	0.26	0.33	0.03	0.02	0.01	0.00	-	-15.36
Coking coal	80.10	44.19	34.14	29.49	27.63	28.09	26.42	-4.84	-2.04
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	76.10	44.16	33.91	26.67	26.61	26.19	23.92	-4.43	-2.42
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	0.30	0.30	4.06	1.90	0.68	2.81	-	9.36
<i>Iron and steel</i>	-	0.30	0.30	0.30	0.30	0.30	0.30	-	0.00
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	3.76	1.60	0.38	2.51	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

OECD AMERICAS

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	35.78	88.38	85.48	79.80	79.26	85.43	77.26	7.83	-0.54
Total electricity and heat	33.12	81.12	80.87	72.02	72.53	71.60	69.21	7.75	-0.63
<i>Main activity producers</i>	33.12	80.03	79.62	69.44	72.52	71.59	69.21	7.63	-0.58
<i>Autoproducers</i>	-	1.10	1.25	2.57	0.01	0.01	0.01	-	-19.39
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	0.00	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	5.64	5.67	5.57	5.10	5.39	5.55	-	-0.06
Industry	2.46	1.41	1.59	1.29	1.29	1.27	1.23	-4.53	-0.55
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	0.23	0.24	0.26	0.24	0.43	0.40	-	2.14
<i>Non-metallic minerals</i>	-	0.00	0.00	-	0.01	-	-	-	-
<i>Paper, pulp and print</i>	0.17	0.10	0.10	-	-	-	-	-4.60	-
<i>Other industry</i>	2.30	1.08	1.25	1.04	1.04	0.84	0.83	-6.09	-1.03
Other sectors ³	0.20	0.12	0.09	0.09	0.04	0.04	0.02	-4.34	-7.04
Non-energy use	-	0.09	0.14	0.16	0.24	0.08	0.08	-	-0.23
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

OECD AMERICAS

3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change	
								78-90	90-15
Mtce:									
Coking coal	109.25	126.25	82.07	74.75	93.69	82.44	74.99	1.21	-1.69
Steam coal	427.40	668.18	700.52	751.62	687.55	556.75	450.65	3.79	-0.73
Lignite	18.09	41.91	41.95	41.04	38.82	35.04	35.97	7.25	-0.71
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:								1.07	-1.40
Coking coal	109.07	123.88	84.67	80.76	100.82	87.18	79.56	4.02	-0.34
Steam coal	497.37	797.81	878.99	953.96	897.17	732.96	591.92	7.80	-0.76
Lignite	36.26	89.32	88.81	87.92	81.93	73.89	75.79	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	22.37	18.63	42.85	55.98	40.65	31.17	32.19	31.60	31.40
Bituminous coal ⁴	10.87	12.55	26.77	38.18	28.84	21.59	21.47	19.84	20.82
Coking coal	6.04	4.91	8.24	7.98	6.75	6.86	7.74	7.66	5.19
Sub-bituminous coal	-	-	3.20	5.98	3.22	1.52	1.48	2.65	3.16
Lignite	-	-	0.04	0.06	0.07	0.06	0.06	0.05	0.05
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	5.45	1.16	4.61	3.79	1.78	1.14	1.44	1.39	2.18
Total exports	50.81	127.76	82.31	65.79	96.63	131.59	113.40	89.66	78.53
Bituminous coal ⁴	9.63	41.27	25.38	12.82	19.69	37.97	31.11	22.13	16.91
Coking coal	40.44	85.76	54.83	46.66	71.03	85.70	77.56	63.01	58.66
Sub-bituminous coal	-	-	0.73	4.40	4.40	7.08	3.63	3.59	1.94
Lignite	0.04	0.04	0.03	0.16	0.16	0.06	0.05	0.06	0.05
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.70	0.70	1.34	1.74	1.35	0.78	1.05	0.88	0.97

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

OECD AMERICAS

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	17684	18506	41420	59936	45455	34423	35176	35436	34966
Coking coal	6209	5211	8353	8251	6994	7099	8006	7869	5345
Australia	-	-	1074	948	701	517	586	1548	390
Canada	-	122	2049	2246	1900	1366	1074	1218	884
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	5924	4497	4357	4652	4298	5200	5540	4369	3906
Other OECD	-	-	-	-	-	-	-	-	1
China, People's Rep.	-	-	1	3	3	-	-	-	-
Colombia	-	-	-	120	92	16	806	734	164
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	66	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	92	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	285	592	714	282	-	-	-	-	-
Steam coal	11475	13295	32983	51553	38318	27190	27048	27452	29521
Australia	933	22	1482	5436	3413	2347	2686	4270	6469
Canada	49	883	960	576	361	339	143	189	730
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	645	-	-	70	-	-	-	-	-
United Kingdom	-	5	-	25	4	1	1	2	2
United States	8796	9639	19167	14409	10141	8728	7467	8104	6194
Other OECD	-	-	164	340	84	1	63	127	1
China, People's Rep.	-	-	235	72	50	39	32	21	15
Colombia	-	1296	6928	21192	19707	14433	14678	13643	15127
Indonesia	-	-	1282	3505	2474	805	1385	808	557
South Africa	996	-	182	70	1275	-	-	61	26
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	26	693	13	33	39	60	341
<i>Other FSU</i>	x	x	-	94	191	381	233	53	-
Venezuela	-	277	2015	3978	560	70	294	67	-
Viet Nam	-	-	-	85	-	-	-	-	5
Non-specified/other	56	1173	542	1008	45	13	27	47	54
Lignite	-	-	84	132	143	134	122	115	100

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

OECD AMERICAS

6. Coking coal exports by destination¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	40450	84425	58170	52256	78260	94605	85558	69785	65170
Total OECD	36030	67629	45508	41290	52311	56188	55003	44279	40144
Australia	-	-	-	-	-	-	-	-	-
Austria	-	-	-	239	412	558	426	378	381
Belgium	1103	5538	2717	1527	1736	1000	810	1066	1031
Canada	5410	3988	3501	4034	3091	3363	3945	3886	3425
Chile	-	292	312	361	213	542	566	277	208
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	50	-	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	127	288	767	673	802	1207	878	928
France	1468	4880	2782	1602	1956	2402	1918	1126	1131
Germany	560	708	1211	2200	2715	2405	3019	2568	2112
Greece	-	-	-	-	-	-	-	-	-
Hungary	-	-	65	-	40	-	-	-	-
Iceland	-	28	48	57	59	71	56	41	18
Ireland	-	-	-	-	-	-	-	-	-
Israel	-	50	56	-	-	-	-	-	-
Italy	3069	6536	4467	3647	3392	2979	2625	2128	1701
Japan	19925	26588	12937	8330	11299	11682	10151	10074	10063
Korea	1173	2908	4947	5416	7955	10509	9082	7954	8560
Latvia	x	-	-	-	96	71	-	-	-
Luxembourg	-	-	-	-	77	-	-	-	-
Mexico	-	3	740	987	999	3099	1800	536	456
Netherlands	929	3975	2143	2342	5629	4860	5929	4738	4260
New Zealand	-	-	-	-	-	-	-	-	-
Norway	68	99	42	18	75	90	75	49	58
Poland	-	-	-	-	2149	616	722	807	586
Portugal	265	753	198	-	-	218	75	-	85
Slovak Republic	-	-	-	-	259	289	513	210	-
Slovenia	x	-	-	163	223	114	187	198	-
Spain	838	3156	2331	2023	1461	1419	1015	1135	1102
Sweden	453	866	642	464	401	438	651	607	262
Switzerland	-	-	-	-	37	-	-	-	-
Turkey	409	1957	2403	2649	2906	4271	4220	2614	2216
United Kingdom	360	4355	3134	2888	3041	3530	5256	2141	856
United States	-	772	544	1576	1417	860	755	868	705
Total non-OECD	4420	11592	9437	10966	25880	37992	30044	25087	24632
Brazil	1942	6327	5564	4802	8746	9124	8947	6689	7088
China ³	-	300	-	939	8163	17288	8783	5568	5779
Chinese Taipei	205	357	1440	1252	858	1151	1020	1087	1251
Egypt	218	586	682	698	1042	305	434	341	180
India	200	-	22	1078	2299	4120	4860	5287	5280
Romania	673	1559	443	547	812	1017	773	384	255
Oth. Africa & Mid. East	1	614	269	377	229	643	349	129	647
Oth. non-OECD Americas	914	580	184	207	321	455	413	412	188
Other Asia & Oceania	24	229	-	102	108	-	-	54	-
Other non-OECD Europe and Eurasia	243	1040	833	964	3302	3889	4465	5136	3964
Non-specified/Other	-	5204	3225	-	69	93	-	-	32

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

OECD AMERICAS

7. Steam coal exports by destination¹

(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	10808	42493	26922	20435	27820	52367	39249	28515	20605
Total OECD	10341	36299	25445	18284	23463	44440	30677	24747	15826
Australia	-	1	-	-	105	135	1	-	-
Austria	-	-	-	-	-	-	-	1	2
Belgium	27	2178	429	411	367	821	109	19	107
Canada	8782	10083	13524	13625	7245	3084	2152	1518	1122
Chile	-	394	48	252	1090	2163	824	869	609
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	309	3321	70	66	73	-	-	41	55
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	-	-	-	166	-	-	-	54
France	38	1758	564	28	1080	1326	265	82	176
Germany	528	384	522	133	935	3092	2063	2045	1674
Greece	-	-	-	-	47	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Iceland	-	15	-	-	-	-	-	-	-
Ireland	-	1322	456	-	-	-	-	-	-
Israel	-	530	-	-	-	-	-	-	-
Italy	22	4451	79	23	613	3820	3023	1272	315
Japan	243	4007	4425	947	1845	3378	3142	2455	1985
Korea	356	719	2275	746	3914	5218	4839	3386	1200
Latvia	x	-	-	-	33	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Mexico	-	188	373	341	1312	2284	2626	3005	2351
Netherlands	27	3982	643	829	1700	7660	6374	7820	5474
New Zealand	-	1	-	-	-	-	-	-	-
Norway	-	62	74	-	-	14	7	15	7
Poland	-	-	-	-	65	175	181	-	-
Portugal	-	1386	343	143	531	138	126	126	-
Slovak Republic	-	-	-	-	-	-	-	-	-
Slovenia	x	-	-	-	182	146	-	-	-
Spain	-	282	441	-	374	70	480	42	224
Sweden	-	21	-	71	275	-	-	-	-
Switzerland	-	-	-	-	-	1287	-	-	-
Turkey	5	15	55	67	220	584	316	83	172
United Kingdom	-	1005	1016	361	1219	8992	4064	1855	109
United States	4	194	108	241	72	53	85	113	190
Total non-OECD	95	4967	923	1949	4356	6933	6553	3508	4238
Brazil	11	177	22	693	109	370	602	192	107
China ³	-	108	9	-	2689	1973	568	1	249
Chinese Taipei	-	3820	-	3	1	342	580	164	254
Egypt	-	-	-	-	146	-	1	1	1
India	-	-	-	217	171	1655	2613	2845	3301
Romania	-	-	-	844	-	-	-	17	-
Oth. Africa & Mid. East	1	682	825	63	1044	2302	1918	110	294
Oth. non-OECD Americas	82	128	1	14	119	217	268	176	1
Other Asia & Oceania	1	5	-	-	77	4	2	1	1
Other non-OECD Europe and Eurasia	-	47	66	115	-	70	1	1	30
Non-specified/Other	372	1227	554	202	1	128	1479	1	197

1. Please refer to the explanatory notes and definitions in Part I. Steam coal includes all sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

OECD ASIA OCEANIA¹

Figure 1: Coal supply indicators (1971 = 100)

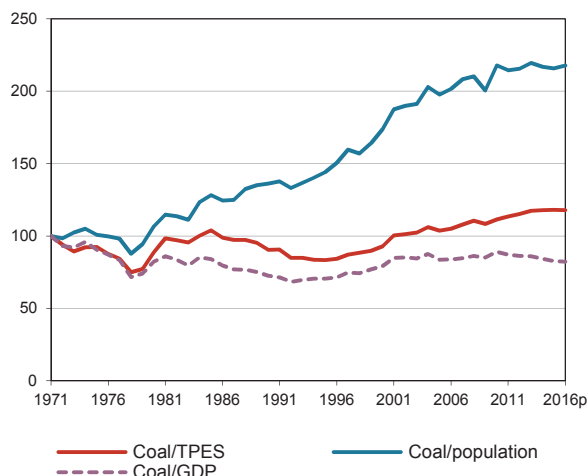


Figure 2: TPES by fuel (Mtce)

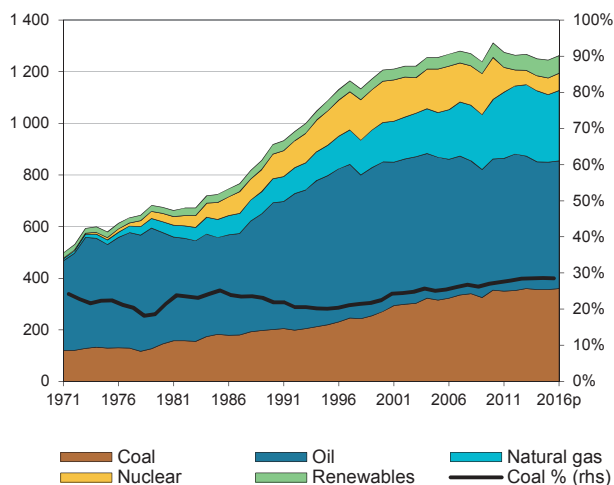


Figure 3: Primary coal supply (Mtce)

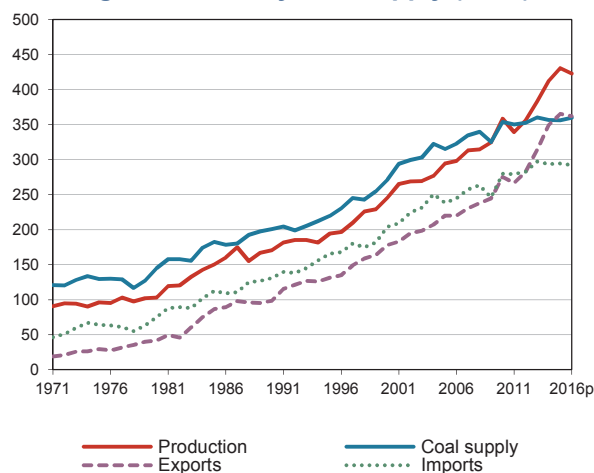


Figure 4: Coal consumption (Mtce)

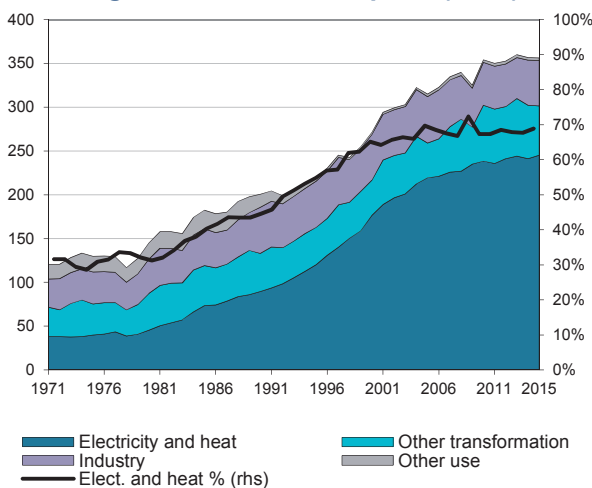
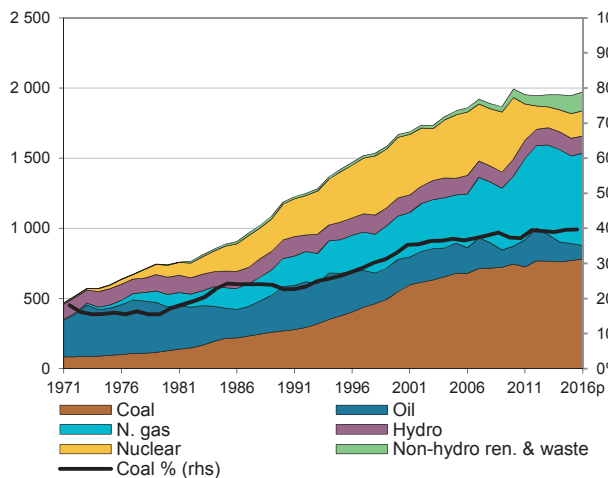
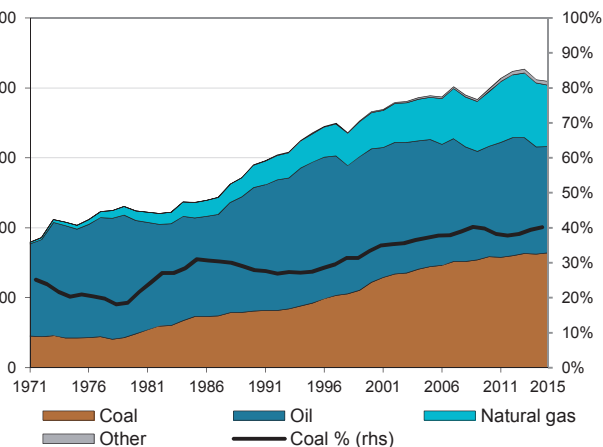


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

OECD ASIA OCEANIA

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	94.2	103.1	170.6	245.5	358.1	412.3	430.5	423.0	3.6	3.8
Imports	59.6	75.0	130.8	204.0	280.0	293.3	294.4	292.1	4.7	3.3
Exports	-26.0	-41.9	-98.4	-177.7	-275.1	-349.2	-365.0	-362.2	8.1	5.4
Stock changes	0.3	8.7	-2.4	-0.6	-9.1	0.2	-3.9	7.0		
Primary supply	128.2	144.9	200.6	271.2	353.9	356.6	356.0	359.9	2.7	2.3
Statistical differences	-2.6	-2.3	4.8	7.7	-7.6	-3.2	-1.6	..		
Total transformation	-68.6	-79.1	-129.4	-216.2	-279.9	-284.6	-285.8	..	3.8	3.2
Electricity and heat gen.	-37.7	-45.2	-89.5	-176.5	-238.4	-241.2	-245.1	..	5.2	4.1
<i>Main activity producers</i> ³	-37.6	-40.9	-78.8	-160.0	-218.2	-218.3	-220.1	..	4.4	4.2
<i>Autoproducers</i>	-0.1	-4.3	-10.7	-16.6	-20.2	-22.9	-25.0	..	35.9	3.5
Gas works	3.7	5.2	-0.3	-0.2	0.0	0.0	0.0	..	-	-
Coal transformation ⁴	-34.6	-39.1	-39.6	-39.5	-41.5	-43.4	-40.7	..	0.8	0.1
<i>BKB plants</i>	-0.2	-0.2	-0.1	-0.0	-0.0	-0.0	-0.0	..	-5.3	-15.4
<i>Blast furnaces</i>	-27.1	-23.7	-32.2	-37.9	-39.5	-41.6	-39.8	..	1.0	0.9
<i>Coke ovens</i>	-5.8	-14.5	-2.6	-0.7	-2.0	-1.7	-0.9	..	-4.7	-4.2
<i>Patent fuel plants</i>	-1.5	-0.6	-4.8	-0.9	-	-	-	..	6.9	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-4.6	-5.5	-8.1	-8.0	-14.7	-14.4	-13.8	..	3.4	2.2
Losses	-0.1	-0.3	-0.2	-0.0	-0.0	-0.0	-0.0	..		
Final consumption ⁶	52.3	57.6	67.7	54.6	51.7	54.4	54.8	..	1.5	-0.8
Industry ⁷	35.2	39.2	52.7	52.2	48.8	51.4	51.9	..	2.4	-0.1
<i>Iron and steel</i>	26.9	27.3	25.8	23.0	25.1	28.6	29.4	..	-0.2	0.5
<i>Chemical</i>	0.4	0.8	6.3	5.1	6.1	6.0	6.0	..	17.8	-0.2
<i>Non-metallic minerals</i>	0.9	5.9	12.7	13.1	10.3	10.4	10.1	..	16.9	-0.9
<i>Paper, pulp and print</i>	0.3	0.5	1.7	2.3	2.2	2.3	2.4	..	9.9	1.5
<i>Other industry</i> ⁸	6.6	4.7	6.2	8.7	5.0	4.0	4.0	..	-0.4	-1.8
Transport ⁹	0.3	0.0	0.1	0.1	0.1	0.0	0.0	..	-6.5	-13.8
Other	16.8	18.4	14.2	1.8	1.6	1.7	1.6	..	-1.0	-8.3
<i>Comm. and pub. services</i>	1.6	1.6	1.5	0.9	0.3	0.6	0.6	..	-0.2	-3.6
<i>Residential</i>	15.1	16.8	12.6	0.9	1.2	1.0	0.9	..	-1.1	-9.8
<i>Other sectors</i> ¹⁰	0.1	-	0.0	0.0	0.1	0.1	0.1	..	-11.9	7.1
Non-energy use	-	-	0.8	0.5	1.1	1.4	1.3	..	-	2.2
Electricity gen. - TWh	88.5	127.6	268.0	550.3	745.4	760.6	769.7	782.3	6.7	4.3

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

OECD ASIA OCEANIA

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	155.83	261.73	366.25	455.71	454.85	448.18	454.51	4.42	2.23
Total electricity and heat	57.88	125.39	232.39	310.66	310.00	304.38	314.61	6.65	3.75
<i>Main activity producers</i>	56.53	119.73	223.62	297.35	295.07	286.90	294.42	6.45	3.66
<i>Autoproducers</i>	1.35	5.66	8.77	13.31	14.93	17.49	20.19	12.66	5.22
Patent fuel/BKB plants	21.49	22.59	3.36	2.33	2.51	2.20	1.57	0.42	-10.12
Coke ovens/Liquefaction ³	64.47	84.87	79.84	83.34	81.88	84.57	83.03	2.32	-0.09
Blast furnace inputs	-	5.24	13.97	19.82	22.97	21.73	21.53	-	5.82
Gas manufacture	4.64	-	-	-	-	-	-	-	-
Industry	7.91	26.35	33.57	28.10	30.18	29.81	29.64	10.55	0.47
<i>Iron and steel</i>	1.52	2.03	3.42	4.81	6.05	6.60	6.64	2.41	4.86
<i>Chemical</i>	0.38	2.92	3.92	4.54	4.51	4.66	4.58	18.50	1.82
<i>Non-metallic minerals</i>	1.88	13.82	14.32	11.47	12.83	11.79	11.42	18.10	-0.76
<i>Paper, pulp and print</i>	0.65	1.95	2.64	2.66	2.72	2.74	2.87	9.55	1.56
<i>Other industry</i>	3.48	5.64	9.27	4.63	4.08	4.02	4.13	4.11	-1.24
Other sectors ⁴	1.55	0.43	0.21	0.30	0.24	0.17	0.19	-10.16	-3.25
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	57.24	132.73	216.68	292.81	304.72	297.58	300.89	7.26	3.33
Total electricity and heat	30.57	81.24	166.04	239.09	247.89	244.01	249.75	8.49	4.59
<i>Main activity producers</i>	30.21	76.66	158.37	225.79	232.98	226.54	229.58	8.07	4.49
<i>Autoproducers</i>	0.36	4.58	7.67	13.30	14.91	17.47	20.17	23.60	6.11
Patent fuel/BKB plants	18.64	20.81	2.41	1.86	1.92	1.63	1.47	0.92	-10.05
Coke ovens/Liquefaction ³	0.13	7.87	12.69	13.36	16.72	16.24	15.98	41.05	2.87
Blast furnace inputs	-	-	-	0.63	0.18	0.16	0.05	-	-
Gas manufacture	0.19	-	-	-	-	-	-	-	-
Industry	7.37	26.14	33.40	27.67	28.94	28.07	27.24	11.13	0.16
<i>Iron and steel</i>	1.46	2.02	3.42	4.66	5.06	5.14	4.52	2.77	3.27
<i>Chemical</i>	0.34	2.90	3.92	4.54	4.51	4.66	4.58	19.46	1.85
<i>Non-metallic minerals</i>	1.88	13.82	14.32	11.47	12.83	11.79	11.42	18.11	-0.76
<i>Paper, pulp and print</i>	0.35	1.95	2.64	2.66	2.72	2.74	2.87	15.25	1.56
<i>Other industry</i>	3.34	5.45	9.11	4.36	3.83	3.74	3.85	4.18	-1.39
Other sectors ⁴	1.49	0.37	0.13	0.23	0.21	0.13	0.13	-10.98	-3.98
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	67.95	82.85	82.06	90.07	87.50	89.75	87.93	1.67	0.24
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	64.35	77.00	67.15	69.98	65.16	68.33	67.05	1.51	-0.55
Blast furnace inputs	-	5.24	13.97	19.19	22.79	21.58	21.48	-	5.81
Gas manufacture	4.45	-	-	-	-	-	-	-	-
Industry	0.12	0.00	0.00	0.23	1.00	1.46	2.12	-32.71	35.86
<i>Iron and steel</i>	0.06	0.00	0.00	0.15	0.99	1.46	2.12	-29.20	35.85
<i>Chemical</i>	0.01	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	0.00	0.00	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.04	-	-	0.07	0.01	0.01	0.00	-	-
Other sectors ⁴	0.01	-	-	0.01	0.00	0.00	0.00	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

OECD ASIA OCEANIA

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	30.64	46.15	67.51	72.84	62.63	60.86	65.69	3.47	1.42
Total electricity and heat	27.32	44.15	66.35	71.57	62.11	60.37	64.86	4.08	1.55
<i>Main activity producers</i>	26.32	43.07	65.25	71.56	62.10	60.36	64.85	4.19	1.65
<i>Autoproducers</i>	0.99	1.08	1.10	0.02	0.01	0.02	0.02	0.72	-15.51
Patent fuel/BKB plants	2.85	1.78	0.96	0.48	0.59	0.57	0.10	-3.84	-10.99
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.42	0.21	0.17	0.20	0.25	0.28	0.28	-5.76	1.17
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	0.03	0.03	-	-	-	-	-	-1.23	-
<i>Non-metallic minerals</i>	0.00	0.00	-	0.00	-	-	-	-	-
<i>Paper, pulp and print</i>	0.30	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.10	0.18	0.17	0.20	0.25	0.28	0.28	5.52	1.73
Other sectors ³	0.05	0.06	0.08	0.06	0.03	0.03	0.05	0.90	-0.43
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	0.30	0.39	0.43	0.42	0.40	0.42	-	1.31
Total electricity and heat	-	0.30	0.46	0.43	0.42	0.40	0.42	-	1.31
<i>Main activity producers</i>	-	0.30	0.27	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	0.18	0.43	0.42	0.40	0.42	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

OECD ASIA OCEANIA

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	44.87	63.09	102.24	127.32	160.81	187.16	185.33	2.88	4.45
Steam coal	42.82	92.82	122.15	143.26	172.87	221.25	216.17	6.66	3.54
Lignite	9.73	14.69	21.06	23.71	24.40	22.02	21.41	3.49	1.63
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	0.03	0.04	0.04	0.04	0.06	0.06	-	2.55
Mt:								2.89	4.42
Coking coal	46.34	65.21	105.06	130.80	165.27	192.39	190.52	5.88	3.10
Steam coal	60.93	120.98	148.88	177.11	205.18	259.51	253.49	3.47	1.42
Lignite	30.66	46.15	67.51	70.78	72.84	65.69	63.88	-	-
Peat	-	-	-	-	-	-	-	-	1.31
Oil shale and oil sands	-	0.30	0.39	0.43	0.43	0.42	0.42	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	54.88	130.83	204.00	238.34	279.99	297.31	293.30	294.43	292.14
Bituminous coal ⁴	1.59	50.21	123.60	158.56	191.81	212.28	204.69	204.63	202.03
Coking coal	53.19	79.50	74.14	73.89	82.72	80.70	80.94	81.30	82.52
Sub-bituminous coal	-	0.60	3.67	2.78	3.78	1.76	3.85	5.26	5.04
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.10	0.51	2.60	3.10	1.68	2.58	3.82	3.24	2.55
Total exports	35.25	98.37	177.73	219.77	275.10	313.90	349.19	365.04	362.21
Bituminous coal ⁴	4.25	39.96	77.02	94.23	118.82	159.61	170.63	179.50	176.55
Coking coal	29.83	55.92	98.02	123.85	155.26	152.09	177.25	183.86	184.04
Sub-bituminous coal	-	-	-	-	-	-	0.02	0.03	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	1.17	2.48	2.68	1.68	1.02	2.20	1.29	1.65	1.62

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

OECD ASIA OCEANIA

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	55041	135377	225615	268197	317884	335504	330703	335100	333143
Coking coal	52885	76223	77424	77154	85854	84087	84316	84697	85963
Australia	25299	34438	48404	51640	59810	53286	52534	58935	56846
Canada	11304	19785	16571	10687	13430	12776	9316	11842	11681
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	398	-	-	-	-	-	-	-	-
Poland	429	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	10406	12077	1855	2787	5866	8159	7007	5561	6274
Other OECD	11	255	356	433	372	155	133	159	382
China, People's Rep.	420	1515	6599	7828	2422	1248	2471	1104	1038
Colombia	-	40	-	-	-	60	170	56	955
Indonesia	-	37	338	129	126	817	515	487	371
South Africa	2360	1353	317	-	-	-	-	-	-
Former Soviet Union ⁴	2244	6717	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	2828	3596	3764	5053	8240	6309	7101
<i>Other FSU</i>	x	x	-	-	-	-	-	152	31
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	97	-	-	-	-	-	-
Non-specified/other	14	6	59	54	62	2533	3930	92	1284
Steam coal	2156	59154	148191	191043	232030	251417	246387	250403	247180
Australia	668	29822	64182	81274	102247	121620	122167	127355	116234
Canada	105	2756	3068	871	7170	10198	13662	6155	3092
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	1	3611	4086	504	542	4695	3505	2683	3132
Other OECD	-	48	673	316	108	14	97	-	446
China, People's Rep.	513	4803	35229	36773	11146	3952	2837	2177	5304
Colombia	-	80	103	-	4295	5705	5906	5861	7001
Indonesia	-	1296	19731	45143	74508	71821	65865	66015	68238
South Africa	157	8829	4213	140	5793	4490	2952	2908	3406
Former Soviet Union ⁴	149	3261	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	5436	10459	17552	25530	27267	35998	38744
<i>Other FSU</i>	x	x	-	21	-	134	76	-	-
Venezuela	-	-	-	15	-	-	-	-	-
Viet Nam	-	150	1037	2401	3489	2136	1792	814	587
Non-specified/other	563	4498	10302	13126	5179	1122	261	437	996
Lignite	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

OECD ASIA OCEANIA

6. Coking coal exports by destination¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	31085	58086	100712	127246	159566	156289	182177	188990	189185
Total OECD	29188	44287	74911	85006	82157	75027	80165	80248	84773
Australia	-	-	122	49	-	-	-	-	-
Austria	-	-	-	-	-	-	-	-	-
Belgium	374	1054	1833	1881	1034	585	165	759	710
Canada	-	30	-	-	-	-	-	-	-
Chile	32	200	776	822	446	424	337	407	349
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	-	-	392	76	356	-	-	-
France	1173	1917	3739	3895	2506	3253	2836	3632	3889
Germany	-	25	2619	1746	1160	804	701	709	1345
Greece	191	-	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	14	-	-	-	-	-
Israel	-	-	-	129	55	-	-	-	-
Italy	1319	1181	2914	2527	1559	1205	655	668	870
Japan	22651	28822	39861	45780	48934	40746	42798	39972	42031
Korea	1330	4944	10358	12457	15864	16181	19155	20460	20311
Latvia	x	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Mexico	10	-	666	588	336	179	274	233	-
Netherlands	992	725	2279	5652	3342	6136	7309	6696	8092
New Zealand	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	369	957	1238	1403
Portugal	-	-	-	-	-	-	-	-	-
Slovak Republic	-	-	-	-	-	-	-	-	-
Slovenia	x	-	-	-	-	-	233	-	374
Spain	593	694	1767	2470	1069	1024	950	1318	929
Sweden	-	702	992	1226	1486	869	1333	1020	1360
Switzerland	-	-	46	-	-	-	-	-	-
Turkey	-	912	1451	720	909	819	239	1245	2028
United Kingdom	469	3081	5488	4451	3381	2077	2223	1891	1082
United States	54	-	-	207	-	-	-	-	-
Total non-OECD	1897	13799	25569	37808	70912	79264	100598	107017	101779
Brazil	164	1291	4988	3218	4234	3073	3747	5615	6363
China ³	-	560	265	4330	27500	35772	48319	43613	38486
Chinese Taipei	981	2798	6273	7091	5357	8086	8921	9797	9394
Egypt	-	323	-	353	324	-	-	-	77
India	32	4895	10773	18039	32450	31777	37641	43447	44196
Romania	675	2256	-	46	-	-	-	160	-
Oth. Africa & Mid. East	-	454	1554	2807	-	-	-	-	-
Oth. non-OECD Americas	-	300	595	784	603	318	562	779	794
Other Asia & Oceania	45	734	1051	737	299	238	1088	2781	1825
Other non-OECD Europe and Eurasia	-	188	70	403	145	-	320	825	644
Non-specified/Other	-	-	232	4131	4515	492	-	20	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

OECD ASIA OCEANIA

7. Steam coal exports by destination¹

(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	5533	45647	87804	107418	135475	182005	194609	204729	201305
Total OECD	4809	38304	70501	85460	95691	114534	116651	119488	129341
Australia	-	-	-	-	-	-	-	-	-
Austria	-	-	-	-	-	-	-	-	-
Belgium	-	129	428	17	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Chile	-	120	1301	412	309	367	497	1126	2600
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	150	1149	142	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-
France	682	934	434	469	66	-	-	-	-
Germany	458	125	72	115	-	-	-	-	-
Greece	-	-	110	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	133	284	568	-	-	-	-	-
Israel	-	528	2623	1165	516	678	342	172	-
Italy	-	-	428	141	-	-	-	-	-
Japan	1489	26569	47449	57574	66413	77646	80569	81226	82175
Korea	-	3633	11455	17970	24840	33364	33253	35110	39172
Latvia	x	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Mexico	-	-	-	4238	3109	2438	1772	1332	5042
Netherlands	320	4236	2550	760	126	-	-	269	-
New Zealand	-	-	16	56	59	-	94	61	76
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-
Slovak Republic	-	-	-	-	-	-	-	-	-
Slovenia	x	-	-	-	-	-	-	-	-
Spain	-	205	1445	671	-	-	-	107	165
Sweden	-	155	83	164	73	41	41	30	-
Switzerland	-	29	-	-	-	-	-	-	-
Turkey	-	-	55	45	-	-	-	-	-
United Kingdom	932	328	1499	993	13	-	83	-	-
United States	778	31	127	102	167	-	-	55	111
Total non-OECD	204	7343	17303	21958	39665	67471	77936	85022	69205
Brazil	-	158	-	33	20	-	-	-	55
China ³	-	2443	1429	2121	15189	38853	48059	43373	30561
Chinese Taipei	76	3046	10034	14329	19553	17883	18990	21835	20994
Egypt	-	-	-	-	-	-	-	-	-
India	-	47	2469	1461	610	2629	1889	7668	5837
Romania	-	33	-	-	-	-	-	-	-
Oth. Africa & Mid. East	-	-	-	-	-	-	-	-	-
Oth. non-OECD Americas	-	-	72	-	-	45	-	-	-
Other Asia & Oceania	128	1616	3299	4014	4293	8061	8998	12146	11758
Other non-OECD Europe and Eurasia	-	-	-	-	-	-	-	-	-
Non-specified/Other	520	-	-	-	119	-	22	43	1097

1. Please refer to the explanatory notes and definitions in Part I. Steam coal includes all sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

OECD EUROPE¹

Figure 1: Coal supply indicators (1971 = 100)

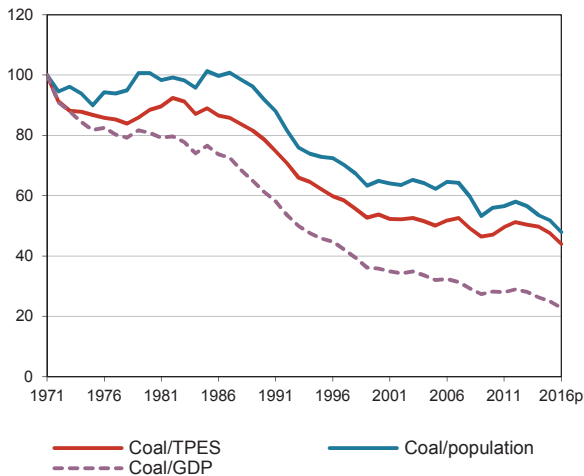


Figure 2: TPES by fuel (Mtce)

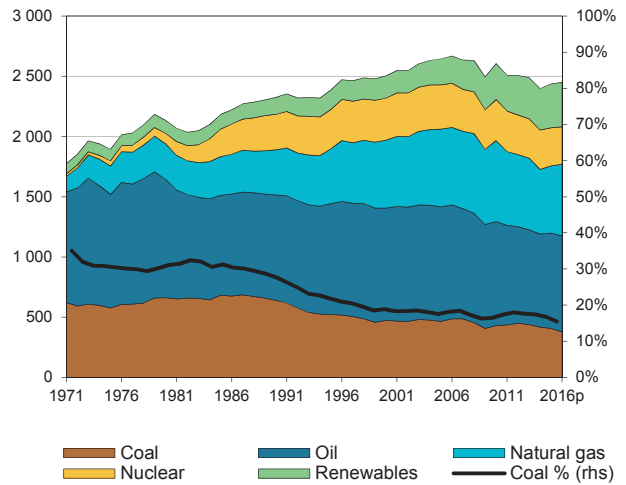


Figure 3: Primary coal supply (Mtce)

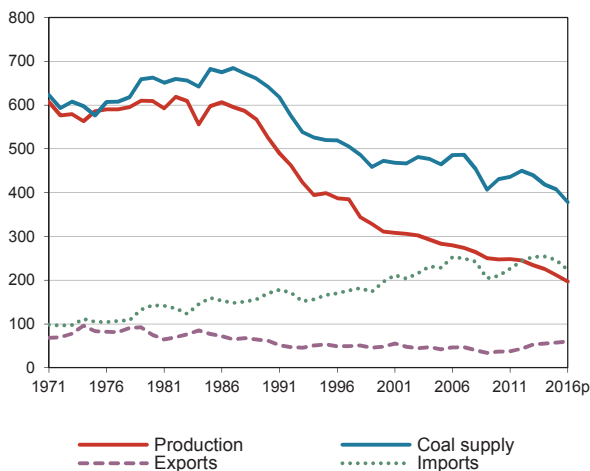


Figure 4: Coal consumption (Mtce)

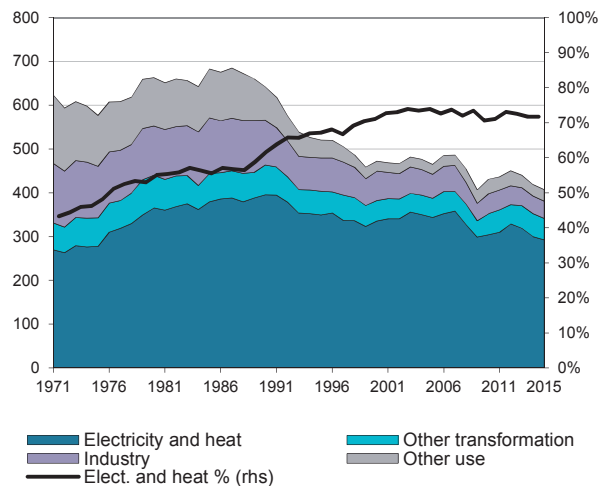
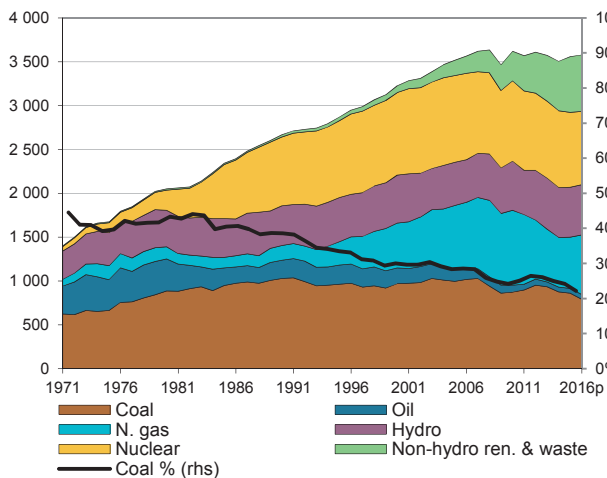
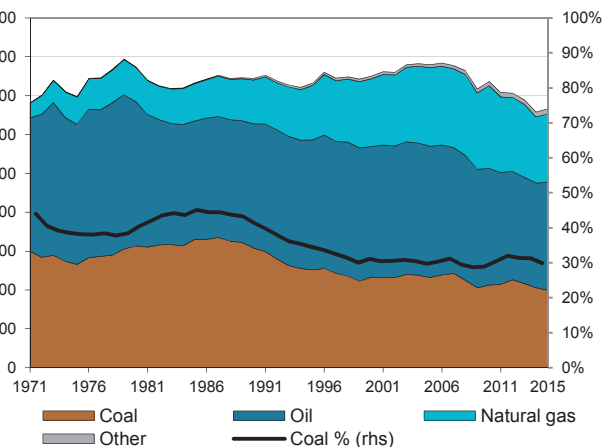


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

OECD EUROPE

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	579.5	608.9	526.0	310.8	247.1	225.5	211.9	196.8	-0.6	-3.6
Imports	97.9	143.1	170.1	196.4	210.1	254.2	245.6	223.2	3.3	1.5
Exports	-77.5	-75.1	-61.5	-48.2	-36.7	-55.1	-57.2	-60.2	-1.3	-0.3
Stock changes	7.9	-14.3	7.1	13.1	10.2	-6.2	6.9	18.6		
Primary supply	607.7	662.6	641.8	472.2	430.7	418.4	407.2	378.5	0.3	-1.8
Statistical differences	5.1	-7.5	-13.0	1.3	-4.7	-5.9	-2.2	..		
Total transformation	-321.5	-411.9	-435.9	-372.3	-336.2	-334.3	-327.2	..	1.8	-1.1
Electricity and heat gen.	-279.3	-365.1	-395.0	-335.4	-304.3	-300.0	-292.1	..	2.1	-1.2
<i>Main activity producers</i> ³	-258.3	-305.8	-344.6	-315.5	-287.9	-288.9	-280.3	..	1.7	-0.8
<i>Autoproducers</i>	-21.1	-59.3	-50.5	-19.9	-16.4	-11.0	-11.9	..	5.3	-5.6
Gas works	11.5	2.5	2.4	0.1	-0.4	-0.4	-0.3	..	-8.9	-
Coal transformation ⁴	-53.7	-49.4	-42.9	-36.2	-30.2	-32.2	-32.6	..	-1.3	-1.1
<i>BKB plants</i>	2.4	1.6	-1.5	-0.2	0.1	-0.2	-0.4	..	-	-5.6
<i>Blast furnaces</i>	-38.6	-37.7	-32.8	-29.8	-26.1	-28.0	-28.2	..	-1.0	-0.6
<i>Coke ovens</i>	-18.2	-14.0	-9.3	-6.4	-4.3	-4.0	-4.0	..	-3.9	-3.3
<i>Patent fuel plants</i>	0.8	0.7	0.7	0.2	0.1	-0.0	-0.0	..	-1.0	-
Other transformation ⁵	-	-	-0.3	-0.7	-1.3	-1.8	-2.1	..	-	8.8
Energy ind. own use	-21.7	-18.5	-13.3	-10.3	-9.4	-10.5	-10.0	..	-2.8	-1.1
Losses	-5.2	-2.0	-1.2	-1.1	-1.6	-1.5	-1.6	..		
Final consumption ⁶	264.4	222.7	178.4	89.8	78.8	66.2	66.3	..	-2.3	-3.9
Industry ⁷	130.3	112.1	102.2	66.7	45.4	40.2	39.7	..	-1.4	-3.7
<i>Iron and steel</i>	52.7	42.8	40.2	27.9	20.8	16.9	16.9	..	-1.6	-3.4
<i>Chemical</i>	14.3	12.9	11.3	4.3	4.3	4.6	5.2	..	-1.4	-3.1
<i>Non-metallic minerals</i>	14.3	16.3	18.8	12.5	9.6	10.8	10.4	..	1.6	-2.4
<i>Paper, pulp and print</i>	4.2	3.4	3.8	2.3	1.6	1.7	1.7	..	-0.5	-3.2
<i>Other industry</i> ⁸	44.9	36.8	28.1	19.7	9.0	6.2	5.5	..	-2.7	-6.3
Transport ⁹	9.8	3.6	0.3	0.0	0.0	0.0	0.0	..	-18.5	-11.4
Other	119.9	103.8	73.4	21.2	31.0	23.2	24.0	..	-2.8	-4.4
<i>Comm. and pub. services</i>	22.0	24.4	18.2	2.1	2.6	5.9	6.9	..	-1.1	-3.8
<i>Residential</i>	89.2	72.0	51.0	17.1	26.2	15.7	15.7	..	-3.2	-4.6
<i>Other sectors</i> ¹⁰	8.7	7.4	4.2	2.0	2.2	1.6	1.5	..	-4.1	-4.1
Non-energy use	4.4	3.1	2.5	1.9	2.4	2.8	2.6	..	-3.3	0.1
Electricity gen. - TWh	663.1	887.2	1029.6	968.0	873.1	875.9	859.3	791.2	2.6	-0.7

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

OECD EUROPE

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	1097.19	1155.55	817.44	751.04	763.57	737.03	716.68	0.43	-1.89
Total electricity and heat	619.11	766.12	647.07	588.34	612.54	591.27	571.99	1.79	-1.16
<i>Main activity producers</i>	552.78	697.50	627.81	573.52	603.10	583.26	564.46	1.96	-0.84
<i>Autoproducers</i>	66.33	68.61	19.26	14.82	9.44	8.01	7.53	0.28	-8.46
Patent fuel/BKB plants	140.91	111.31	12.99	13.00	14.15	14.66	14.62	-1.95	-7.80
Coke ovens/Liquefaction ³	137.69	107.93	73.13	63.92	60.25	59.95	59.05	-2.01	-2.38
Blast furnace inputs	0.01	4.92	9.05	11.28	13.06	14.35	15.10	77.58	4.59
Gas manufacture	10.49	3.50	1.35	1.57	1.36	1.46	1.42	-8.75	-3.56
Industry	87.97	83.14	48.45	32.50	28.01	27.77	27.15	-0.47	-4.38
<i>Iron and steel</i>	5.53	7.43	4.61	4.75	4.23	3.96	4.05	2.49	-2.39
<i>Chemical</i>	17.50	16.34	6.19	5.30	5.20	5.27	5.71	-0.57	-4.12
<i>Non-metallic minerals</i>	15.06	19.10	11.58	9.05	10.20	10.31	9.37	2.00	-2.81
<i>Paper, pulp and print</i>	4.88	4.22	2.32	1.48	1.41	1.49	1.50	-1.20	-4.05
<i>Other industry</i>	45.00	36.06	23.76	11.93	6.98	6.75	6.51	-1.83	-6.62
Other sectors ⁴	83.66	66.90	25.37	35.44	29.30	26.02	26.86	-1.85	-3.58
Non-energy use	0.91	0.63	0.38	0.82	0.97	0.92	0.86	-3.04	1.25
Steam coal	366.47	366.09	283.54	263.69	281.30	258.24	259.02	-0.01	-1.37
Total electricity and heat	256.93	283.99	229.27	203.98	227.76	205.37	204.99	0.84	-1.30
<i>Main activity producers</i>	207.55	245.81	219.44	196.71	224.69	202.51	202.34	1.42	-0.78
<i>Autoproducers</i>	49.38	38.18	9.84	7.26	3.07	2.87	2.65	-2.12	-10.12
Patent fuel/BKB plants	6.90	2.94	0.84	0.23	0.26	0.26	0.22	-6.86	-9.81
Coke ovens/Liquefaction ³	2.28	0.09	-	-	-	-	-	-23.82	-
Blast furnace inputs	0.01	3.58	7.32	9.02	9.07	10.08	11.51	72.95	4.78
Gas manufacture	1.63	0.41	-	-	-	-	-	-10.93	-
Industry	40.00	40.59	32.22	21.22	20.02	20.93	21.04	0.12	-2.59
<i>Iron and steel</i>	4.59	4.32	4.10	3.57	3.49	3.20	3.60	-0.51	-0.72
<i>Chemical</i>	3.18	5.67	3.06	3.68	3.75	3.95	4.51	4.94	-0.91
<i>Non-metallic minerals</i>	13.49	17.47	11.29	8.69	7.71	8.10	7.99	2.17	-3.08
<i>Paper, pulp and print</i>	0.84	2.21	1.85	1.28	1.14	1.18	1.18	8.39	-2.49
<i>Other industry</i>	17.90	10.92	11.92	4.00	3.93	4.51	3.76	-4.03	-4.18
Other sectors ⁴	50.74	31.06	15.02	26.24	21.90	20.34	21.45	-4.01	-1.47
Non-energy use	0.08	0.05	0.12	0.24	0.52	0.52	0.53	-4.48	10.33
Coking coal	145.14	129.48	92.80	73.29	67.52	67.95	63.61	-0.95	-2.80
Total electricity and heat	7.14	18.23	13.37	6.04	2.44	3.70	1.03	8.12	-10.85
<i>Main activity producers</i>	6.19	14.32	10.17	5.01	1.73	3.35	0.93	7.23	-10.37
<i>Autoproducers</i>	0.95	3.91	3.20	1.04	0.71	0.36	0.11	12.52	-13.44
Patent fuel/BKB plants	-	-	-	-	-	0.00	0.00	-	-
Coke ovens/Liquefaction ³	135.41	107.84	73.13	63.35	59.75	59.39	58.50	-1.88	-2.42
Blast furnace inputs	-	1.34	1.73	2.26	3.96	4.27	3.59	-	4.03
Gas manufacture	2.46	0.26	-	-	-	-	-	-17.08	-
Industry	0.14	2.07	2.69	1.57	0.99	0.75	0.44	24.95	-6.05
<i>Iron and steel</i>	0.01	1.74	0.29	1.02	0.70	0.74	0.43	58.31	-5.43
<i>Chemical</i>	0.00	-	0.00	-	-	-	-	-	-
<i>Non-metallic minerals</i>	0.00	-	0.00	-	0.04	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.13	0.34	2.39	0.55	0.25	0.01	0.01	8.10	-15.49
Other sectors ⁴	0.27	0.14	0.10	0.18	0.07	0.06	-	-5.56	-
Non-energy use	-	0.00	0.23	0.18	0.18	0.13	0.10	-	16.75

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

OECD EUROPE

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	585.58	659.98	441.11	414.07	414.75	410.84	394.05	1.00	-2.04
Total electricity and heat	355.04	463.90	404.42	378.32	382.34	382.19	365.96	2.25	-0.94
<i>Main activity producers</i>	339.04	437.37	398.20	371.80	376.69	377.41	361.19	2.14	-0.76
<i>Autoproducers</i>	16.00	26.53	6.22	6.52	5.66	4.78	4.77	4.30	-6.63
Patent fuel/BKB plants	134.01	108.37	12.15	12.77	13.89	14.40	14.40	-1.75	-7.76
Coke ovens/Liquefaction ²	-	-	-	0.57	0.50	0.56	0.55	-	-
Blast furnace inputs	-	-	-	-	0.03	0.00	0.00	-	-
Gas manufacture	6.40	2.83	1.35	1.57	1.36	1.46	1.42	-6.57	-2.74
Industry	47.82	40.48	13.54	9.71	7.01	6.09	5.68	-1.38	-7.56
<i>Iron and steel</i>	0.93	1.37	0.22	0.16	0.04	0.02	0.02	3.32	-15.91
<i>Chemical</i>	14.32	10.67	3.13	1.62	1.45	1.33	1.20	-2.42	-8.37
<i>Non-metallic minerals</i>	1.57	1.63	0.28	0.35	2.45	2.21	1.38	0.32	-0.66
<i>Paper, pulp and print</i>	4.04	2.01	0.47	0.20	0.26	0.31	0.33	-5.65	-7.01
<i>Other industry</i>	26.97	24.80	9.45	7.38	2.81	2.23	2.75	-0.70	-8.42
Other sectors ³	32.65	35.70	10.25	9.02	7.33	5.62	5.41	0.75	-7.27
Non-energy use	0.83	0.58	0.02	0.40	0.27	0.27	0.23	-2.94	-3.57
Peat	7.98	13.75	11.30	14.81	10.60	10.42	9.81	4.64	-1.34
Total electricity and heat	3.71	7.72	8.51	12.39	8.58	8.49	8.11	6.29	0.19
<i>Main activity producers</i>	3.23	7.50	8.01	11.97	8.29	8.17	7.80	7.26	0.16
<i>Autoproducers</i>	0.48	0.23	0.50	0.42	0.29	0.32	0.31	-6.02	1.24
Patent fuel/BKB plants	0.75	1.64	0.88	0.81	0.76	0.66	0.40	6.74	-5.54
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	1.09	1.55	1.22	1.05	0.78	0.83	0.77	2.94	-2.75
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	0.16	0.09	0.02	0.02	0.02	0.01	-	-10.45
<i>Non-metallic minerals</i>	-	-	0.00	0.00	-	-	-	-	-
<i>Paper, pulp and print</i>	0.50	1.29	1.04	0.92	0.70	0.75	0.71	8.24	-2.35
<i>Other industry</i>	0.60	0.10	0.09	0.11	0.05	0.07	0.05	-13.81	-2.81
Other sectors ³	2.42	2.73	0.71	0.79	0.65	0.58	0.57	1.02	-6.11
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	25.95	13.23	17.89	20.49	20.63	17.90	-	-1.48
Total electricity and heat	-	22.57	10.84	13.55	15.44	15.23	12.08	-	-2.47
<i>Main activity producers</i>	-	22.57	10.82	13.53	15.43	15.23	12.00	-	-2.49
<i>Autoproducers</i>	-	-	0.02	0.02	0.01	-	0.08	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	0.88	1.39	3.09	3.82	4.08	4.90	-	7.12
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	0.65	0.61	1.03	0.98	1.04	0.75	-	0.57
Industry	-	1.39	0.22	0.16	0.16	0.16	0.07	-	-11.07
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	0.22	0.16	0.16	0.16	0.07	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	1.39	0.00	-	-	-	-	-	-
Other sectors ³	-	-	0.00	-	-	-	-	-	-
Non-energy use	-	-	0.15	0.06	0.08	0.10	0.14	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

OECD EUROPE

3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change 78-90	90-15
Mtce:									
Coking coal	136.40	92.69	44.80	37.08	26.89	21.68	19.37	-3.17	-5.65
Steam coal	278.59	224.43	129.41	109.73	84.91	64.32	56.33	-1.79	-4.88
Lignite	177.75	196.40	129.59	126.93	125.37	117.50	112.66	0.83	-2.03
Peat	2.30	5.61	3.35	4.69	4.45	2.49	2.24	7.71	-3.20
Oil shale and oil sands	-	6.91	3.70	4.42	5.51	5.96	6.18	-	-0.59
Mt:								-3.37	-5.66
Coking coal	141.07	93.45	45.21	37.30	27.18	21.76	19.42	-1.68	-4.86
Steam coal	347.05	283.08	163.72	139.62	108.04	81.41	71.67	0.88	-1.96
Lignite	585.45	650.13	434.47	437.20	411.83	396.03	373.84	6.25	-3.13
Peat	8.05	16.66	10.34	14.32	13.65	7.52	6.75	-	-0.54
Oil shale and oil sands	-	22.49	11.73	14.59	17.93	19.62	20.35	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	108.62	169.38	196.01	228.37	210.12	253.50	254.21	245.60	223.23
Bituminous coal ⁴	46.33	94.76	122.58	160.18	143.50	191.53	189.50	187.91	165.25
Coking coal	40.54	56.97	56.67	53.92	53.34	49.56	51.17	45.57	46.51
Sub-bituminous coal	0.60	0.79	0.63	0.86	0.78	0.77	0.73	0.69	0.60
Lignite	4.69	4.40	1.42	0.42	0.54	0.67	1.09	0.93	0.60
Peat	-	0.10	0.10	0.14	0.16	0.08	0.07	0.06	0.04
Coal products ⁵	16.47	12.35	14.61	12.85	11.79	10.89	11.65	10.45	10.24
Total exports	90.65	61.44	48.16	41.80	36.70	52.89	55.07	57.20	60.17
Bituminous coal ⁴	30.61	23.43	28.52	25.63	19.15	36.91	38.12	41.35	43.55
Coking coal	35.17	19.56	9.76	6.47	5.44	4.47	4.53	4.19	4.52
Sub-bituminous coal	-	0.04	0.04	0.03	-	-	-	-	-
Lignite	4.33	4.31	1.31	0.66	0.64	0.80	1.16	1.00	0.66
Peat	0.01	0.12	0.08	0.06	0.04	0.01	0.00	0.02	-
Coal products ⁵	20.53	13.98	8.45	8.95	11.43	10.71	11.26	10.64	11.45

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

OECD EUROPE

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	106042	171374	200392	238484	219691	272659	273538	265333	238969
Coking coal	40078	55533	56057	52927	52877	48757	50411	45079	46081
Australia	4497	10043	21757	20330	17145	15517	12923	15716	15430
Canada	294	2812	7072	6743	3732	2712	4263	2685	3312
Czech Republic	909	774	3388	3366	3704	2370	2533	2068	2294
Germany	10550	3141	2	289	1	2	87	3	-
Poland	6190	2570	3118	3246	1821	2116	2265	2913	2417
United Kingdom	79	52	-	6	1	2	-	-	-
United States	8745	28433	16901	13914	21520	19256	19730	13389	9534
Other OECD	105	80	24	384	92	270	502	158	6223
China, People's Rep.	-	1	2	279	3	-	-	-	-
Colombia	-	24	140	193	766	352	308	425	265
Indonesia	-	46	441	-	-	147	-	273	56
South Africa	206	158	388	295	574	106	19	10	-
Former Soviet Union ⁴	3005	2419	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	2327	2668	2709	3655	5507	4253	3923
<i>Other FSU</i>	x	x	26	316	80	1316	480	428	388
Venezuela	-	-	418	872	187	90	91	-	77
Viet Nam	-	-	53	-	37	-	-	-	-
Non-specified/other	5498	4980	-	26	505	846	1703	2758	2162
Steam coal	53202	105808	141375	184645	165746	222393	220638	218103	191665
Australia	2955	9790	9416	7429	3504	2910	2241	6499	6083
Canada	816	832	12	807	859	1723	1961	1196	877
Czech Republic	243	327	2443	1415	2889	2772	2011	1452	925
Germany	6716	2123	470	641	627	474	613	4379	464
Poland	15647	13084	18894	15494	10730	9046	6857	6160	5811
United Kingdom	2285	2436	593	297	311	230	153	153	201
United States	499	20504	4724	2332	11588	34980	32007	22611	20002
Other OECD	986	3515	3692	3144	4169	3530	4262	2700	3084
China, People's Rep.	21	2783	1887	1895	279	86	147	128	59
Colombia	-	9060	22500	26613	37605	57228	57661	62595	58392
Indonesia	-	194	8657	14816	10158	7199	7886	7595	5437
South Africa	10814	26099	42839	52893	18829	18762	26463	21599	21640
Former Soviet Union ⁴	2863	6464	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	15568	49327	54087	69227	67175	66663	59599
<i>Other FSU</i>	x	x	835	2575	1847	2832	4802	1494	1560
Venezuela	-	1475	3081	1142	822	455	201	372	130
Viet Nam	-	-	560	213	23	2	11	181	20
Non-specified/other	9357	7122	5204	3612	7419	10937	6085	12142	7254
Lignite	12762	10033	2960	912	1068	1509	2489	2151	1223

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

OECD EUROPE

6. Coking coal exports by destination¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	35537	19781	9747	6663	5491	4541	4558	4199	4534
Total OECD	25095	11025	8106	6172	5361	4225	4410	3982	4247
Australia	-	-	-	-	-	-	-	-	-
Austria	1283	1351	1844	1514	1312	1147	1014	824	955
Belgium	2383	858	1	20	16	-	1	1	1
Canada	-	-	-	-	-	-	-	-	-
Chile	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	214	523	720	845	1500	1366	1280
Denmark	-	-	-	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	203	717	13	-	41	-	-	-
France	6331	1697	108	30	16	23	-	-	-
Germany	154	144	1061	397	152	76	1	-	1
Greece	54	-	-	-	-	-	-	-	-
Hungary	-	-	1010	449	502	201	290	346	443
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	3	4	1	-	8	1	1	1
Israel	-	-	-	-	-	-	-	-	-
Italy	4005	1017	-	295	-	-	-	-	-
Japan	804	-	-	-	-	-	-	-	-
Korea	-	-	-	-	-	-	-	-	-
Latvia	x	-	-	-	-	-	-	-	-
Luxembourg	286	-	-	-	-	-	-	-	-
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	1426	573	323	48	-	-	-	-	-
New Zealand	-	-	-	-	-	-	-	-	-
Norway	125	-	53	-	-	-	-	-	-
Poland	-	-	538	592	733	517	693	512	319
Portugal	122	52	-	-	-	-	-	-	-
Slovak Republic	5126	3681	1570	1909	1832	1356	909	932	1232
Slovenia	x	-	-	-	-	-	-	-	-
Spain	1826	649	65	99	-	3	-	-	-
Sweden	387	-	494	-	-	-	-	-	-
Switzerland	18	3	-	-	-	1	1	-	-
Turkey	89	-	100	212	78	-	-	-	15
United Kingdom	573	794	4	-	-	7	-	-	-
United States	103	-	-	70	-	-	-	-	-
Total non-OECD	2491	4676	1641	489	130	309	148	217	287
Brazil	15	1249	143	-	-	-	-	-	-
China ³	-	-	-	-	-	-	-	-	-
Chinese Taipei	-	-	-	-	-	-	-	-	-
Egypt	-	100	529	355	-	-	-	-	-
India	-	284	-	-	-	-	-	-	-
Romania	-	100	62	-	-	-	-	-	-
Oth. Africa & Mid. East	520	-	2	-	-	-	-	-	-
Oth. non-OECD Americas	5	1249	2	-	-	-	-	-	-
Other Asia & Oceania	-	-	-	-	1	-	-	-	-
Other non-OECD Europe and Eurasia	1951	1694	903	134	129	309	148	217	287
Non-specified/Other	7951	4080	-	2	-	7	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

OECD EUROPE

7. Steam coal exports by destination¹

(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	33590	25277	32193	29547	21600	42428	44248	48351	50987
Total OECD	25347	20776	31245	29007	20896	41788	43007	47082	49037
Australia	-	1	-	-	-	13	29	41	45
Austria	275	1216	1643	2183	1447	1366	1183	1527	717
Belgium	2633	1471	616	870	610	1947	2293	3686	3221
Canada	-	-	-	19	24	1	9	2	12
Chile	-	-	-	-	-	-	-	2	-
Czech Republic	274	2282	864	719	685	782	1157	1257	1525
Denmark	4161	1387	2382	1154	800	820	493	344	277
Estonia	x	-	3	-	-	13	3	1	3
Finland	4095	2815	1228	965	190	319	190	85	103
France	6035	1167	2418	3127	1906	2278	1283	1182	1418
Germany	3171	4942	15893	13409	8846	28569	31162	33672	38173
Greece	1	-	2	144	-	101	49	32	17
Hungary	-	-	322	321	158	28	22	67	127
Iceland	-	18	7	44	56	43	58	102	75
Ireland	540	793	468	596	605	510	441	494	385
Israel	-	-	-	5	-	-	-	-	-
Italy	1530	600	923	258	1173	348	790	861	250
Japan	-	61	-	-	-	-	-	-	-
Korea	-	-	-	-	-	-	-	-	-
Latvia	x	-	-	-	-	-	42	104	49
Luxembourg	52	3	164	38	50	61	72	46	49
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	938	1341	363	651	370	528	650	1070	429
New Zealand	-	-	-	-	-	-	-	-	-
Norway	167	339	604	497	403	329	370	485	364
Poland	-	1	117	128	1386	1254	1091	568	261
Portugal	15	186	5	437	245	7	11	21	14
Slovak Republic	237	198	1217	721	449	487	515	522	587
Slovenia	x	-	12	10	4	3	2	19	17
Spain	21	275	442	59	42	109	110	161	184
Sweden	244	864	172	208	311	209	192	201	108
Switzerland	90	52	20	8	32	29	13	12	9
Turkey	74	-	-	66	218	403	68	69	269
United Kingdom	149	764	1359	2323	886	1199	705	449	343
United States	645	-	1	47	-	32	4	-	6
Total non-OECD	85	722	908	533	295	625	884	878	1732
Brazil	-	10	-	-	-	-	-	-	-
China ³	-	3	2	-	-	-	-	-	-
Chinese Taipei	-	-	-	-	-	-	-	-	-
Egypt	-	1	2	4	22	1	78	183	569
India	-	1	-	1	2	2	3	3	3
Romania	-	16	-	-	-	38	37	50	74
Oth. Africa & Mid. East	31	375	3	436	31	411	650	418	564
Oth. non-OECD Americas	-	-	16	-	15	50	8	-	11
Other Asia & Oceania	-	-	4	5	4	8	4	3	4
Other non-OECD Europe and Eurasia	54	316	881	87	221	115	104	221	507
Non-specified/Other	8158	3779	40	7	409	15	338	376	188

1. Please refer to the explanatory notes and definitions in Part I. Steam coal includes all sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

IEA TOTAL¹

Figure 1: Coal supply indicators (1971 = 100)

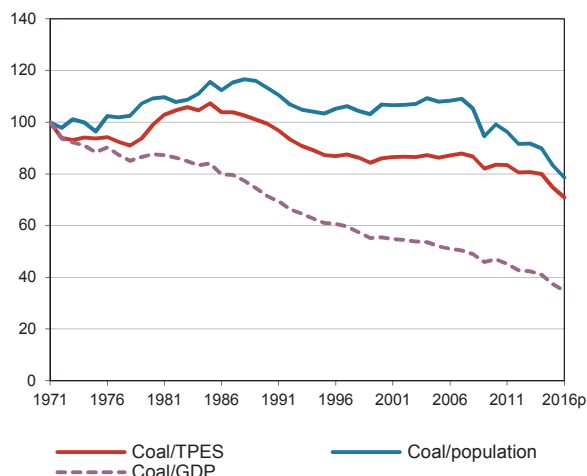


Figure 2: TPES by fuel (Mtce)

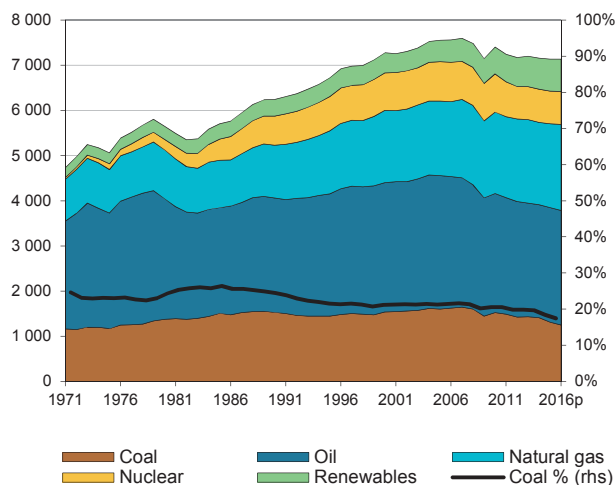


Figure 3: Primary coal supply (Mtce)

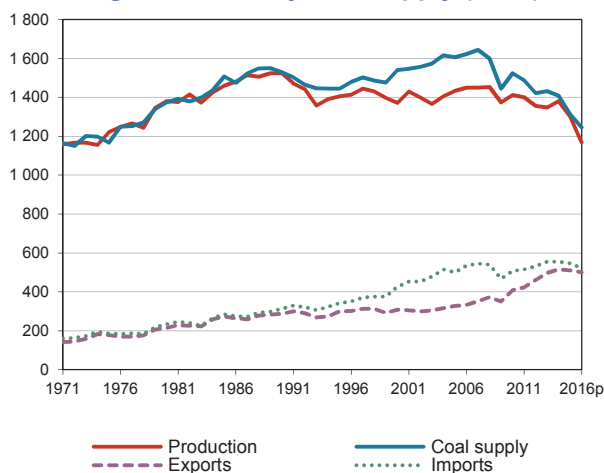


Figure 4: Coal consumption (Mtce)

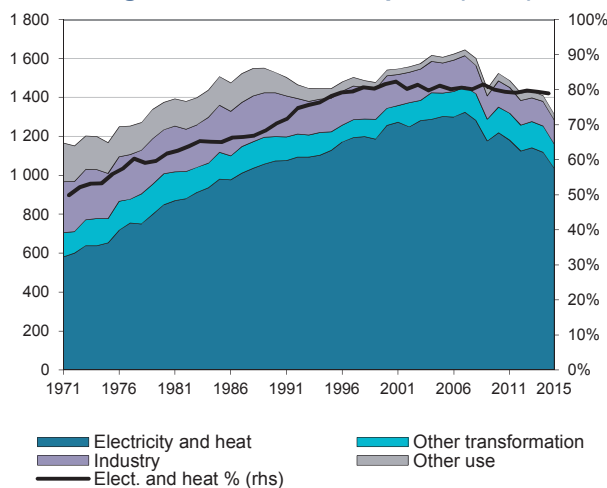
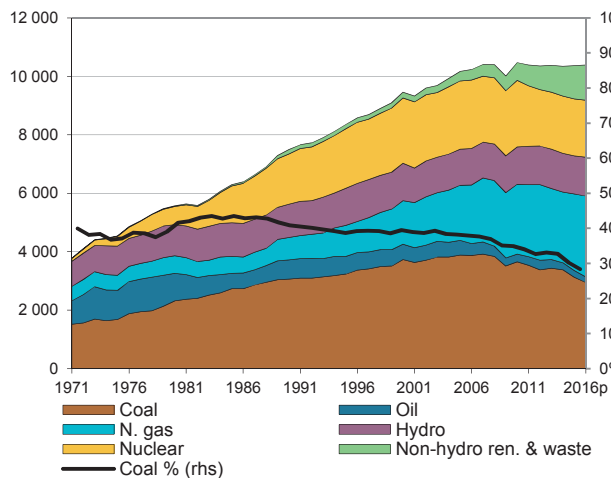
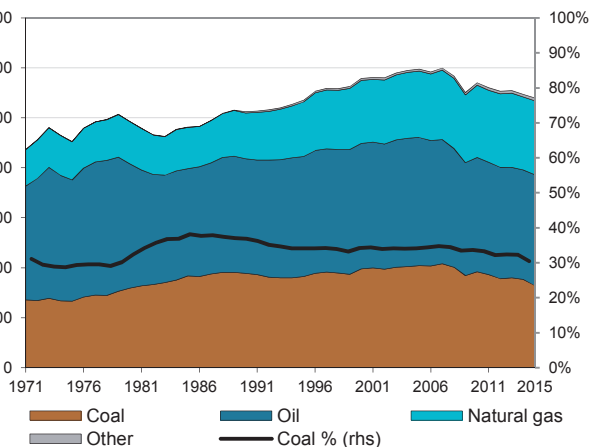


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

IEA TOTAL

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	1166.6	1380.7	1523.5	1370.8	1411.8	1380.0	1301.0	1168.5	1.6	-0.6
Imports	173.5	234.4	312.9	427.0	506.7	554.4	546.1	521.4	3.5	2.3
Exports	-158.7	-214.8	-287.6	-308.2	-408.4	-515.4	-511.1	-500.0	3.6	2.3
Stock changes	20.6	-26.0	-20.9	49.9	12.8	-9.9	-23.2	55.5		
Primary supply	1202.1	1374.3	1528.0	1539.5	1522.9	1409.2	1312.8	1245.4	1.4	-0.6
Statistical differences	21.2	-19.8	1.0	30.7	-15.9	-14.2	-6.9	..		
Total transformation	-752.7	-957.9	-1174.9	-1353.0	-1306.0	-1210.1	-1126.3	..	2.7	-0.2
Electricity and heat gen.	-638.8	-849.0	-1072.9	-1255.9	-1218.5	-1118.1	-1035.3	..	3.1	-0.1
<i>Main activity producers</i> ³	-617.6	-785.4	-1006.0	-1202.5	-1175.6	-1079.6	-994.6	..	2.9	-0.0
<i>Autoproducers</i>	-21.1	-63.6	-66.9	-53.4	-42.8	-38.4	-40.6	..	7.0	-2.0
Gas works	15.7	7.8	-0.6	-2.8	-3.2	-3.1	-3.2	..	-	6.9
Coal transformation ⁴	-129.7	-116.6	-101.2	-93.6	-83.0	-87.2	-85.7	..	-1.4	-0.7
<i>BKB plants</i>	2.2	1.4	-1.6	-0.2	0.1	-0.2	-0.4	..	-	-5.8
<i>Blast furnaces</i>	-93.5	-79.8	-77.9	-80.0	-72.8	-77.4	-75.0	..	-1.1	-0.2
<i>Coke ovens</i>	-37.6	-38.3	-17.5	-12.5	-10.3	-9.5	-10.3	..	-4.4	-2.1
<i>Patent fuel plants</i>	-0.8	0.1	-4.1	-0.8	0.1	-0.0	-0.0	..	10.5	-22.8
Other transformation ⁵	-	-	-0.3	-0.7	-1.3	-1.8	-2.1	..	-	8.8
Energy ind. own use	-34.9	-27.7	-23.3	-20.4	-26.4	-27.1	-25.8	..	-2.4	0.4
Losses	-5.4	-2.3	-1.3	-1.1	-1.6	-1.5	-1.6	..		
Final consumption ⁶	430.3	366.7	329.4	195.7	173.0	156.2	152.3	..	-1.6	-3.0
Industry ⁷	258.5	226.1	224.4	166.6	134.5	125.5	121.7	..	-0.8	-2.4
<i>Iron and steel</i>	131.9	103.8	86.5	64.8	55.2	52.9	52.4	..	-2.5	-2.0
<i>Chemical</i>	26.6	24.9	30.1	19.0	16.6	15.8	15.8	..	0.7	-2.6
<i>Non-metallic minerals</i>	21.0	32.5	43.1	37.8	27.9	30.3	29.2	..	4.3	-1.5
<i>Paper, pulp and print</i>	11.6	11.2	16.0	8.3	9.6	7.8	7.4	..	1.9	-3.0
<i>Other industry</i> ⁸	67.3	53.6	48.8	36.8	25.2	18.7	17.0	..	-1.9	-4.1
Transport ⁹	10.3	3.6	0.4	0.1	0.2	0.0	0.0	..	-17.3	-11.9
Other	157.1	133.7	100.9	26.1	34.7	26.1	26.6	..	-2.6	-5.2
<i>Comm. and pub. services</i>	28.5	28.7	23.1	4.2	5.1	7.7	8.5	..	-1.2	-3.9
<i>Residential</i>	109.4	91.2	65.4	19.9	27.5	16.7	16.6	..	-3.0	-5.3
<i>Other sectors</i> ¹⁰	19.1	13.9	12.4	2.0	2.2	1.7	1.5	..	-2.5	-8.0
Non-energy use	4.4	3.3	3.7	2.8	3.6	4.6	4.0	..	-1.0	0.2
Electricity gen. - TWh	1693.8	2317.5	3065.1	3731.4	3652.7	3381.4	3132.1	2947.7	3.6	0.1

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

IEA TOTAL

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	1868.87	2271.58	2197.33	2188.86	2081.03	2052.57	1915.21	1.64	-0.68
Total electricity and heat	1136.48	1633.18	1825.77	1817.79	1725.22	1693.15	1581.34	3.07	-0.13
<i>Main activity producers</i>	1068.77	1552.03	1781.03	1782.04	1696.18	1663.30	1549.87	3.16	-0.01
<i>Autoproducers</i>	67.70	81.15	44.73	35.75	29.04	29.85	31.47	1.52	-3.72
Patent fuel/BKB plants	162.40	133.90	16.35	15.34	16.66	16.86	16.19	-1.60	-8.10
Coke ovens/Liquefaction ³	273.91	233.07	183.16	170.27	165.00	166.88	162.90	-1.34	-1.42
Blast furnace inputs	0.01	10.33	25.40	32.38	37.16	37.02	37.34	88.91	5.28
Gas manufacture	15.14	9.13	7.02	7.14	6.46	6.86	6.97	-4.12	-1.08
Industry	144.39	164.18	121.30	95.48	88.24	87.52	83.53	1.08	-2.67
<i>Iron and steel</i>	10.78	11.37	9.70	10.44	10.78	11.02	11.04	0.45	-0.12
<i>Chemical</i>	28.22	33.75	20.86	16.93	16.21	16.18	15.66	1.50	-3.03
<i>Non-metallic minerals</i>	28.82	45.55	39.14	29.31	32.41	32.19	30.36	3.89	-1.61
<i>Paper, pulp and print</i>	13.52	17.55	9.10	10.58	8.45	8.43	7.95	2.20	-3.12
<i>Other industry</i>	63.05	55.95	42.51	28.22	20.40	19.69	18.52	-0.99	-4.33
Other sectors ⁴	104.55	82.05	29.31	38.26	30.85	27.69	28.25	-2.00	-4.18
Non-energy use	0.91	0.98	0.84	1.01	1.22	1.01	0.94	0.60	-0.15
Steam coal	928.15	1230.28	1402.44	1440.40	1351.27	1317.97	1209.67	2.38	-0.07
Total electricity and heat	713.89	1030.86	1265.22	1294.24	1209.80	1178.44	1083.46	3.11	0.20
<i>Main activity producers</i>	664.13	982.23	1232.26	1268.63	1187.14	1153.74	1056.88	3.32	0.29
<i>Autoproducers</i>	49.76	48.62	32.97	25.61	22.66	24.70	26.58	-0.19	-2.39
Patent fuel/BKB plants	25.54	23.75	3.24	2.09	2.18	1.89	1.70	-0.60	-10.02
Coke ovens/Liquefaction ³	2.40	7.96	12.69	13.36	16.72	16.24	15.98	10.49	2.83
Blast furnace inputs	0.01	3.76	9.71	10.93	10.39	11.17	12.27	73.63	4.85
Gas manufacture	1.83	0.41	-	-	-	-	-	-11.75	-
Industry	93.42	119.98	103.02	82.92	78.14	77.99	74.08	2.11	-1.91
<i>Iron and steel</i>	9.78	7.99	8.89	8.81	8.76	8.51	8.17	-1.68	0.09
<i>Chemical</i>	13.86	22.82	17.49	15.05	14.52	14.42	14.06	4.24	-1.92
<i>Non-metallic minerals</i>	27.24	43.92	38.85	28.96	29.91	29.98	28.98	4.06	-1.65
<i>Paper, pulp and print</i>	9.02	15.52	8.53	10.40	8.22	8.16	7.65	4.63	-2.79
<i>Other industry</i>	33.52	29.73	29.26	19.71	16.74	16.92	15.22	-1.00	-2.64
Other sectors ⁴	71.37	46.49	18.80	28.90	23.37	21.94	22.76	-3.51	-2.82
Non-energy use	0.08	0.30	0.45	0.27	0.54	0.52	0.53	12.00	2.21
Coking coal	288.75	252.62	205.28	186.90	177.85	181.24	172.34	-1.11	-1.52
Total electricity and heat	7.14	18.23	13.37	6.04	2.44	3.70	1.03	8.12	-10.85
<i>Main activity producers</i>	6.19	14.32	10.17	5.01	1.73	3.35	0.93	7.23	-10.37
<i>Autoproducers</i>	0.95	3.91	3.20	1.04	0.71	0.36	0.11	12.52	-13.44
Patent fuel/BKB plants	-	-	-	-	-	0.00	0.00	-	-
Coke ovens/Liquefaction ³	271.50	225.11	170.47	156.34	147.78	150.08	146.37	-1.55	-1.71
Blast furnace inputs	-	6.57	15.69	21.45	26.74	25.84	25.07	-	5.50
Gas manufacture	6.91	0.26	-	-	-	-	-	-23.92	-
Industry	0.26	2.37	2.99	2.10	2.29	2.52	2.86	20.26	0.75
<i>Iron and steel</i>	0.07	2.04	0.59	1.47	1.99	2.50	2.85	32.43	1.35
<i>Chemical</i>	0.01	-	0.00	-	-	-	-	-	-
<i>Non-metallic minerals</i>	0.00	-	0.00	0.00	0.05	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.18	0.34	2.39	0.63	0.26	0.02	0.01	5.51	-13.47
Other sectors ⁴	0.28	0.14	0.10	0.20	0.07	0.06	0.00	-5.70	-17.89
Non-energy use	-	0.00	0.23	0.18	0.18	0.13	0.10	-	16.75

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

IEA TOTAL

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	651.97	788.68	589.61	561.57	551.91	553.36	533.21	1.60	-1.55
Total electricity and heat	415.45	584.10	547.17	517.51	512.98	511.01	496.85	2.88	-0.65
<i>Main activity producers</i>	398.45	555.48	538.60	508.41	507.32	506.21	492.06	2.81	-0.48
<i>Autoproducers</i>	16.99	28.62	8.57	9.10	5.67	4.79	4.79	4.44	-6.90
Patent fuel/BKB plants	136.86	110.15	13.11	13.25	14.48	14.97	14.49	-1.79	-7.79
Coke ovens/Liquefaction ²	-	-	-	0.57	0.50	0.56	0.55	-	-
Blast furnace inputs	-	-	-	-	0.03	0.00	0.00	-	-
Gas manufacture	6.40	8.47	7.02	7.14	6.46	6.86	6.97	2.36	-0.78
Industry	50.71	41.83	15.29	10.46	7.82	7.02	6.59	-1.59	-7.13
<i>Iron and steel</i>	0.93	1.35	0.22	0.16	0.04	0.02	0.02	3.17	-15.85
<i>Chemical</i>	14.35	10.93	3.37	1.88	1.69	1.76	1.60	-2.24	-7.41
<i>Non-metallic minerals</i>	1.57	1.63	0.28	0.35	2.46	2.21	1.38	0.31	-0.66
<i>Paper, pulp and print</i>	4.51	2.03	0.57	0.18	0.23	0.28	0.31	-6.45	-7.29
<i>Other industry</i>	29.36	25.89	10.86	7.89	3.40	2.76	3.29	-1.04	-7.93
Other sectors ³	32.90	35.42	10.41	9.17	7.41	5.69	5.48	0.62	-7.19
Non-energy use	0.83	0.67	0.16	0.56	0.50	0.35	0.32	-1.78	-2.93
Peat	7.98	13.42	11.05	14.80	10.59	10.42	9.81	4.43	-1.25
Total electricity and heat	3.71	7.55	8.30	12.39	8.58	8.49	8.11	6.09	0.28
<i>Main activity producers</i>	3.23	7.36	7.81	11.97	8.28	8.17	7.80	7.09	0.23
<i>Autoproducers</i>	0.48	0.19	0.49	0.42	0.29	0.32	0.31	-7.43	1.98
Patent fuel/BKB plants	0.75	1.53	0.88	0.81	0.76	0.66	0.40	6.11	-5.27
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	1.09	1.55	1.22	1.05	0.78	0.83	0.77	2.94	-2.75
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	0.16	0.09	0.02	0.02	0.02	0.01	-	-10.45
<i>Non-metallic minerals</i>	-	-	0.00	0.00	-	-	-	-	-
<i>Paper, pulp and print</i>	0.50	1.29	1.04	0.92	0.70	0.75	0.71	8.24	-2.35
<i>Other industry</i>	0.60	0.10	0.09	0.11	0.05	0.07	0.05	-13.81	-2.89
Other sectors ³	2.42	2.70	0.71	0.78	0.65	0.58	0.57	0.93	-6.07
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	25.95	13.23	17.89	20.49	20.63	17.90	-	-1.48
Total electricity and heat	-	22.57	10.84	13.55	15.44	15.23	12.08	-	-2.47
<i>Main activity producers</i>	-	22.57	10.82	13.53	15.43	15.23	12.00	-	-2.49
<i>Autoproducers</i>	-	-	0.02	0.02	0.01	-	0.08	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	0.88	1.39	3.09	3.82	4.08	4.90	-	7.12
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	0.65	0.61	1.03	0.98	1.04	0.75	-	0.57
Industry	-	1.39	0.22	0.16	0.16	0.16	0.07	-	-11.07
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	0.22	0.16	0.16	0.16	0.07	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	1.39	0.00	-	-	-	-	-	-
Other sectors ³	-	-	0.00	-	-	-	-	-	-
Non-energy use	-	-	0.15	0.06	0.08	0.10	0.14	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

IEA TOTAL

3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change	
								78-90	90-15
Mtce:									
Coking coal	288.05	279.15	226.96	235.65	277.41	288.17	276.74	-0.26	0.13
Steam coal	747.72	980.89	945.77	997.90	937.78	831.25	714.71	2.29	-0.66
Lignite	205.56	251.07	191.09	189.69	186.62	173.12	168.61	1.68	-1.48
Peat	2.30	5.52	3.32	4.69	4.45	2.49	2.24	7.57	-3.14
Oil shale and oil sands	-	6.91	3.70	4.42	5.51	5.96	6.18	-	-0.59
Mt:								-0.40	0.26
Coking coal	293.39	279.57	232.72	245.34	289.25	298.21	286.54	2.36	-0.48
Steam coal	904.22	1195.72	1182.10	1260.94	1199.18	1059.12	905.89	1.50	-1.52
Lignite	652.34	780.02	586.30	590.61	561.47	531.91	509.86	6.11	-3.07
Peat	8.05	16.41	10.27	14.31	13.64	7.52	6.74	-	-0.54
Oil shale and oil sands	-	22.49	11.73	14.59	17.93	19.62	20.35	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	184.95	312.18	426.62	500.51	506.67	554.45	554.44	546.08	521.44
Bituminous coal ⁴	58.79	151.97	260.64	338.02	342.74	401.50	393.78	390.49	366.15
Coking coal	99.04	140.70	136.56	133.41	140.91	134.38	137.29	132.13	133.21
Sub-bituminous coal	0.60	1.26	6.81	9.25	7.47	3.67	5.81	8.07	7.54
Lignite	4.69	4.40	1.46	0.48	0.57	0.66	1.13	0.97	0.64
Peat	-	0.10	0.10	0.14	0.16	0.08	0.07	0.06	0.04
Coal products ⁵	21.83	13.76	21.05	19.21	14.82	14.15	16.37	14.36	13.86
Total exports	176.68	287.54	308.14	327.29	408.32	497.42	515.39	511.05	500.04
Bituminous coal ⁴	44.50	104.66	130.92	132.68	157.65	233.53	237.74	242.17	236.17
Coking coal	105.43	161.24	162.61	176.98	231.63	242.26	259.35	251.05	247.22
Sub-bituminous coal	-	0.04	0.77	4.42	4.40	7.08	3.64	3.62	1.94
Lignite	4.38	4.32	1.33	0.82	0.80	0.86	1.21	1.06	0.71
Peat	0.01	0.12	0.08	0.06	0.04	0.01	0.00	0.02	-
Coal products ⁵	22.37	17.16	12.43	12.34	13.80	13.69	13.45	13.13	14.00

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

IEA TOTAL

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	178012	319052	450043	541808	555064	611184	610697	606636	577991
Coking coal	98417	136246	139324	135867	143744	137098	140083	135205	136365
Australia	29796	44481	70161	72114	76955	68803	65457	74651	72276
Canada	11598	22597	25154	18888	18547	16348	14334	15395	15699
Czech Republic	909	774	3388	3366	3704	2370	2533	2068	2294
Germany	10948	3141	2	289	1	2	87	3	-
Poland	6619	2570	3118	3246	1821	2116	2265	2913	2417
United Kingdom	79	52	-	6	1	2	-	-	-
United States	24605	45001	23052	20816	31014	30793	30635	22822	19258
Other OECD	116	335	380	817	464	425	635	317	6606
China, People's Rep.	420	1516	6601	8107	2425	1248	2471	1104	1038
Colombia	-	64	140	202	766	428	1181	1170	1384
Indonesia	-	83	779	129	126	964	515	760	427
South Africa	2566	1511	705	295	574	106	19	10	-
Former Soviet Union ⁴	5249	9136	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	5155	6264	6473	8708	13747	10562	11024
<i>Other FSU</i>	x	x	26	316	80	1316	480	580	419
Venezuela	-	-	454	872	187	90	91	-	77
Viet Nam	-	-	150	-	37	-	-	-	-
Non-specified/other	5512	4985	59	140	567	3379	5633	2850	3446
Steam coal	66833	172773	307679	404900	410188	472589	468054	469199	440317
Australia	4556	39634	73750	88769	106096	124530	124408	133909	122428
Canada	970	4471	3235	1922	8115	11972	15707	7463	4157
Czech Republic	243	327	2435	1393	2880	2765	2008	1449	922
Germany	6716	2123	464	601	611	473	610	4343	463
Poland	16292	13084	18887	15545	10730	9046	6857	6160	5810
United Kingdom	2285	2428	589	322	306	231	154	155	199
United States	9296	33702	27293	16230	19284	42816	37671	27077	24387
Other OECD	986	3563	4343	3473	4223	3457	4289	2641	3505
China, People's Rep.	534	7586	37289	38736	11472	4075	3013	2319	5369
Colombia	-	10436	29521	47782	52936	65396	66047	71823	69229
Indonesia	-	1490	28612	61697	85960	79472	74755	74061	73873
South Africa	11967	34928	47113	53103	21477	19404	26919	22010	24069
Former Soviet Union ⁴	3012	9725	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	20952	60323	69573	92051	91940	100443	95942
<i>Other FSU</i>	x	x	835	2689	2037	3289	5083	1547	1560
Venezuela	-	1752	4985	5135	1371	525	495	439	130
Viet Nam	-	150	1597	2699	3512	2138	1803	995	612
Non-specified/other	9976	7374	5648	4481	9604	10949	6193	12181	7535
Lignite	12762	10033	3040	1041	1132	1497	2560	2232	1309

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

IEA TOTAL

6. Coking coal exports by destination¹

(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	107072	162286	168625	186165	243212	255435	272293	262974	258889
Total OECD	90313	122941	128521	132468	139782	135440	139578	128509	129164
Australia	-	-	122	49	-	-	-	-	-
Austria	1283	1351	1844	1753	1724	1705	1440	1202	1336
Belgium	3860	7450	4551	3428	2786	1585	976	1826	1742
Canada	5410	4018	3501	4034	3091	3363	3945	3886	3425
Chile	32	492	1088	1183	659	966	903	684	557
Czech Republic	-	-	214	523	720	845	1500	1366	1280
Denmark	-	50	-	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	330	1005	1172	749	1199	1207	878	928
France	8972	8494	6629	5527	4478	5678	4754	4758	5020
Germany	714	877	4891	4343	4027	3285	3721	3277	3458
Greece	245	-	-	-	-	-	-	-	-
Hungary	-	-	1075	449	542	201	290	346	443
Iceland	-	28	48	57	59	71	56	41	18
Ireland	-	3	4	15	-	8	1	1	1
Israel	-	50	56	129	55	-	-	-	-
Italy	8393	8734	7381	6469	4951	4184	3280	2796	2571
Japan	43380	55410	52798	54110	60233	52428	52949	50046	52094
Korea	2503	7852	15305	17873	23819	26690	28237	28414	28871
Latvia	x	-	-	-	96	71	-	-	-
Luxembourg	286	-	-	-	77	-	-	-	-
Mexico	10	3	1406	1575	1335	3278	2074	769	456
Netherlands	3347	5273	4745	8042	8971	10996	13238	11434	12352
New Zealand	-	-	-	-	-	-	-	-	-
Norway	193	99	95	18	75	90	75	49	58
Poland	-	-	538	592	2882	1502	2372	2557	2308
Portugal	387	805	198	-	-	218	75	-	85
Slovak Republic	5126	3681	1570	1909	2091	1645	1422	1142	1232
Slovenia	x	-	-	163	223	114	420	198	374
Spain	3257	4499	4163	4592	2530	2446	1965	2453	2031
Sweden	840	1568	2128	1690	1887	1307	1984	1627	1622
Switzerland	18	3	46	-	37	1	1	-	-
Turkey	498	2869	3954	3581	3893	5090	4459	3859	4259
United Kingdom	1402	8230	8626	7339	6422	5614	7479	4032	1938
United States	157	772	540	1853	1370	860	755	868	705
Total non-OECD	8808	30067	36647	49263	96864	117565	130790	132321	126698
Brazil	2121	8867	10695	8020	12980	12197	12694	12304	13451
China ³	-	860	265	5269	35605	53060	57102	49181	44265
Chinese Taipei	1186	3155	7713	8343	6215	9237	9941	10884	10645
Egypt	218	1009	1211	1406	1366	305	434	341	257
India	232	5179	10795	19117	34749	35897	42501	48734	49476
Romania	1348	3915	505	593	812	1017	773	544	255
Oth. Africa & Mid. East	521	1068	1825	3184	229	643	349	129	647
Oth. non-OECD Americas	919	2129	781	991	924	773	975	1191	982
Other Asia & Oceania	69	963	1051	839	408	238	1088	2835	1825
Other non-OECD Europe and Eurasia	2194	2922	1806	1501	3576	4198	4933	6178	4895
Non-specified/Other	7951	9278	3457	4133	4584	592	-	20	32

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

IEA TOTAL

7. Steam coal exports by destination¹

(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	49931	113417	146919	157376	184888	275522	275872	280747	272019
Total OECD	40497	95379	127191	132735	140048	200518	189711	191129	194201
Australia	-	2	-	-	105	148	30	41	45
Austria	275	1216	1643	2183	1447	1366	1183	1528	719
Belgium	2660	3778	1473	1298	977	2768	2402	3705	3328
Canada	8782	10083	13524	13644	7269	3085	2161	1520	1134
Chile	-	514	1349	664	1399	2530	1321	1997	3209
Czech Republic	274	2282	864	719	685	782	1157	1257	1525
Denmark	4620	5857	2594	1220	873	820	493	385	332
Estonia	x	-	3	-	-	10	-	-	-
Finland	4095	2815	1228	965	356	319	190	85	157
France	6755	3859	3416	3624	3052	3604	1548	1264	1594
Germany	4157	5451	16487	13657	9781	31660	33225	35717	39847
Greece	1	-	112	144	47	101	49	32	17
Hungary	-	-	322	321	158	28	22	67	127
Iceland	-	33	7	44	56	43	58	102	75
Ireland	540	2248	1208	1164	604	510	441	494	385
Israel	-	1058	2623	1170	516	678	342	172	-
Italy	1552	5051	1430	409	1785	4163	3813	2133	565
Japan	1732	30637	51874	58521	68258	81024	83711	83681	84160
Korea	356	4352	13730	18716	28754	38582	38092	38496	40372
Latvia	x	-	-	-	33	-	42	104	49
Luxembourg	52	3	164	38	50	61	72	46	49
Mexico	-	188	373	4579	4421	4722	4398	4337	7393
Netherlands	1285	9559	3556	2240	2196	8110	6758	8996	5903
New Zealand	-	1	16	56	59	-	94	61	76
Norway	167	401	678	497	403	343	377	500	371
Poland	-	1	117	128	1451	1350	1144	568	261
Portugal	15	1572	348	580	776	145	137	147	14
Slovak Republic	237	198	1217	721	449	487	515	522	587
Slovenia	x	-	12	10	186	149	2	19	17
Spain	21	762	2328	730	416	179	363	286	573
Sweden	244	1040	255	443	659	250	233	231	108
Switzerland	90	81	20	8	32	1316	13	12	9
Turkey	79	15	110	178	438	987	384	152	441
United Kingdom	1081	2097	3874	3677	2118	10113	4852	2304	452
United States	1427	225	236	387	239	85	89	168	307
Total non-OECD	384	13032	19134	24432	44312	74015	83766	88750	74302
Brazil	11	345	22	726	129	370	602	173	162
China ³	-	2554	1440	2121	17878	40678	48627	43374	30810
Chinese Taipei	76	6866	10034	14332	19554	18225	19570	21999	21248
Egypt	-	1	2	4	168	1	79	184	570
India	-	48	2469	1679	783	3427	2903	9879	8271
Romania	-	49	-	844	-	38	37	67	74
Oth. Africa & Mid. East	32	1057	828	499	1075	2713	2568	528	858
Oth. non-OECD Americas	82	128	89	13	130	310	274	175	12
Other Asia & Oceania	129	1621	3303	4019	4374	8073	9004	12150	11763
Other non-OECD Europe and Eurasia	54	363	947	195	221	180	102	221	534
Non-specified/Other	9050	5006	594	209	528	123	1836	420	1481

1. Please refer to the explanatory notes and definitions in Part I. Steam coal includes all sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

AUSTRALIA¹

Figure 1: Coal supply indicators (1971 = 100)

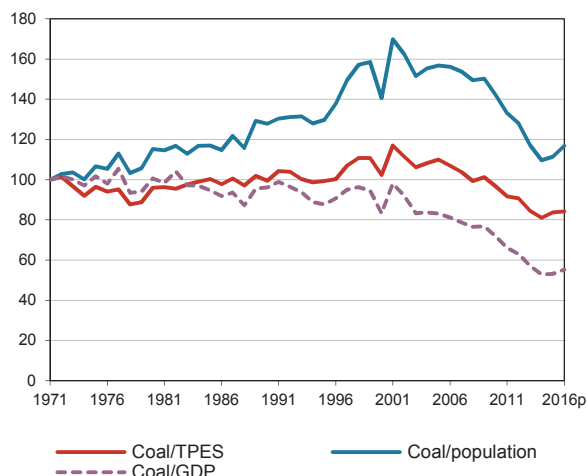


Figure 2: TPES by fuel (Mtce)

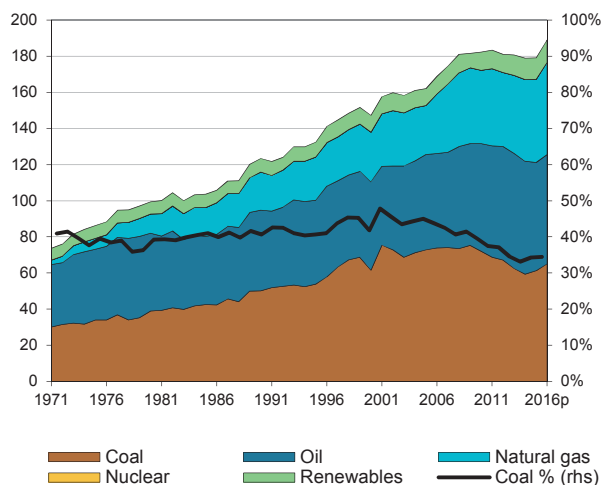


Figure 3: Primary coal supply (Mtce)

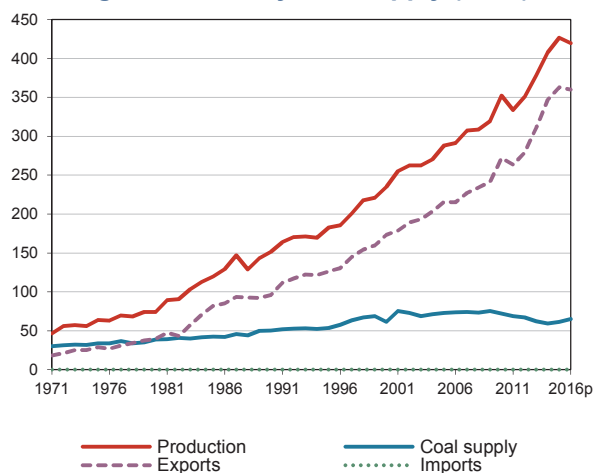


Figure 4: Coal consumption (Mtce)

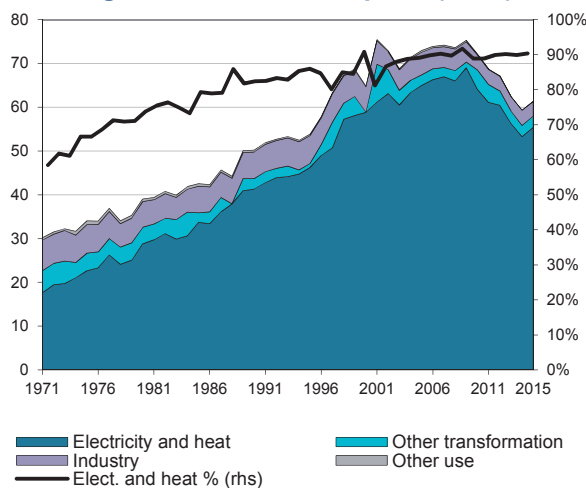
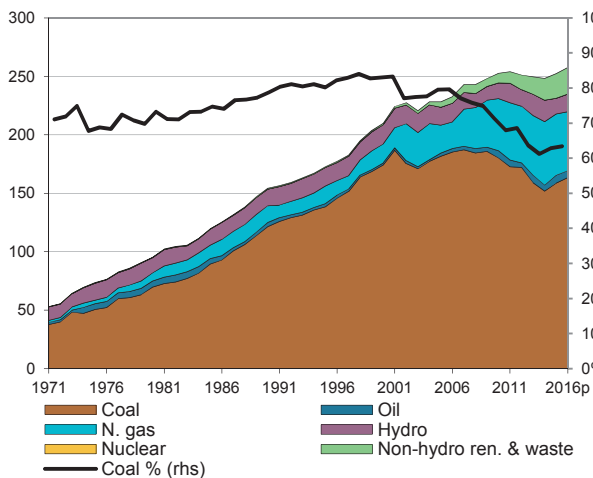
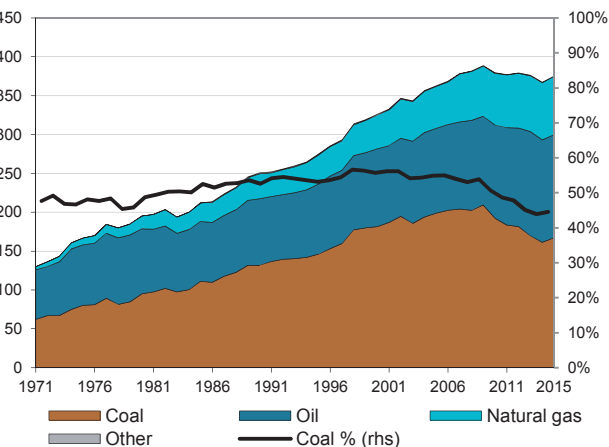


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

AUSTRALIA

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	57.5	74.1	151.6	235.1 e	352.2	407.8	426.5	419.5	5.9	4.2
Imports	-	0.0	-	-	0.1	0.2	0.2	0.2	-	-
Exports	-25.2	-39.7	-96.1	-173.5	-272.0	-346.9	-362.9	-360.0	8.2	5.5
Stock changes	-0.0	4.6	-5.3	-0.0 e	-8.2	-1.7	-2.6	5.4		
Primary supply	32.3	39.0	50.2	61.6	72.1	59.3	61.3	65.1	2.6	0.8
Statistical differences	0.0	0.0	-0.1	5.6 e	0.2	0.1	-0.1	..		
Total transformation	-24.8 e	-31.9 e	-43.1 e	-60.8 e	-67.0 e	-54.7 e	-56.7 e	..	3.3	1.1
Electricity and heat gen.	-19.7	-28.8	-41.3	-58.8 e	-64.0	-53.3	-55.4	..	4.4	1.2
<i>Main activity producers</i> ³	-19.7	-28.1	-40.4	-58.2 e	-63.9	-53.3	-55.4	..	4.3	1.3
<i>Autoproducers</i>	-	-0.7	-0.9	-0.7 e	-0.1	-	-	..	-	-
Gas works	0.3	0.5	0.3	0.1	0.0	0.0	0.0	..	-0.4	-18.3
Coal transformation ⁴	-5.4 e	-3.6 e	-2.0 e	-2.0 e	-2.9 e	-1.4 e	-1.3 e	..	-5.6	-1.7
<i>BKB plants</i>	-0.2	-0.2	-0.1	-0.0 e	-0.0	-0.0	-0.0	..	-5.3	-15.4
<i>Blast furnaces</i>	-2.4 e	-2.2 e	-1.4 e	-1.7 e	-1.6 e	-0.9 e	-0.9 e	..	-3.3	-1.9
<i>Coke ovens</i>	-2.8	-1.2	-0.6	-0.3	-1.3	-0.5	-0.5	..	-9.0	-0.9
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-0.0	-0.7	-0.5	-0.5 e	-1.7	-1.3	-1.2	..	19.7	3.7
Losses	-	-	-	-	-	-	-	..		
Final consumption ⁶	7.4	6.4	6.5	6.0	3.6	3.5	3.3	..	-0.8	-2.6
Industry ⁷	7.0	5.8	6.1	5.8	3.5	3.5	3.3	..	-0.8	-2.4
<i>Iron and steel</i>	3.0 e	2.9 e	2.3 e	1.8 e	0.4 e	0.5 e	0.4 e	..	-1.8	-6.3
<i>Chemical</i>	0.4	0.4	0.4	0.3 e	0.2	0.2	0.2	..	0.2	-2.1
<i>Non-metallic minerals</i>	0.9	0.8	0.8	0.7 e	0.7	0.6	0.6	..	-0.7	-1.3
<i>Paper, pulp and print</i>	0.3	0.3	0.3	0.3	0.1	0.1	0.1	..	-0.4	-4.8
<i>Other industry</i> ⁸	2.3	1.5	2.3	2.7 e	2.0	2.1	2.0	..	0.1	-0.7
Transport ⁹	0.0	0.0	0.1	0.1	0.1	-	0.0	..	7.6	-17.4
Other	0.4	0.6	0.3	0.1	0.0	0.0	0.0	..	-1.9	-12.4
<i>Comm. and pub. services</i>	0.1	0.3	0.2	0.1 e	0.0	0.0	0.0	..	2.7	-11.5
<i>Residential</i>	0.3	0.3	0.1	0.0 e	0.0	-	0.0	..	-6.8	-17.2
<i>Other sectors</i> ¹⁰	-	-	-	-	-	-	-	..	-	-
Non-energy use	-	-	-	-	-	-	-	..	-	-
Electricity gen. - TWh	48.2	69.8	121.5	174.2	180.2	151.8	158.6	163.3	5.6	1.1

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

AUSTRALIA

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	61.93	95.29	128.12	134.04	116.68	111.40	117.16	3.66	0.83
Total electricity and heat	48.20	82.33	117.44 e	123.22	108.31	103.37	109.00	4.56	1.13
<i>Main activity producers</i>	46.85	80.82	116.16 e	123.22	108.31	103.37	109.00	4.65	1.20
<i>Autoproducers</i>	1.35	1.52	1.28 e	-	-	-	-	0.95	-
Patent fuel/BKB plants	2.85	1.78	0.96 e	0.48	0.59	0.57	0.10	-3.84	-10.99
Coke ovens/Liquefaction ³	7.22	5.93	4.80	5.11	4.27	3.90	3.95	-1.62	-1.62
Blast furnace inputs	-	-	-	0.63 e	0.18 e	0.16 e	0.05 e	-	-
Gas manufacture	0.04	-	-	-	-	-	-	-	-
Industry	3.48	4.92	4.69	3.86	3.68	3.78	3.65	2.93	-1.19
<i>Iron and steel</i>	0.37	0.34	0.10 e	0.09 e	0.09 e	0.08 e	0.05 e	-0.73	-7.26
<i>Chemical</i>	0.15	0.16	0.09	0.23	0.25	0.23	0.25	0.11	1.87
<i>Non-metallic minerals</i>	0.88	0.98	0.79 e	0.96	0.83	0.79	0.75	0.85	-1.04
<i>Paper, pulp and print</i>	0.54	0.35	0.33	0.20	0.10	0.10	0.14	-3.62	-3.49
<i>Other industry</i>	1.54	3.10	3.39 e	2.38 e	2.40 e	2.58 e	2.45 e	6.04	-0.94
Other sectors ⁴	0.25	0.15	0.04	0.02	0.00	0.02	0.02	-4.05	-8.23
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	24.24	43.37	56.03	56.38	50.07	46.95	47.85	4.97	0.39
Total electricity and heat	20.89	38.20	51.10 e	51.66	46.22	43.01	44.16	5.16	0.58
<i>Main activity producers</i>	20.53	37.75	50.91 e	51.66	46.22	43.01	44.16	5.21	0.63
<i>Autoproducers</i>	0.36	0.45	0.19 e	-	-	-	-	1.82	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	0.63 e	0.18 e	0.16 e	0.05 e	-	-
Gas manufacture	0.04	-	-	-	-	-	-	-	-
Industry	3.17	4.85	4.69	3.85	3.68	3.78	3.64	3.59	-1.14
<i>Iron and steel</i>	0.37	0.34	0.10 e	0.09 e	0.09 e	0.08 e	0.05 e	-0.73	-7.26
<i>Chemical</i>	0.15	0.13	0.09	0.23	0.25	0.23	0.25	-1.34	2.59
<i>Non-metallic minerals</i>	0.88	0.97	0.79 e	0.95	0.83	0.79	0.75	0.83	-1.03
<i>Paper, pulp and print</i>	0.28	0.35	0.33	0.20	0.10	0.10	0.14	1.89	-3.49
<i>Other industry</i>	1.49	3.06	3.39 e	2.38 e	2.40 e	2.58 e	2.45 e	6.15	-0.89
Other sectors ⁴	0.25	0.15	0.04	0.02	0.00	0.00	0.00	-3.93	-13.59
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	7.22	5.93	4.80	5.11	4.27	3.90	3.95	-1.62	-1.62
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	7.22	5.93	4.80	5.11	4.27	3.90	3.95	-1.62	-1.62
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

AUSTRALIA

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	30.47	45.99	67.29	72.55	62.34	60.54	65.36	3.49	1.42
Total electricity and heat	27.32	44.14	66.34 e	71.56	62.10	60.36	64.85	4.08	1.55
<i>Main activity producers</i>	26.32	43.07	65.25 e	71.56	62.10	60.36	64.85	4.19	1.65
<i>Autoproducers</i>	0.99	1.07	1.09 e	-	-	-	-	0.62	-
Patent fuel/BKB plants	2.85	1.78	0.96 e	0.48	0.59	0.57	0.10	-3.84	-10.99
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.31	0.07	-	0.00	-	-	0.01	-11.23	-10.17
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	0.03	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	0.00	-	0.00	-	-	-	-	-
<i>Paper, pulp and print</i>	0.26	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.04	0.05	-	-	-	-	0.01	0.96	-8.49
Other sectors ³	0.00	-	-	-	-	0.01	0.01	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

AUSTRALIA

3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change	
								78-90	90-15
Mtce:									
Coking coal	36.14	62.50	100.89	124.82	158.44	185.79	184.09	4.67	4.45
Steam coal	22.71	74.47	113.27 e	139.56	169.54	218.90	214.11	10.40	4.41
Lignite	9.64	14.61	20.95	23.59	24.26	21.86	21.26	3.52	1.62
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:								4.60	4.43
Coking coal	37.67	64.63	103.75	128.36	162.93	191.06	189.30	9.72	4.09
Steam coal	30.88	93.94	135.68 e	171.70	200.40	256.01	250.40	3.49	1.42
Lignite	30.47	45.99	67.29	70.53	72.55	65.36	63.57	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹ (Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	0.01	-	-	0.02	0.06	0.09	0.18	0.24	0.20
Bituminous coal ⁴	0.01	-	-	-	0.03	0.01	0.03	0.02	0.01
Coking coal	-	-	-	-	0.01	0.04	0.08	0.10	0.02
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	-	-	-	0.02	0.01	0.04	0.07	0.12	0.17
Total exports	34.17	96.10	173.47	215.70	271.99	310.54	346.90	362.86	359.96
Bituminous coal ⁴	4.24	39.96	77.02	94.23	118.70	159.61	170.63	179.49	176.55
Coking coal	29.77	55.58	96.43	121.47	152.93	149.94	175.49	182.49	182.82
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.16	0.55	0.02	c	0.35	0.98	0.78	0.87	0.59

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

AUSTRALIA

6. Coking coal exports by destination¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	31029	57750	99161	124915	157265	154193	180458	187664	187998
Total OECD	29177	44002	73658	83834	81628	74482	79752	79990	84562
Australia	-	-	-	-	-	-	-	-	-
Austria	-	-	-	-	-	-	-	-	-
Belgium	374	1054	1833	1881	1034	585	165	759	710
Canada	-	-	-	-	-	-	-	-	-
Chile	32	200	463	555	389	424	337	296	349
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	-	-	392	76	356	-	-	-
France	1173	1917	3739	3895	2506	3253	2836	3632	3889
Germany	-	25	2619	1746	1160	804	701	709	1345
Greece	191	-	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	14	-	-	-	-	-
Israel	-	-	-	129	55	-	-	-	-
Italy	1319	1181	2914	2527	1559	1205	655	668	870
Japan	22640	28579	39174	44962	48462	40201	42385	39825	41905
Korea	1330	4944	10358	12457	15864	16181	19155	20460	20226
Latvia	x	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Mexico	10	-	666	588	336	179	274	233	-
Netherlands	992	713	2194	5652	3342	6136	7309	6696	8092
New Zealand	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	369	957	1238	1403
Portugal	-	-	-	-	-	-	-	-	-
Slovak Republic	-	-	-	-	-	-	-	-	-
Slovenia	x	-	-	-	-	-	233	-	374
Spain	593	694	1767	2470	1069	1024	950	1318	929
Sweden	-	702	992	1226	1486	869	1333	1020	1360
Switzerland	-	-	-	-	-	-	-	-	-
Turkey	-	912	1451	720	909	819	239	1245	2028
United Kingdom	469	3081	5488	4451	3381	2077	2223	1891	1082
United States	54	-	-	169	-	-	-	-	-
Total non-OECD	1852	13748	25293	36950	69621	77902	99395	105949	100803
Brazil	164	1291	4988	3094	4234	3073	3747	5615	6363
China ³	-	560	174	4193	27282	35437	48113	43392	37953
Chinese Taipei	981	2798	6273	7091	5357	8086	8921	9797	9394
Egypt	-	323	-	353	324	-	-	-	77
India	32	4844	10588	17442	31377	30750	36644	42600	43753
Romania	675	2256	-	46	-	-	-	160	-
Oth. Africa & Mid. East	-	454	1554	2807	-	-	-	-	-
Oth. non-OECD Americas	-	300	595	784	603	318	562	779	794
Other Asia & Oceania	-	734	1051	737	299	238	1088	2781	1825
Other non-OECD Europe and Eurasia	-	188	70	403	145	-	320	825	644
Non-specified/Other	-	-	210	4131	4210	492	-	20	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

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7. Steam coal exports by destination¹

(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	5522	45646	87801	107415	135352	182003	194586	204684	201303
Total OECD	4809	38304	70498	85460	95691	114534	116651	119488	129341
Australia	-	-	-	-	-	-	-	-	-
Austria	-	-	-	-	-	-	-	-	-
Belgium	-	129	428	17	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Chile	-	120	1301	412	309	367	497	1126	2600
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	150	1149	142	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-
France	682	934	434	469	66	-	-	-	-
Germany	458	125	72	115	-	-	-	-	-
Greece	-	-	110	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	133	284	568	-	-	-	-	-
Israel	-	528	2623	1165	516	678	342	172	-
Italy	-	-	428	141	-	-	-	-	-
Japan	1489	26569	47449	57574	66413	77646	80569	81226	82175
Korea	-	3633	11452	17970	24840	33364	33253	35110	39172
Latvia	x	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Mexico	-	-	-	4238	3109	2438	1772	1332	5042
Netherlands	320	4236	2550	760	126	-	-	269	-
New Zealand	-	-	16	56	59	-	94	61	76
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-
Slovak Republic	-	-	-	-	-	-	-	-	-
Slovenia	x	-	-	-	-	-	-	-	-
Spain	-	205	1445	671	-	-	-	107	165
Sweden	-	155	83	164	73	41	41	30	-
Switzerland	-	29	-	-	-	-	-	-	-
Turkey	-	-	55	45	-	-	-	-	-
United Kingdom	932	328	1499	993	13	-	83	-	-
United States	778	31	127	102	167	-	-	55	111
Total non-OECD	193	7342	17303	21955	39661	67469	77935	85020	69203
Brazil	-	158	-	33	20	-	-	-	55
China ³	-	2443	1429	2121	15189	38853	48059	43373	30561
Chinese Taipei	76	3046	10034	14329	19553	17883	18990	21835	20994
Egypt	-	-	-	-	-	-	-	-	-
India	-	47	2469	1461	610	2629	1889	7668	5837
Romania	-	33	-	-	-	-	-	-	-
Oth. Africa & Mid. East	-	-	-	-	-	-	-	-	-
Oth. non-OECD Americas	-	-	72	-	-	45	-	-	-
Other Asia & Oceania	117	1615	3299	4011	4289	8059	8997	12144	11756
Other non-OECD Europe and Eurasia	-	-	-	-	-	-	-	-	-
Non-specified/Other	520	-	-	-	-	-	-	-	1097

1. Please refer to the explanatory notes and definitions in Part I. Steam coal includes all sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

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Figure 1: Coal supply indicators (1971 = 100)

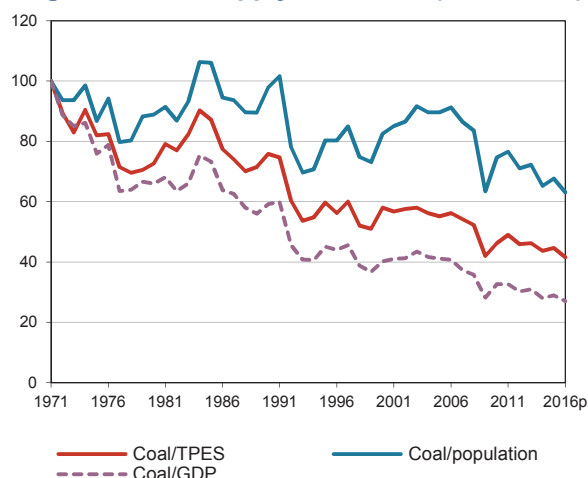


Figure 2: TPES by fuel (Mtce)

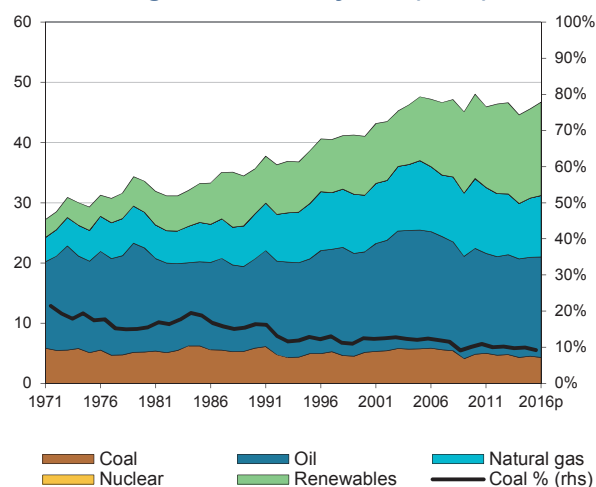


Figure 3: Primary coal supply (Mtce)

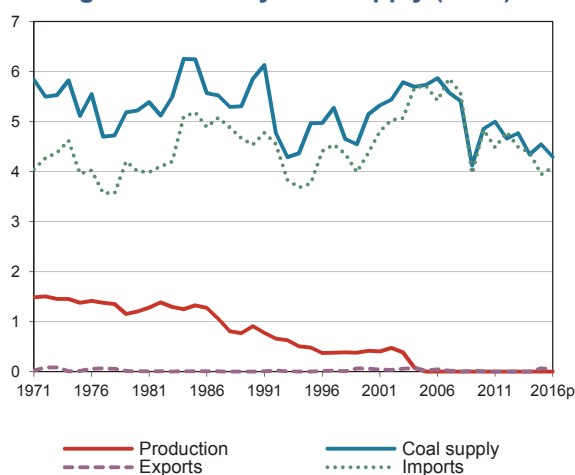


Figure 4: Coal consumption (Mtce)

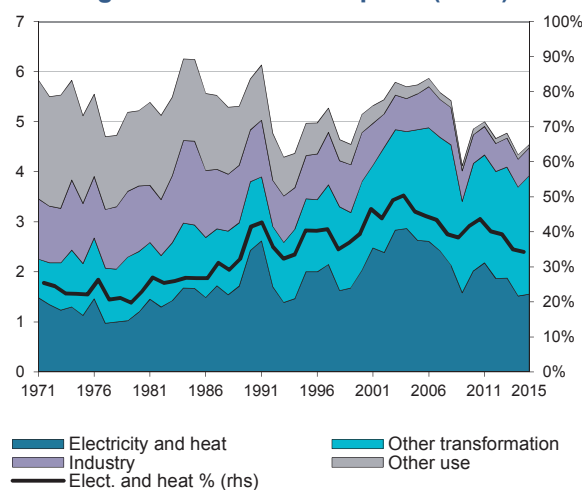
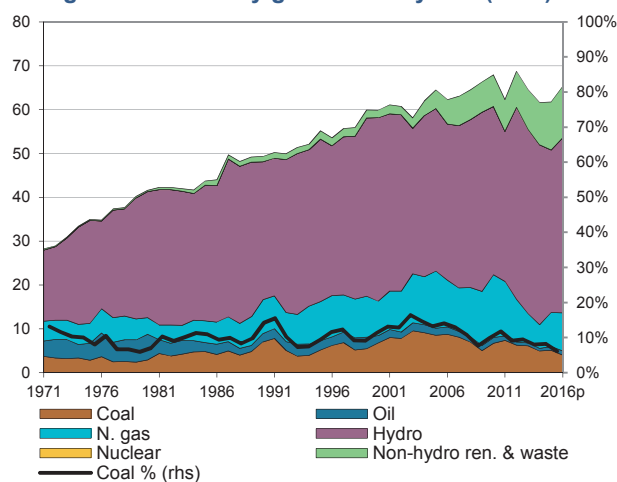
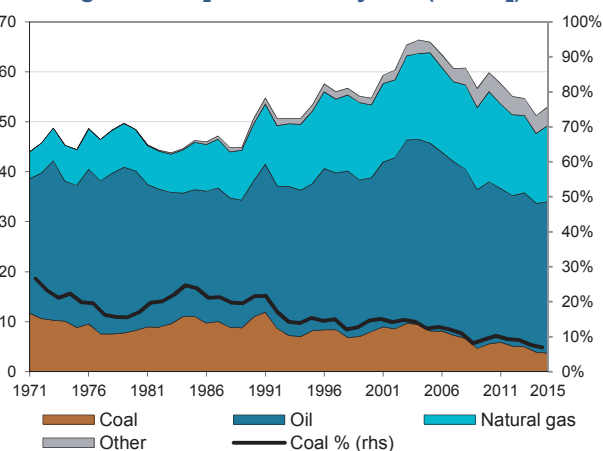


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

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1. Coal balance¹
(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	1.5	1.2	0.9	0.4	0.0	0.0	0.0	0.0	-2.7	-27.4
Imports	4.4	4.0	4.5	4.4	4.8	4.4	3.9	4.1	0.2	-0.6
Exports	-0.1	-0.0	-0.0	-0.1	-0.0	-0.0	-0.1	-0.0	-17.3	12.8
Stock changes	-0.2	0.0	0.4	0.4	0.0	-0.0	0.7	0.3		
Primary supply	5.5	5.2	5.9	5.1	4.9	4.3	4.5	4.3	0.3	-1.0
Statistical differences	0.0	0.0	-0.0	-0.1	-0.0	-0.0	-0.0	..		
Total transformation	-1.8 e	-2.2 e	-3.3 e	-3.1 e	-3.4	-2.9	-3.2	..	3.6	-0.0
Electricity and heat gen.	-1.2	-1.2	-2.4	-2.0	-2.0	-1.5	-1.6	..	4.0	-1.8
<i>Main activity producers</i> ³	-1.0	-1.0	-2.1	-1.6	-1.4	-0.8	-0.9	..	4.2	-3.5
<i>Autoproducers</i>	-0.2	-0.2	-0.3	-0.4	-0.6	-0.7	-0.7	..	3.3	3.0
Gas works	0.5	-0.0	0.0	-	-	-	-	..	-15.7	-
Coal transformation ⁴	-1.1 e	-1.0 e	-0.9 e	-1.1 e	-1.3	-1.3	-1.7	..	-1.2	2.7
<i>BKB plants</i>	0.1	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-1.0 e	-0.9 e	-0.7 e	-0.9 e	-1.2	-1.3	-1.6	..	-2.3	3.4
<i>Coke ovens</i>	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	..	3.5	-3.4
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-0.3	-0.1	-0.5	-0.7	-0.8	-0.8	-0.7	..	4.2	0.7
Losses	-0.1	-0.0	-0.0	-	-0.0	-0.0	-0.0	..		
Final consumption ⁶	3.4	2.8	2.1	1.3	0.7	0.6	0.6	..	-2.8	-4.7
Industry ⁷	1.1	1.3	1.0	1.0	0.6	0.6	0.6	..	-0.3	-2.5
<i>Iron and steel</i>	0.7 e	1.1 e	0.7 e	0.6 e	0.3	0.3	0.3	..	-0.4	-3.0
<i>Chemical</i>	0.0	0.0	0.0	0.1	0.0	0.0	0.0	..	-	-
<i>Non-metallic minerals</i>	0.1	0.0	0.2	0.2	0.1	0.1	0.1	..	7.5	-3.1
<i>Paper, pulp and print</i>	0.0	0.0	0.1	0.1	0.1	0.1	0.1	..	4.4	0.7
<i>Other industry</i> ⁸	0.2	0.1	0.0	0.0	0.0	0.0	0.0	..	-13.0	-
Transport ⁹	0.2	0.0	0.0	0.0	-	-	-	..	-21.1	-
Other	2.1	1.5	1.0	0.3	0.1	0.0	0.0	..	-4.3	-12.1
<i>Comm. and pub. services</i>	0.1	0.2	0.0	0.0	0.0	0.0	0.0	..	-3.1	-
<i>Residential</i>	2.0	1.3	0.9	0.3	0.1	0.0	0.0	..	-4.4	-12.3
<i>Other sectors</i> ¹⁰	0.0	0.0	0.0	0.0	0.0	0.0	0.0	..	-	-
Non-energy use	0.0	0.0	0.0	0.0	0.0	0.0	0.0	..	-	-
Electricity gen. - TWh	3.2	2.9	7.0	6.7	6.7	4.9	5.1	4.0	4.7	-1.3

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

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2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	5.37	6.66	5.11	3.84	3.57	3.20	3.76	1.82	-2.26
Total electricity and heat	2.03	3.55	2.65	1.58	1.33	0.95	0.97	4.79	-5.08
<i>Main activity producers</i>	1.99	3.45	2.56	1.54	1.30	0.90	0.93	4.70	-5.13
<i>Autoproducers</i>	0.04	0.10	0.09	0.04	0.04	0.04	0.04	8.34	-3.68
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	2.01	2.34	1.88	1.84	1.79	1.77	1.77	1.28	-1.10
Blast furnace inputs	-	-	-	0.14	0.19	0.23	0.76	-	-
Gas manufacture	0.03	-	-	-	-	-	-	-	-
Industry	0.24	0.36	0.42	0.27	0.25	0.26	0.25	3.20	-1.40
<i>Iron and steel</i>	0.03	-	-	-	-	-	-	-	-
<i>Chemical</i>	0.00	0.01	0.06	0.02	0.02	0.03	0.03	11.00	5.70
<i>Non-metallic minerals</i>	0.03	0.21	0.21	0.16	0.12	0.13	0.12	18.28	-2.21
<i>Paper, pulp and print</i>	0.15	0.14	0.15	0.09	0.11	0.10	0.10	-0.93	-1.11
<i>Other industry</i>	0.04	0.00	-	-	-	-	0.00	-16.54	-
Other sectors ⁴	0.96	0.41	0.12	0.01	0.01	0.01	0.01	-6.93	-14.12
Non-energy use	-	0.00	0.00	0.00	-	-	-	-	-
Steam coal	0.37	1.82	1.89	1.97	1.77	1.42	1.98	14.21	0.33
Total electricity and heat	0.00	1.42	1.42	1.58	1.33	0.95	0.97	83.11	-1.53
<i>Main activity producers</i>	0.00	1.37	1.36	1.54	1.30	0.90	0.93	82.59	-1.56
<i>Autoproducers</i>	-	0.05	0.06	0.04	0.04	0.04	0.04	-	-0.73
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	0.14	0.19	0.23	0.76	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.04	0.21	0.35	0.24	0.25	0.25	0.24	15.22	0.59
<i>Iron and steel</i>	0.01	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	0.01	0.06	0.02	0.02	0.03	0.03	-	5.70
<i>Non-metallic minerals</i>	0.02	0.20	0.21	0.13	0.11	0.12	0.11	21.10	-2.31
<i>Paper, pulp and print</i>	-	0.00	0.09	0.09	0.11	0.10	0.10	-	17.03
<i>Other industry</i>	0.00	-	-	-	-	-	-	-	-
Other sectors ⁴	0.32	0.19	0.08	0.01	0.00	0.00	0.01	-4.29	-12.33
Non-energy use	-	0.00	0.00	0.00	-	-	-	-	-
Coking coal	2.01	2.34	1.88	1.84	1.79	1.77	1.77	1.28	-1.10
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	2.01	2.34	1.88	1.84	1.79	1.77	1.77	1.28	-1.10
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

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2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	2.99	2.50	1.34	0.04	0.01	0.01	0.01	-1.47	-19.52
Total electricity and heat	2.03	2.13	1.23	-	-	-	-	0.43	-
<i>Main activity producers</i>	1.99	2.08	1.19	-	-	-	-	0.37	-
<i>Autoproducers</i>	0.04	0.05	0.04	-	-	-	-	2.75	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	0.03	-	-	-	-	-	-	-	-
Industry	0.21	0.15	0.07	0.03	0.01	0.01	0.01	-2.72	-10.60
<i>Iron and steel</i>	0.01	-	-	-	-	-	-	-	-
<i>Chemical</i>	0.00	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	0.01	0.01	0.00	0.03	0.01	0.01	0.01	2.69	-0.80
<i>Paper, pulp and print</i>	0.15	0.13	0.07	-	-	-	-	-1.05	-
<i>Other industry</i>	0.03	0.00	-	-	-	-	-	-15.69	-
Other sectors ³	0.64	0.22	0.05	0.01	0.00	0.00	0.00	-8.63	-17.09
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	-	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

AUSTRIA

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-	-
Lignite	1.35	0.91	0.42	-	-	-	-	-3.25	-
Peat	-	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-1.88	-
Lignite	3.08	2.45	1.25	-	-	-	-	-	-
Peat	-	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	3.57	4.54	4.38	5.72	4.83	4.49	4.38	3.94	4.09
Bituminous coal ⁴	0.30	1.18	1.60	2.18	1.60	1.35	1.26	1.21	1.43
Coking coal	1.99	2.36	1.72	2.05	1.89	1.75	1.81	1.71	1.78
Sub-bituminous coal	-	-	0.03	0.05	0.05	0.06	0.06	0.06	0.05
Lignite	0.11	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	1.17	0.99	1.03	1.42	1.28	1.33	1.24	0.95	0.83
Total exports	0.06	0.00	0.06	0.02	0.01	0.00	0.00	0.07	0.05
Bituminous coal ⁴	-	-	-	0.00	0.00	0.00	-	0.01	-
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	0.00	0.00	-	-	0.00	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.06	0.00	0.06	0.02	0.00	0.00	0.00	0.06	0.05

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

AUSTRIA

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	2553	3645	3463	4448	3746	3267	3255	3120	3411
Coking coal	2006	2376	1738	2063	1907	1758	1824	1730	1797
Australia	-	-	-	-	-	-	236	180	416
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	662	746	1187	992	986	708	772	593	567
Germany	205	-	-	9	-	-	-	-	-
Poland	470	566	551	519	366	370	250	266	346
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	456	-	501	539	680	542	641	468
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	16	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	669	608	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	31	-	-	-	-	-
<i>Other FSU</i>	x	x	-	11	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	24	50	-
Steam coal	301	1233	1709	2337	1796	1498	1419	1379	1603
Australia	-	-	-	-	-	-	-	-	64
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	307	922	837	958	509	361	581
Germany	8	29	44	72	74	102	185	85	106
Poland	260	1189	1358	1327	300	381	637	682	646
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	540	-	-	3	-
Other OECD	-	9	-	1	-	7	4	4	24
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	10	70	-	-
Indonesia	-	-	-	-	1	-	-	-	-
South Africa	-	6	-	10	-	-	-	-	-
Former Soviet Union ⁴	33	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	38	14	244	182
<i>Other FSU</i>	x	x	-	5	24	1	-	-	-
Venezuela	-	-	-	-	20	1	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Lignite	246	36	16	48	43	11	12	11	11

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

BELGIUM¹

Figure 1: Coal supply indicators (1971 = 100)

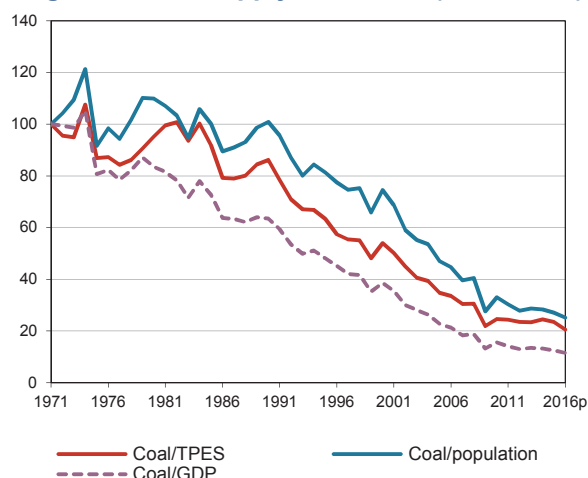


Figure 2: TPES by fuel (Mtce)

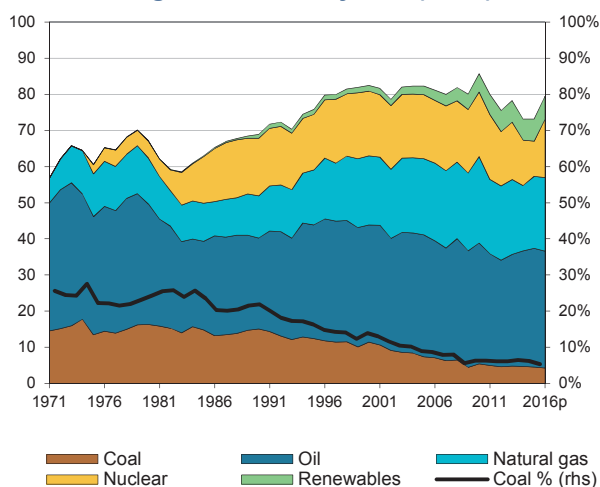


Figure 3: Primary coal supply (Mtce)

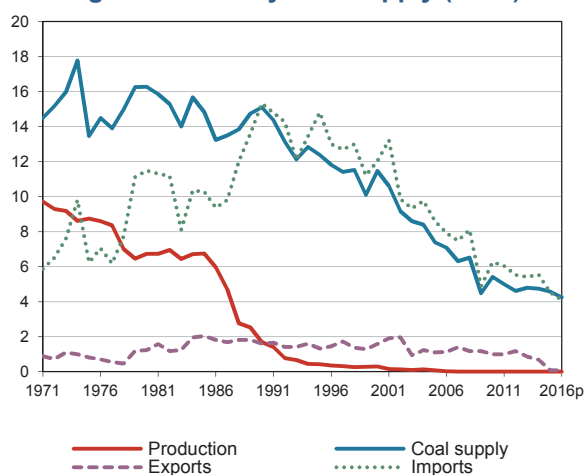


Figure 4: Coal consumption (Mtce)

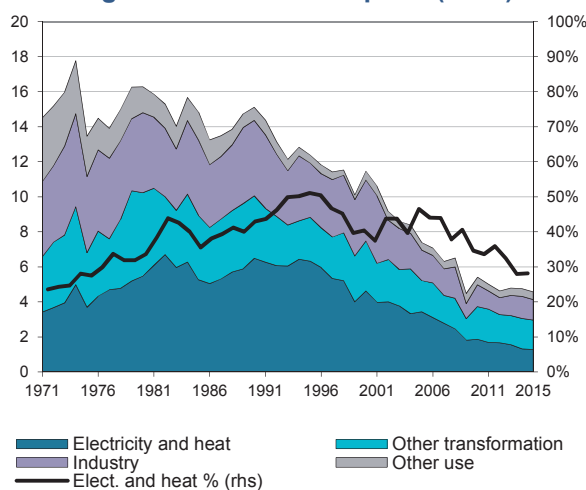
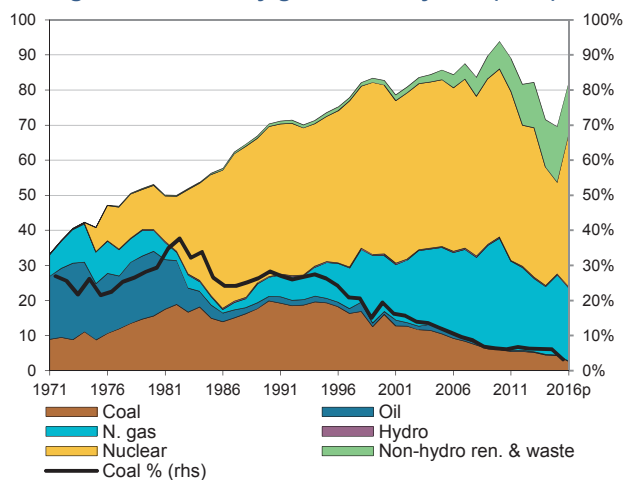
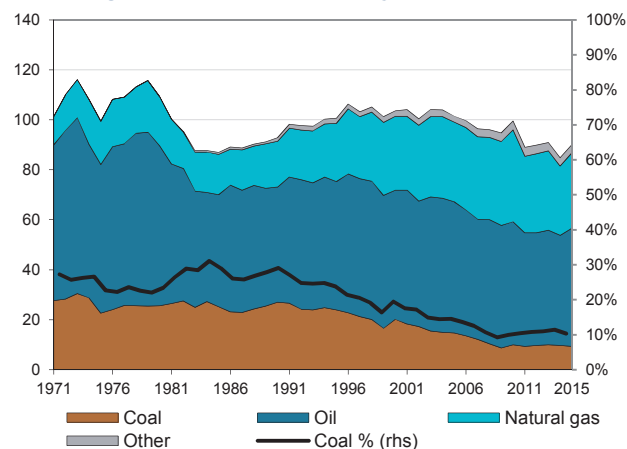


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

BELGIUM

1. Coal balance¹
(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	9.2	6.7	1.7	0.3	0.0	0.0	0.0	0.0	-9.5	-18.1
Imports	7.6	11.5	15.3	12.0	6.3	5.5	4.5	4.1	4.2	-4.8
Exports	-1.1	-1.2	-1.6	-1.6	-1.0	-0.7	-0.1	-0.1	2.2	-11.0
Stock changes	0.3	-0.7	-0.3	0.7	0.1	-0.1	0.1	0.2		
Primary supply	16.0	16.3	15.1	11.5	5.4	4.7	4.6	4.2	-0.3	-4.7
Statistical differences	1.5	-0.4	-0.0	-0.6	-0.0	0.0	0.0	..		
Total transformation	-8.2	-9.1 e	-9.4 e	-6.6 e	-3.2 e	-2.7 e	-2.6 e	..	0.8	-5.0
Electricity and heat gen.	-3.9	-5.5	-6.5	-4.6	-1.9	-1.3	-1.3	..	3.0	-6.3
<i>Main activity producers</i> ³	-3.9	-4.8	-6.0	-4.5	-1.8	-1.3	-1.3	..	2.5	-6.0
<i>Autoproducers</i>	-	-0.7	-0.5	-0.1	-0.1	-0.0	-0.0	..	-	-13.5
Gas works	-0.0	0.0	-	-	-	-	-	..	-	-
Coal transformation ⁴	-4.3	-3.6 e	-2.9 e	-1.9 e	-1.4 e	-1.4 e	-1.3 e	..	-2.3	-3.1
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-3.8	-2.9 e	-2.3 e	-2.0 e	-1.3 e	-1.3 e	-1.3 e	..	-2.7	-2.4
<i>Coke ovens</i>	-0.6	-0.8	-0.5	0.1	-0.1	-0.1	-0.0	..	-0.6	-9.1
<i>Patent fuel plants</i>	0.1	0.0	0.0 e	0.0	-	-	-	..	-34.9	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-1.1	-0.8	-0.7	-0.3	-0.5	-0.4	-0.4	..	-2.6	-2.6
Losses	-0.0	-0.0	-	-	-	-0.0	-0.0	..		
Final consumption ⁶	8.2	6.0	5.1	4.0	1.7	1.7	1.6	..	-2.8	-4.5
Industry ⁷	5.1	4.6	4.3	3.5	1.2	1.3	1.2	..	-1.0	-5.1
<i>Iron and steel</i>	3.5	2.9 e	2.9 e	2.8 e	0.7 e	0.7 e	0.6 e	..	-1.1	-6.3
<i>Chemical</i>	0.1	0.1	0.2	0.0	-	-	-	..	2.2	-
<i>Non-metallic minerals</i>	1.0	1.5	0.8	0.5	0.4	0.5	0.5	..	-1.0	-2.0
<i>Paper, pulp and print</i>	-	0.0	0.0	0.0	0.0	0.0	0.0	..	-	-
<i>Other industry</i> ⁸	0.4	0.2	0.3	0.2	0.1	0.1	0.1	..	-2.0	-6.2
Transport ⁹	0.0	0.0	-	-	-	-	-	..	-	-
Other	3.1	1.5	0.7	0.3	0.2	0.1	0.1	..	-8.0	-6.6
<i>Comm. and pub. services</i>	0.0	0.0	-	-	-	-	-	..	-	-
<i>Residential</i>	3.1	1.5	0.7	0.3	0.2	0.1	0.1	..	-8.0	-7.0
<i>Other sectors</i> ¹⁰	-	-	-	-	0.0	0.0	0.0	..	-	-
Non-energy use	-	-	-	0.2	0.2	0.3	0.3	..	-	-
Electricity gen. - TWh	8.8	15.6	19.9	16.0	6.0	4.4	4.2	2.6	4.9	-6.0

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

BELGIUM

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	16.28	16.43	11.05	5.68	5.02	4.50	4.14	0.07	-5.36
Total electricity and heat	4.64	6.64	4.32	1.49	1.04	0.79	0.78	3.03	-8.23
<i>Main activity producers</i>	4.36	6.34	4.31	1.47	1.03	0.78	0.76	3.17	-8.14
<i>Autoproducers</i>	0.28	0.30	0.01	0.02	0.01	0.01	0.02	0.55	-11.25
Patent fuel/BKB plants	0.12	0.00 e	0.01	-	-	-	-	-32.76	-
Coke ovens/Liquefaction ³	7.22	7.16	3.86	2.59	2.27	1.95	1.67	-0.07	-5.66
Blast furnace inputs	-	0.41 e	0.98 e	0.79 e	1.00 e	1.01 e	0.98 e	-	3.49
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	2.66	1.64	0.98	0.50	0.58	0.64	0.59	-3.94	-4.04
<i>Iron and steel</i>	0.17	0.10 e	0.48 e	0.14 e	0.35 e	0.34 e	0.28 e	-4.36	4.20
<i>Chemical</i>	0.03	0.14	-	-	-	-	-	13.74	-
<i>Non-metallic minerals</i>	2.44	1.14	0.36	0.24	0.16	0.24	0.24	-6.12	-6.13
<i>Paper, pulp and print</i>	-	0.05	0.04	0.04	0.04	0.03	0.03	-	-1.53
<i>Other industry</i>	0.02	0.22 e	0.10 e	0.08 e	0.04 e	0.04 e	0.04 e	20.19	-6.38
Other sectors ⁴	1.63	0.70	0.30	0.20	0.17	0.13	0.12	-6.77	-6.83
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	8.76	9.00	7.00	3.06	2.45	2.29	2.27	0.22	-5.35
Total electricity and heat	4.44	6.64	4.32	1.49	1.04	0.79	0.78	3.41	-8.23
<i>Main activity producers</i>	4.18	6.34	4.31	1.47	1.03	0.78	0.76	3.53	-8.14
<i>Autoproducers</i>	0.26	0.30	0.01	0.02	0.01	0.01	0.02	1.22	-11.25
Patent fuel/BKB plants	0.12	0.00 e	0.01	-	-	-	-	-32.76	-
Coke ovens/Liquefaction ³	0.03	-	-	-	-	-	-	-	-
Blast furnace inputs	-	0.41 e	0.98 e	0.79 e	1.00 e	1.01 e	0.98 e	-	3.49
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	2.66	1.37	0.98	0.50	0.28	0.38	0.38	-5.39	-4.97
<i>Iron and steel</i>	0.17	0.10 e	0.48 e	0.14 e	0.08 e	0.08 e	0.08 e	-4.36	-1.00
<i>Chemical</i>	0.03	0.14	-	-	-	-	-	13.74	-
<i>Non-metallic minerals</i>	2.44	0.87	0.36	0.24	0.12	0.24	0.24	-8.25	-5.09
<i>Paper, pulp and print</i>	-	0.05	0.04	0.04	0.04	0.03	0.03	-	-1.53
<i>Other industry</i>	0.02	0.22 e	0.10 e	0.08 e	0.04 e	0.03 e	0.04 e	20.19	-6.75
Other sectors ⁴	1.63	0.70	0.30	0.20	0.17	0.13	0.12	-6.77	-6.83
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	7.52	7.16	4.05	2.63	2.57	2.21	1.87	-0.42	-5.23
Total electricity and heat	0.20	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	0.18	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	0.02	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	7.19	7.16	3.86	2.59	2.27	1.95	1.67	-0.03	-5.66
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.00	-	-	-	0.31	0.26	0.20	-	-
<i>Iron and steel</i>	-	-	-	-	0.26	0.26	0.20	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	0.00	-	-	-	0.04	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	0.00	0.00	-	-
Other sectors ⁴	0.00	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

BELGIUM

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	-	0.28	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	0.28	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	0.28	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

BELGIUM

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	3.81	-	-	-	-	-	-	-	-
Steam coal	3.19	1.69	0.29	0.08	0.01	0.01	0.01	-5.18	-18.06
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	3.81	-	-	-	-	-	-	-5.92	-18.31
Steam coal	4.90	2.36	0.38	0.11	0.02	0.02	0.01	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	7.72	15.33	12.04	8.59	6.27	5.42	5.54	4.52	4.10
Bituminous coal ⁴	3.51	7.24	6.84	4.61	3.04	2.54	2.70	2.00	1.66
Coking coal	3.49	7.13	3.82	3.53	2.80	2.40	2.23	1.85	1.68
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	0.08	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.71	0.88	1.38	0.45	0.43	0.49	0.60	0.68	0.76
Total exports	0.47	1.60	1.59	1.10	0.99	0.87	0.69	0.09	0.07
Bituminous coal ⁴	0.12	0.65	1.16	1.02	0.47	0.48	0.51	0.07	0.06
Coking coal	0.10	-	0.09	0.03	0.06	0.03	-	-	-
Sub-bituminous coal	-	0.03	0.04	0.02	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.24	0.92	0.30	0.03	0.46	0.36	0.18	0.01	0.01

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

BELGIUM

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	7007	15037	11347	8804	6275	5284	5226	4058	3512
Coking coal	3490	7132	3818	3533	2801	2403	2234	1849	1679
Australia	209	1015	1109	2003	1149	1090	1005	-	-
Canada	148	236	678	227	-	-	-	-	-
Czech Republic	59	-	-	-	-	-	-	-	-
Germany	1751	690	-	-	-	-	87	-	-
Poland	392	105	74	-	-	70	-	-	-
United Kingdom	22	32	-	-	-	-	-	-	-
United States	833	4897	1898	1303	1562	1042	808	-	-
Other OECD	15	-	-	-	90	73	72	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	15	157	59	-	-	-	-	-	-
Former Soviet Union ⁴	46	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	33	190	-	-
<i>Other FSU</i>	x	x	-	-	-	95	31	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	41	1849	1679
Steam coal	3517	7629	7529	5271	3474	2881	2992	2209	1833
Australia	-	388	2354	947	200	216	282	370	400
Canada	26	66	12	43	19	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	2316	721	118	155	145	142	121	76	74
Poland	105	242	225	436	23	-	-	-	-
United Kingdom	129	67	76	62	46	43	24	25	22
United States	-	981	309	411	636	613	417	320	31
Other OECD	72	60	48	29	58	23	96	102	117
China, People's Rep.	-	292	167	58	-	-	-	-	-
Colombia	-	170	431	5	166	339	377	117	-
Indonesia	-	6	11	-	-	-	-	-	-
South Africa	606	4365	3028	2081	1120	318	464	125	117
Former Soviet Union ⁴	233	234	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	705	944	125	1137	1118	996	1008
<i>Other FSU</i>	x	x	19	-	-	-	-	-	-
Venezuela	-	1	3	-	-	-	9	-	-
Viet Nam	-	-	23	98	-	-	-	-	-
Non-specified/other	30	36	-	2	936	50	84	78	64
Lignite	-	276	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

BELGIUM

7. Steam coal exports by destination¹

(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	122	724	1340	1199	545	570	557	79	66
Total OECD	122	724	1340	1199	535	569	545	78	65
Australia	-	-	-	-	-	-	-	-	-
Austria	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Chile	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	1	-	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	-	2	-	-	-	-	-	-
France	61	360	609	377	257	194	237	25	17
Germany	1	67	495	334	159	305	244	42	32
Greece	-	-	-	2	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	-	7	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-	-
Italy	-	5	-	-	-	-	-	-	-
Japan	-	61	-	-	-	-	-	-	-
Korea	-	-	-	-	-	-	-	-	-
Latvia	x	-	-	-	-	-	-	-	-
Luxembourg	21	-	40	37	32	37	37	6	3
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	1	179	136	423	6	33	27	4	13
New Zealand	-	-	-	-	-	-	-	-	-
Norway	13	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
Portugal	6	4	-	-	-	-	-	-	-
Slovak Republic	-	-	-	-	-	-	-	-	-
Slovenia	x	-	-	-	-	-	-	-	-
Spain	18	43	6	-	-	-	-	-	-
Sweden	-	-	15	17	81	-	-	-	-
Switzerland	1	-	15	7	-	-	-	-	-
Turkey	-	-	-	-	-	-	-	-	-
United Kingdom	-	4	15	2	-	-	-	1	-
United States	-	-	-	-	-	-	-	-	-
Total non-OECD	-	-	-	-	-	-	-	-	-
Brazil	-	-	-	-	-	-	-	-	-
China ³	-	-	-	-	-	-	-	-	-
Chinese Taipei	-	-	-	-	-	-	-	-	-
Egypt	-	-	-	-	-	-	-	-	-
India	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	-
Oth. Africa & Mid. East	-	-	-	-	-	-	-	-	-
Oth. non-OECD Americas	-	-	-	-	-	-	-	-	-
Other Asia & Oceania	-	-	-	-	-	-	-	-	-
Other non-OECD Europe and Eurasia	-	-	-	-	-	-	-	-	-
Non-specified/Other	-	-	-	-	10	1	12	1	1

1. Please refer to the explanatory notes and definitions in Part I. Steam coal includes all sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

CANADA¹

Figure 1: Coal supply indicators (1971 = 100)

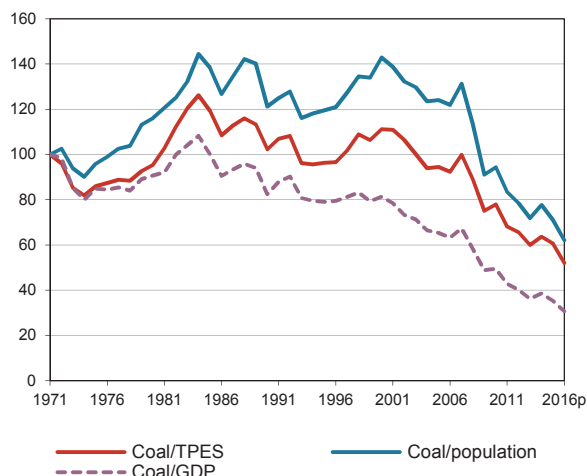


Figure 2: TPES by fuel (Mtce)

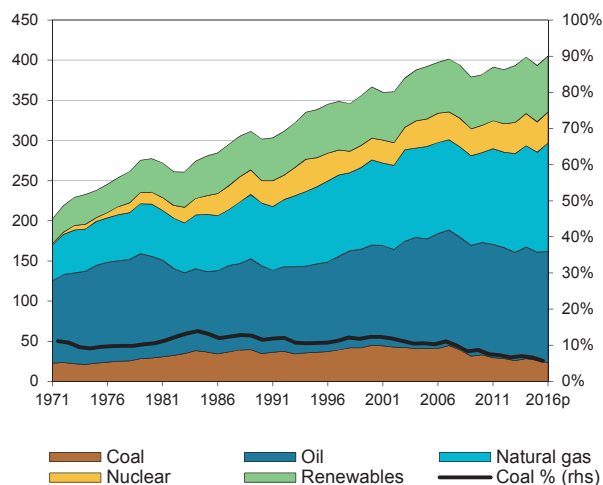


Figure 3: Primary coal supply (Mtce)

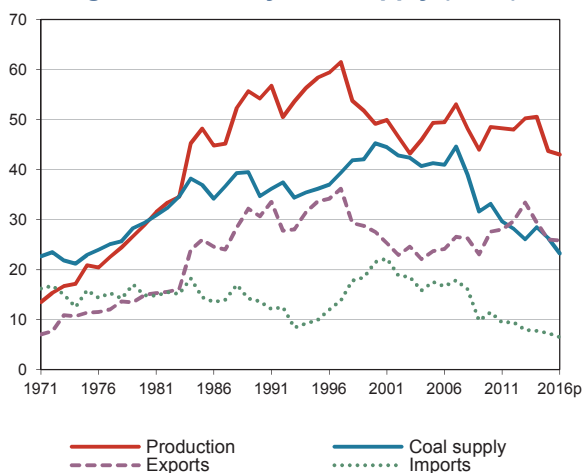


Figure 4: Coal consumption (Mtce)

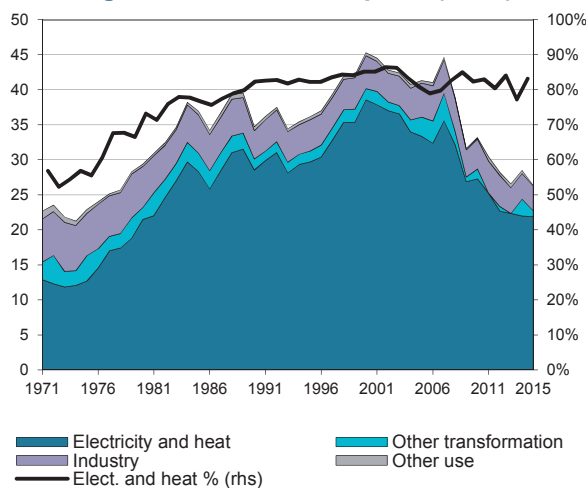
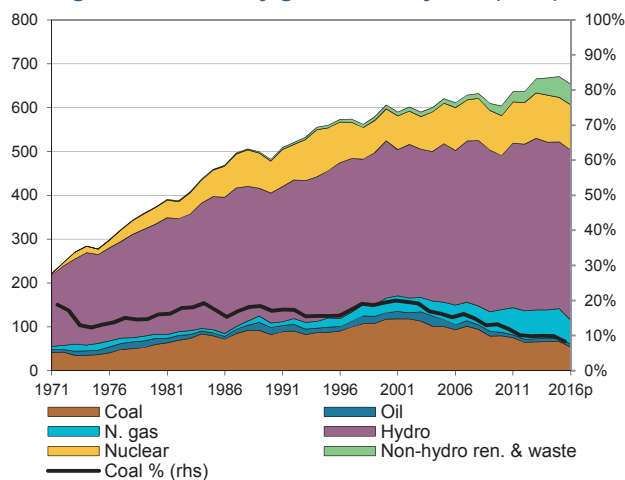
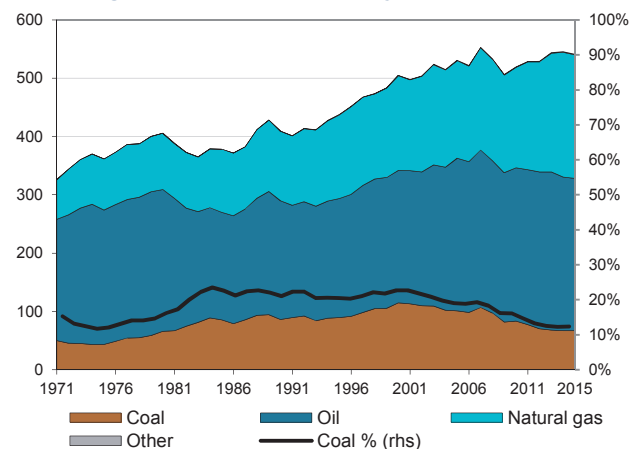


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

CANADA

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	16.7	28.9	54.2	49.2	48.5	50.5	43.7	43.0	7.2	-0.9
Imports	15.0	14.8	13.6	21.5	11.4	7.8	7.3	6.5	-0.5	-2.5
Exports	-10.9	-14.9	-30.6	-27.5	-27.6	-29.4	-26.0	-25.8	6.3	-0.7
Stock changes	1.0	0.5	-2.5	2.1	0.8	-0.4	1.3	-0.4		
Primary supply	21.8	29.4	34.7	45.3	33.2	28.5	26.3	23.2	2.8	-1.1
Statistical differences	0.5	1.1	0.4	0.1	0.4	-1.0	0.3	..		
Total transformation	-14.5 e	-24.3 e	-30.3 e	-40.1 e	-29.0 e	-23.3 e	-23.1 e	..	4.4	-1.1
Electricity and heat gen.	-11.9	-21.5	-28.5	-38.5	-27.3	-22.0	-21.9	..	5.3	-1.1
<i>Main activity producers</i> ³	-11.9	-21.4	-28.5	-38.4	-27.3	-22.0	-21.9	..	5.3	-1.1
<i>Autoproducers</i>	-	-0.0	-0.0	-0.1	-0.0	-0.0	-0.0	..	-	-
Gas works	-	-	-	-	-	-	-	..	-	-
Coal transformation ⁴	-2.7 e	-2.8 e	-1.8 e	-1.6 e	-1.7 e	-1.3 e	-1.2 e	..	-2.3	-1.6
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-1.9 e	-2.1 e	-1.5 e	-1.4 e	-1.2 e	-1.2 e	-1.1 e	..	-1.2	-1.5
<i>Coke ovens</i>	-0.7	-0.7	-0.3	-0.2	-0.5	-0.2	-0.1	..	-6.2	-2.3
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-0.1	-0.0	-0.1	-0.1	-0.0	-	-0.0	..	2.6	-18.1
Losses	-	-	-	-	-	-	-	..		
Final consumption ⁶	7.7	6.2	4.6	5.1	4.5	4.1	3.6	..	-3.0	-1.0
Industry ⁷	7.0	5.9	4.0	4.7	4.3	3.6	3.5	..	-3.2	-0.6
<i>Iron and steel</i>	3.9 e	4.1 e	2.6 e	2.8 e	2.4	2.3	2.1 e	..	-2.4	-0.7
<i>Chemical</i>	-	0.0	-	-	-	-	-	..	-	-
<i>Non-metallic minerals</i>	0.7	0.3	0.5	0.8	0.7	0.7	0.7	..	-1.2	0.9
<i>Paper, pulp and print</i>	0.3	0.3	0.1	0.1	-	-	-	..	-4.4	-
<i>Other industry</i> ⁸	2.2	1.1	0.8	1.0	1.2	0.7	0.7	..	-5.6	-0.6
Transport ⁹	0.2	-	-	-	-	-	-	..	-	-
Other	0.6	0.1	0.1	0.1	0.0	0.0	0.0	..	-11.4	-8.0
<i>Comm. and pub. services</i>	0.0	0.0	0.0	0.0	-	-	-	..	-	-
<i>Residential</i>	0.6	0.1	0.1	0.1	0.0	0.0	0.0	..	-11.9	-7.7
<i>Other sectors</i> ¹⁰	-	-	-	-	-	-	-	..	-	-
Non-energy use	-	0.2	0.5	0.4	0.1	0.4	0.1	..	-	-7.0
Electricity gen. - TWh	34.9	59.8	82.2	117.6	79.5	66.2	66.0	53.8	5.2	-0.9

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

CANADA

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	31.46	49.15	62.97	49.90	39.08	43.01	40.06	3.79	-0.81
Total electricity and heat	22.91	42.15	55.83	43.75	36.42	36.04	36.22	5.21	-0.60
<i>Main activity producers</i>	22.90	42.14	55.82	43.75	36.42	36.04	36.22	5.21	-0.60
<i>Autoproducers</i>	0.01	0.02	0.01	-	-	-	-	2.12	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	6.98	5.00	4.23	3.87	3.39	3.03	2.94	-2.74	-2.10
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	1.70	1.69	2.20	2.41	2.00	1.92	1.92	-0.04	0.51
<i>Iron and steel</i>	0.07	0.30	0.30	0.30	0.30	0.30	0.30	12.89	0.00
<i>Chemical</i>	0.26	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	0.36	0.68	1.03	0.88	0.65	0.82	0.83	5.40	0.76
<i>Paper, pulp and print</i>	0.45	0.19	0.13	-	-	-	-	-6.88	-
<i>Other industry</i>	0.56	0.52	0.74	1.23	1.05	0.80	0.79	-0.66	1.73
Other sectors ⁴	0.29	0.10	0.09	0.09	0.04	0.04	0.02	-8.54	-6.43
Non-energy use	-	0.35	0.47	0.19	0.26	0.09	0.09	-	-5.35
Steam coal	19.71	34.77	47.30	34.73	26.86	31.18	28.20	4.84	-0.83
Total electricity and heat	18.31	33.07	44.97	33.64	27.75	28.39	27.38	5.05	-0.75
<i>Main activity producers</i>	18.30	33.05	44.97	33.64	27.75	28.39	27.38	5.05	-0.75
<i>Autoproducers</i>	0.01	0.02	0.01	-	-	-	-	2.12	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	1.42	1.22	1.74	1.83	1.41	1.40	1.40	-1.27	0.56
<i>Iron and steel</i>	0.07	-	-	c	c	c	-	-	-
<i>Chemical</i>	0.26	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	0.36	0.68	1.03	0.88	0.65	0.82	0.83	5.40	0.76
<i>Paper, pulp and print</i>	0.28	0.09	0.03	-	-	-	-	-8.64	-
<i>Other industry</i>	0.45	0.44	0.67	0.95	0.76	0.58	0.58	-0.17	1.07
Other sectors ⁴	0.18	0.09	0.05	-	-	-	-	-5.61	-
Non-energy use	-	0.26	0.33	0.03	0.02	0.01	0.00	-	-15.36
Coking coal	6.78	5.02	4.46	4.39	3.38	3.47	3.09	-2.46	-1.92
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	6.98	5.00	4.23	3.87	3.39	3.03	2.94	-2.74	-2.10
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	0.30	0.30	0.30	0.30	0.30	0.30	-	0.00
<i>Iron and steel</i>	-	0.30	0.30	0.30	0.30	0.30	0.30	-	0.00
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

CANADA

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	4.98	9.36	11.21	10.78	8.84	8.36	8.77	5.40	-0.26
Total electricity and heat	4.60	9.08	10.86	10.10	8.68	7.65	8.85	5.83	-0.11
<i>Main activity producers</i>	4.60	9.08	10.86	10.10	8.68	7.65	8.85	5.83	-0.11
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.28	0.17	0.16	0.28	0.30	0.22	0.22	-3.97	0.96
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	0.17	0.10	0.10	-	-	-	-	-4.60	-
<i>Other industry</i>	0.11	0.08	0.07	0.28	0.30	0.22	0.22	-3.07	4.34
Other sectors ³	0.11	0.01	0.04	0.09	0.04	0.04	0.02	-18.83	3.03
Non-energy use	-	0.09	0.14	0.16	0.24	0.08	0.08	-	-0.23
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

CANADA

3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change	
								78-90	90-15
Mtce:									
Coking coal	13.39	27.17	23.92	26.04	23.80	22.45	21.95	6.07	-0.76
Steam coal	8.55	22.44	19.79	18.05 e	19.78	17.25	16.74	8.37	-1.05
Lignite	2.52	4.57	5.44	5.27 e	4.91	4.03	4.30	5.10	-0.51
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:								5.98	-0.16
Coking coal	13.78	27.66	28.16	30.80	28.15	26.55	25.96	8.58	-0.59
Steam coal	11.64	31.27	29.81	28.22 e	29.48	26.96	26.04	5.29	-0.44
Lignite	5.07	9.41	11.19	11.02 e	10.26	8.43	8.98	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	14.21	13.64	21.50	17.56 e	11.45	7.97	7.76	7.29	6.51
Bituminous coal ⁴	8.51	9.10	14.00	8.60	5.33	2.67	2.05	2.02	1.48
Coking coal	5.30	4.22	4.15	4.05	3.52	3.27	3.79	3.75	3.34
Sub-bituminous coal	-	-	2.76	4.69	2.29	1.39	1.02	0.92	0.77
Lignite	-	-	-	0.00 e	0.00	0.01	0.01	0.01	0.00
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.40	0.32	0.59	0.21	0.32	0.62	0.89	0.60	0.92
Total exports	13.68	30.63	27.53	23.66 e	27.61	33.39	29.43	26.01	25.84
Bituminous coal ⁴	0.94	4.08	3.14	1.25	4.46	3.70	3.06	2.16	2.04
Coking coal	12.65	26.37	24.11	22.20	23.04	29.61	26.27	23.72	23.71
Sub-bituminous coal	-	-	-	0.01 e	0.00	0.00	0.01	0.01	0.01
Lignite	0.00	0.00	-	0.06	0.06	0.05	0.04	0.05	0.04
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.08	0.18	0.28	0.14	0.04	0.03	0.06	0.07	0.04

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

CANADA

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	14250	14169	23231	21004 e	13104	8552	7819	7568	6318
Coking coal	5454	4491	4296	4183	3628	3378	3907	3872	3451
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	5454	4491	4296	4115	3628	3378	3898	3872	3450
Other OECD	-	-	-	-	-	-	-	-	1
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	9 e	-	-	9	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	59 e	-	-	-	-	-
Steam coal	8796	9678	18935	16820	9472	5155	3893	3684	2857
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	24	1	1	1	2	2
United States	8796	9639	18531	13403	7207	3208	2195	1812	1362
Other OECD	-	-	-	-	26	-	-	-	1
China, People's Rep.	-	-	155	51 e	-	-	-	-	1
Colombia	-	-	-	1924	2040	1751	1548	1795	1389
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	61	-	-	-	-	15	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	26	336 e	13	-	-	60	101
<i>Other FSU</i>	x	x	-	62 e	153	163	117	-	-
Venezuela	-	39	91	591	32	32	32	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	71	429	-	-	-	-	1
Lignite	-	-	-	1 e	4	19	19	12	10

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

CANADA

6. Coking coal exports by destination¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	13017	26851	28386	26255	27249	35020	31063	28049	28039
Total OECD	12217	19908	22752	21713	20524	19677	17954	17193	16665
Australia	-	-	-	-	-	-	-	-	-
Austria	-	-	-	-	-	-	-	-	-
Belgium	147	6	374	57	47	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Chile	-	224	312	361	213	213	213	217	208
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	41	-	507	411	428	537	526	587
France	-	379	585	486	164	-	31	-	92
Germany	-	72	792	1727	1237	529	715	968	608
Greece	-	-	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-	-
Italy	164	159	1170	1444	1004	817	403	288	283
Japan	10934	16569	12085	6678	8603	8058	7119	6873	6495
Korea	668	-	3851	4689	5240	6884	6211	5303	5702
Latvia	x	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Mexico	-	-	385	399	299	277	158	130	-
Netherlands	-	369	408	794	700	912	717	685	517
New Zealand	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	120	122	294	367
Portugal	-	519	-	-	-	-	-	-	-
Slovak Republic	-	-	-	-	58	-	59	-	-
Slovenia	x	-	-	-	-	-	-	-	-
Spain	150	-	338	338	68	58	-	-	62
Sweden	154	102	-	-	-	-	-	22	-
Switzerland	-	-	-	-	-	-	-	-	-
Turkey	-	51	819	1007	830	334	491	834	1039
United Kingdom	-	645	1093	1650	280	187	423	185	-
United States	-	772	540	1576	1370	860	755	868	705
Total non-OECD	800	1745	2795	4542	6725	15343	13109	10768	11203
Brazil	600	1108	1471	1689	1621	1685	2188	1112	901
China ³	-	300	-	939	4297	10650	7416	5361	5126
Chinese Taipei	-	-	1324	1252	631	1151	1020	1087	1251
Egypt	-	-	-	418	-	-	59	193	180
India	200	-	-	-	-	1360	1711	1700	2697
Romania	-	-	-	-	-	171	403	155	76
Oth. Africa & Mid. East	-	129	-	-	68	-	-	-	-
Oth. non-OECD Americas	-	-	-	-	-	-	-	-	94
Other Asia & Oceania	-	208	-	102	108	-	-	54	-
Other non-OECD Europe and Eurasia	-	-	-	142	-	326	312	1106	878
Non-specified/Other	-	5198	2839	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

CANADA

7. Steam coal exports by destination¹

(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	971	4149	3696	1337 e	4792	3977	3310	2338	2207
Total OECD	971	2826	3419	1291 e	3501	3503	2420	2170	2041
Australia	-	-	-	-	-	-	-	-	-
Austria	-	-	-	-	-	-	-	-	-
Belgium	27	-	151	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Chile	-	120	-	176	37	114	61	149	430
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	309	479	-	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-
France	-	18	-	-	-	-	-	-	-
Germany	492	64	55	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-	-
Italy	-	-	14	-	1	-	-	-	-
Japan	83	1933	1244	711	1670	2139	1731	1432	1420
Korea	56	-	1767	166	1391	1196	542	474	-
Latvia	x	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Mexico	-	-	-	-	329	-	-	-	-
Netherlands	-	-	-	-	-	-	-	-	-
New Zealand	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-
Slovak Republic	-	-	-	-	-	-	-	-	-
Slovenia	x	-	-	-	-	-	-	-	-
Spain	-	-	-	-	1	1	1	2	1
Sweden	-	-	-	-	-	-	-	-	-
Switzerland	-	-	-	-	-	-	-	-	-
Turkey	-	-	-	-	-	-	-	-	-
United Kingdom	-	18	80	-	-	-	-	-	-
United States	4	194	108	238 e	72	53	85	113	190
Total non-OECD	-	98	-	2 e	1291	474	890	165	165
Brazil	-	98	-	-	46	-	75	-	-
China ³	-	-	-	-	1244	474	325	-	-
Chinese Taipei	-	-	-	2 e	1	-	489	164	165
Egypt	-	-	-	-	-	-	1	1	-
India	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	-
Oth. Africa & Mid. East	-	-	-	-	-	-	-	-	-
Oth. non-OECD Americas	-	-	-	-	-	-	-	-	-
Other Asia & Oceania	-	-	-	-	-	-	-	-	-
Other non-OECD Europe and Eurasia	-	-	-	-	-	-	-	-	-
Non-specified/Other	-	1225	277	44 e	-	-	-	1	-

1. Please refer to the explanatory notes and definitions in Part I. Steam coal includes all sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

CHILE¹

Figure 1: Coal supply indicators (1971 = 100)

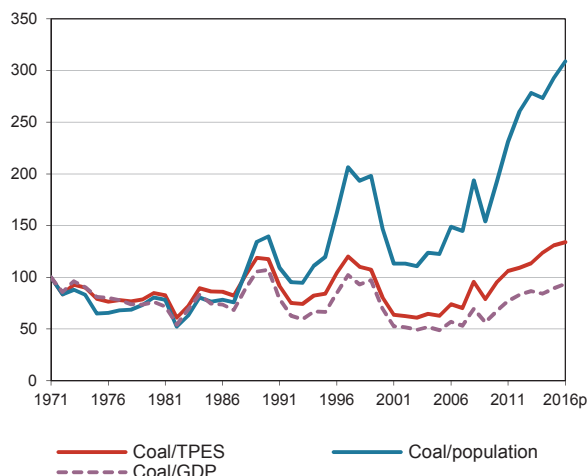


Figure 2: TPES by fuel (Mtce)

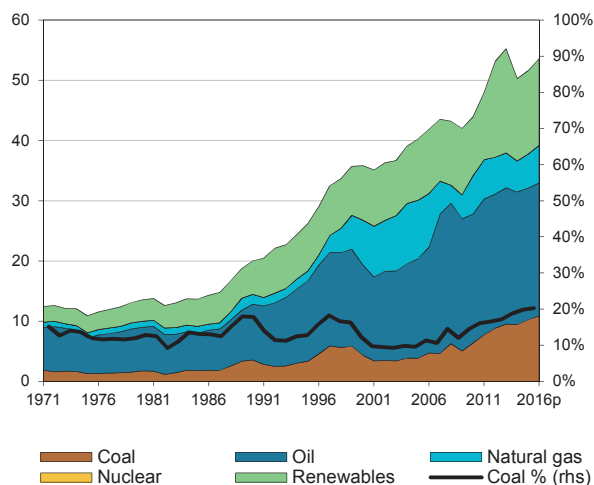


Figure 3: Primary coal supply (Mtce)

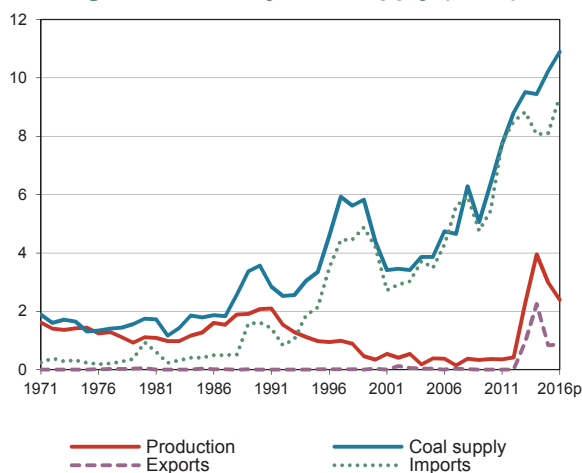


Figure 4: Coal consumption (Mtce)

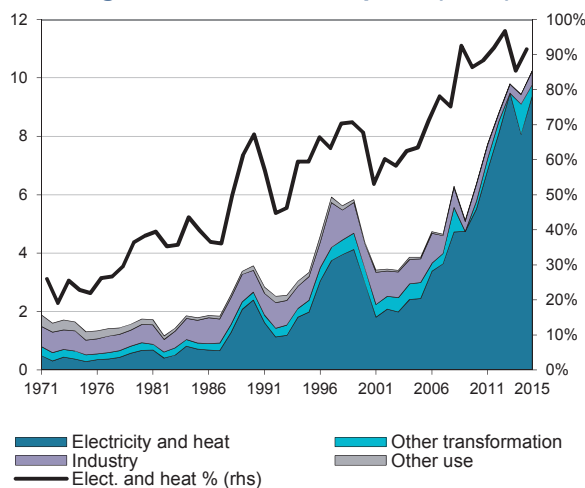
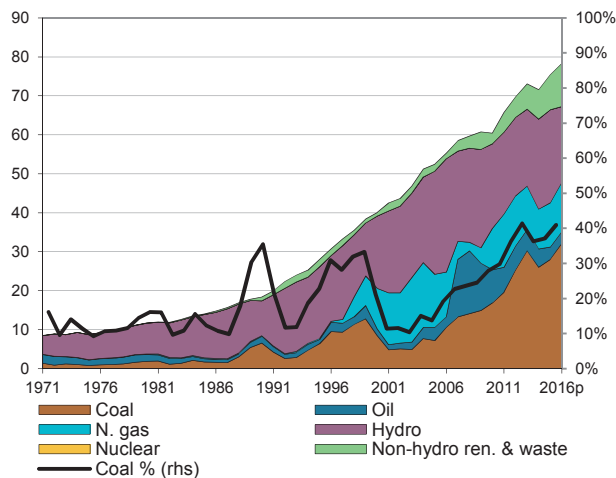
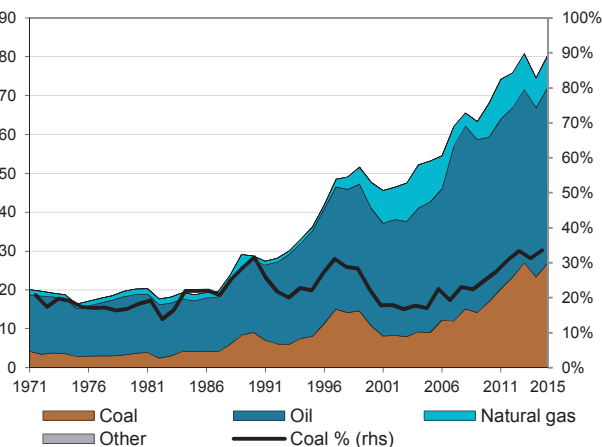


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

CHILE

1. Coal balance¹
(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	1.4	1.1	2.1	0.3	0.4	4.0	3.0	2.4	2.5	1.5
Imports	0.3	0.9	1.6	4.2	5.4	8.1 e	8.1	9.4	10.7	6.7
Exports	-0.0	-0.0	-	-0.0	-	-2.3	-0.8	-0.9	-	-
Stock changes	0.1	-0.3	-0.1	-0.1	0.6	-0.3 e	-0.0	-	-	-
Primary supply	1.7	1.7	3.6	4.4	6.4	9.4	10.2	10.9	4.4	4.3
Statistical differences	-	0.0	0.0	-0.0	0.1	-0.5 e	-0.0	..		
Total transformation	-0.6	-0.8	-2.6 e	-3.3 e	-5.7 e	-8.3 e	-9.5 e	..	8.8	5.4
Electricity and heat gen.	-0.4	-0.7	-2.4	-3.0	-5.5	-8.1	-9.4	..	10.5	5.6
<i>Main activity producers</i> ³	-0.4	-0.7	-1.6	-3.0	-5.5	-8.1	-9.4	..	8.0	7.3
<i>Autoproducers</i>	-0.0	-0.0	-0.8	-0.0	-	-	-	..	33.5	-
Gas works	0.0	0.0	0.1	0.1	0.0	0.0	0.0	..	5.2	-7.1
Coal transformation ⁴	-0.2	-0.2	-0.2 e	-0.4 e	-0.2 e	-0.2 e	-0.2 e	..	1.0	-1.6
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-0.1	-0.2	-0.2 e	-0.3 e	-0.2 e	-0.2 e	-0.2 e	..	4.2	-1.1
<i>Coke ovens</i>	-0.1	-0.0	-0.0	-0.0	-0.0	-0.1 e	0.0	..	-8.4	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-0.0	-0.0	-0.1	-0.1	-0.1	-0.3	-0.2	..	4.0	3.2
Losses	-0.0	-0.1	-0.0	-0.1	-0.0	-0.0 e	-0.0	..		
Final consumption ⁶	1.0	0.8	0.9	0.9	0.6	0.3	0.5	..	-0.7	-2.6
Industry ⁷	0.7	0.6	0.7	0.8	0.6	0.3	0.5	..	0.7	-2.0
<i>Iron and steel</i>	0.2	0.2	0.1 e	0.1 e	0.1 e	-	0.1 e	..	-2.6	-0.9
<i>Chemical</i>	-	-	-	-	-	0.0	-	..	-	-
<i>Non-metallic minerals</i>	0.2	0.2	0.2	0.2	0.1	-	0.0	..	-0.0	-19.1
<i>Paper, pulp and print</i>	0.0	0.0	0.0	0.0	-	0.0 e	-	..	-	-
<i>Other industry</i> ⁸	0.3	0.2	0.5	0.4	0.4	0.3 e	0.4	..	2.2	-0.8
Transport ⁹	0.2	0.1	-	-	-	-	-	..	-	-
Other	0.2	0.1	0.2	0.1	0.0	0.0	0.0	..	-0.4	-9.0
<i>Comm. and pub. services</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	..	-	-
<i>Residential</i>	0.1	0.1	0.1	0.0	0.0	0.0 e	0.0	..	2.1	-12.0
<i>Other sectors</i> ¹⁰	0.1	0.0	0.1	0.0	0.0	-	-	..	-2.2	-
Non-energy use	-	-	-	-	-	-	-	..	-	-
Electricity gen. - TWh	1.2	1.9	6.5	8.5	16.9	26.0	28.0	32.1	10.3	6.0

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

CHILE

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	1.40	3.72	4.59	8.35	11.33	11.06	12.19	8.47	4.86
Total electricity and heat	0.45	2.48	3.13	7.42	11.72	9.98	11.18	15.25	6.21
<i>Main activity producers</i>	0.44	1.69	3.12	7.42	11.72	9.98	11.18	11.86	7.84
<i>Autoproducers</i>	0.01	0.79	0.01	-	-	-	-	42.76	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	0.39	0.49	0.71	0.51	0.58	0.65	0.53	2.06	0.33
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	0.03	-	-	-	-	-	-	-	-
Industry	0.38	0.66	0.72	0.50	0.22	0.33	0.39	4.78	-2.05
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	0.00	-	-	-
<i>Non-metallic minerals</i>	0.13	0.19	0.24	0.08	-	-	0.00	3.46	-19.00
<i>Paper, pulp and print</i>	0.00	0.01	0.04	-	0.01	0.01 e	-	7.32	-
<i>Other industry</i>	0.25	0.46	0.45	0.42	0.21	0.32 e	0.39	5.37	-0.64
Other sectors ⁴	0.06	0.09	0.02	0.01	0.00	0.00	0.01	3.64	-10.76
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	0.99	3.23	3.88	7.84	10.75	10.44	11.63	10.37	5.26
Total electricity and heat	0.42	2.48	3.13	7.42	11.72	9.98	11.18	15.91	6.21
<i>Main activity producers</i>	0.41	1.69	3.12	7.42	11.72	9.98	11.18	12.52	7.84
<i>Autoproducers</i>	0.01	0.79	0.01	-	-	-	-	42.76	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	0.03	-	-	-	-	-	-	-	-
Industry	0.38	0.66	0.72	0.50	0.22	0.33	0.39	4.78	-2.05
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	0.00	-	-	-
<i>Non-metallic minerals</i>	0.13	0.19	0.24	0.08	-	-	0.00	3.46	-19.00
<i>Paper, pulp and print</i>	0.00	0.01	0.04	-	0.01	0.01 e	-	7.32	-
<i>Other industry</i>	0.25	0.46	0.45	0.42	0.21	0.32 e	0.39	5.37	-0.64
Other sectors ⁴	0.06	0.09	0.02	0.01	0.00	0.00	0.01	3.64	-10.76
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	0.39	0.49	0.71	0.51	0.58	0.62	0.57	2.06	0.56
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	0.39	0.49	0.71	0.51	0.58	0.65	0.53	2.06	0.33
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

CHILE

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	1.10	2.07	0.35	0.38	0.36	2.99	2.40	5.46	1.47
Lignite	0.02	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	-	-	-	-	-	-	-	5.65	1.47
Steam coal	1.13	2.18	0.37	0.54	0.62	3.14	2.53	-	-
Lignite	0.03	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	0.28	1.62	4.20	3.49	5.44	8.83	8.06 e	8.11	9.36
Bituminous coal ⁴	-	1.11	3.50	2.75	5.00	8.24	7.45	7.55	8.80
Coking coal	0.18	0.47	0.68	0.68	0.44	0.55	0.61	0.55	0.56
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.10	0.04	0.03	0.06	0.00	0.03	0.01 e	0.00	0.00
Total exports	0.03	-	0.04	0.04	-	0.95	2.26	0.84	0.87
Bituminous coal ⁴	-	-	-	-	-	0.95	2.11	0.80	0.83
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.03	-	0.04	0.04	-	-	0.15	0.04	0.04

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

CHILE

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	185	1660	4402	4010	6933	10301	9539	9894	11434
Coking coal	185	492	714	692	450	566	623	566	568
Australia	-	-	-	411	296	338	359	301	390
Canada	-	-	-	281	154	228	161	220	178
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	103	45	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	185	492	714	-	-	-	-	-	-
Steam coal	-	1168	3688	3318	6483	9735	8916	9328	10866
Australia	-	-	1330	437	647	1422	476	1756	2961
Canada	-	-	805	260	-	288	59	77	542
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	523	1591	2154	2469	3273	2552
Other OECD	-	-	158	254	57	-	63	127	-
China, People's Rep.	-	-	62	-	-	-	-	-	-
Colombia	-	-	-	-	3427	5871	5849	4095	4811
Indonesia	-	-	631	1266	746	-	-	-	-
South Africa	-	-	121	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	111	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	1168	470	578	15	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

CZECH REPUBLIC¹

Figure 1: Coal supply indicators (1971 = 100)

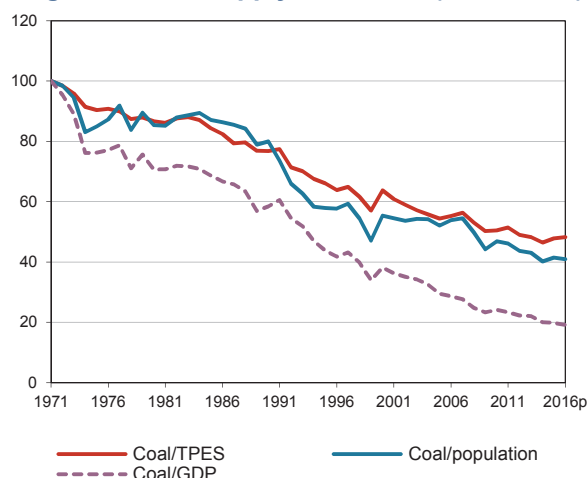


Figure 2: TPES by fuel (Mtce)

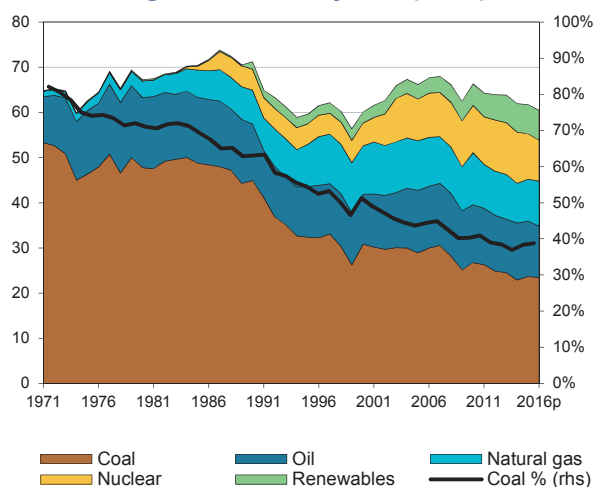


Figure 3: Primary coal supply (Mtce)

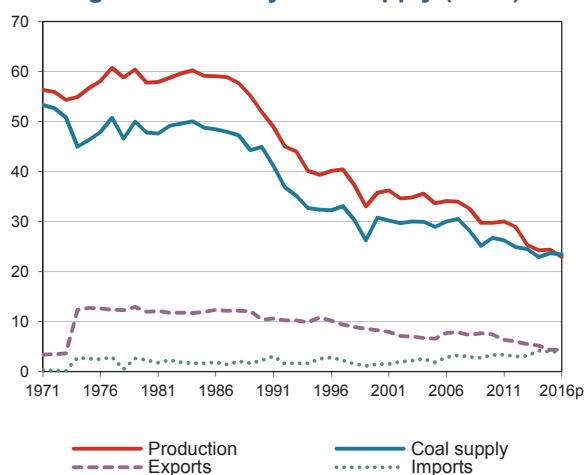


Figure 4: Coal consumption (Mtce)

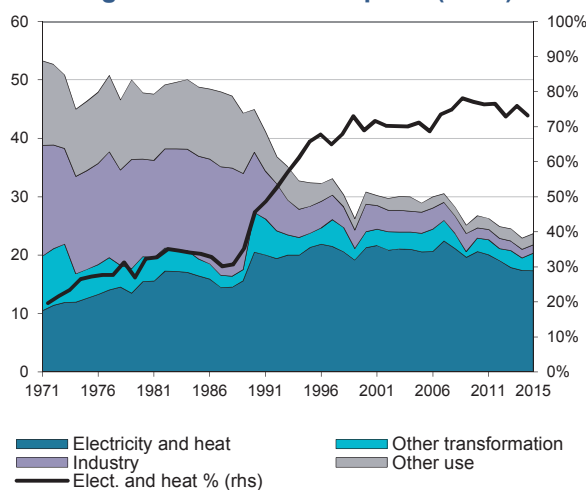
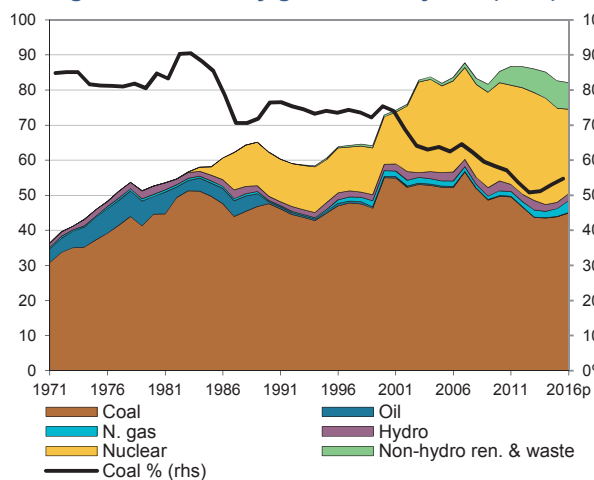
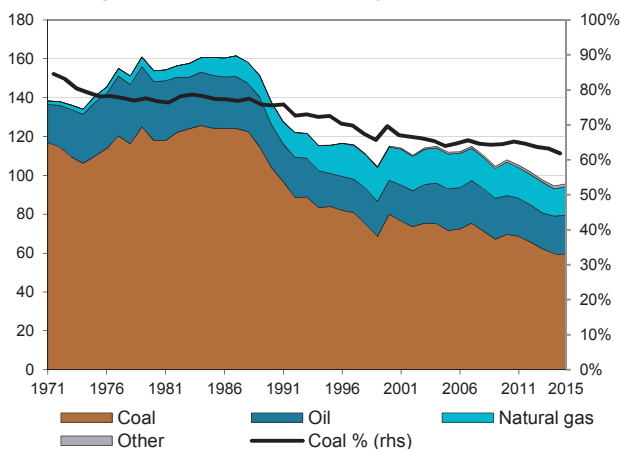


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

CZECH REPUBLIC

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	54.3 e	57.8	51.9	35.8	29.8	24.3	24.4	22.9	-0.3	-3.0
Imports	0.2 e	2.3	2.2	1.5	3.4	4.2	4.0	3.9	15.0	2.3
Exports	-3.7 e	-12.0	-10.4	-8.3	-7.5	-5.2	-4.4	-4.4	6.3	-3.4
Stock changes	-0.0 e	-0.3	1.2	1.8	1.1	-0.4	-0.3	1.0		
Primary supply	50.8	47.8	44.9	30.8	26.8	22.9	23.7	23.4	-0.7	-2.5
Statistical differences	1.8	2.0	-3.5	-0.4	0.0	0.4	-0.5	..		
Total transformation	-22.7 e	-20.7 e	-22.6 e	-23.1	-22.1	-18.9	-18.8	..	-0.0	-0.7
Electricity and heat gen.	-11.9 e	-15.5 e	-20.5 e	-21.3	-20.6	-17.4	-17.3	..	3.3	-0.7
<i>Main activity producers</i> ³	-11.9 e	-15.5 e	-17.4 e	-18.9	-18.5	-15.8	-15.7	..	2.3	-0.4
<i>Autoproducers</i>	-	-	-3.1 e	-2.4	-2.1	-1.6	-1.6	..	-	-2.6
Gas works	-0.9 e	-0.9	-0.4	-0.2	-0.3	-0.3	-0.3	..	-5.1	-0.3
Coal transformation ⁴	-10.0 e	-4.3 e	-1.8 e	-1.7	-1.1	-1.2	-1.1	..	-9.7	-1.7
<i>BKB plants</i>	0.0 e	0.0	-0.0	0.0	-0.0	-	-	..	-	-
<i>Blast furnaces</i>	-2.6 e	-2.6 e	-1.7 e	-1.3	-1.1	-1.2	-1.1	..	-2.3	-1.7
<i>Coke ovens</i>	-7.4 e	-1.8 e	-0.0 e	-0.4	0.0	-0.0	-0.0	..	-26.5	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-1.0 e	-1.0 e	-1.1 e	-0.5	-0.8	-0.9	-0.9	..	0.8	-0.7
Losses	-0.1 e	-0.1 e	-0.1 e	-0.0	-0.1	-0.1	-0.1	..		
Final consumption ⁶	28.9	28.0	17.6	6.8	3.8	3.4	3.3	..	-2.9	-6.4
Industry ⁷	16.3	16.7	10.3	4.7	1.7	1.5	1.4	..	-2.7	-7.6
<i>Iron and steel</i>	3.4 e	3.9 e	5.0 e	2.0	0.9	0.8	0.8	..	2.3	-7.2
<i>Chemical</i>	1.1 e	0.9 e	0.5	1.2	0.4	0.3	0.3	..	-4.6	-2.0
<i>Non-metallic minerals</i>	0.5 e	0.7 e	0.5	0.3	0.2	0.2	0.2	..	-0.3	-3.9
<i>Paper, pulp and print</i>	1.3 e	1.1 e	0.3	0.1	0.1	0.1	0.0	..	-7.7	-7.5
<i>Other industry</i> ⁸	9.9 e	10.1 e	3.9 e	1.1	0.1	0.1	0.1	..	-5.3	-13.3
Transport ⁹	0.2	0.1	-	-	0.0	0.0	0.0	..	-	-
Other	12.4	11.2	7.3	2.1	1.4	1.3	1.2	..	-3.1	-6.8
<i>Comm. and pub. services</i>	0.4 e	0.3 e	2.1 e	0.3	0.1	0.0	0.0	..	10.3	-15.0
<i>Residential</i>	9.3 e	8.0 e	4.6	1.3	1.4	1.2	1.2	..	-4.0	-5.3
<i>Other sectors</i> ¹⁰	2.7 e	2.8 e	0.6 e	0.4	0.0	0.0	0.0	..	-8.5	-14.0
Non-energy use	-	-	-	-	0.7	0.7	0.7	..	-	-
Electricity gen. - TWh	35.1	44.6	47.6	55.0	49.7	43.5	43.8	45.0	1.8	-0.3

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

CZECH REPUBLIC

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	103.70	91.83	61.09	52.18	47.81	46.01	45.95	-1.01	-2.73
Total electricity and heat	37.97 e	48.65	45.05	42.35	37.93	36.91	36.97	2.09	-1.09
<i>Main activity producers</i>	37.97 e	42.32	41.16	39.21	35.51	34.65	34.62	0.91	-0.80
<i>Autoproducers</i>	-	6.33	3.90	3.14	2.42	2.27	2.35	-	-3.88
Patent fuel/BKB plants	1.96	1.94	0.44	0.29	-	-	-	-0.10	-
Coke ovens/Liquefaction ³	12.57 e	8.54 e	4.56	3.24	3.21	3.28	3.04	-3.17	-4.05
Blast furnace inputs	-	-	-	-	-	0.28	0.30	-	-
Gas manufacture	6.35	2.69	1.35	1.57	1.36	1.46	1.42	-6.90	-2.54
Industry	24.42	11.58	6.44	1.52	1.41	1.14	1.07	-6.03	-9.09
<i>Iron and steel</i>	1.64 e	2.61 e	1.03	0.13	0.22	0.10	0.08	3.94	-13.19
<i>Chemical</i>	2.55 e	1.24	2.56	0.79	0.68	0.57	0.54	-5.83	-3.28
<i>Non-metallic minerals</i>	0.96 e	0.95	0.45	0.24	0.20	0.20	0.18	-0.10	-6.47
<i>Paper, pulp and print</i>	2.99 e	0.82	0.25	0.18	0.12	0.11	0.10	-10.23	-7.95
<i>Other industry</i>	16.29 e	5.97 e	2.15	0.19	0.19	0.16	0.17	-8.03	-13.19
Other sectors ⁴	20.83	12.21	4.07	2.09	2.19	1.87	1.83	-4.35	-7.31
Non-energy use	-	-	-	0.37	0.24	0.25	0.21	-	-
Steam coal	9.81	10.12	5.75	4.42	4.48	3.81	4.43	0.26	-3.25
Total electricity and heat	-	4.94	3.90	3.87	3.30	3.23	3.61	-	-1.24
<i>Main activity producers</i>	-	3.75	3.79	3.65	3.19	3.14	3.55	-	-0.21
<i>Autoproducers</i>	-	1.19	0.11	0.21	0.11	0.09	0.06	-	-11.28
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	0.28	0.30	-	-
Gas manufacture	-	0.03	-	-	-	-	-	-	-
Industry	7.85	3.05	1.46	0.40	0.47	0.34	0.29	-7.58	-8.94
<i>Iron and steel</i>	1.10 e	0.85	0.79	0.10	0.19	0.09	0.06	-2.11	-10.06
<i>Chemical</i>	0.05 e	0.04	0.15	0.06	0.07	0.06	0.04	-2.32	0.10
<i>Non-metallic minerals</i>	0.60 e	0.47	0.25	0.20	0.18	0.18	0.16	-2.01	-4.14
<i>Paper, pulp and print</i>	0.04 e	0.03	0.01	0.02	0.01	-	-	-2.51	-
<i>Other industry</i>	6.05 e	1.66	0.26	0.02	0.02	0.02	0.03	-10.23	-15.06
Other sectors ⁴	1.96	1.47	0.21	0.30	0.32	0.32	0.35	-2.36	-5.61
Non-energy use	-	-	-	-	-	0.00	0.00	-	-
Coking coal	12.57	9.94	4.97	3.55	3.40	3.85	3.70	-1.93	-3.87
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	12.57 e	8.54 e	4.56	3.24	3.21	3.28	3.04	-3.17	-4.05
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	1.40	0.04	-	-	-	-	-	-
<i>Iron and steel</i>	-	1.40 e	0.04	-	-	-	-	-	-
<i>Chemical</i>	-	-	0.00	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

CZECH REPUBLIC

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	81.32	71.77	50.37	44.21	39.93	38.35	37.82	-1.04	-2.53
Total electricity and heat	37.97 e	43.71	41.15	38.48	34.64	33.68	33.36	1.18	-1.08
<i>Main activity producers</i>	37.97 e	38.58	37.36	35.56	32.32	31.50	31.07	0.13	-0.86
<i>Autoproducers</i>	-	5.13	3.79	2.92	2.32	2.18	2.29	-	-3.18
Patent fuel/BKB plants	1.96	1.94	0.44	0.29	-	-	-	-0.10	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	6.35	2.67	1.35	1.57	1.36	1.46	1.42	-6.97	-2.50
Industry	16.58	7.12	4.94	1.13	0.94	0.81	0.78	-6.80	-8.49
<i>Iron and steel</i>	0.54	0.35	0.21	0.03	0.02	0.02	0.02	-3.52	-11.63
<i>Chemical</i>	2.49	1.20	2.41	0.73	0.61	0.51	0.50	-5.93	-3.45
<i>Non-metallic minerals</i>	0.36	0.48	0.20	0.04	0.02	0.02	0.01	2.43	-13.15
<i>Paper, pulp and print</i>	2.95	0.79	0.23	0.16	0.11	0.11	0.10	-10.39	-7.83
<i>Other industry</i>	10.24	4.31	1.90	0.17	0.17	0.15	0.15	-6.96	-12.66
Other sectors ³	18.87	10.74	3.86	1.80	1.86	1.55	1.48	-4.59	-7.62
Non-energy use	-	-	-	0.37	0.24	0.25	0.21	-	-
Peat	0.60	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.60	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.60	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

CZECH REPUBLIC

3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change	
								78-90	90-15
Mtce:									
Coking coal	14.81	13.78	7.92	6.92	5.87	4.00	3.31	-0.60	-4.83
Steam coal	6.57	4.98	5.54	5.09	4.85	3.96	3.04	-2.28	-0.91
Lignite	37.25	33.12	22.32	21.66	19.03	16.41	16.59	-0.98	-2.77
Peat	0.17	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:								-2.10	-4.91
Coking coal	18.55	14.38	8.14	7.14	6.02	4.09	3.38	-2.28	-2.21
Steam coal	10.60	8.03	6.72	6.12	5.57	4.59	3.52	-0.98	-2.87
Lignite	88.84	78.98	50.31	48.77	43.77	38.11	38.53	-	-
Peat	0.60	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	0.52	2.25	1.48	1.91	3.36	3.15	4.21	3.97	3.91
Bituminous coal ⁴	0.25	2.09	0.68	0.66	1.10	1.09	1.23	1.22	1.30
Coking coal	-	-	0.22	0.42	0.92	1.03	1.72	1.52	1.60
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	0.00	0.00	0.06	0.14	0.53	0.38	0.03
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.27	0.15	0.59	0.83	1.28	0.89	0.73	0.85	0.97
Total exports	12.32	10.38	8.26	6.60	7.45	5.55	5.20	4.41	4.37
Bituminous coal ⁴	0.37	0.47	2.51	2.06	2.50	2.38	1.82	1.54	1.32
Coking coal	5.56	4.22	3.42	2.99	3.43	2.14	2.34	1.86	2.04
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	3.31	4.03	1.29	0.54	0.60	0.60	0.54	0.53	0.51
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	3.09	1.66	1.03	1.02	0.93	0.43	0.50	0.48	0.51

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

CZECH REPUBLIC

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	274 e	2282	1095	1264	2355	2715	4835	4176	3418
Coking coal	-	-	217	492	907	1093	1781	1579	1661
Australia	-	-	-	-	10	4	-	17	-
Canada	-	-	-	-	-	-	-	-	2
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	217	492	803	918	1591	1440	1582
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	94	171	190	120	77
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	2	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Steam coal	274 e	2282	877	771	1319	1268	1647	1566	1669
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	2	2	1	5	1	1
Poland	274 e	2282	869	733	919	1048	1540	1467	1556
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	-	1	8	2	1	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	6	32	384	65	71	86	107
<i>Other FSU</i>	x	x	2	3	6	152	30	12	5
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Lignite	-	-	1	1	129	354	1407	1031	88

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

CZECH REPUBLIC

6. Coking coal exports by destination¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	5934 e	4504	3427	3210	3499	2230	2386	1895	2080
Total OECD	5934 e	4504 e	3427	3103	3388	2229	2367	1880	2070
Australia	-	-	-	-	-	-	-	-	-
Austria	600 e	785 e	1244	994	945	745	799	543	561
Belgium	59 e	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Chile	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-
France	-	-	-	-	-	-	-	-	-
Germany	-	28 e	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-
Hungary	-	-	744	230	383	137	253	226	368
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-	-
Italy	-	-	-	-	-	-	-	-	-
Japan	-	-	-	-	-	-	-	-	-
Korea	-	-	-	-	-	-	-	-	-
Latvia	x	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	69 e	10 e	-	-	-	-	-	-	-
New Zealand	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	538	592	727	512	689	512	319
Portugal	-	-	-	-	-	-	-	-	-
Slovak Republic	5126 e	3681 e	901	1287	1333	835	626	599	822
Slovenia	x	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-
Sweden	80 e	-	-	-	-	-	-	-	-
Switzerland	-	-	-	-	-	-	-	-	-
Turkey	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Total non-OECD	-	-	-	107	111	1	19	15	10
Brazil	-	-	-	-	-	-	-	-	-
China ³	-	-	-	-	-	-	-	-	-
Chinese Taipei	-	-	-	-	-	-	-	-	-
Egypt	-	-	-	-	-	-	-	-	-
India	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	-
Oth. Africa & Mid. East	-	-	-	-	-	-	-	-	-
Oth. non-OECD Americas	-	-	-	-	-	-	-	-	-
Other Asia & Oceania	-	-	-	-	-	-	-	-	-
Other non-OECD Europe and Eurasia	-	-	-	107	111	1	19	15	10
Non-specified/Other	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

CZECH REPUBLIC

7. Steam coal exports by destination¹

(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	394	498	2459	2051	2773	2598	1978	1670	1428
Total OECD	394 e	498	2442	2042	2772	2598	1978	1667	1311
Australia	-	-	-	-	-	-	-	-	-
Austria	-	-	331	981	1000	959	505	312	296
Belgium	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Chile	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	6 e	40	-	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-
France	-	-	-	-	-	-	-	-	-
Germany	100 e	220	1033	526	27	362	402	529	376
Greece	1 e	-	-	-	-	-	-	-	-
Hungary	-	-	43	21	103	4	4	21	45
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-	-
Italy	-	-	-	-	-	-	-	-	-
Japan	-	-	-	-	-	-	-	-	-
Korea	-	-	-	-	-	-	-	-	-
Latvia	x	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	36 e	-	-	-	-	-	-	-	-
New Zealand	-	-	-	-	-	-	-	-	-
Norway	-	32	-	-	-	-	-	-	-
Poland	-	-	102	45	1257	1009	807	561	226
Portugal	-	-	-	-	-	-	-	-	-
Slovak Republic	237 e	198	931	469	315	245	258	242	365
Slovenia	x	-	-	-	1	3	2	2	2
Spain	-	-	-	-	-	-	-	-	-
Sweden	6 e	6	2	-	69	16	-	-	1
Switzerland	8 e	-	-	-	-	-	-	-	-
Turkey	-	-	-	-	-	-	-	-	-
United Kingdom	-	2	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Total non-OECD	-	-	17	9	1	-	-	3	117
Brazil	-	-	-	-	-	-	-	-	-
China ³	-	-	-	-	-	-	-	-	-
Chinese Taipei	-	-	-	-	-	-	-	-	-
Egypt	-	-	-	-	-	-	-	-	-
India	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	8
Oth. Africa & Mid. East	-	-	-	-	-	-	-	-	-
Oth. non-OECD Americas	-	-	-	-	-	-	-	-	-
Other Asia & Oceania	-	-	-	-	-	-	-	-	-
Other non-OECD Europe and Eurasia	-	-	17	9	1	-	-	3	109
Non-specified/Other	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I. Steam coal includes all sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

DENMARK¹

Figure 1: Coal supply indicators (1971 = 100)

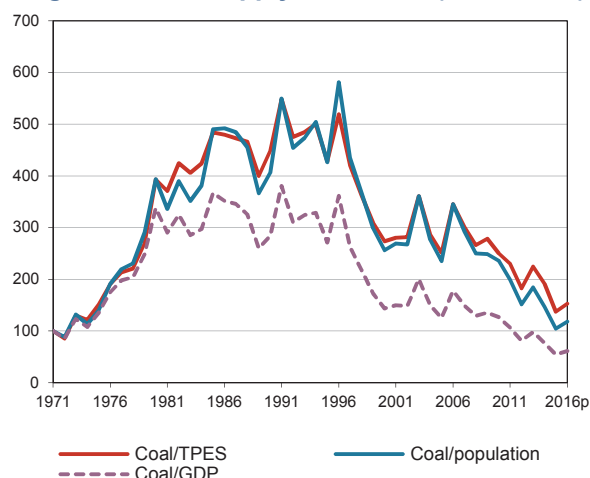


Figure 2: TPES by fuel (Mtce)

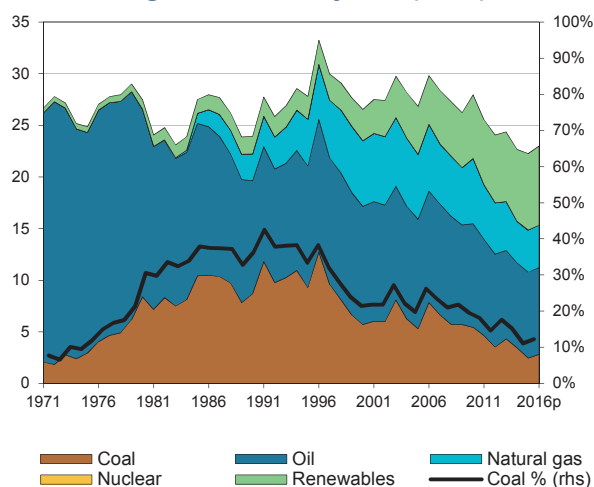


Figure 3: Primary coal supply (Mtce)

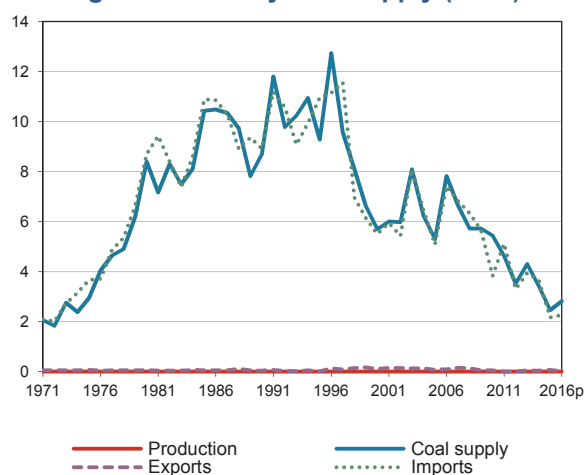


Figure 4: Coal consumption (Mtce)

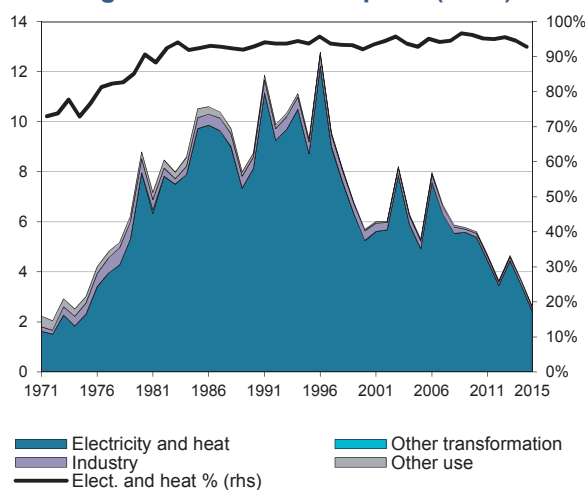
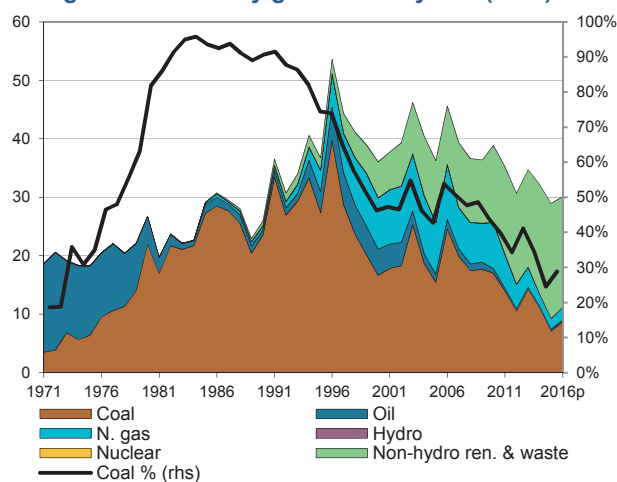
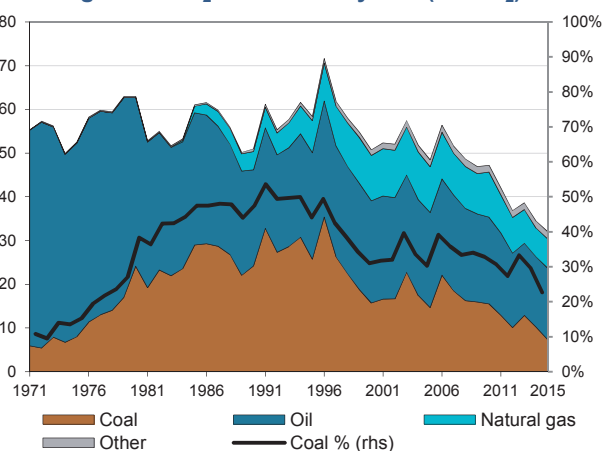


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

DENMARK

1. Coal balance¹
(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	-	-	-	-	-	-	-	-	-	-
Imports	2.7	8.7	8.9	5.5	3.8	3.7	2.2	2.3	7.2	-5.5
Exports	-0.1	-0.1	-0.0	-0.1	-0.1	-0.0	-0.1	-0.0	-1.0	1.6
Stock changes	0.1	-0.3	-0.2	0.3	1.7	-0.2	0.4	0.6		
Primary supply	2.8	8.4	8.7	5.7	5.4	3.4	2.5	2.8	7.0	-4.9
Statistical differences	0.0	0.2	-0.0	-0.0	0.1	0.2	0.1	..		
Total transformation	-2.1	-7.8	-8.1	-5.2	-5.4	-3.5	-2.4	..	8.2	-4.7
Electricity and heat gen.	-2.3	-8.0	-8.1	-5.2	-5.4	-3.5	-2.4	..	7.8	-4.7
<i>Main activity producers</i> ³	-2.3	-7.9	-8.1	-5.2	-5.4	-3.5	-2.4	..	7.7	-4.7
<i>Autoproducers</i>	-	-0.1	-0.1	-0.0	-0.0	-0.0	-0.0	..	-	-15.4
Gas works	0.2	0.2	0.1	0.0	0.0	0.0	0.0	..	-6.4	-3.8
Coal transformation ⁴	-	-	-	-	-	-	-	..	-	-
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-	-	-	-	-	-	-	..	-	-
<i>Coke ovens</i>	-	-	-	-	-	-	-	..	-	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-0.0	-0.0	-	-	-	-	-	..	-	-
Losses	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	..		
Final consumption ⁶	0.7	0.8	0.6	0.4	0.2	0.2	0.2	..	-0.3	-4.6
Industry ⁷	0.3	0.6	0.5	0.4	0.2	0.2	0.2	..	2.1	-4.4
<i>Iron and steel</i>	0.0	0.0	0.0	0.0	-	-	-	..	-	-
<i>Chemical</i>	0.0	0.0	0.0	0.0	-	0.0	0.0	..	-	-
<i>Non-metallic minerals</i>	0.1	0.4	0.2	0.2	0.1	0.1	0.1	..	2.4	-3.7
<i>Paper, pulp and print</i>	0.0	0.1	0.0	0.0	-	-	-	..	-	-
<i>Other industry</i> ⁸	0.2	0.1	0.2	0.1	0.1	0.0	0.0	..	1.3	-5.8
Transport ⁹	0.0	-	-	-	-	-	-	..	-	-
Other	0.3	0.3	0.2	0.1	0.1	0.1	0.0	..	-4.2	-5.5
<i>Comm. and pub. services</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	..	-	-
<i>Residential</i>	0.3	0.2	0.1	0.0	0.0	0.0	0.0	..	-8.5	-6.8
<i>Other sectors</i> ¹⁰	-	0.0	0.1	0.0	0.0	0.0	0.0	..	-	-4.5
Non-energy use	-	-	-	-	-	-	-	..	-	-
Electricity gen. - TWh	6.8	21.9	23.6	16.7	17.0	11.1	7.1	8.7	7.5	-4.7

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

DENMARK

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	5.65	9.99	6.64	6.50	5.40	4.27	3.14	4.86	-4.53
Total electricity and heat	4.99	9.40	6.19	6.46	5.32	4.14	2.97	5.43	-4.51
<i>Main activity producers</i>	4.93	9.34	6.18	6.46	5.31	4.14	2.97	5.47	-4.49
<i>Autoproducers</i>	0.06	0.06	0.02	0.01	0.00	0.00	0.00	0.41	-15.22
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	0.09	-	-	-	-	-	-	-	-
Industry	0.69	0.47	0.38	0.15	0.14	0.15	0.15	-3.20	-4.47
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	0.00	0.02	-	0.02	0.02	0.02	-	7.88
<i>Non-metallic minerals</i>	0.55	0.20	0.23	0.08	0.06	0.08	0.08	-8.07	-3.53
<i>Paper, pulp and print</i>	0.06	0.05	-	-	-	-	-	-1.35	-
<i>Other industry</i>	0.09	0.22	0.13	0.07	0.05	0.05	0.05	7.81	-5.78
Other sectors ⁴	0.01	0.12	0.04	0.05	0.06	0.04	0.03	20.35	-5.27
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	5.65	9.99	6.64	6.50	5.40	4.27	3.14	4.86	-4.53
Total electricity and heat	4.99	9.40	6.19	6.46	5.32	4.14	2.97	5.43	-4.51
<i>Main activity producers</i>	4.93	9.34	6.18	6.46	5.31	4.14	2.97	5.47	-4.49
<i>Autoproducers</i>	0.06	0.06	0.02	0.01	0.00	0.00	0.00	0.41	-15.22
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	0.09	-	-	-	-	-	-	-	-
Industry	0.69	0.47	0.38	0.15	0.14	0.15	0.15	-3.20	-4.47
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	0.00	0.02	-	0.02	0.02	0.02	-	7.88
<i>Non-metallic minerals</i>	0.55	0.20	0.23	0.08	0.06	0.08	0.08	-8.07	-3.53
<i>Paper, pulp and print</i>	0.06	0.05	-	-	-	-	-	-1.35	-
<i>Other industry</i>	0.09	0.22	0.13	0.07	0.05	0.05	0.05	7.81	-5.78
Other sectors ⁴	0.01	0.12	0.04	0.05	0.06	0.04	0.03	20.35	-5.27
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

DENMARK

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	5.36	8.93	5.51	5.09	3.83	3.95	3.65	2.17	2.27
Bituminous coal ⁴	5.24	8.88	5.46	5.05	3.81	3.93	3.63	2.15	2.25
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.12	0.05	0.05	0.04	0.02	0.02	0.02	0.01	0.01
Total exports	0.06	0.05	0.10	0.08	0.06	0.04	0.04	0.07	0.02
Bituminous coal ⁴	-	0.05	0.10	0.08	0.06	0.04	0.04	0.07	0.02
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.06	-	0.00	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

DENMARK

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	6110	10255	6416	6031	4570	4953	4533	2758	2886
Coking coal	-	-	-	-	-	-	-	-	-
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Steam coal	6110	10255	6416	6031	4570	4953	4533	2758	2886
Australia	177	1127	143	129	-	-	-	-	-
Canada	307	646	-	-	-	-	-	-	-
Czech Republic	6	39	-	-	37	-	-	-	-
Germany	941	52	-	-	-	3	1	7	14
Poland	3078	972	2311	830	459	560	363	150	132
United Kingdom	145	592	3	-	-	-	-	-	-
United States	2	3223	-	66	375	37	2	41	114
Other OECD	8	8	177	369	255	241	90	147	170
China, People's Rep.	-	57	-	-	-	-	-	-	-
Colombia	-	2057	812	1254	1338	1914	1833	575	411
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	868	-	1672	1852	735	317	309	407	187
Former Soviet Union ⁴	528	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	1295	1531	1371	1826	1690	1431	1858
<i>Other FSU</i>	x	x	-	-	-	55	230	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	3	-	-	-	-	-	-
Non-specified/other	50	1482	-	-	-	-	15	-	-
Lignite	-	-	-	-	-	-	-	-	-

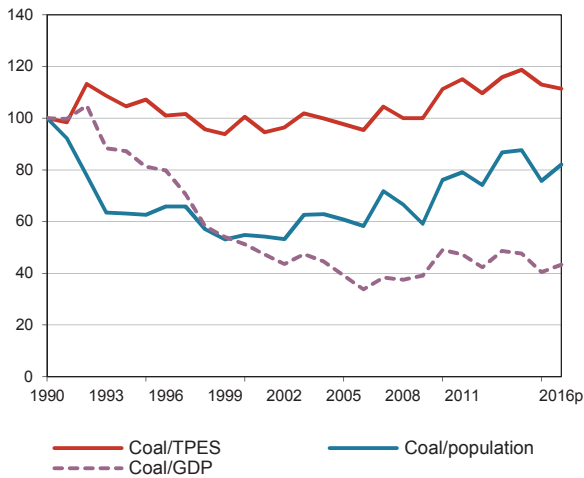
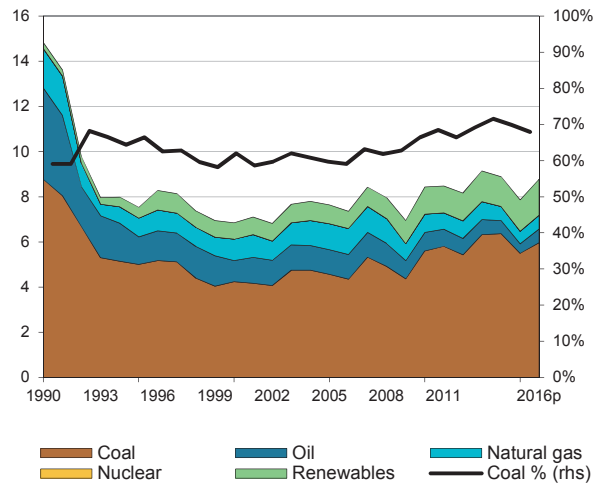
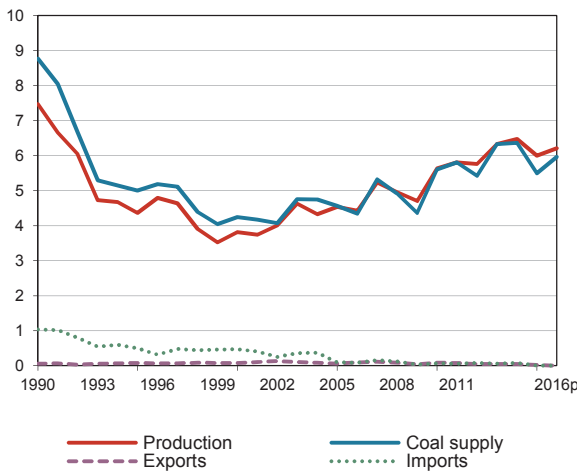
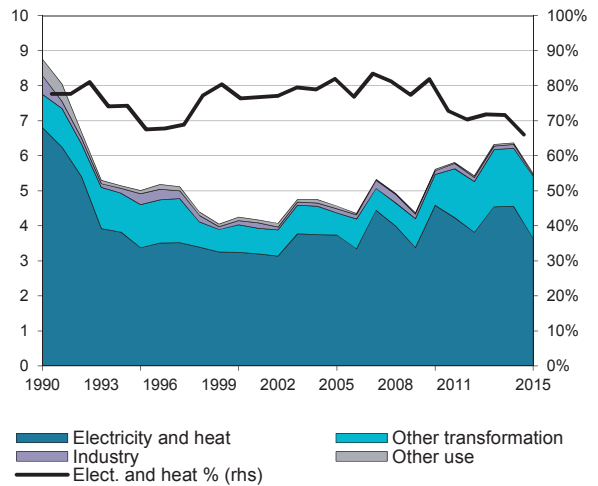
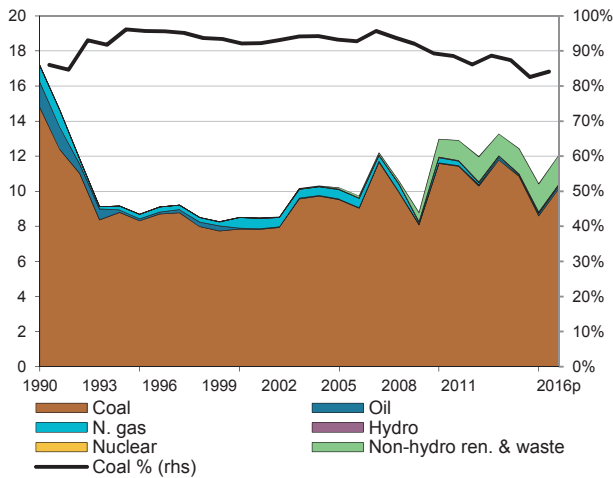
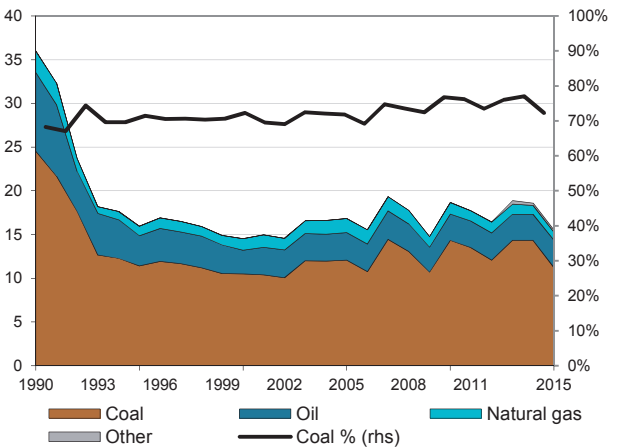
1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

ESTONIA¹

Figure 1: Coal supply indicators (1971 = 100)

Figure 2: TPES by fuel (Mtce)

Figure 3: Primary coal supply (Mtce)

Figure 4: Coal consumption (Mtce)

Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)


1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

ESTONIA

1. Coal balance¹
(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	x	x	7.5	3.8	5.6	6.5	6.0	6.2	-	-0.9
Imports	x	x	1.0	0.5	0.1	0.1	0.0	0.0	-	-18.4
Exports	x	x	-0.1	-0.1	-0.1	-0.1	-0.0	-	-	-4.0
Stock changes	x	x	0.3	0.0	-0.0	-0.1	-0.5	-0.3		
Primary supply	x	x	8.8	4.2	5.6	6.4	5.5	6.0	-	-1.9
Statistical differences	x	x	-0.4	-0.1	0.4	-0.0	0.1	..		
Total transformation	x	x	-7.2	-3.9	-5.9	-6.2	-5.5	..	-	-1.1
Electricity and heat gen.	x	x	-6.8	-3.2	-4.6	-4.6	-3.6	..	-	-2.5
<i>Main activity producers</i> ³	x	x	-6.8	-3.2	-4.6	-4.6	-3.6	..	-	-2.5
<i>Autoproducers</i>	x	x	-	-0.0	-0.0	-0.0	-0.0	..	-	-
Gas works	x	x	-0.1	-0.1	-0.2	-0.1	-0.0	..	-	-2.4
Coal transformation ⁴	x	x	-0.1	-0.0	-0.0	-0.0	-0.0	..	-	-10.7
<i>BKB plants</i>	x	x	-0.1	-0.0	-0.0	-0.0	-0.0	..	-	-20.6
<i>Blast furnaces</i>	x	x	-	-	-	-	-	..	-	-
<i>Coke ovens</i>	x	x	-0.0	-0.0	-0.0	-0.0	-0.0	..	-	-
<i>Patent fuel plants</i>	x	x	-	-	-	-	-	..	-	-
Other transformation ⁵	x	x	-0.3	-0.5	-1.1	-1.5	-1.8	..	-	8.2
Energy ind. own use	x	x	-0.1	-0.0	-0.0	-0.0	-0.0	..	-	-7.3
Losses	x	x	-0.0	-0.0	-	-	-	..		
Final consumption ⁶	x	x	1.0	0.2	0.1	0.2	0.1	..	-	-9.1
Industry ⁷	x	x	0.5	0.1	0.1	0.1	0.0	..	-	-9.6
<i>Iron and steel</i>	x	x	-	-	-	-	-	..	-	-
<i>Chemical</i>	x	x	0.0	0.0	-	-	-	..	-	-
<i>Non-metallic minerals</i>	x	x	0.0	0.1	0.1	0.1	0.0	..	-	-
<i>Paper, pulp and print</i>	x	x	-	0.0	-	-	-	..	-	-
<i>Other industry</i> ⁸	x	x	0.5	0.0	0.0	0.0	-	..	-	-
Transport ⁹	x	x	0.0	-	-	-	-	..	-	-
Other	x	x	0.5	0.1	0.0	0.0	0.0	..	-	-14.9
<i>Comm. and pub. services</i>	x	x	0.1	0.0	0.0	0.0	0.0	..	-	-15.7
<i>Residential</i>	x	x	0.2	0.0	0.0	0.0	0.0	..	-	-13.2
<i>Other sectors</i> ¹⁰	x	x	0.1	0.0	-	-	-	..	-	-
Non-energy use	x	x	-	0.0	0.0	0.0	0.0	..	-	-
Electricity gen. - TWh	x	x	14.8	7.8	11.6	10.9	8.6	10.1	-	-2.1

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

ESTONIA

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	x	0.38	0.09	0.06	0.06	0.08	0.03	-	-9.80
Total electricity and heat	x	0.17	0.01	0.00	0.00	0.00	0.00	-	-18.59
<i>Main activity producers</i>	x	0.17	0.00	0.00	0.00	0.00	-	-	-
<i>Autoproducers</i>	x	-	0.01	0.00	-	-	0.00	-	-
Patent fuel/BKB plants	x	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	x	-	-	-	-	-	-	-	-
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	-	-	-	-	-	-	-	-
Industry	x	0.09	0.04	0.05	0.04	0.07	0.02	-	-5.31
<i>Iron and steel</i>	x	-	-	-	-	-	-	-	-
<i>Chemical</i>	x	0.00	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	x	-	0.04	0.05	0.04	0.06	0.02	-	-
<i>Paper, pulp and print</i>	x	-	-	-	-	-	-	-	-
<i>Other industry</i>	x	0.08	0.00	0.00	0.00	0.00	-	-	-
Other sectors ⁴	x	0.12	0.04	0.01	0.01	0.01	0.00	-	-12.66
Non-energy use	x	-	-	-	-	-	-	-	-
Steam coal	x	0.38	0.09	0.06	0.06	0.08	0.03	-	-9.80
Total electricity and heat	x	0.17	0.01	0.00	0.00	0.00	0.00	-	-18.59
<i>Main activity producers</i>	x	0.17	0.00	0.00	0.00	0.00	-	-	-
<i>Autoproducers</i>	x	-	0.01	0.00	-	-	0.00	-	-
Patent fuel/BKB plants	x	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	x	-	-	-	-	-	-	-	-
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	-	-	-	-	-	-	-	-
Industry	x	0.09	0.04	0.05	0.04	0.07	0.02	-	-5.31
<i>Iron and steel</i>	x	-	-	-	-	-	-	-	-
<i>Chemical</i>	x	0.00	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	x	-	0.04	0.05	0.04	0.06	0.02	-	-
<i>Paper, pulp and print</i>	x	-	-	-	-	-	-	-	-
<i>Other industry</i>	x	0.08	0.00	0.00	0.00	0.00	-	-	-
Other sectors ⁴	x	0.12	0.04	0.01	0.01	0.01	0.00	-	-12.66
Non-energy use	x	-	-	-	-	-	-	-	-
Coking coal	x	-	-	-	-	-	-	-	-
Total electricity and heat	x	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	x	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	x	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	x	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	x	-	-	-	-	-	-	-	-
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	-	-	-	-	-	-	-	-
Industry	x	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	x	-	-	-	-	-	-	-	-
<i>Chemical</i>	x	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	x	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	x	-	-	-	-	-	-	-	-
<i>Other industry</i>	x	-	-	-	-	-	-	-	-
Other sectors ⁴	x	-	-	-	-	-	-	-	-
Non-energy use	x	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

ESTONIA

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	x	-	-	-	-	-	-	-	-
Total electricity and heat	x	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	x	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	x	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	x	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	x	-	-	-	-	-	-	-	-
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	-	-	-	-	-	-	-	-
Industry	x	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	x	-	-	-	-	-	-	-	-
<i>Chemical</i>	x	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	x	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	x	-	-	-	-	-	-	-	-
<i>Other industry</i>	x	-	-	-	-	-	-	-	-
Other sectors ³	x	-	-	-	-	-	-	-	-
Non-energy use	x	-	-	-	-	-	-	-	-
Peat	x	1.70	0.33	0.35	0.24	0.23	0.13	-	-9.73
Total electricity and heat	x	0.33	0.09	0.21	0.14	0.12	0.12	-	-4.06
<i>Main activity producers</i>	x	0.33	0.06	0.19	0.12	0.10	0.10	-	-4.62
<i>Autoproducers</i>	x	-	0.04	0.01	0.02	0.02	0.02	-	-
Patent fuel/BKB plants	x	0.54	0.20	0.15	0.09	0.10	0.01	-	-13.59
Coke ovens/Liquefaction ²	x	-	-	-	-	-	-	-	-
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	-	-	-	-	-	-	-	-
Industry	x	0.02	0.01	-	-	-	-	-	-
<i>Iron and steel</i>	x	-	-	-	-	-	-	-	-
<i>Chemical</i>	x	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	x	-	0.00	-	-	-	-	-	-
<i>Paper, pulp and print</i>	x	-	0.00	-	-	-	-	-	-
<i>Other industry</i>	x	0.02	0.00	-	-	-	-	-	-
Other sectors ³	x	0.81	0.00	-	-	-	-	-	-
Non-energy use	x	-	-	-	-	-	-	-	-
Oil shale and oil sands	x	25.95	13.23	17.89	20.49	20.63	17.90	-	-1.48
Total electricity and heat	x	22.57	10.84	13.55	15.44	15.23	12.08	-	-2.47
<i>Main activity producers</i>	x	22.57	10.82	13.53	15.43	15.23	12.00	-	-2.49
<i>Autoproducers</i>	x	-	0.02	0.02	0.01	-	0.08	-	-
Patent fuel/BKB plants	x	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	x	0.88	1.39	3.09	3.82	4.08	4.90	-	7.12
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	0.65	0.61	1.03	0.98	1.04	0.75	-	0.57
Industry	x	1.39	0.22	0.16	0.16	0.16	0.07	-	-11.07
<i>Iron and steel</i>	x	-	-	-	-	-	-	-	-
<i>Chemical</i>	x	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	x	-	0.22	0.16	0.16	0.16	0.07	-	-
<i>Paper, pulp and print</i>	x	-	-	-	-	-	-	-	-
<i>Other industry</i>	x	1.39	0.00	-	-	-	-	-	-
Other sectors ³	x	-	0.00	-	-	-	-	-	-
Non-energy use	x	-	0.15	0.06	0.08	0.10	0.14	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

ESTONIA

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	x	-	-	-	-	-	-	-	-
Steam coal	x	-	-	-	-	-	-	-	-
Lignite	x	-	-	-	-	-	-	-	-
Peat	x	0.56	0.12	0.12	0.13	0.04	0.03	-	-9.77
Oil shale and oil sands	x	6.91	3.70	4.42	5.51	5.96	6.18	-	-0.59
Mt:									
Coking coal	x	-	-	-	-	-	-	-	-
Steam coal	x	-	-	-	-	-	-	-	-
Lignite	x	-	-	-	-	-	-	-	-10.19
Peat	x	1.73	0.35	0.38	0.36	0.12	0.09	-	-0.54
Oil shale and oil sands	x	22.49	11.73	14.59	17.93	19.62	20.35	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	x	0.34	0.09	0.05	0.07	0.05	0.08	0.01	0.01
Bituminous coal ⁴	x	0.32	0.09	0.05	0.07	0.05	0.08	0.01	0.01
Coking coal	x	-	-	-	-	-	-	-	-
Sub-bituminous coal	x	-	-	-	-	-	-	-	-
Lignite	x	-	-	-	-	-	-	-	-
Peat	x	-	-	-	-	-	-	-	-
Coal products ⁵	x	0.01	0.00	-	-	-	-	-	-
Total exports	x	0.03	0.04	0.04	0.05	0.02	0.03	0.02	-
Bituminous coal ⁴	x	-	-	-	-	-	-	-	-
Coking coal	x	-	-	-	-	-	-	-	-
Sub-bituminous coal	x	-	-	-	-	-	-	-	-
Lignite	x	-	-	-	-	-	-	-	-
Peat	x	-	0.02	0.00	0.03	0.01	-	0.01	-
Coal products ⁵	x	0.03	0.02	0.04	0.02	0.02	0.03	0.01	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

ESTONIA

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	x	373	101	54	71	59	82	7	9
Coking coal	x	-	-	-	-	-	-	-	-
Australia	x	-	-	-	-	-	-	-	-
Canada	x	-	-	-	-	-	-	-	-
Czech Republic	x	-	-	-	-	-	-	-	-
Germany	x	-	-	-	-	-	-	-	-
Poland	x	-	-	-	-	-	-	-	-
United Kingdom	x	-	-	-	-	-	-	-	-
United States	x	-	-	-	-	-	-	-	-
Other OECD	x	-	-	-	-	-	-	-	-
China, People's Rep.	x	-	-	-	-	-	-	-	-
Colombia	x	-	-	-	-	-	-	-	-
Indonesia	x	-	-	-	-	-	-	-	-
South Africa	x	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	x	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	x	-	-	-	-	-	-	-	-
Viet Nam	x	-	-	-	-	-	-	-	-
Non-specified/other	x	-	-	-	-	-	-	-	-
Steam coal	x	373	101	54	71	59	82	7	9
Australia	x	-	-	-	-	-	-	-	-
Canada	x	-	-	-	-	-	-	-	-
Czech Republic	x	-	-	-	-	-	-	-	-
Germany	x	-	-	-	-	-	-	-	-
Poland	x	-	3	-	-	-	-	-	-
United Kingdom	x	-	-	-	-	-	-	-	-
United States	x	-	-	-	-	-	-	-	-
Other OECD	x	-	-	-	-	-	-	-	-
China, People's Rep.	x	-	-	-	-	-	-	-	-
Colombia	x	-	-	-	-	-	-	-	-
Indonesia	x	-	-	-	-	-	-	-	-
South Africa	x	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	x	373	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	98	54	71	57	75	7	9
<i>Other FSU</i>	x	x	-	-	-	1	7	-	-
Venezuela	x	-	-	-	-	-	-	-	-
Viet Nam	x	-	-	-	-	-	-	-	-
Non-specified/other	x	-	-	-	-	1	-	-	-
Lignite	x	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

FINLAND¹

Figure 1: Coal supply indicators (1971 = 100)

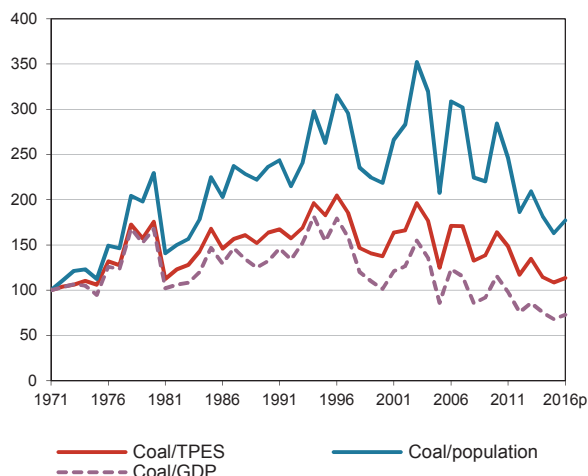


Figure 2: TPES by fuel (Mtce)

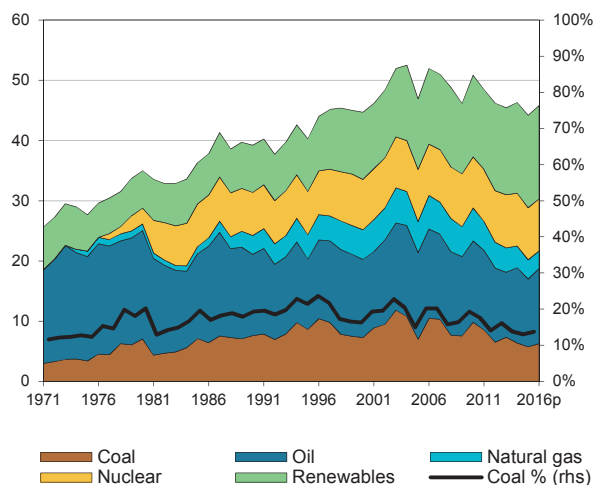


Figure 3: Primary coal supply (Mtce)

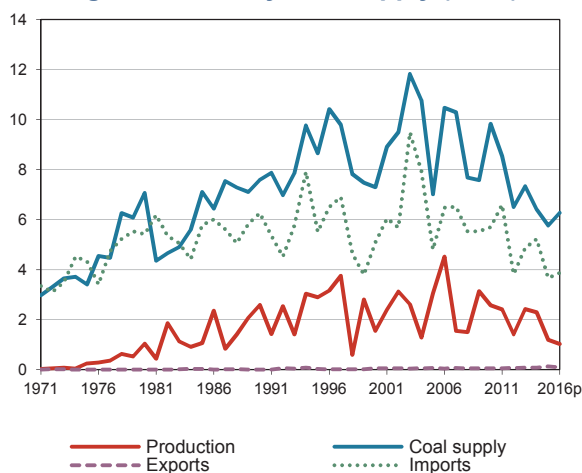


Figure 4: Coal consumption (Mtce)

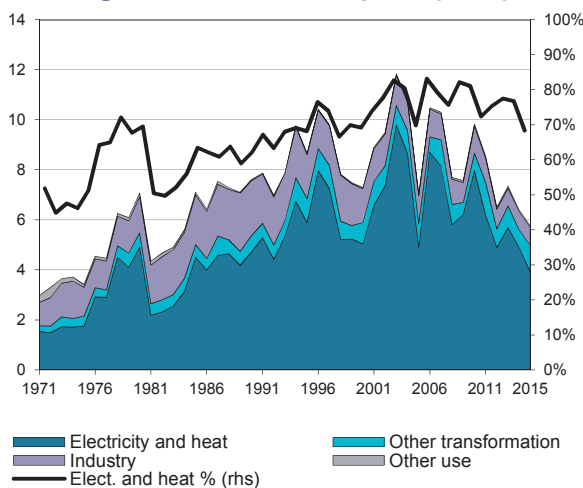
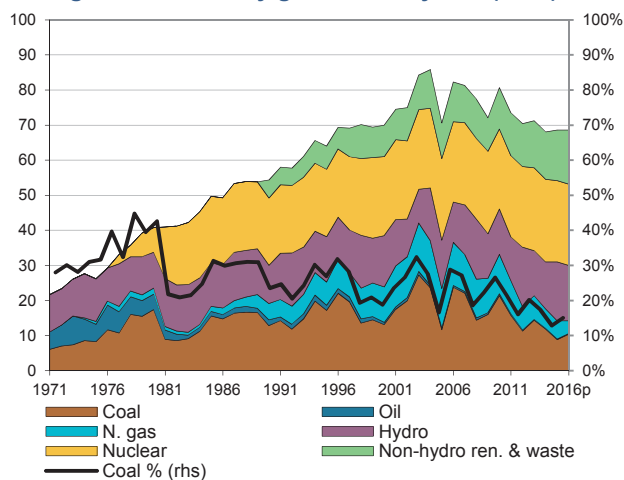
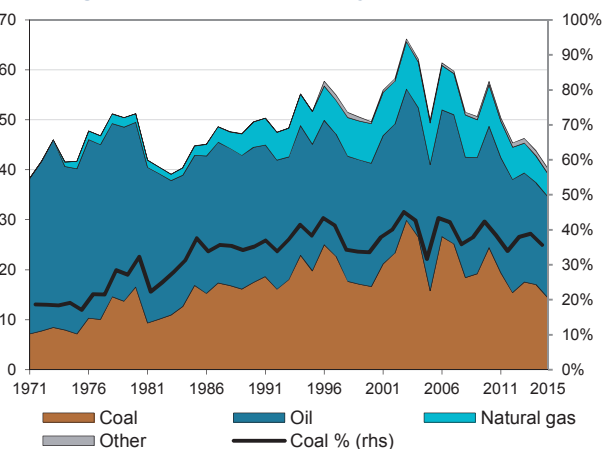


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

FINLAND

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	0.1	1.0	2.6	1.6	2.6	2.3	1.2	1.0	22.6	-3.0
Imports	3.5	5.4	6.3	5.1	5.7	5.2	3.7	3.9	3.5	-2.1
Exports	-0.0	-0.0	-0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-	21.6
Stock changes	0.1	0.6	-1.3	0.7	1.6	-1.0	1.0	1.5		
Primary supply	3.6	7.1	7.6	7.3	9.8	6.4	5.8	6.3	4.4	-1.1
Statistical differences	-0.0	-0.2	-0.1	0.0	0.0	0.2	-0.2	..		
Total transformation	-2.1 e	-5.3 e	-5.3 e	-5.6 e	-8.5 e	-5.5 e	-4.5 e	..	5.5	-0.6
Electricity and heat gen.	-1.7	-4.9	-4.7	-5.0	-8.0	-4.9	-3.9	..	6.1	-0.7
<i>Main activity producers</i> ³	-1.7	-4.5	-4.4	-4.6	-7.5	-4.8	-3.8	..	5.7	-0.6
<i>Autoproducers</i>	-	-0.5	-0.3	-0.4	-0.4	-0.1	-0.1	..	-	-3.9
Gas works	0.0	0.0	0.0	-	-	-	-	..	-	-
Coal transformation ⁴	-0.4 e	-0.4 e	-0.5 e	-0.5 e	-0.5 e	-0.5 e	-0.5 e	..	2.2	-0.7
<i>BKB plants</i>	-	-	-	-	-0.0	-0.0	-	..	-	-
<i>Blast furnaces</i>	-0.4 e	-0.4 e	-0.5 e	-0.5 e	-0.4 e	-0.5 e	-0.4 e	..	2.0	-0.8
<i>Coke ovens</i>	-	-	-0.0	-0.1	-0.1	-0.0	-0.0	..	-	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-0.1	-0.0	-0.1	-0.1	..	-	-
Energy ind. own use	-0.0	-	-	-0.3	-0.2	-0.2	-0.3	..	-	-
Losses	-0.0	-0.0	-0.0	-0.0	-0.1	-0.1	-0.1	..		
Final consumption ⁶	1.5	1.6	2.2	1.4	1.2	0.8	0.8	..	2.3	-4.2
Industry ⁷	1.3	1.4	2.2	1.4	1.1	0.7	0.7	..	2.9	-4.4
<i>Iron and steel</i>	0.4 e	0.5 e	0.8 e	0.6 e	0.5 e	0.3 e	0.3 e	..	4.3	-3.8
<i>Chemical</i>	0.0	0.0	0.1	0.1	-	-	-	..	17.2	-
<i>Non-metallic minerals</i>	-	0.5	0.7	0.2	0.1	0.1	0.1	..	-	-7.6
<i>Paper, pulp and print</i>	0.0	0.3	0.5	0.4	0.3	0.3	0.3	..	20.2	-2.6
<i>Other industry</i> ⁸	0.9	0.2	0.1	0.0	0.1	0.1	0.0	..	-15.0	-1.5
Transport ⁹	0.0	-	-	-	-	-	-	..	-	-
Other	0.2	0.2	0.0	0.0	0.1	0.1	0.1	..	-8.6	2.0
<i>Comm. and pub. services</i>	-	-	-	0.0	0.0	0.0	0.0	..	-	-
<i>Residential</i>	0.2	0.2	0.0	0.0	0.0	0.0	0.0	..	-8.6	-
<i>Other sectors</i> ¹⁰	-	-	-	0.0	0.1	0.1	0.0	..	-	-
Non-energy use	-	-	-	-	-	-	-	..	-	-
Electricity gen. - TWh	7.3	17.4	12.8	13.1	21.4	11.8	8.8	10.3	3.3	-1.5

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

FINLAND

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	5.31	5.65	5.19	6.98	5.84	4.56	3.99	0.52	-1.38
Total electricity and heat	4.57	3.88	3.55	5.59	4.48	3.41	2.39	-1.34	-1.92
<i>Main activity producers</i>	4.52	3.77	3.51	5.54	4.47	3.40	2.37	-1.49	-1.84
<i>Autoproducers</i>	0.05	0.11	0.04	0.05	0.01	0.01	0.02	7.24	-5.94
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	0.71	1.28	1.20	1.23	1.24	1.22	-	2.20
Blast furnace inputs	-	-	-	-	-	-	0.05 e	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.67	1.04	0.35	0.17	0.11	0.11	0.13	3.82	-8.11
<i>Iron and steel</i>	0.09	0.08	-	-	-	-	0.01 e	-0.61	-9.80
<i>Chemical</i>	0.01	0.08	0.08	-	-	-	-	16.10	-
<i>Non-metallic minerals</i>	0.41	0.76	0.18	0.13	0.06	0.07	0.05	5.22	-10.18
<i>Paper, pulp and print</i>	-	0.09	0.09	0.02	0.02	0.01	0.05	-	-2.49
<i>Other industry</i>	0.15	0.02	0.01	0.02	0.03	0.03	0.02 e	-14.26	-1.14
Other sectors ⁴	0.08	0.01	0.01	0.01	0.01	0.01	0.00	-16.20	-3.19
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	5.31	4.94	3.91	5.77	4.56	3.28	2.80	-0.60	-2.24
Total electricity and heat	4.57	3.88	3.55	5.59	4.48	3.41	2.39	-1.34	-1.92
<i>Main activity producers</i>	4.52	3.77	3.51	5.54	4.47	3.40	2.37	-1.49	-1.84
<i>Autoproducers</i>	0.05	0.11	0.04	0.05	0.01	0.01	0.02	7.24	-5.94
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	0.05 e	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.67	1.04	0.35	0.17	0.11	0.11	0.13	3.82	-8.11
<i>Iron and steel</i>	0.09	0.08	-	-	-	-	0.01 e	-0.61	-9.80
<i>Chemical</i>	0.01	0.08	0.08	-	-	-	-	16.10	-
<i>Non-metallic minerals</i>	0.41	0.76	0.18	0.13	0.06	0.07	0.05	5.22	-10.18
<i>Paper, pulp and print</i>	-	0.09	0.09	0.02	0.02	0.01	0.05	-	-2.49
<i>Other industry</i>	0.15	0.02	0.01	0.02	0.03	0.03	0.02 e	-14.26	-1.14
Other sectors ⁴	0.08	0.01	0.01	0.01	0.01	0.01	0.00	-16.20	-3.19
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	-	0.71	1.28	1.21	1.28	1.28	1.19	-	2.08
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	0.71	1.28	1.20	1.23	1.24	1.22	-	2.20
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

FINLAND

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	1.47	4.81	6.02	9.50	5.87	5.98	5.72	10.37	0.70
Total electricity and heat	0.85	3.23	4.81	8.37	4.98	5.10	4.81	11.76	1.61
<i>Main activity producers</i>	0.43	3.10	4.43	8.01	4.75	4.84	4.55	18.01	1.55
<i>Autoproducers</i>	0.43	0.13	0.38	0.35	0.23	0.26	0.26	-9.52	2.84
Patent fuel/BKB plants	-	-	-	0.04	0.03	0.02	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.50	1.51	1.21	1.02	0.75	0.81	0.76	9.68	-2.74
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	0.16	0.08	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	0.00	-	-	-	-	-
<i>Paper, pulp and print</i>	0.50	1.28	1.04	0.92	0.70	0.74	0.71	8.13	-2.31
<i>Other industry</i>	-	0.08	0.09	0.10	0.05	0.07	0.05	-	-2.19
Other sectors ³	0.12	0.07	0.12	0.25	0.24	0.17	0.16	-4.70	3.32
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

FINLAND

3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change 78-90	90-15
Mtce:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	0.63	2.59	1.56	3.05	2.58	1.20	1.03	12.47	-3.04
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	10.28	-2.83
Peat	2.21	7.15	4.42	9.14	7.49	3.49	3.00	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	5.23	6.27	5.09	4.81	5.70	4.87	5.22	3.66	3.87
Bituminous coal ⁴	4.31	4.85	3.32	2.89	3.93	3.27	3.49	1.88	2.04
Coking coal	-	0.64	1.26	1.40	1.33	1.21	1.32	1.32	1.49
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	0.01	0.00	0.01	0.02	0.02	0.02
Coal products ⁵	0.92	0.77	0.50	0.50	0.44	0.37	0.40	0.45	0.32
Total exports	-	0.00	0.06	0.07	0.05	0.08	0.08	0.13	0.10
Bituminous coal ⁴	-	-	-	-	-	-	-	-	-
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	0.02	0.02	0.01	0.00	0.00	0.00	-
Coal products ⁵	-	0.00	0.04	0.05	0.05	0.08	0.08	0.13	0.10

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

FINLAND

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	4789	6101	5072	4723	5920	5067	5439	3542	3909
Coking coal	-	711	1258	1401	1327	1213	1316	1316	1486
Australia	-	-	-	487	406	206	-	-	176
Canada	-	-	100	519	416	368	599	517	507
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	2	-	-	-	-	-	-
Poland	-	203	705	13	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	45	360	382	437	411	602	418	432
Other OECD	-	-	-	-	1	66	43	7	1
China, People's Rep.	-	-	-	-	3	-	-	-	-
Colombia	-	-	-	-	64	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	463	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	91	-	-	162	72	374	370
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Steam coal	4789	5390	3814	3322	4593	3854	4123	2226	2423
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	7	15	-	-	-
Germany	-	-	-	-	6	-	8	9	-
Poland	4089	2609	1313	551	211	302	176	79	42
United Kingdom	3	253	-	3	-	-	-	-	-
United States	-	41	-	-	166	-	-	-	-
Other OECD	-	-	51	32	14	4	9	-	3
China, People's Rep.	-	100	-	-	-	-	-	-	-
Colombia	-	334	-	-	413	-	5	4	3
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	697	1905	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	2448	2736	3680	3428	3742	1842	2140
<i>Other FSU</i>	x	x	2	-	55	105	183	292	233
Venezuela	-	148	-	-	41	-	-	-	2
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

FRANCE¹

Figure 1: Coal supply indicators (1971 = 100)

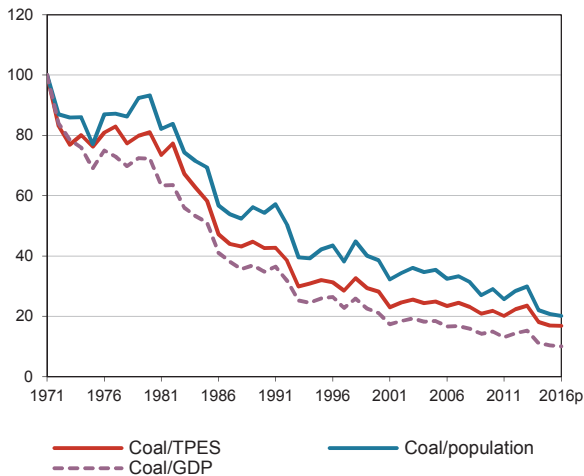


Figure 2: TPES by fuel (Mtce)

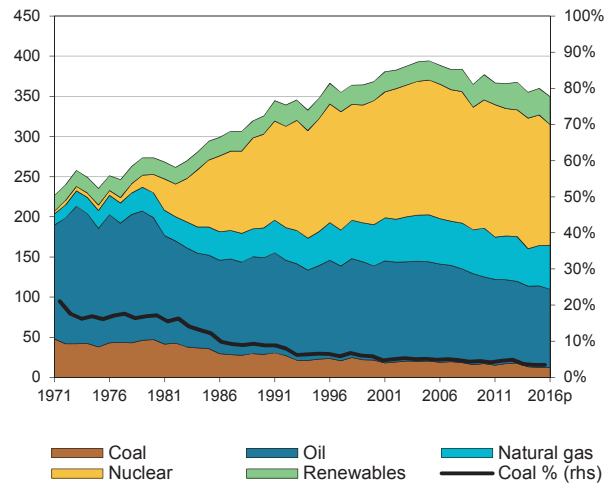


Figure 3: Primary coal supply (Mtce)

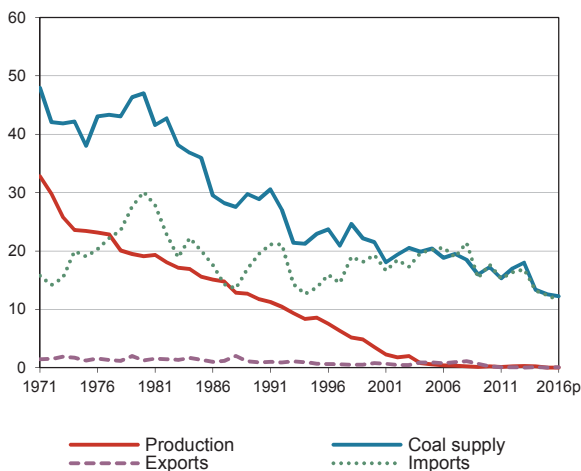


Figure 4: Coal consumption (Mtce)

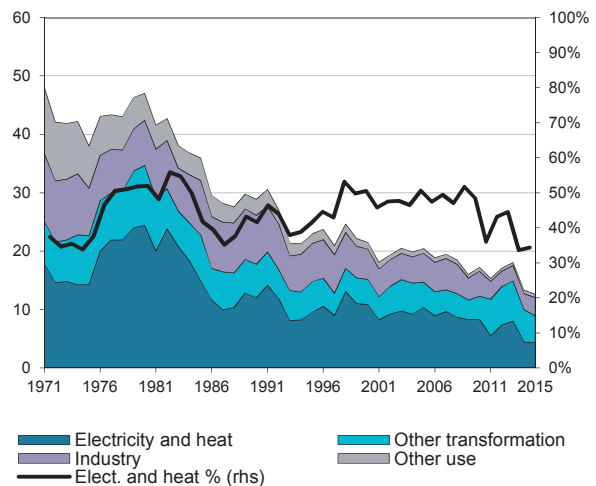
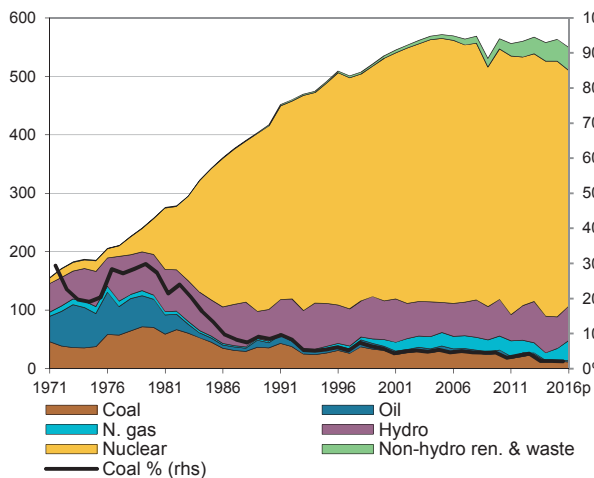
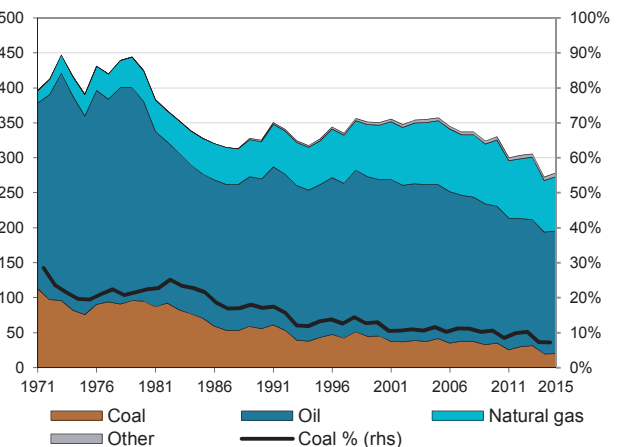


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

FRANCE

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	25.8	19.1	11.8	3.5	0.2	0.3	-	-	-4.5	-
Imports	15.4	30.1	19.5	19.3	17.7	13.2	12.4	11.5	1.4	-1.8
Exports	-1.9	-1.2	-0.9	-0.8	-0.3	-0.1	-0.0	-0.1	-4.1	-13.3
Stock changes	2.5	-1.0	-1.5	-0.6	-0.4	-0.1	0.2	0.8		
Primary supply	41.9	47.0	28.9	21.5	17.2	13.3	12.6	12.3	-2.2	-3.3
Statistical differences	2.0	-0.0	-0.3	0.4	-0.2	-0.8	0.0	..		
Total transformation	-20.8	-31.8 e	-16.4 e	-14.7 e	-11.7 e	-7.9 e	-7.6 e	..	-1.4	-3.0
Electricity and heat gen.	-14.8	-24.4	-12.0	-10.8	-8.3	-4.5	-4.3	..	-1.2	-4.0
<i>Main activity producers</i> ³	-14.8	-16.9	-6.9	-9.4	-7.4	-3.7	-3.6	..	-4.4	-2.5
<i>Autoproducers</i>	-	-7.5	-5.1	-1.4	-0.9	-0.8	-0.7	..	-	-7.7
Gas works	1.1	0.0	-	-	-	-	-	..	-	-
Coal transformation ⁴	-7.1	-7.4 e	-4.4 e	-3.9 e	-3.3 e	-3.4 e	-3.3 e	..	-2.8	-1.1
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-6.3	-6.3 e	-3.8 e	-3.6 e	-2.7 e	-2.8 e	-2.6 e	..	-2.8	-1.6
<i>Coke ovens</i>	-1.3	-1.5	-0.8	-0.3	-0.7	-0.6	-0.7	..	-2.9	-0.3
<i>Patent fuel plants</i>	0.4	0.3	0.2	0.0	-	-	-	..	-3.9	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-2.5	-2.7	-0.9	-0.8	-0.5	-1.3	-1.3	..	-6.1	1.8
Losses	-0.6	-0.2	-0.2	-0.1	-	-	-	..		
Final consumption ⁶	19.9	12.3	11.1	6.3	4.9	3.4	3.7	..	-3.4	-4.3
Industry ⁷	10.4	7.7	8.4	5.2	4.3	2.8	3.1	..	-1.3	-3.9
<i>Iron and steel</i>	6.3	4.6 e	4.8 e	2.8 e	2.7 e	1.5 e	1.8 e	..	-1.6	-3.8
<i>Chemical</i>	1.2	0.8	1.0 e	c	0.4	0.6	0.5	..	-0.9	-2.6
<i>Non-metallic minerals</i>	0.5	0.6	1.0 e	0.2 e	0.6	0.4	0.4	..	4.1	-3.8
<i>Paper, pulp and print</i>	0.2	0.1	0.4 e	0.1 e	0.0	0.0	0.0	..	5.6	-11.0
<i>Other industry</i> ⁸	2.3	1.6	1.2 e	2.1	0.6	0.3	0.4	..	-3.7	-4.1
Transport ⁹	0.1	0.0	-	-	-	-	-	..	-	-
Other	9.5	4.6	2.4	0.9	0.6	0.1	0.1	..	-7.8	-11.5
<i>Comm. and pub. services</i>	0.3	0.0	-	-	0.2	0.1	0.1	..	-	-
<i>Residential</i>	9.2	4.6	2.4 e	0.9	0.3	0.0	0.1	..	-7.6	-14.2
<i>Other sectors</i> ¹⁰	-	-	-	-	0.1	0.0	0.0	..	-	-
Non-energy use	-	-	0.4	0.2	0.1	0.5	0.4	..	-	0.6
Electricity gen. - TWh	35.9	70.4	35.4	30.9	26.3	12.0	12.2	11.3	-0.1	-4.2

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

FRANCE

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	47.20	30.89	22.16	17.39	19.04	13.56	13.19	-3.47	-3.35
Total electricity and heat	24.50	12.87	10.69	7.60	8.47	4.00	3.95	-5.22	-4.62
<i>Main activity producers</i>	17.92	7.59	9.75	6.97	8.22	3.77	3.70	-6.91	-2.83
<i>Autoproducers</i>	6.58	5.28	0.94	0.63	0.25	0.23	0.25	-1.82	-11.56
Patent fuel/BKB plants	2.09	0.38	0.11	-	-	-	-	-13.19	-
Coke ovens/Liquefaction ³	12.98	9.52	6.54	4.33	4.63	4.50	4.47	-2.55	-2.98
Blast furnace inputs	-	1.09 e	2.03 e	1.88 e	1.95 e	2.17 e	2.15 e	-	2.76
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	3.11	4.91	2.51	2.21	1.86	1.93	2.23	3.88	-3.10
<i>Iron and steel</i>	1.47	1.63 e	0.43 e	0.56 e	0.56 e	0.68 e	0.89 e	0.88	-2.39
<i>Chemical</i>	0.39	0.90 e	..	0.44	0.62	0.65	0.55	7.23	-1.93
<i>Non-metallic minerals</i>	0.15	0.99 e	0.20 e	0.56	0.36	0.35	0.36	16.95	-3.94
<i>Paper, pulp and print</i>	0.04	0.49 e	0.16 e	0.04	0.03	0.02	0.03	22.74	-10.95
<i>Other industry</i>	1.06	0.89 e	1.72 e	0.61 e	0.29 e	0.23 e	0.40 e	-1.39	-3.16
Other sectors ⁴	3.16	1.73	0.73	0.51	0.11	0.09	0.09	-4.92	-11.06
Non-energy use	-	-	-	-	0.21	0.22	0.22	-	-
Steam coal	31.60	19.12	15.26	12.83	13.22	7.91	9.06	-4.10	-2.94
Total electricity and heat	22.16	11.03	10.42	7.60	8.47	4.00	3.95	-5.65	-4.03
<i>Main activity producers</i>	16.75	7.00	9.49	6.97	8.22	3.77	3.70	-7.01	-2.52
<i>Autoproducers</i>	5.41	4.03	0.94	0.63	0.25	0.23	0.25	-2.43	-10.59
Patent fuel/BKB plants	2.09	0.38	0.11	-	-	-	-	-13.19	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	1.09 e	2.03 e	1.88 e	1.14 e	1.41 e	2.14 e	-	2.76
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	2.91	4.68	2.46	2.16	1.47	1.55	2.11	4.04	-3.13
<i>Iron and steel</i>	1.47	1.63 e	0.43 e	0.56 e	0.33 e	0.44 e	0.89 e	0.88	-2.40
<i>Chemical</i>	0.38	0.81 e	..	0.44	0.60	0.64	0.55	6.50	-1.55
<i>Non-metallic minerals</i>	0.15	0.99 e	0.20 e	0.56	0.31	0.30	0.34	17.02	-4.23
<i>Paper, pulp and print</i>	0.04	0.49 e	0.16 e	0.04	0.03	0.02	0.03	22.74	-10.95
<i>Other industry</i>	0.87	0.76 e	1.67 e	0.56 e	0.20 e	0.15 e	0.31 e	-1.14	-3.49
Other sectors ⁴	3.09	1.65	0.70	0.51	0.11	0.09	0.09	-5.10	-10.90
Non-energy use	-	-	-	-	0.21	0.22	0.22	-	-
Coking coal	12.98	9.67	6.54	4.50	5.63	5.50	4.01	-2.42	-3.46
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	12.98	9.52	6.54	4.33	4.63	4.50	4.47	-2.55	-2.98
Blast furnace inputs	-	-	-	-	0.78 e	0.76 e	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	0.22	0.24	-	-	-
<i>Iron and steel</i>	-	-	-	-	0.22 e	0.24 e	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

FRANCE

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	2.62	2.09	0.36	0.05	0.20	0.15	0.13	-1.85	-10.66
Total electricity and heat	2.34	1.84	0.27	-	-	-	-	-1.97	-
<i>Main activity producers</i>	1.17	0.59	0.27	-	-	-	-	-5.51	-
<i>Autoproducers</i>	1.17	1.25	-	-	-	-	-	0.55	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	0.03 e	0.00 e	0.00 e	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.20	0.23	0.05	0.05	0.17	0.15	0.12	1.17	-2.47
<i>Iron and steel</i>	-	-	-	-	0.01 e	0.00 e	0.00 e	-	-
<i>Chemical</i>	0.01	0.09 e	-	-	0.02	0.02	0.01	20.31	-11.00
<i>Non-metallic minerals</i>	0.00	-	-	-	0.05	0.05	0.03	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.19	0.14 e	0.05	0.05	0.08 e	0.08 e	0.09 e	-2.59	-1.70
Other sectors ³	0.07	0.08	0.04	-	0.00	-	-	0.80	-
Non-energy use	-	-	-	-	0.00	0.00	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

FRANCE

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	4.80	1.80	-	-	-	-	-	-7.86	-
Steam coal	14.14	8.55	3.37	0.55	0.23	-	-	-4.11	-
Lignite	1.17	1.43	0.17	-	-	-	-	1.68	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:								-7.54	-
Coking coal	4.66	1.82	-	-	-	-	-	-4.60	-
Steam coal	16.50	9.38	3.80	0.62	0.26	-	-	-1.30	-
Lignite	2.73	2.33	0.30	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	23.52	19.50	19.34	20.18	17.66	16.85	13.19	12.42	11.54
Bituminous coal ⁴	12.96	10.05	11.03	12.06	11.50	10.40	6.88	7.82	6.61
Coking coal	8.55	8.17	6.81	6.51	4.80	5.86	5.57	4.03	4.46
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	0.00	0.04	0.03	0.02	0.03	0.08	0.09	0.07	0.06
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	2.00	1.24	1.47	1.59	1.33	0.51	0.65	0.51	0.41
Total exports	1.16	0.92	0.77	0.88	0.25	0.01	0.05	0.03	0.08
Bituminous coal ⁴	0.38	0.53	0.08	0.23	0.02	-	-	-	-
Coking coal	-	-	-	0.03	0.12	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	0.00	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.77	0.39	0.69	0.61	0.12	0.01	0.05	0.03	0.08

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

FRANCE

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	23451	19458	19032	19887	17631	17452	13233	12773	11822
Coking coal	8316	7848	6543	6255	4615	5634	5351	3874	4283
Australia	987	2071	2818	3800	2811	2954	2890	2811	3635
Canada	-	637	577	421	8	35	31	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	4364	817	-	263	-	-	-	-	-
Poland	1311	254	182	3	-	-	-	-	-
United Kingdom	1	-	-	-	-	-	-	-	-
United States	1462	4019	2667	1627	1636	1921	1537	959	598
Other OECD	-	50	1	80	-	4	39	-	34
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	130	61	-	-	-	6	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	191	-	154	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	107	570	709	22	16
<i>Other FSU</i>	x	x	-	-	-	-	27	-	-
Venezuela	-	-	14	-	-	-	-	-	-
Viet Nam	-	-	-	-	37	-	-	-	-
Non-specified/other	-	-	-	-	16	150	118	76	-
Steam coal	15125	11541	12437	13596	12964	11674	7727	8781	7441
Australia	785	1480	1022	1509	670	307	221	1233	74
Canada	-	50	-	70	163	1	-	145	-
Czech Republic	-	-	-	-	2	2	2	1	-
Germany	2217	718	98	55	159	41	35	21	43
Poland	3441	141	881	1451	1349	887	-	235	181
United Kingdom	891	311	61	35	7	16	12	13	12
United States	36	2586	425	301	1648	2696	746	685	364
Other OECD	98	222	1125	1149	460	218	230	106	283
China, People's Rep.	-	1776	524	15	6	12	9	36	9
Colombia	-	2033	1043	2455	3024	2617	1690	1534	1716
Indonesia	-	-	6	245	-	-	-	-	2
South Africa	6643	863	5694	4225	2407	2244	2608	2088	1320
Former Soviet Union ⁴	853	777	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	383	905	2753	2367	1949	2547	3283
<i>Other FSU</i>	x	x	-	-	27	91	150	20	24
Venezuela	-	560	935	542	262	174	29	6	6
Viet Nam	-	-	140	100	23	-	-	-	9
Non-specified/other	161	24	100	539	4	1	46	111	115
Lignite	10	69	52	36	52	144	155	118	98

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

GERMANY¹

Figure 1: Coal supply indicators (1971 = 100)

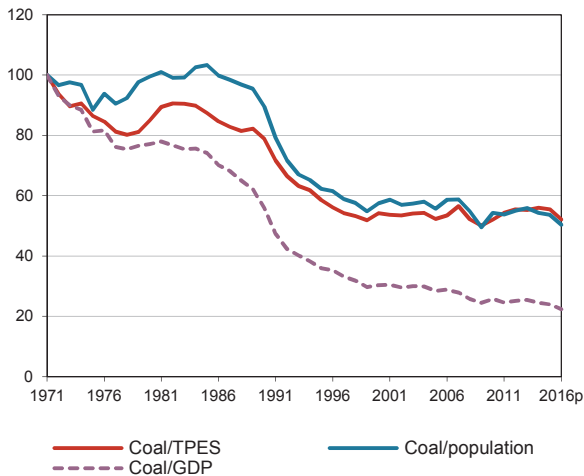


Figure 2: TPES by fuel (Mtce)

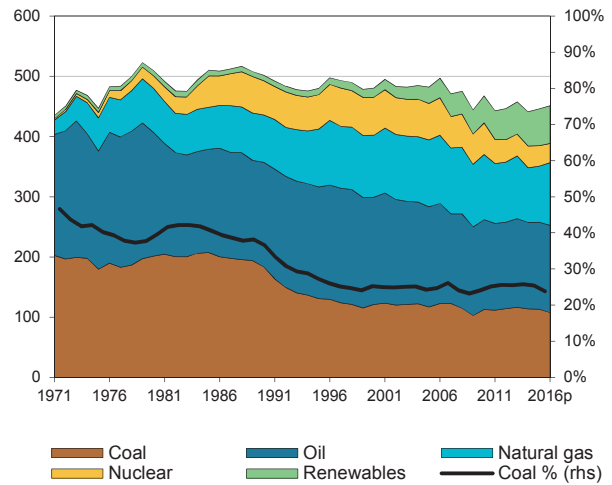


Figure 3: Primary coal supply (Mtce)

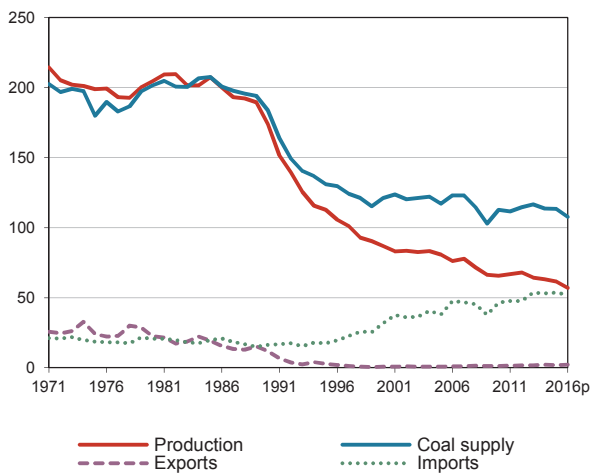


Figure 4: Coal consumption (Mtce)

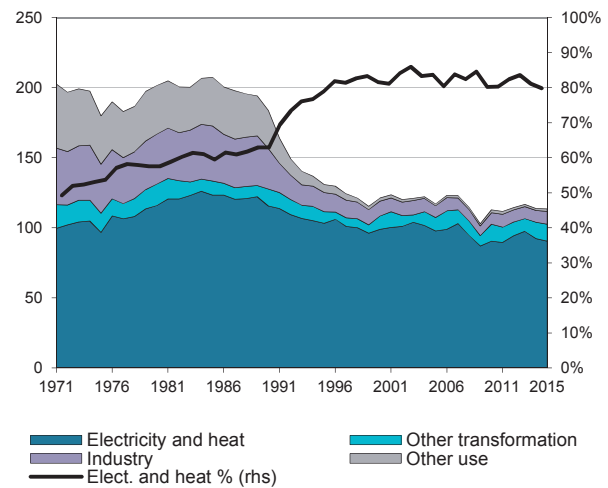
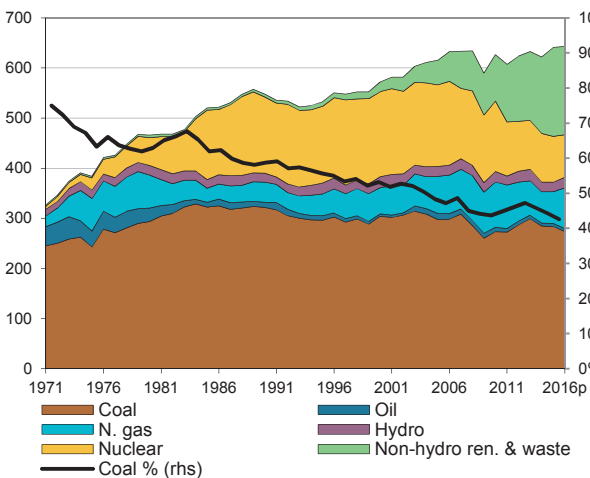
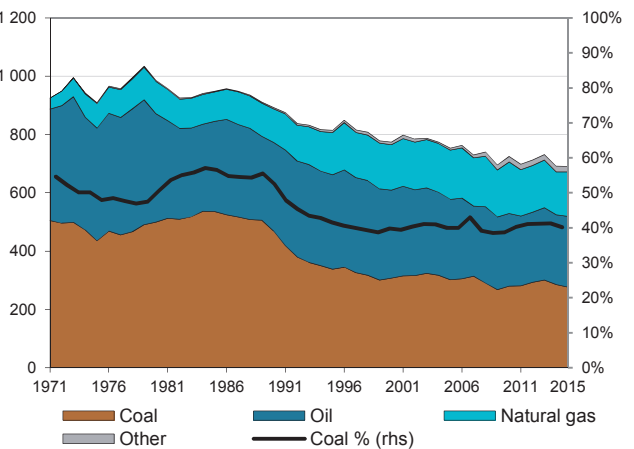


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

GERMANY

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	202.0	204.5	174.0	86.6	65.6	63.0	61.4	56.9	-0.9	-4.1
Imports	21.8	20.6	16.4	31.7	46.6	53.1	53.5	52.2	-1.6	4.8
Exports	-26.1	-22.5	-11.7	-0.8	-1.4	-2.2	-2.0	-2.1	-4.6	-6.8
Stock changes	1.5	-1.1	4.9	3.6	2.0	-0.2	0.5	0.7		
Primary supply	199.1	201.5	183.7	121.2	112.8	113.7	113.4	107.7	-0.5	-1.9
Statistical differences	0.4	0.2	0.6	0.4	-1.8	-1.4	-1.3	..		
Total transformation	-111.3 e	-125.3 e	-124.1 e	-106.6 e	-98.6	-100.5	-99.4	..	0.6	-0.9
Electricity and heat gen.	-104.2	-115.9	-115.6 e	-98.8 e	-90.4	-92.2	-90.5	..	0.6	-1.0
<i>Main activity producers</i> ³	-99.8	-94.2	-98.7 e	-91.5 e	-84.3	-88.5	-85.9	..	-0.1	-0.6
<i>Autoproducers</i>	-4.3	-21.6	-16.9 e	-7.3	-6.1	-3.7	-4.6	..	8.4	-5.1
Gas works	0.8	1.8	1.9	0.0	-	-	-	..	5.0	-
Coal transformation ⁴	-8.0 e	-11.2 e	-10.5 e	-7.8 e	-8.2	-8.3	-8.9	..	1.6	-0.7
<i>BKB plants</i>	1.9	1.2	-1.4	-0.2	0.1	-0.1	-0.3	..	-	-5.5
<i>Blast furnaces</i>	-9.2 e	-10.1 e	-8.0 e	-7.9 e	-7.7	-7.7	-7.9	..	-0.8	-0.1
<i>Coke ovens</i>	-0.9	-2.5	-1.2	0.2	-0.6	-0.5	-0.6	..	1.5	-2.4
<i>Patent fuel plants</i>	0.3	0.2	0.2	0.0	-	-	-	..	-3.6	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-7.0	-5.1	-3.5	-1.7 e	-1.3	-1.3	-1.2	..	-4.0	-4.2
Losses	-1.7	-1.0	-0.6	-0.5 e	-0.8	-0.8	-0.8	..		
Final consumption ⁶	79.6	70.3	56.1	12.8	10.3	9.7	10.9	..	-2.0	-6.4
Industry ⁷	38.9	35.6	28.9	10.6	8.2	8.3	9.2	..	-1.7	-4.5
<i>Iron and steel</i>	13.7 e	10.6 e	7.8 e	5.6 e	4.4	4.3	4.7	..	-3.2	-2.1
<i>Chemical</i>	9.3	8.3	6.4	0.6 e	0.9	0.8	1.5	..	-2.2	-5.7
<i>Non-metallic minerals</i>	1.8	3.0	3.5	2.8 e	1.9	2.0	2.0	..	3.8	-2.2
<i>Paper, pulp and print</i>	1.2	1.3	1.3	0.5 e	0.5	0.5	0.5	..	0.2	-3.5
<i>Other industry</i> ⁸	12.9	12.4	9.9	1.0 e	0.5	0.6	0.5	..	-1.5	-11.0
Transport ⁹	2.5	0.4	0.0	0.0	-	-	-	..	-24.2	-
Other	34.9	32.1	25.9	1.8	1.6	0.9	1.1	..	-1.7	-11.8
<i>Comm. and pub. services</i>	10.2	10.8	8.9	0.4 e	0.1	0.1	0.3	..	-0.8	-13.1
<i>Residential</i>	22.0	19.0	15.4	1.3 e	1.4	0.8	0.9	..	-2.1	-10.9
<i>Other sectors</i> ¹⁰	2.7	2.3	1.7	0.1 e	-	-	-	..	-2.7	-
Non-energy use	3.2	2.2	1.2	0.4	0.5	0.5	0.6	..	-5.6	-3.0
Electricity gen. - TWh	258.3	293.5	321.6	304.2	273.5	284.9	283.7	273.6	1.3	-0.5

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

GERMANY

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	470.13	451.02	238.91	231.42	245.24	238.69	238.52	-0.35	-2.52
Total electricity and heat	265.63	279.81 e	209.20 e	198.40	213.49	205.33	203.50	0.43	-1.27
<i>Main activity producers</i>	237.64	249.41 e	201.24 e	192.32	210.35	202.57	200.79	0.40	-0.86
<i>Autoproducers</i>	27.99	30.39 e	7.97	6.08	3.14	2.76	2.72	0.69	-9.21
Patent fuel/BKB plants	131.49	105.69	11.51	12.48	13.89	14.40	14.40	-1.80	-7.66
Coke ovens/Liquefaction ³	34.30	24.09	11.42	11.16	11.26	11.81	11.99	-2.90	-2.75
Blast furnace inputs	-	1.73	2.53	3.96	4.46	4.65	4.88	-	4.24
Gas manufacture	1.02	0.14	-	-	-	-	-	-15.18	-
Industry	25.70	26.89	2.89	2.92	2.65	2.69	3.52	0.38	-7.81
<i>Iron and steel</i>	0.49	0.76	0.21	0.81	1.04	0.85	1.08	3.68	1.43
<i>Chemical</i>	12.51	10.12	0.57	0.88	0.65	0.84	1.44	-1.75	-7.51
<i>Non-metallic minerals</i>	0.61	2.13	1.35	0.49	0.42	0.46	0.44	10.92	-6.13
<i>Paper, pulp and print</i>	1.16	1.16	0.43	0.44	0.26	0.26	0.28	-0.03	-5.60
<i>Other industry</i>	10.92	12.72	0.32	0.30	0.28	0.28	0.29	1.28	-14.03
Other sectors ⁴	5.25	9.37	0.41	0.30	0.14	0.24	0.47	4.94	-11.27
Non-energy use	-	0.01	0.02	0.09	0.07	0.05	0.05	-	7.52
Steam coal	45.08	44.75	44.50	45.70	50.25	47.44	49.83	-0.06	0.43
Total electricity and heat	34.59	33.78 e	38.77 e	38.01	45.22	40.38	41.45	-0.20	0.82
<i>Main activity producers</i>	21.05	26.06 e	35.67 e	35.41	44.92	40.08	41.20	1.79	1.85
<i>Autoproducers</i>	13.55	7.73 e	3.10	2.60	0.30	0.30	0.26	-4.57	-12.70
Patent fuel/BKB plants	1.46	0.78	0.15	-	-	-	-	-5.14	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	1.73	2.53	3.96	4.46	4.65	4.88	-	4.24
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	5.15	6.53	2.44	2.35	2.12	2.15	3.00	2.00	-3.07
<i>Iron and steel</i>	0.25	-	0.21	0.81	1.04	0.85	1.08	-	-
<i>Chemical</i>	1.88	2.57	0.27	0.48	0.24	0.42	1.07	2.66	-3.46
<i>Non-metallic minerals</i>	0.48	1.64	1.35	0.47	0.42	0.46	0.44	10.75	-5.14
<i>Paper, pulp and print</i>	0.28	0.56	0.43	0.44	0.26	0.26	0.28	5.92	-2.83
<i>Other industry</i>	2.26	1.76	0.19	0.15	0.17	0.15	0.14	-2.05	-9.71
Other sectors ⁴	2.87	0.99	0.36	0.30	0.14	0.24	0.47	-8.47	-2.93
Non-energy use	-	0.01	-	0.06	0.05	0.03	0.03	-	4.66
Coking coal	41.88	42.22	24.46	15.97	12.50	14.29	11.72	0.07	-5.00
Total electricity and heat	6.58	18.12	13.04	5.37	1.74	3.04	0.28	8.81	-15.38
<i>Main activity producers</i>	5.70	14.24	10.17	5.01	1.73	3.02	0.28	7.93	-14.56
<i>Autoproducers</i>	0.88	3.88	2.87	0.37	0.01	0.02	-	13.17	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	34.30	24.09	11.42	10.60	10.76	11.25	11.44	-2.90	-2.94
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	1.01	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

GERMANY

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	383.17	364.05	169.94	169.74	182.49	176.96	176.97	-0.43	-2.84
Total electricity and heat	224.46	227.90 e	157.39 e	155.01	166.53	161.92	161.77	0.13	-1.36
<i>Main activity producers</i>	210.89	209.11 e	155.39 e	151.90	163.70	159.48	159.31	-0.07	-1.08
<i>Autoproducers</i>	13.57	18.79	2.00	3.11	2.83	2.44	2.46	2.75	-7.82
Patent fuel/BKB plants	130.03	104.92	11.36	12.48	13.89	14.40	14.40	-1.77	-7.64
Coke ovens/Liquefaction ²	-	-	-	0.57	0.50	0.56	0.55	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	0.02	0.14	-	-	-	-	-	18.25	-
Industry	20.55	20.36	0.45	0.57	0.53	0.55	0.53	-0.08	-13.60
<i>Iron and steel</i>	0.24	0.76	-	-	-	-	-	10.07	-
<i>Chemical</i>	10.63	7.55	0.31	0.40	0.41	0.42	0.37	-2.81	-11.34
<i>Non-metallic minerals</i>	0.13	0.49	0.00	0.02	-	-	-	11.48	-
<i>Paper, pulp and print</i>	0.88	0.60	0.00	-	-	-	-	-3.20	-
<i>Other industry</i>	8.66	10.96	0.13	0.14	0.12	0.13	0.15	1.98	-15.69
Other sectors ³	2.38	8.38	0.05	-	-	-	-	11.06	-
Non-energy use	-	-	0.02	0.03	0.03	0.02	0.02	-	-
Peat	-	-	0.01	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	0.01	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

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3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	51.64	44.06	18.66	15.01	8.06	3.80	2.14	-1.32	-9.33
Steam coal	34.97	27.23	15.86	10.75	5.15	2.77	1.90	-2.06	-8.74
Lignite	106.08	102.55	52.05	54.89	52.37	54.86	52.86	-0.28	-2.47
Peat	-	0.12	0.04	0.04	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
								-1.31	-9.34
Mt:									
Coking coal	52.24	44.58	18.86	15.17	8.15	3.84	2.16	-1.42	-9.27
Steam coal	37.95	31.98	18.51	12.85	5.96	2.81	1.92	-0.46	-2.75
Lignite	377.89	357.47	167.69	177.91	169.40	178.07	171.55	-	-
Peat	-	0.43	0.15	0.13	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	17.48	16.43	31.74	37.97	46.55	53.49	53.14	53.54	52.21
Bituminous coal ⁴	9.61	10.75	20.28	26.82	34.19	42.17	39.90	42.73	39.33
Coking coal	2.41	1.69	4.56	7.36	7.71	7.71	9.61	7.76	10.36
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	1.34	1.06	0.91	0.00	-	0.01	0.01	0.01	0.02
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	4.12	2.94	5.99	3.78	4.66	3.61	3.62	3.03	2.50
Total exports	30.12	11.65	0.80	0.89	1.35	1.68	2.23	2.01	2.08
Bituminous coal ⁴	5.29	1.63	0.28	0.25	0.25	0.25	0.21	0.18	0.28
Coking coal	13.20	3.96	0.00	-	0.01	0.01	0.00	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	0.00	0.05	0.00	0.00	-	0.06	0.43	0.33	-
Peat	-	0.12	0.04	0.03	-	-	-	-	-
Coal products ⁵	11.63	5.89	0.47	0.61	1.09	1.36	1.60	1.49	1.80

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

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5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	17656	15663	29744	37114	45725	54337	53753	54548	53595
Coking coal	2435	1706	4608	7152	7793	7790	9710	7845	10471
Australia	-	58	3414	3403	2577	2988	1989	3321	1729
Canada	-	25	865	1485	557	430	1989	249	684
Czech Republic	-	28	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	116	50	832	-	154	-	732	-
United Kingdom	48	-	-	-	-	-	-	-	-
United States	553	48	257	1135	2393	2833	2916	2293	1036
Other OECD	89	2	19	-	-	-	-	-	5804
China, People's Rep.	-	-	2	-	-	-	-	-	-
Colombia	-	-	-	132	312	246	168	181	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	1	90	574	106	19	10	-
Former Soviet Union ⁴	20	177	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	49	1030	924	1754	734	1218
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	1725	1252	-	26	350	109	875	325	-
Steam coal	10430	11874	23340	29953	37932	46529	44030	46683	43098
Australia	763	1094	301	768	1529	1578	350	2831	4069
Canada	428	45	-	172	587	746	1578	1050	846
Czech Republic	152	248	1061	12	15	283	354	350	-
Germany	-	-	-	-	-	-	-	-	-
Poland	2041	2583	6744	7924	5835	4326	3291	2463	2451
United Kingdom	554	284	37	-	1	-	5	8	4
United States	399	689	432	132	3321	7548	7765	5186	6182
Other OECD	637	637	1236	64	137	148	524	319	135
China, People's Rep.	21	8	67	-	-	-	14	16	12
Colombia	-	128	2719	2937	7548	7885	7360	6876	8054
Indonesia	-	38	149	-	-	-	-	-	-
South Africa	1108	4512	4577	8215	2714	3026	5070	2603	1251
Former Soviet Union ⁴	96	157	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	937	7497	10104	10905	12146	13998	15029
<i>Other FSU</i>	x	x	-	-	-	-	86	56	50
Venezuela	-	-	341	-	-	-	-	-	-
Viet Nam	-	-	114	-	-	-	-	-	-
Non-specified/other	4231	1451	4625	2232	6141	10084	5487	10927	5015
Lignite	4791	2083	1796	9	-	18	13	20	26

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

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6. Coking coal exports by destination¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	13354	4002	3	-	6	6	5	-	-
Total OECD	12335	3902	3	-	6	6	5	-	-
Australia	-	-	-	-	-	-	-	-	-
Austria	213	-	1	-	-	-	-	-	-
Belgium	1897	717	1	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Chile	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-
France	5020	1443	1	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-	-
Italy	2480	859	-	-	-	-	-	-	-
Japan	375	-	-	-	-	-	-	-	-
Korea	-	-	-	-	-	-	-	-	-
Latvia	x	-	-	-	-	-	-	-	-
Luxembourg	286	-	-	-	-	-	-	-	-
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	975	465	-	-	-	-	-	-	-
New Zealand	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	6	5	4	-	-
Portugal	-	-	-	-	-	-	-	-	-
Slovak Republic	-	-	-	-	-	-	-	-	-
Slovenia	x	-	-	-	-	-	-	-	-
Spain	447	415	-	-	-	-	-	-	-
Sweden	234	-	-	-	-	-	-	-	-
Switzerland	18	3	-	-	-	1	1	-	-
Turkey	89	-	-	-	-	-	-	-	-
United Kingdom	198	-	-	-	-	-	-	-	-
United States	103	-	-	-	-	-	-	-	-
Total non-OECD	1019	100	-	-	-	-	-	-	-
Brazil	15	-	-	-	-	-	-	-	-
China ³	-	-	-	-	-	-	-	-	-
Chinese Taipei	-	-	-	-	-	-	-	-	-
Egypt	-	100	-	-	-	-	-	-	-
India	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	-
Oth. Africa & Mid. East	520	-	-	-	-	-	-	-	-
Oth. non-OECD Americas	5	-	-	-	-	-	-	-	-
Other Asia & Oceania	-	-	-	-	-	-	-	-	-
Other non-OECD Europe and Eurasia	479	-	-	-	-	-	-	-	-
Non-specified/Other	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

GERMANY

7. Steam coal exports by destination¹

(thousand tonnes)

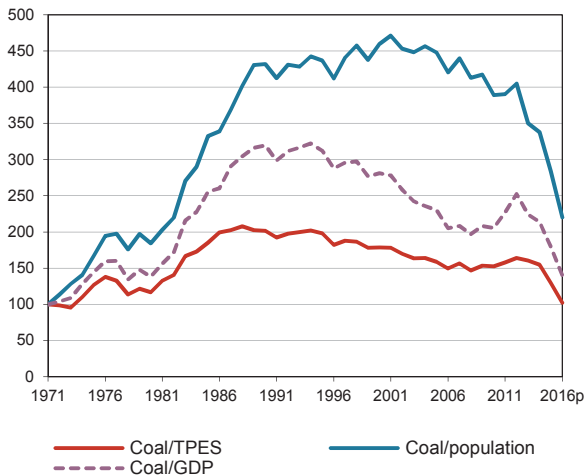
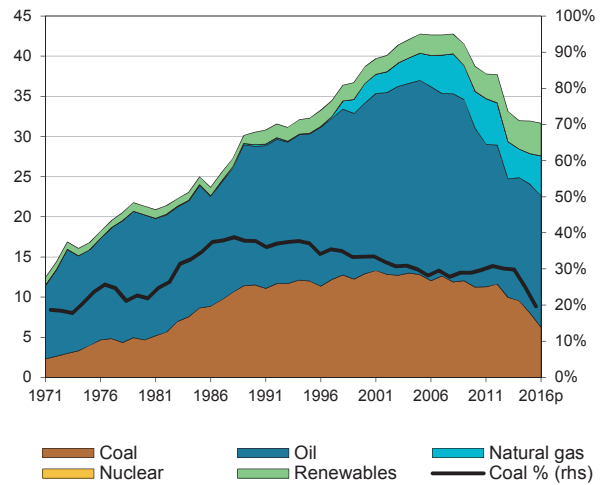
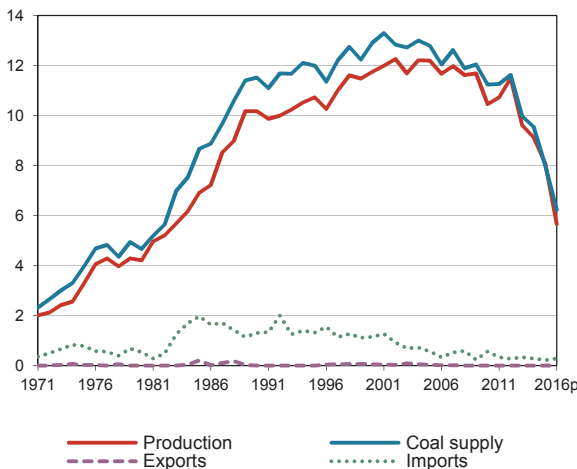
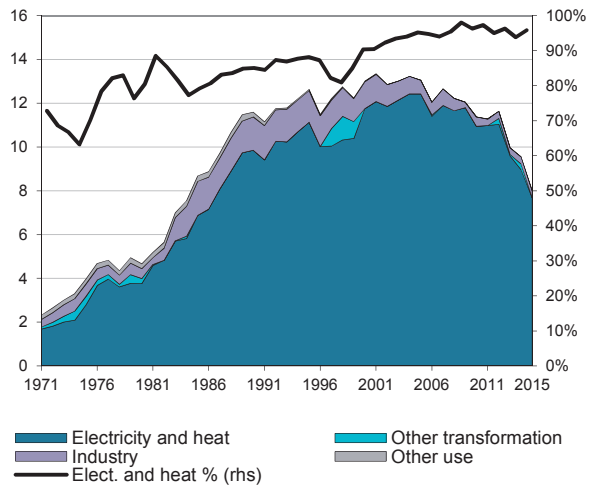
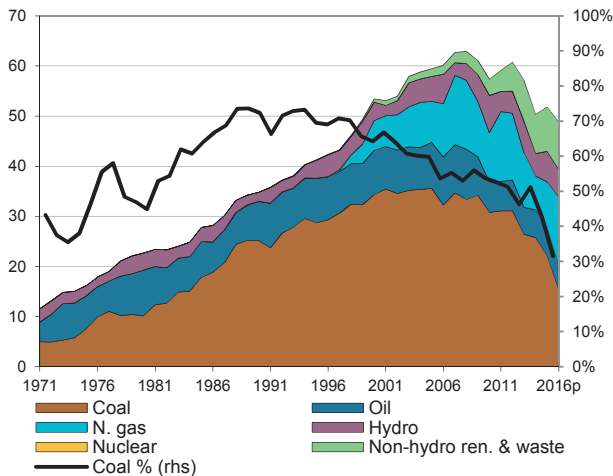
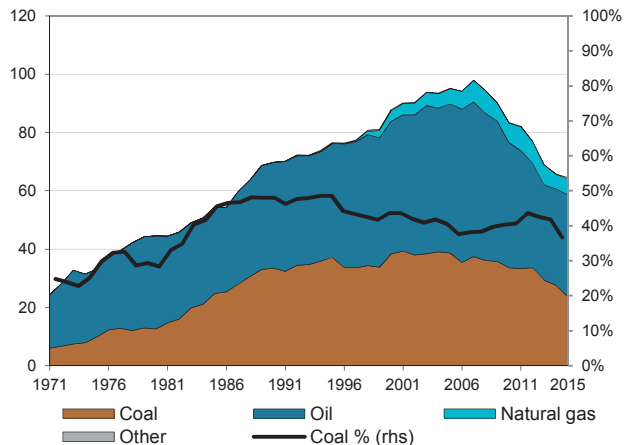
	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	5737	1510	276	255	247	245	203	179	278
Total OECD	5381	1186	275	252	41	224	45	56	142
Australia	-	-	-	-	-	-	-	-	-
Austria	15	6	98	9	3	3	8	3	3
Belgium	2123	678	82	78	5	153	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Chile	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	2	1	-	2	1	2
Denmark	944	3	-	1	1	3	5	7	11
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-
France	1574	81	75	74	-	30	1	-	-
Germany	-	-	-	-	-	-	-	-	-
Greece	-	-	1	-	-	-	-	-	-
Hungary	-	-	-	-	1	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-
Ireland	7	5	-	-	-	-	-	-	-
Israel	-	-	-	5	-	-	-	-	-
Italy	32	28	6	-	-	-	-	-	-
Japan	-	-	-	-	-	-	-	-	-
Korea	-	-	-	-	-	-	-	-	-
Latvia	x	-	-	-	-	-	-	-	-
Luxembourg	14	1	-	-	1	-	-	-	-
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	467	48	3	3	2	12	16	33	93
New Zealand	-	-	-	-	-	-	-	-	-
Norway	18	45	-	-	-	-	-	-	1
Poland	-	1	-	75	2	2	4	5	29
Portugal	6	-	-	-	-	-	-	-	-
Slovak Republic	-	-	-	2	1	-	-	-	-
Slovenia	x	-	-	1	2	-	-	1	-
Spain	-	42	3	-	-	1	-	-	-
Sweden	38	5	1	-	3	-	-	1	-
Switzerland	60	38	5	1	10	20	8	4	3
Turkey	32	-	-	-	4	-	1	1	-
United Kingdom	51	205	1	1	5	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Total non-OECD	53	324	-	1	1	15	-	-	15
Brazil	-	5	-	-	-	-	-	-	-
China ³	-	-	-	-	-	-	-	-	-
Chinese Taipei	-	-	-	-	-	-	-	-	-
Egypt	-	-	-	-	-	-	-	-	-
India	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	15
Oth. Africa & Mid. East	-	3	-	-	-	1	-	-	-
Oth. non-OECD Americas	-	-	-	-	-	-	-	-	-
Other Asia & Oceania	-	-	-	1	1	2	-	-	-
Other non-OECD Europe and Eurasia	53	316	-	-	-	12	-	-	-
Non-specified/Other	303	-	1	2	205	6	158	122	121

1. Please refer to the explanatory notes and definitions in Part I. Steam coal includes all sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

GREECE¹

Figure 1: Coal supply indicators (1971 = 100)

Figure 2: TPES by fuel (Mtce)

Figure 3: Primary coal supply (Mtce)

Figure 4: Coal consumption (Mtce)

Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)


1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

GREECE

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	2.4	4.2	10.2	11.7	10.5	9.1	8.1	5.7	8.8	-0.9
Imports	0.7	0.5	1.3	1.2	0.6	0.3	0.2	0.3	4.0	-6.8
Exports	-0.0	-	-	-0.1	-	-0.0	-	-0.0	-	-
Stock changes	-0.1	-0.1	0.0	0.1	0.2	0.2	-0.3	0.3		
Primary supply	3.0	4.7	11.5	12.9	11.2	9.6	8.0	6.2	8.2	-1.4
Statistical differences	-0.0	-0.0	0.1	0.1	0.1	-0.3	-0.0	..		
Total transformation	-2.1 e	-3.9 e	-9.9	-11.8	-10.9	-9.0	-7.7	..	9.5	-1.0
Electricity and heat gen.	-2.0	-3.8	-9.8	-11.8	-10.9	-9.0	-7.7	..	9.8	-1.0
<i>Main activity producers</i> ³	-2.0	-3.8	-9.8	-11.8	-10.9	-9.0	-7.7	..	9.8	-1.0
<i>Autoproducers</i>	-	-	-	-	-	-	-	..	-	-
Gas works	-0.0	-0.0	0.0	-	-	-	-	..	-	-
Coal transformation ⁴	-0.1 e	-0.1 e	-0.0	-0.0	-	-	-	..	-6.3	-
<i>BKB plants</i>	0.0	0.0	-0.0	-0.0	-	-	-	..	-	-
<i>Blast furnaces</i>	-0.1 e	-0.1 e	-	-	-	-	-	..	-	-
<i>Coke ovens</i>	0.0	-0.1	-	-	-	-	-	..	-	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-0.1	-0.1	-	-	-	-	-	..	-	-
Losses	-0.0	-0.0	-0.0	-	-	-	-	..		
Final consumption ⁶	0.7	0.7	1.7	1.3	0.4	0.3	0.3	..	5.1	-6.5
Industry ⁷	0.5	0.5	1.5	1.2	0.4	0.3	0.3	..	6.4	-6.2
<i>Iron and steel</i>	0.2	0.2	-	-	-	-	-	..	-	-
<i>Chemical</i>	0.0	0.0	0.1	-	-	-	-	..	5.6	-
<i>Non-metallic minerals</i>	0.0	0.0	1.2	1.0	0.2	0.1	0.1	..	36.6	-10.7
<i>Paper, pulp and print</i>	-	-	0.0	-	-	-	-	..	-	-
<i>Other industry</i> ⁸	0.3	0.3	0.3	0.2	0.2	0.2	0.2	..	-0.1	-0.3
Transport ⁹	0.0	0.0	0.0	-	-	-	-	..	-	-
Other	0.1	0.1	0.0	0.0	0.0	0.0	0.0	..	-1.8	-
<i>Comm. and pub. services</i>	0.0	0.0	0.0	-	-	-	-	..	-	-
<i>Residential</i>	0.1	0.1	0.0	0.0	0.0	0.0	0.0	..	-3.8	-
<i>Other sectors</i> ¹⁰	-	-	0.0	0.0	-	0.0	0.0	..	-	-
Non-energy use	0.1	0.1	0.2	-	-	-	-	..	1.8	-
Electricity gen. - TWh	5.3	10.2	25.2	34.3	30.8	25.7	22.1	15.4	9.7	-0.5

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

GREECE

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	22.11	53.43	65.69	58.32	54.69	52.15	44.55	7.63	-0.72
Total electricity and heat	19.83	50.53	63.87	57.81	54.29	51.63	44.02	8.11	-0.55
<i>Main activity producers</i>	19.83	50.53	63.87	57.81	54.29	51.63	44.02	8.11	-0.55
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	0.66	0.35	0.24	-	-	-	-	-5.14	-
Coke ovens/Liquefaction ³	0.21	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	0.02	-	-	-	-	-	-	-	-
Industry	0.49	1.89	1.50	0.48	0.38	0.49	0.47	11.85	-5.39
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	0.21	0.20	-	-	-	-	-	-0.25	-
<i>Non-metallic minerals</i>	-	1.31	1.05	0.27	0.10	0.11	0.08	-	-10.54
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.29	0.38	0.45	0.21	0.28	0.38	0.39	2.40	0.09
Other sectors ⁴	0.00	0.08	0.08	0.03	0.02	0.05	0.05	31.33	-1.74
Non-energy use	0.83	0.58	-	-	-	-	-	-2.96	-
Steam coal	0.15	1.38	1.12	0.61	0.30	0.27	0.28	20.18	-6.17
Total electricity and heat	-	-	0.01	0.16	0.00	-	-	-	-
<i>Main activity producers</i>	-	-	0.01	0.16	0.00	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	0.02	-	-	-	-	-	-	-	-
Industry	0.13	1.38	1.12	0.46	0.30	0.29	0.28	21.66	-6.16
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	1.29	1.05	0.27	0.10	0.11	0.08	-	-10.49
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.13	0.09	0.07	0.19	0.20	0.18	0.20	-3.54	3.48
Other sectors ⁴	0.00	0.00	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	0.21	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	0.21	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

GREECE

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	21.74	52.05	64.56	57.70	54.39	51.88	44.27	7.55	-0.65
Total electricity and heat	19.83	50.53	63.86	57.66	54.29	51.63	44.02	8.11	-0.55
<i>Main activity producers</i>	19.83	50.53	63.86	57.66	54.29	51.63	44.02	8.11	-0.55
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	0.66	0.35	0.24	-	-	-	-	-5.14	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.36	0.52	0.38	0.02	0.08	0.20	0.19	2.96	-3.85
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	0.21	0.20	-	-	-	-	-	-0.25	-
<i>Non-metallic minerals</i>	-	0.02	0.00	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.16	0.30	0.38	0.02	0.08	0.20	0.19	5.46	-1.74
Other sectors ³	-	0.08	0.08	0.03	0.02	0.05	0.05	-	-1.69
Non-energy use	0.83	0.58	-	-	-	-	-	-2.96	-
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

GREECE

3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change	
								78-90	90-15
Mtce:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-	-
Lignite	3.97	10.17	11.75	12.20	10.45	8.11	5.65	8.16	-0.90
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	7.49	-0.46
Lignite	21.82	51.90	63.89	69.40	56.52	46.25	32.26	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	0.40	1.31	1.16	0.57	0.57	0.33	0.28	0.23	0.29
Bituminous coal ⁴	0.12	1.28	1.16	0.56	0.57	0.32	0.28	0.23	0.29
Coking coal	0.21	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	0.01	0.01	0.00	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.07	0.03	0.00	0.00	0.00	-	-	-	-
Total exports	0.06	-	0.06	0.04	-	0.01	0.01	-	0.01
Bituminous coal ⁴	-	-	0.05	0.01	-	0.01	0.01	-	0.01
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	0.00	-	-	0.00	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.06	-	-	0.03	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

GREECE

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	349	1380	1245	646	651	441	336	257	327
Coking coal	213	-	-	-	-	-	-	-	-
Australia	159	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	54	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Steam coal	136	1380	1245	646	617	344	310	257	327
Australia	48	-	110	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	1	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	75	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	35	-	-	47	-	-	-	-
Other OECD	-	4	-	71	51	-	-	-	-
China, People's Rep.	-	-	119	-	-	-	-	-	-
Colombia	-	-	-	-	76	64	-	-	-
Indonesia	-	-	205	63	-	-	-	-	-
South Africa	-	1017	447	132	45	71	-	44	-
Former Soviet Union ⁴	12	324	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	321	380	398	71	167	165	318
<i>Other FSU</i>	x	x	43	-	-	138	143	48	9
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	34	97	26	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

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Figure 1: Coal supply indicators (1971 = 100)

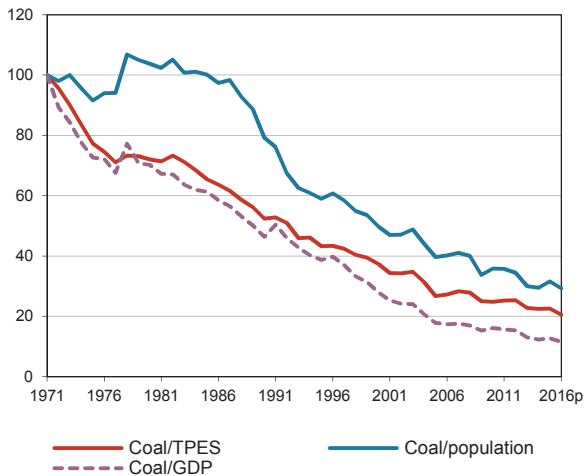


Figure 2: TPES by fuel (Mtce)

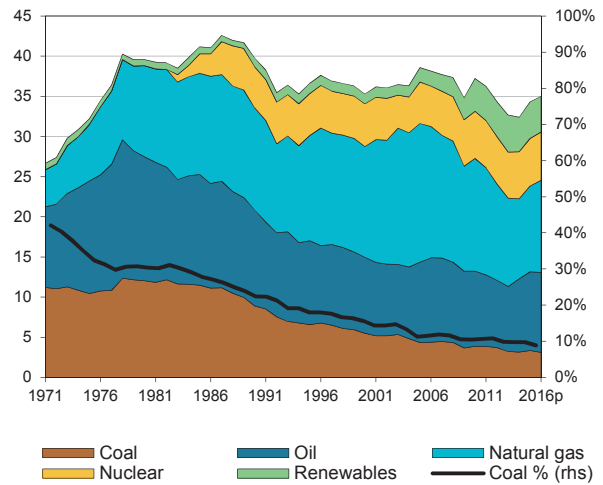


Figure 3: Primary coal supply (Mtce)

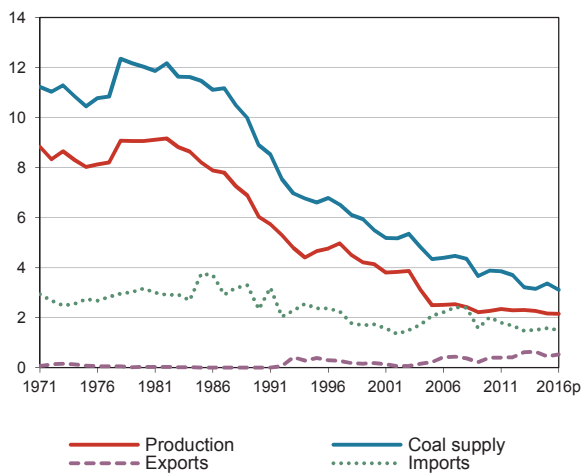


Figure 4: Coal consumption (Mtce)

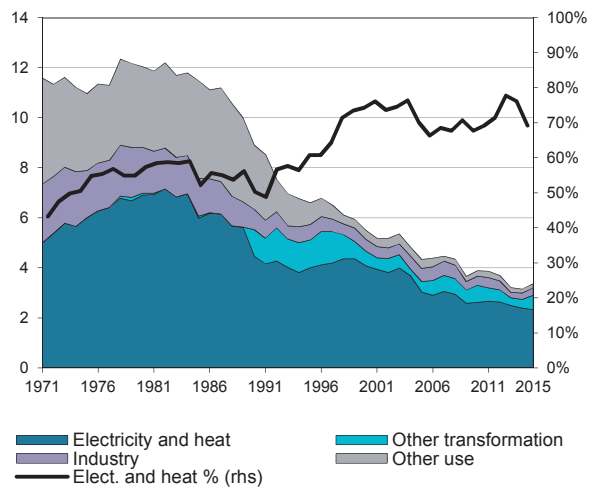
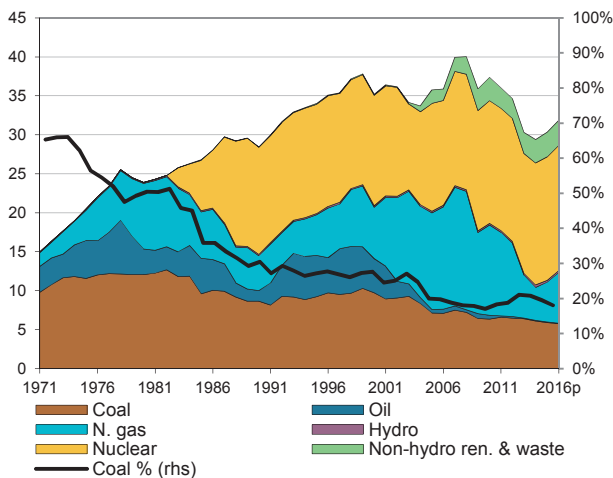
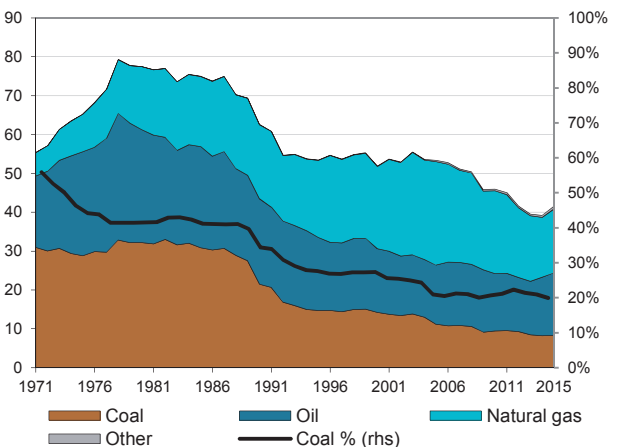


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

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1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	8.6	9.1	6.0	4.1	2.3	2.3	2.2	2.2	-2.1	-4.0
Imports	2.5	3.2	2.3	1.7	2.0	1.5	1.6	1.5	-0.4	-1.5
Exports	-0.2	-0.0	-0.0	-0.2	-0.4	-0.6	-0.4	-0.5	-28.6	31.1
Stock changes	0.3	-0.2	0.5	-0.2	-0.0	0.0	0.1	-0.0		
Primary supply	11.3	12.0	8.9	5.5	3.9	3.2	3.4	3.1	-1.4	-3.8
Statistical differences	1.2	0.6	-0.8	0.0	-0.0	0.1	-0.0	..		
Total transformation	-6.5 e	-7.5 e	-4.7 e	-4.6 e	-3.1 e	-2.7 e	-2.8	..	-1.9	-2.1
Electricity and heat gen.	-5.8	-6.9	-4.5	-4.1	-2.6	-2.4	-2.3	..	-1.5	-2.6
<i>Main activity producers</i> ³	-5.4	-6.5	-4.2	-4.1	-2.6	-2.4	-2.3	..	-1.4	-2.4
<i>Autoproducers</i>	-0.4	-0.5	-0.2	-	-	-0.0	-0.0	..	-3.7	-9.7
Gas works	0.3	0.2	-	-	-	-	-	..	-	-
Coal transformation ⁴	-1.0 e	-0.8 e	-0.2 e	-0.5 e	-0.5 e	-0.3 e	-0.4	..	-9.1	3.1
<i>BKB plants</i>	0.4	0.4	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-0.9 e	-0.9 e	-0.5 e	-0.4 e	-0.4 e	-0.3 e	-0.4	..	-3.2	-1.2
<i>Coke ovens</i>	-0.4	-0.3	-0.1	-0.2	-0.1	-0.1	-0.0	..	-5.3	-5.0
<i>Patent fuel plants</i>	-0.1	0.0	0.5	0.0	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	..	-0.2	0.7
Losses	-0.0	-0.0	-0.0	-	-0.0	-0.0	-0.0	..		
Final consumption ⁶	5.8	5.1	3.4	0.8	0.6	0.4	0.5	..	-3.2	-7.6
Industry ⁷	2.2	1.8	0.8	0.5	0.4	0.3	0.3	..	-5.8	-3.8
<i>Iron and steel</i>	0.9 e	0.9 e	0.6 e	0.4 e	0.3 e	0.2 e	0.2	..	-2.8	-3.2
<i>Chemical</i>	0.2	0.1	0.0	-	0.0	-	-	..	-9.1	-
<i>Non-metallic minerals</i>	0.5	0.3	0.1	0.1	0.1	0.0	0.0	..	-9.8	-1.9
<i>Paper, pulp and print</i>	0.0	0.0	0.0	0.0	-	-	-	..	-	-
<i>Other industry</i> ⁸	0.7	0.5	0.1	0.0	0.0	0.0	0.0	..	-8.9	-9.7
Transport ⁹	0.5	0.2	0.0	0.0	-	-	-	..	-30.3	-
Other	3.0	3.0	2.6	0.4	0.2	0.1	0.1	..	-1.0	-11.0
<i>Comm. and pub. services</i>	0.7	0.3	0.1	0.0	0.0	0.0	0.0	..	-9.2	-12.9
<i>Residential</i>	2.2	2.7	2.4	0.3	0.2	0.1	0.1	..	0.5	-10.9
<i>Other sectors</i> ¹⁰	0.2	0.1	0.0	0.0	0.0	-	0.0	..	-8.9	-
Non-energy use	-	-	-	-	-	0.0	0.0	..	-	-
Electricity gen. - TWh	11.6	12.0	8.7	9.7	6.4	6.1	5.9	5.8	-1.7	-1.5

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

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2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	27.96	20.31	15.17	10.99	11.25	10.72	10.71	-2.63	-2.53
Total electricity and heat	18.29	14.53	13.02	9.11	9.44	8.97	8.90	-1.90	-1.94
<i>Main activity producers</i>	17.61	14.34	13.02	9.11	9.44	8.97	8.90	-1.70	-1.89
<i>Autoproducers</i>	0.68	0.20	-	-	-	-	-	-9.75	-
Patent fuel/BKB plants	1.42	1.83	0.10	-	-	-	-	2.14	-
Coke ovens/Liquefaction ³	1.38	0.96	1.28	1.41	1.28	1.29	1.33	-3.04	1.33
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	2.67	0.65	0.14	0.07	0.04	0.06	0.07	-11.15	-8.51
<i>Iron and steel</i>	0.28	0.08	-	-	0.00	-	-	-9.64	-
<i>Chemical</i>	0.27	0.09	-	-	-	-	-	-8.75	-
<i>Non-metallic minerals</i>	1.06	0.20	0.14	0.06	0.03	0.05	0.06	-13.03	-4.79
<i>Paper, pulp and print</i>	0.06	0.01	0.00	-	-	-	-	-17.57	-
<i>Other industry</i>	1.00	0.27	0.01	0.01	0.01	0.01	0.01	-10.39	-11.70
Other sectors ⁴	3.50	2.29	0.64	0.39	0.50	0.40	0.40	-3.50	-6.70
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	3.34	1.44	0.39	0.65	0.31	0.24	0.22	-6.81	-7.29
Total electricity and heat	1.62	-	0.04	0.37	0.15	0.10	0.08	-	-
<i>Main activity producers</i>	1.56	-	0.04	0.37	0.15	0.10	0.08	-	-
<i>Autoproducers</i>	0.06	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	0.33	0.93	0.03	-	-	-	-	8.97	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.38	0.10	0.11	0.06	0.04	0.06	0.06	-10.29	-2.11
<i>Iron and steel</i>	0.19	0.05	-	-	0.00	-	-	-9.95	-
<i>Chemical</i>	0.02	0.01	-	-	-	-	-	-7.85	-
<i>Non-metallic minerals</i>	0.07	0.01	0.11	0.06	0.03	0.05	0.05	-13.19	5.62
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.10	0.03	-	0.01	0.01	0.01	0.01	-9.91	-4.03
Other sectors ⁴	0.87	0.40	0.21	0.22	0.12	0.08	0.07	-6.23	-6.63
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	1.74	0.97	1.28	1.42	1.28	1.29	1.33	-4.74	1.26
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	1.38	0.96	1.28	1.41	1.28	1.29	1.33	-3.04	1.33
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.01	0.00	-	-	-	-	-	-10.91	-
<i>Iron and steel</i>	0.01	0.00	-	-	-	-	-	-9.91	-
<i>Chemical</i>	0.00	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	0.16	0.01	-	-	-	-	-	-20.46	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

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2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	22.88	17.90	13.50	8.92	9.66	9.19	9.16	-2.02	-2.64
Total electricity and heat	16.68	14.53	12.97	8.74	9.28	8.87	8.82	-1.14	-1.98
<i>Main activity producers</i>	16.06	14.34	12.97	8.74	9.28	8.87	8.82	-0.94	-1.92
<i>Autoproducers</i>	0.62	0.20	-	-	-	-	-	-9.07	-
Patent fuel/BKB plants	1.09	0.90	0.07	-	-	-	-	-1.55	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	2.28	0.54	0.03	0.01	0.00	0.00	0.01	-11.31	-15.11
<i>Iron and steel</i>	0.08	0.03	-	-	-	-	-	-8.93	-
<i>Chemical</i>	0.25	0.08	-	-	-	-	-	-8.81	-
<i>Non-metallic minerals</i>	0.99	0.19	0.02	0.01	0.00	0.00	0.01	-13.02	-12.28
<i>Paper, pulp and print</i>	0.06	0.01	0.00	-	-	-	-	-17.57	-
<i>Other industry</i>	0.91	0.24	0.01	-	0.00	-	0.00	-10.44	-17.44
Other sectors ³	2.48	1.88	0.43	0.17	0.38	0.32	0.33	-2.31	-6.69
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

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3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change	
								78-90	90-15
Mtce:									
Coking coal	0.87	0.17	-	-	-	-	-	-12.69	-
Steam coal	1.08	0.14	-	-	-	-	-	-15.56	-
Lignite	7.12	5.72	4.13	2.50	2.28	2.17	2.16	-1.80	-3.81
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:								-12.69	-
Coking coal	0.86	0.17	-	-	-	-	-	-15.56	-
Steam coal	2.50	0.33	-	-	-	-	-	-2.24	-2.48
Lignite	22.74	17.33	14.03	9.57	9.11	9.26	9.22	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	2.96	2.33	1.73	2.08	2.02	1.48	1.52	1.58	1.50
Bituminous coal ⁴	-	-	-	0.47	0.26	0.03	0.03	0.06	0.12
Coking coal	0.86	0.64	1.26	0.96	1.57	1.30	1.33	1.33	1.24
Sub-bituminous coal	0.60	0.65	0.33	0.43	0.17	0.14	0.11	0.11	0.07
Lignite	-	0.14	0.13	-	-	-	-	0.03	0.02
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	1.51	0.90	0.01	0.22	0.02	0.02	0.05	0.06	0.05
Total exports	0.05	0.00	0.19	0.22	0.40	0.62	0.64	0.45	0.53
Bituminous coal ⁴	-	-	-	0.00	0.01	-	-	-	-
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	0.00	-	-	-	-	-	-	-
Lignite	0.02	-	0.00	0.11	0.00	0.06	0.11	0.09	0.05
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.03	-	0.19	0.10	0.39	0.56	0.53	0.36	0.48

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

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5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	1630	1763	1891	2152	2059	1564	1542	1597	1510
Coking coal	817	610	1234	898	1460	1284	1321	1310	1225
Australia	-	-	-	115	-	-	-	78	54
Canada	-	-	-	-	-	171	261	140	186
Czech Republic	-	-	800	230	380	132	250	232	369
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	251	217	129	63	39	121	76
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	51	52	840	918	727	739	531
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	46	-	44	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	817 e	610 e	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	132	284	65	-	-	-	9
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Steam coal	813	890	430	1254	599	280	221	224	240
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	42	408	292	193	149	123	110
Germany	-	-	-	-	17	14	16	24	15
Poland	-	-	294	263	59	23	15	36	91
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	-	1	-	-	-	2	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	94	582	220	50	41	39	24
<i>Other FSU</i>	x	x	-	-	11	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	813	890	-	-	-	-	-	-	-
Lignite	-	263	227	-	-	-	-	63	45

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

ICELAND¹

Figure 1: Coal supply indicators (1971 = 100)

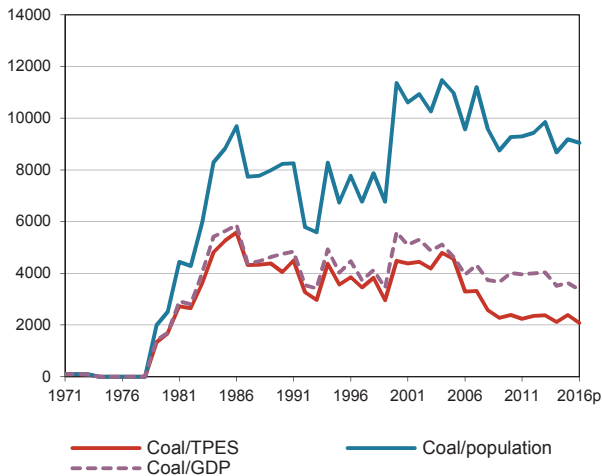


Figure 2: TPES by fuel (Mtce)

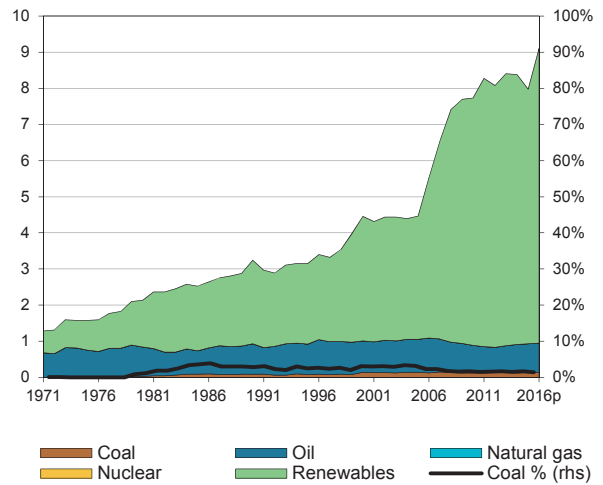


Figure 3: Primary coal supply (Mtce)

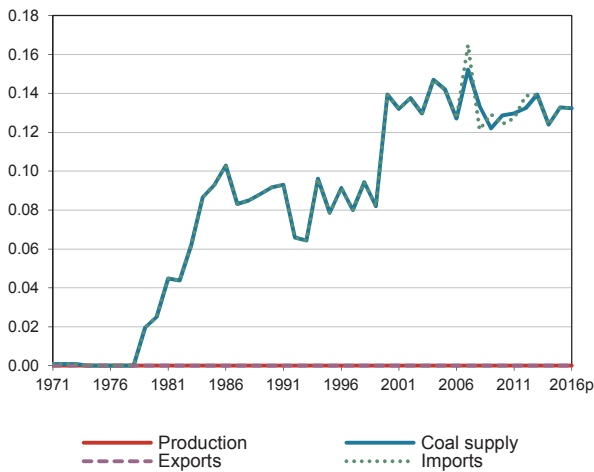


Figure 4: Coal consumption (Mtce)

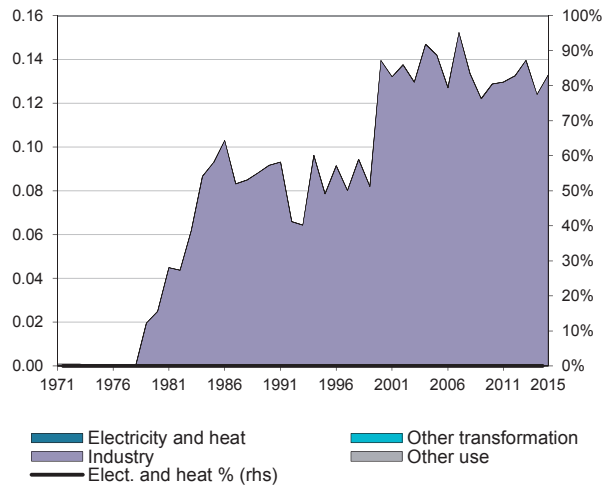
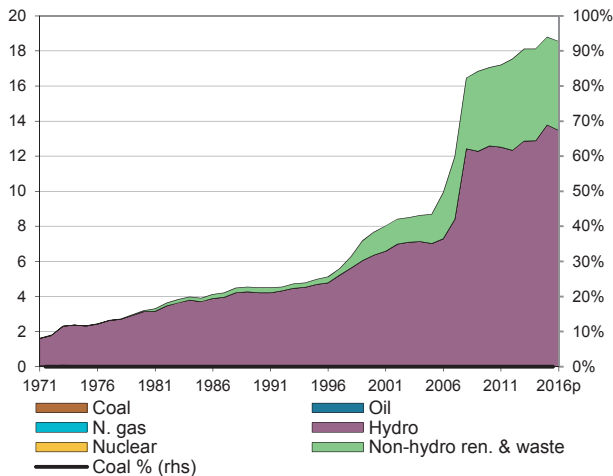
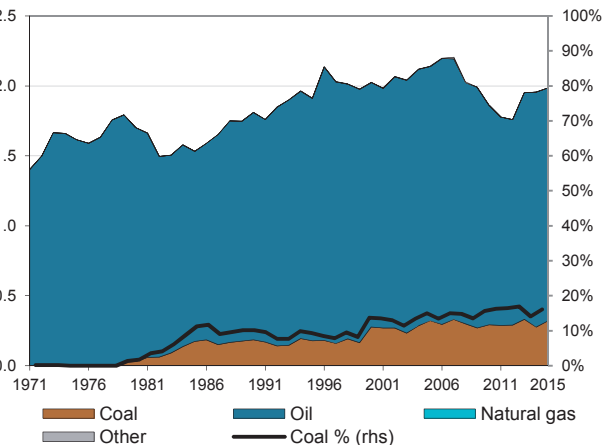


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

ICELAND

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	-	-	-	-	-	-	-	-	-	-
Imports	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	31.3	1.5
Exports	-	-	-	-	-	-	-	-	-	-
Stock changes	-	-	-	-	0.0	-	-	-	-	-
Primary supply	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	31.3	1.5
Statistical differences	-	-	-	-	-	-	-	..	-	-
Total transformation	-	-	-	-	-	-	-	..	-	-
Electricity and heat gen.	-	-	-	-	-	-	-	..	-	-
<i>Main activity producers</i> ³	-	-	-	-	-	-	-	..	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	..	-	-
Gas works	-	-	-	-	-	-	-	..	-	-
Coal transformation ⁴	-	-	-	-	-	-	-	..	-	-
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-	-	-	-	-	-	-	..	-	-
<i>Coke ovens</i>	-	-	-	-	-	-	-	..	-	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-	-	-	-	-	-	-	..	-	-
Losses	-	-	-	-	-	-	-	..	-	-
Final consumption ⁶	0.0	0.0	0.1	0.1	0.1	0.1	0.1	..	31.3	1.5
Industry ⁷	-	0.0	0.1	0.1	0.1	0.1	0.1	..	-	1.5
<i>Iron and steel</i>	-	0.0	0.1	0.1	0.1	0.1	0.1	..	-	2.1
<i>Chemical</i>	-	-	-	-	-	-	-	..	-	-
<i>Non-metallic minerals</i>	-	-	0.0	0.0	0.0	-	-	..	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	..	-	-
<i>Other industry</i> ⁸	-	-	-	-	-	-	-	..	-	-
Transport ⁹	-	-	-	-	-	-	-	..	-	-
Other	0.0	-	-	-	-	-	-	..	-	-
<i>Comm. and pub. services</i>	-	-	-	-	-	-	-	..	-	-
<i>Residential</i>	0.0	-	-	-	-	-	-	..	-	-
<i>Other sectors</i> ¹⁰	-	-	-	-	-	-	-	..	-	-
Non-energy use	-	-	-	-	-	-	-	..	-	-
Electricity gen. - TWh	-	-	-	-	-	-	-	-	-	-

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

ICELAND

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	-	0.07	0.10	0.11	0.12	0.10	0.12	-	2.34
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	0.07	0.10	0.11	0.12	0.10	0.12	-	2.34
<i>Iron and steel</i>	-	0.05	0.09	0.10	0.12	0.10	0.12	-	3.26
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	0.01	0.01	0.01	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	0.00	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	-	0.07	0.10	0.11	0.12	0.10	0.12	-	2.34
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	0.07	0.10	0.11	0.12	0.10	0.12	-	2.34
<i>Iron and steel</i>	-	0.05	0.09	0.10	0.12	0.10	0.12	-	3.26
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	0.01	0.01	0.01	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	0.00	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

ICELAND

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	-	0.09	0.14	0.14	0.12	0.14	0.12	0.13	0.13
Bituminous coal ⁴	-	0.06	0.10	0.11	0.10	0.11	0.10	0.11	0.12
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	-	0.03	0.04	0.03	0.02	0.02	0.03	0.02	0.01
Total exports	-	-	-	-	-	-	-	-	-
Bituminous coal ⁴	-	-	-	-	-	-	-	-	-
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

ICELAND

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	-	65	101	117	106	120	100	116	125
Coking coal	-	-	-	-	-	-	-	-	-
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Steam coal	-	65	101	117	106	120	100	116	125
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	6	39	14	-	2	35	-
Poland	-	-	7	8	-	-	-	-	-
United Kingdom	-	13	4	-	4	-	-	-	-
United States	-	52	48	9	20	66	36	29	109
Other OECD	-	-	26	61	68	54	62	52	16
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	10	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

IRELAND¹

Figure 1: Coal supply indicators (1971 = 100)

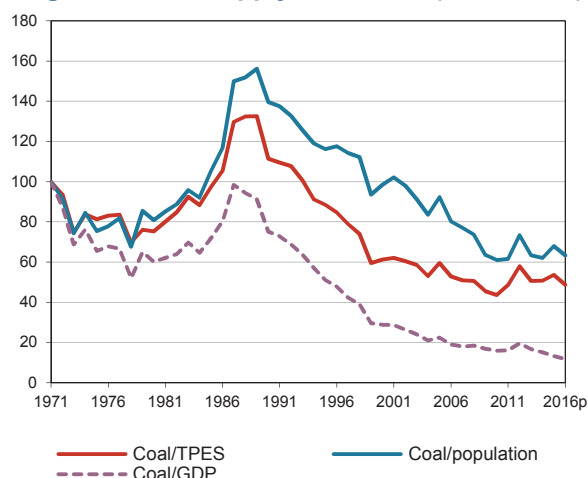


Figure 2: TPES by fuel (Mtce)

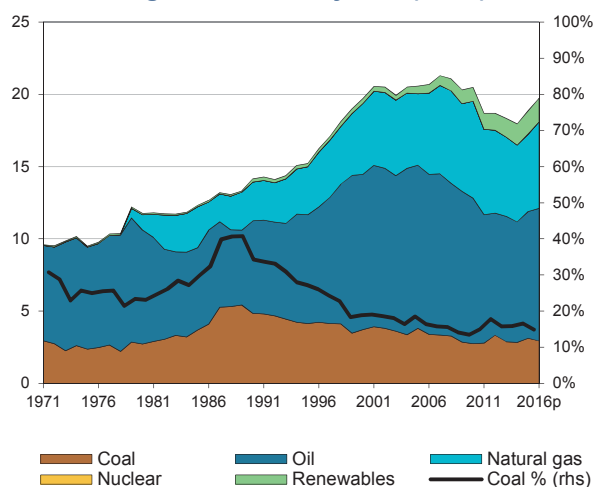


Figure 3: Primary coal supply (Mtce)

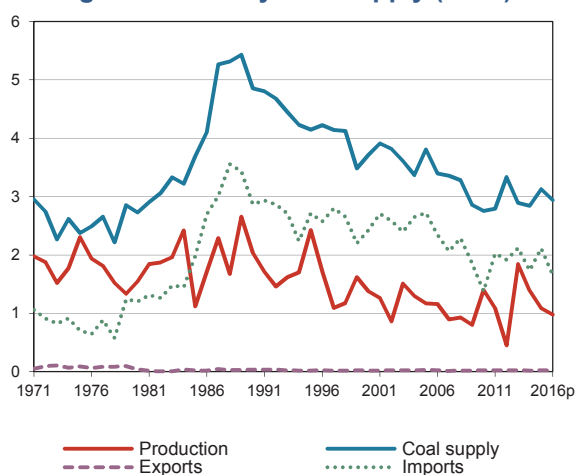


Figure 4: Coal consumption (Mtce)

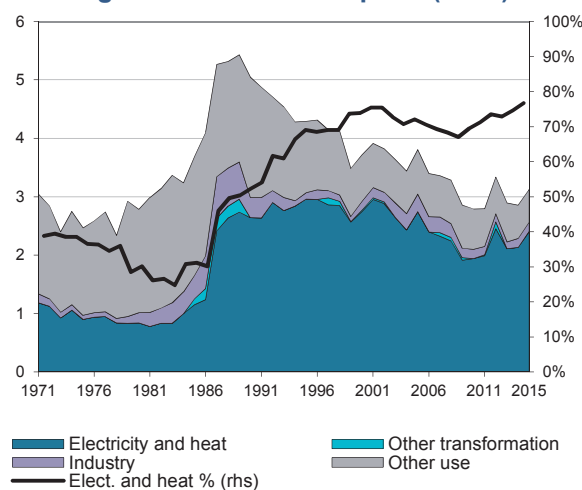
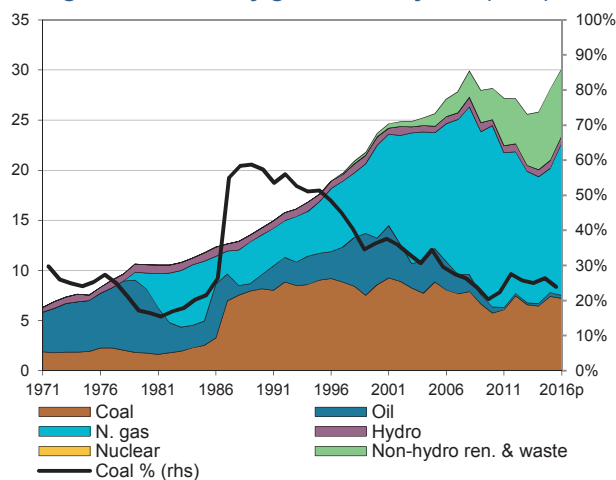
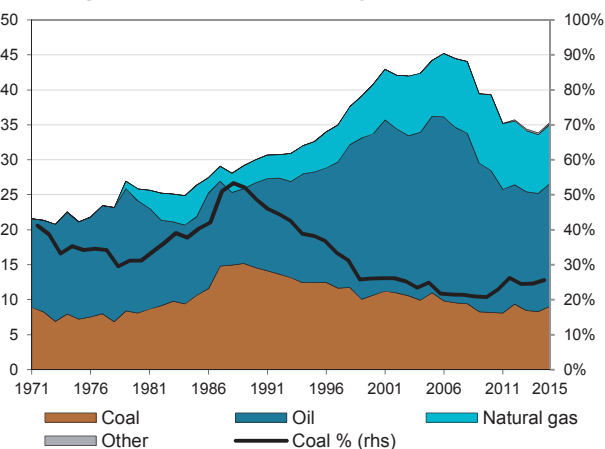


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

IRELAND

1. Coal balance¹
(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	1.5	1.5	2.0	1.4	1.4	1.4	1.1	1.0	1.7	-2.5
Imports	0.8	1.2	2.9	2.4	1.4	1.7	2.1	1.7	7.6	-1.2
Exports	-0.1	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-6.6	-
Stock changes	0.0	0.0	-0.0	-0.1	0.0	-0.3	-0.0	0.3		
Primary supply	2.3	2.7	4.9	3.7	2.8	2.8	3.1	2.9	4.6	-1.7
Statistical differences	-	-0.0	0.2	-0.0	0.1	0.1	0.0	..		
Total transformation	-0.8	-0.7	-2.7	-2.8	-2.0	-2.2	-2.4	..	7.5	-0.4
Electricity and heat gen.	-0.9	-0.8	-2.6	-2.7	-1.9	-2.1	-2.4	..	6.4	-0.4
<i>Main activity producers</i> ³	-0.9	-0.8	-2.6	-2.7	-1.9	-2.1	-2.4	..	6.3	-0.4
<i>Autoproducers</i>	-	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	..	-	-
Gas works	0.2	0.1	-	-	-	-	-	..	-	-
Coal transformation ⁴	-	0.0	-0.0	-0.0	-0.0	-0.0	-0.0	..	-	-
<i>BKB plants</i>	-	0.0	-0.0	-0.0	-0.0	-0.0	-0.0	..	-	-
<i>Blast furnaces</i>	-	-	-	-	-	-	-	..	-	-
<i>Coke ovens</i>	-	-	-	-	-	-	-	..	-	-
<i>Patent fuel plants</i>	-	-	c	c	c	c	c	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	..	-	-
Losses	-0.0	-0.0	-	-	-	-	-	..		
Final consumption ⁶	1.5	1.9	2.4	0.9	0.9	0.7	0.7	..	2.9	-4.7
Industry ⁷	0.1	0.2	0.3	0.1	0.2	0.2	0.2	..	7.7	-3.2
<i>Iron and steel</i>	0.0	0.0	0.0	-	-	-	-	..	-	-
<i>Chemical</i>	-	-	0.0	-	-	-	-	..	-	-
<i>Non-metallic minerals</i>	-	-	0.2	0.1	0.1	0.1	0.1	..	-	-1.4
<i>Paper, pulp and print</i>	-	-	-	-	0.0	-	-	..	-	-
<i>Other industry</i> ⁸	0.1	0.2	0.1	0.1	0.0	0.0	0.0	..	1.1	-4.6
Transport ⁹	-	-	-	-	-	-	-	..	-	-
Other	1.4	1.8	2.1	0.8	0.7	0.6	0.6	..	2.4	-5.1
<i>Comm. and pub. services</i>	-	0.1	0.0	0.0	-	-	-	..	-	-
<i>Residential</i>	1.4	1.7	2.0	0.8	0.7	0.6	0.6	..	2.3	-5.0
<i>Other sectors</i> ¹⁰	-	-	-	-	-	-	-	..	-	-
Non-energy use	-	-	-	-	-	-	-	..	-	-
Electricity gen. - TWh	1.8	1.7	8.2	8.6	5.7	6.5	7.4	7.2	9.2	-0.4

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

IRELAND

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	0.54	3.20	2.94	2.00	2.13	2.00	2.32	15.92	-1.28
Total electricity and heat	0.02	1.97	2.35	1.47	1.65	1.59	1.89	45.40	-0.16
<i>Main activity producers</i>	0.02	1.96	2.34	1.47	1.65	1.59	1.89	45.37	-0.15
<i>Autoproducers</i>	-	0.01	0.01	-	-	-	-	-	-
Patent fuel/BKB plants	-	c	c	c	c	c	c	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	0.03	-	-	-	-	-	-	-	-
Industry	0.04	0.34	0.17	0.17	0.12	0.16	0.16	19.75	-2.98
<i>Iron and steel</i>	-	0.01	-	-	-	-	-	-	-
<i>Chemical</i>	-	0.03	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	0.19	0.11	0.14	0.09	0.13	0.13	-	-1.55
<i>Paper, pulp and print</i>	-	-	-	0.00	-	-	-	-	-
<i>Other industry</i>	0.04	0.11	0.06	0.03	0.03	0.03	0.03	9.19	-4.77
Other sectors ⁴	0.46	1.05	0.38	0.33	0.35	0.28	0.27	7.25	-5.34
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	0.54	3.18	2.94	2.00	2.13	2.00	2.32	15.88	-1.27
Total electricity and heat	0.02	1.97	2.35	1.47	1.65	1.59	1.89	45.40	-0.16
<i>Main activity producers</i>	0.02	1.96	2.34	1.47	1.65	1.59	1.89	45.37	-0.15
<i>Autoproducers</i>	-	0.01	0.01	-	-	-	-	-	-
Patent fuel/BKB plants	-	c	c	c	c	c	c	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	0.03	-	-	-	-	-	-	-	-
Industry	0.04	0.33	0.17	0.17	0.12	0.16	0.16	19.33	-2.82
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	0.03	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	0.19	0.11	0.14	0.09	0.13	0.13	-	-1.55
<i>Paper, pulp and print</i>	-	-	-	0.00	-	-	-	-	-
<i>Other industry</i>	0.04	0.11	0.06	0.03	0.03	0.03	0.03	9.19	-4.77
Other sectors ⁴	0.46	1.05	0.38	0.33	0.35	0.28	0.27	7.25	-5.34
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	-	0.01	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	0.01	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	0.01	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

IRELAND

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	5.91	6.08	3.92	3.79	3.72	3.65	3.50	0.24	-2.19
Total electricity and heat	2.86	3.18	2.64	2.68	2.72	2.73	2.74	0.87	-0.59
<i>Main activity producers</i>	2.81	3.11	2.57	2.63	2.67	2.70	2.71	0.86	-0.56
<i>Autoproducers</i>	0.06	0.06	0.07	0.05	0.05	0.04	0.03	1.00	-2.73
Patent fuel/BKB plants	0.75	0.99	0.68	0.63	0.64	0.54	0.38	2.33	-3.74
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	0.00	0.00	0.00	0.00	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	0.00	0.00	0.00	0.00	-	-
Other sectors ³	2.30	1.82	0.57	0.53	0.41	0.41	0.41	-1.91	-5.81
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

IRELAND

3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change	
								78-90	90-15
Mtce:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	0.02	0.02	-	-	-	-	-	0.45	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	1.50	2.02	1.38	1.17	1.40	1.09	0.98	2.50	-2.44
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	-	-	-	-	-	-	-	1.46	-
Steam coal	0.02	0.03	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	1.82	-2.40
Peat	5.24	6.52	4.81	3.96	4.99	3.55	3.19	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	0.58	2.87	2.42	2.72	1.38	2.12	1.74	2.12	1.66
Bituminous coal ⁴	0.57	2.80	2.40	2.69	1.36	2.09	1.72	2.10	1.64
Coking coal	-	0.01	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.01	0.06	0.03	0.04	0.01	0.03	0.02	0.02	0.01
Total exports	0.08	0.03	0.01	0.01	0.01	0.01	0.01	0.02	0.01
Bituminous coal ⁴	0.05	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	0.01	-	-	-	-	-	-	-	-
Coal products ⁵	0.02	0.00	c	c	0.00	0.00	0.00	0.00	0.00

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

IRELAND

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	565	3081	2747	3024	1596	2383	1974	2394	1869
Coking coal	-	14	-	-	-	-	-	-	-
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	2	-	-	-	-	-	-	-
Poland	-	2	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	2	-	-	-	-	-	-	-
Other OECD	-	5	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	3	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Steam coal	565	3067	2747	3024	1596	2383	1974	2394	1869
Australia	6	-	292	299	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	21	-	5	-	-	-	-	-
Poland	331	430	176	288	278	235	162	111	101
United Kingdom	214	302	123	19	37	67	50	80	85
United States	-	1277	452	-	-	-	-	-	-
Other OECD	-	115	-	36	-	-	-	-	-
China, People's Rep.	-	7	-	9	-	-	-	-	-
Colombia	-	667	904	1013	1184	1912	1559	2014	-
Indonesia	-	17	327	602	-	-	-	-	-
South Africa	11	71	418	634	38	-	-	-	-
Former Soviet Union ⁴	-	15	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	9	-	-	-	-	-
Venezuela	-	5	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	3	140	55	110	59	169	203	189	1683
Lignite	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

ISRAEL¹

Figure 1: Coal supply indicators (1971 = 100)

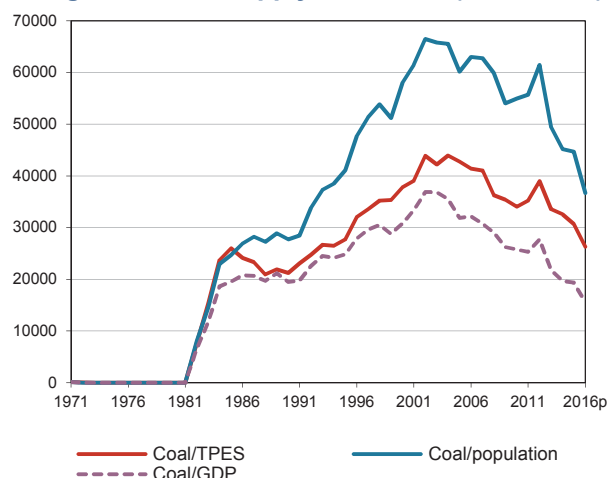


Figure 2: TPES by fuel (Mtce)

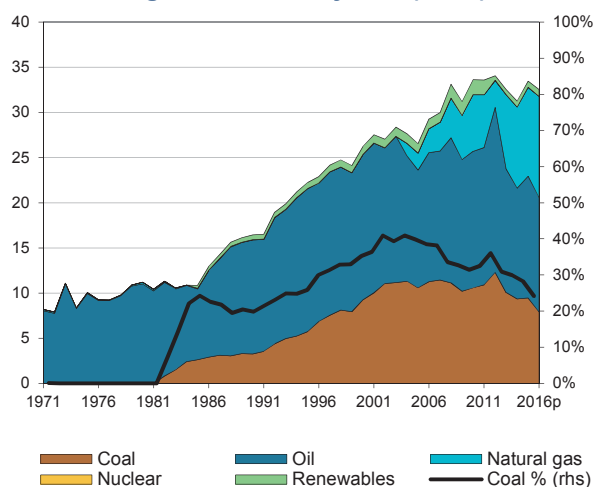


Figure 3: Primary coal supply (Mtce)

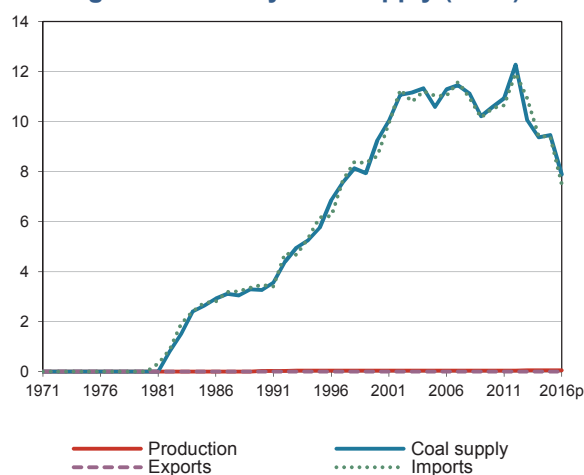


Figure 4: Coal consumption (Mtce)

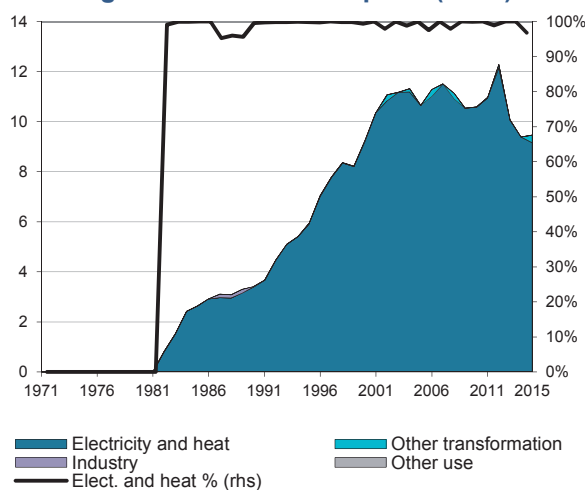
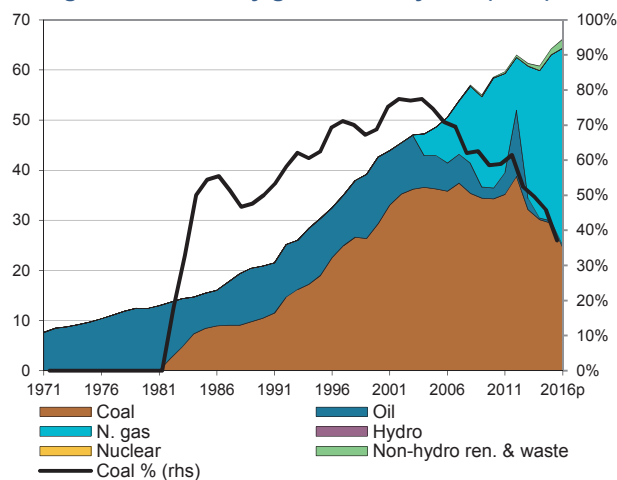
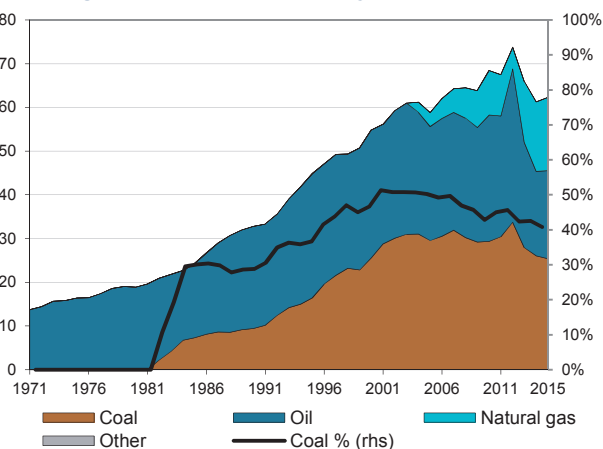


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

ISRAEL

1. Coal balance¹
(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	-	-	0.0	0.0	0.0	0.1	0.1	0.1	-	2.6
Imports	0.0	0.0	3.5	8.6	10.5	9.4	9.4	7.5	55.4	4.1
Exports	-	-	-	-	-	-	-	-	-	-
Stock changes	-	-0.0	-0.2	0.6	-	-0.1	-0.0	0.3		
Primary supply	0.0	0.0	3.3	9.2	10.6	9.4	9.5	7.9	54.9	4.3
Statistical differences	-	-	0.1	-0.0	-0.0	0.0	-0.3	..		
Total transformation	0.0	0.0	-3.4	-9.2	-10.6	-9.4	-9.2	..	-	4.0
Electricity and heat gen.	-	-	-3.4	-9.2	-10.6	-9.4	-9.2	..	-	4.0
<i>Main activity producers</i> ³	-	-	-3.4	-9.2	-10.5	-9.3	-9.1	..	-	4.0
<i>Autoproducers</i>	-	-	-	-0.0	-0.0	-0.1	-0.1	..	-	-
Gas works	-	-	-	-	-	-	-	..	-	-
Coal transformation ⁴	0.0	0.0	-	-	-	-	-	..	-	-
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	0.0	0.0	-	-	-	-	-	..	-	-
<i>Coke ovens</i>	-	-	-	-	-	-	-	..	-	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-	-	-	-	-	-	-	..	-	-
Losses	-	-	-	-	-	-	-	..		
Final consumption ⁶	0.0	0.0	0.0	0.0	-	-	-	..	-	-
Industry ⁷	0.0	0.0	0.0	0.0	-	-	-	..	-	-
<i>Iron and steel</i>	0.0	0.0	-	-	-	-	-	..	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	..	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	..	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	..	-	-
<i>Other industry</i> ⁸	-	-	0.0	0.0	-	-	-	..	-	-
Transport ⁹	-	-	-	-	-	-	-	..	-	-
Other	-	-	-	-	-	-	-	..	-	-
<i>Comm. and pub. services</i>	-	-	-	-	-	-	-	..	-	-
<i>Residential</i>	-	-	-	-	-	-	-	..	-	-
<i>Other sectors</i> ¹⁰	-	-	-	-	-	-	-	..	-	-
Non-energy use	-	-	-	-	-	-	-	..	-	-
Electricity gen. - TWh	-	-	10.5	29.4	34.3	30.1	29.4	24.5	-	4.2

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

ISRAEL

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	-	3.72	10.59	12.31	11.73	10.92	11.04	-	4.45
Total electricity and heat	-	3.70	10.22	12.30	11.73	10.94	10.67	-	4.32
<i>Main activity producers</i>	-	3.70	10.22	12.30	11.73	10.94	10.67	-	4.32
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	0.02	0.03	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	0.02	0.03	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	-	3.72	10.59	12.31	11.73	10.92	11.04	-	4.45
Total electricity and heat	-	3.70	10.22	12.30	11.73	10.94	10.67	-	4.32
<i>Main activity producers</i>	-	3.70	10.22	12.30	11.73	10.94	10.67	-	4.32
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	0.02	0.03	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	0.02	0.03	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

ISRAEL

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	0.30	0.39	0.43	0.42	0.40	0.42	-	1.31
Total electricity and heat	-	0.30	0.46	0.43	0.42	0.40	0.42	-	1.31
<i>Main activity producers</i>	-	0.30	0.27	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	0.18	0.43	0.42	0.40	0.42	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

ISRAEL

3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change 78-90	90-15
Mtce:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	0.03	0.04	0.04	0.04	0.06	0.06	-	2.55
Mt:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	1.31
Oil shale and oil sands	-	0.30	0.39	0.43	0.43	0.42	0.42	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	0.00	3.48	8.62	11.03	10.54	10.93	9.40	9.40	7.49
Bituminous coal ⁴	-	3.48	8.62	11.03	10.54	10.81	9.40	9.40	7.49
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	0.12	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.00	-	-	-	-	-	-	-	-
Total exports	-	-	-	-	-	-	-	-	-
Bituminous coal ⁴	-	-	-	-	-	-	-	-	-
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

ISRAEL

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	-	3998	9917	12685	12310	12815	11021	11042	8795
Coking coal	-	-	-	-	-	-	-	-	-
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Steam coal	-	3998	9917	12685	12310	12815	11021	11042	8795
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	4234	5229	5891	5846	4546
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	3145	3848	2496	2558	1003
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	1931	2621	2460	2202	2492
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	3998	9917	12685	3000	1117	174	436	754
Lignite	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

ITALY¹

Figure 1: Coal supply indicators (1971 = 100)

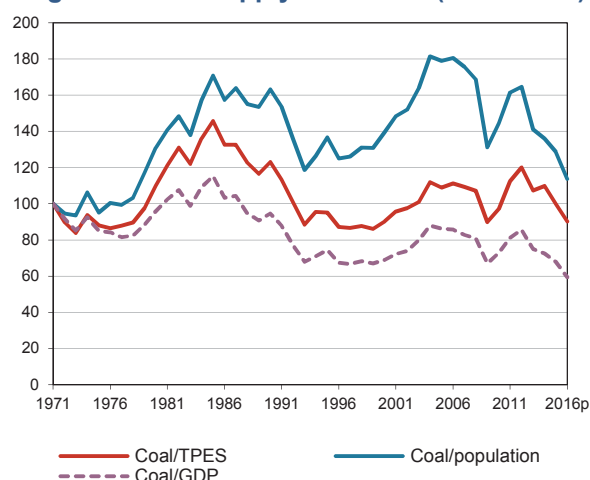


Figure 2: TPES by fuel (Mtce)

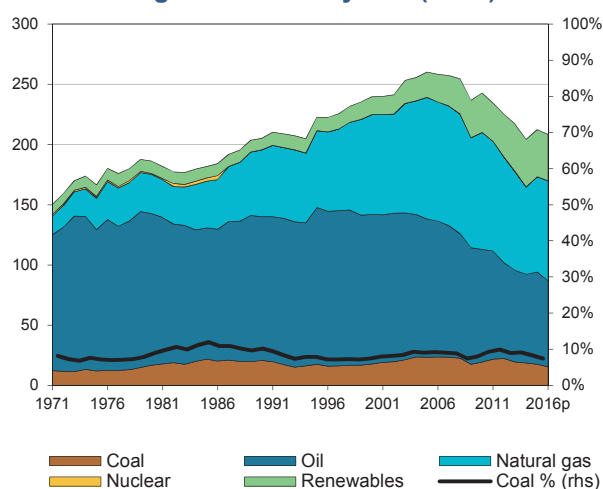


Figure 3: Primary coal supply (Mtce)

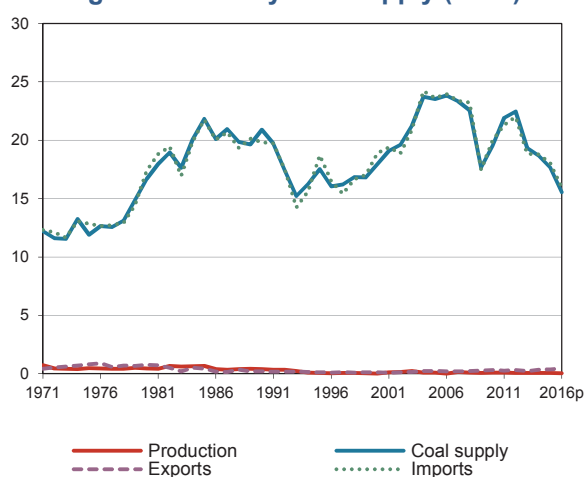


Figure 4: Coal consumption (Mtce)

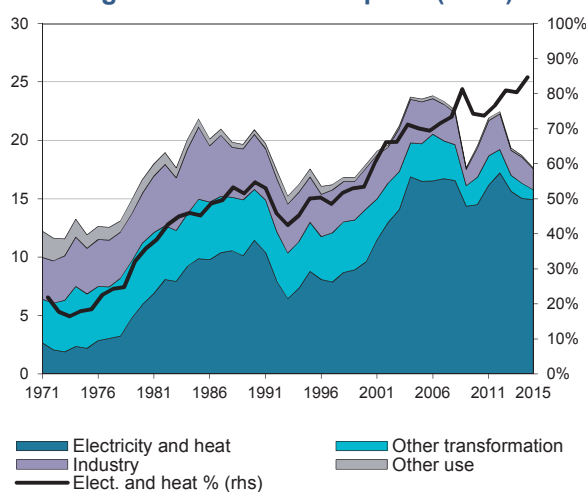
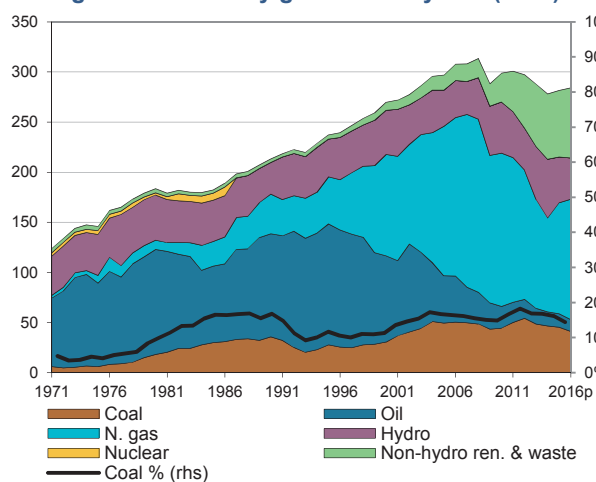
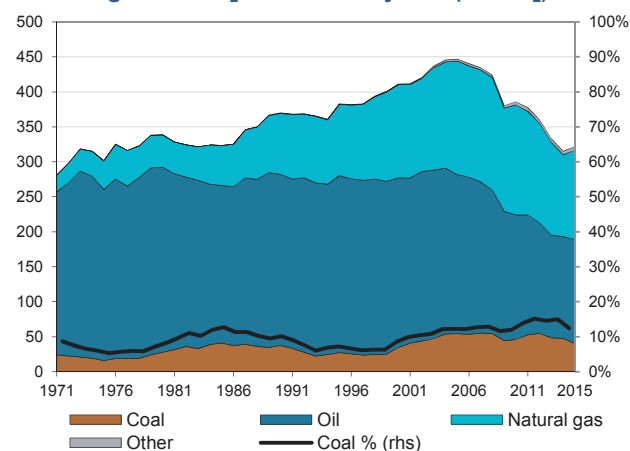


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

ITALY

1. Coal balance¹
(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	0.4	0.5	0.4	0.0	0.1	0.1	0.1	0.0	-0.5	-6.5
Imports	11.7	17.4	19.8	18.9	20.0	18.8	18.1	16.0	3.2	-0.4
Exports	-0.6	-0.7	-0.2	-0.1	-0.3	-0.3	-0.4	-0.5	-6.5	2.5
Stock changes	0.1	-0.4	0.9	-0.8	-0.3	0.2	-0.1	0.0		
Primary supply	11.6	16.7	20.9	17.9	19.5	18.7	17.7	15.6	3.5	-0.7
Statistical differences	0.1	0.0	0.2	-0.5	0.0	0.0	0.0	..		
Total transformation	-4.2 e	-9.1 e	-14.7	-13.2 e	-16.8 e	-16.3 e	-15.7 e	..	7.6	0.3
Electricity and heat gen.	-1.9	-6.0	-11.4	-9.6	-14.5	-15.0	-14.9	..	11.1	1.1
<i>Main activity producers</i> ³	-1.9	-4.9	-10.2	-9.6	-14.5	-15.0	-14.1	..	10.4	1.3
<i>Autoproducers</i>	-	-1.1	-1.3	..	-0.0	-0.0	-0.8	..	-	-1.7
Gas works	0.7	0.7	0.3	0.0	-	-	-	..	-4.9	-
Coal transformation ⁴	-3.0 e	-3.8 e	-3.5	-3.7 e	-2.3 e	-1.3 e	-0.8 e	..	1.0	-5.8
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-2.2 e	-2.2 e	-2.3	-2.1 e	-1.6 e	-1.3 e	-1.0 e	..	0.3	-3.3
<i>Coke ovens</i>	-0.8	-1.6	-1.2	-1.6	-0.6	0.0	0.2	..	2.4	-
<i>Patent fuel plants</i>	-	0.0	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-1.7	-2.0	-1.2	-0.4	-0.1	-0.0	-0.0	..	-1.9	-13.8
Losses	-0.5	-0.2	-0.1	-0.0	-	-	-	..		
Final consumption ⁶	5.3	5.5	5.1	3.8	2.7	2.4	1.9	..	-0.2	-3.9
Industry ⁷	3.8	4.3	4.7	3.5	2.5	2.2	1.8	..	1.3	-3.8
<i>Iron and steel</i>	2.8	2.9	2.9	2.7 e	2.4 e	1.8 e	1.6 e	..	0.4	-2.4
<i>Chemical</i>	0.3	0.2	0.2	0.0	0.0	0.0	0.0	..	-1.0	-19.4
<i>Non-metallic minerals</i>	0.2	0.5	1.3	0.5	0.1	0.4	0.2	..	11.3	-7.3
<i>Paper, pulp and print</i>	-	0.0	0.0	0.0	-	-	-	..	-	-
<i>Other industry</i> ⁸	0.6	0.5	0.2	0.3	0.0	0.0	0.0	..	-5.7	-14.0
Transport ⁹	0.2	0.0	-	-	-	-	-	..	-	-
Other	1.2	1.2	0.4	0.1	0.0	-	-	..	-6.4	-
<i>Comm. and pub. services</i>	-	-	-	-	-	-	-	..	-	-
<i>Residential</i>	1.2	1.2	0.4	0.1	0.0	-	-	..	-6.4	-
<i>Other sectors</i> ¹⁰	-	-	-	-	-	-	-	..	-	-
Non-energy use	-	-	-	0.2	0.2	0.1	0.1	..	-	-
Electricity gen. - TWh	5.2	18.3	35.8	30.5	44.4	46.5	45.4	41.0	12.0	1.0

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

ITALY

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	13.69	22.42	18.04	21.77	21.08	20.11	19.46	4.19	-0.56
Total electricity and heat	3.27	11.84	9.53	15.05	16.77	16.16	16.31	11.33	1.29
<i>Main activity producers</i>	3.22	11.82	9.53	15.03	16.76	16.14	16.30	11.44	1.29
<i>Autoproducers</i>	0.05	0.02	..	0.02	0.01	0.02	0.02	-8.42	0.47
Patent fuel/BKB plants	0.01	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	9.90	8.61	6.38	4.92	2.88	2.28	2.15	-1.15	-5.40
Blast furnace inputs	-	0.17	0.94 e	0.92 e	0.57 e	0.72 e	0.51 e	-	4.52
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.35	1.72	0.91	0.65	0.63	0.81	0.39	14.25	-5.79
<i>Iron and steel</i>	0.06	0.24	0.26 e	0.54 e	0.24 e	0.30 e	0.16 e	12.81	-1.60
<i>Chemical</i>	0.01	0.00	0.00	0.00	-	-	-	-9.91	-
<i>Non-metallic minerals</i>	0.21	1.41	0.55	0.10	0.39	0.51	0.23	17.39	-7.05
<i>Paper, pulp and print</i>	-	-	0.00	-	-	-	-	-	-
<i>Other industry</i>	0.07	0.06	0.10 e	0.01 e	-	-	-	-0.86	-
Other sectors ⁴	0.11	0.06	0.00	0.01	-	-	-	-4.84	-
Non-energy use	-	-	0.23	0.18	0.18	0.13	0.09	-	-
Steam coal	2.51	12.69	11.36	16.62	17.97	17.69	17.21	14.46	1.22
Total electricity and heat	2.07	10.78	9.53	15.05	16.77	16.16	16.31	14.77	1.67
<i>Main activity producers</i>	2.02	10.77	9.53	15.03	16.76	16.14	16.30	14.97	1.67
<i>Autoproducers</i>	0.05	0.02	..	0.02	0.01	0.02	0.02	-8.42	0.47
Patent fuel/BKB plants	0.01	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	0.17	0.94 e	0.92 e	0.57 e	0.72 e	0.51 e	-	4.52
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.31	1.68	0.88	0.65	0.63	0.81	0.38	15.08	-5.75
<i>Iron and steel</i>	0.03	0.22	0.26 e	0.54 e	0.24 e	0.30 e	0.16 e	19.30	-1.22
<i>Chemical</i>	0.01	0.00	0.00	0.00	-	-	-	-9.91	-
<i>Non-metallic minerals</i>	0.20	1.40	0.54	0.10	0.39	0.51	0.22	17.56	-7.07
<i>Paper, pulp and print</i>	-	-	0.00	-	-	-	-	-	-
<i>Other industry</i>	0.07	0.06	0.08 e	0.01 e	-	0.00 e	-	-1.12	-
Other sectors ⁴	0.07	0.06	0.00	0.01	-	-	-	-1.87	-
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	9.91	8.63	6.66	5.15	3.10	2.42	2.25	-1.14	-5.24
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	9.90	8.61	6.38	4.92	2.88	2.28	2.15	-1.15	-5.40
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	0.23	0.18	0.18	0.13	0.09	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

ITALY

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	1.27	1.09	0.03	0.01	0.01	0.00	0.00	-1.27	-21.00
Total electricity and heat	1.20	1.06	0.00	-	-	-	-	-1.07	-
<i>Main activity producers</i>	1.20	1.06	0.00	-	-	-	-	-1.07	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.04	0.03	0.03	0.01	0.01	0.00	0.00	-0.49	-9.15
<i>Iron and steel</i>	0.03	0.02	-	-	-	-	-	-2.55	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	0.01	0.01	0.01	0.01	0.01	0.00	0.00	5.02	-4.30
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.00	0.00	0.02	-	-	-	-	-	-
Other sectors ³	0.03	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

ITALY

3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change 78-90	90-15
Mtce:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	0.01	0.05	-	0.09	0.09	0.07	0.05	20.81	1.41
Lignite	0.43	0.34	0.00	-	-	-	-	-1.89	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	-	-	-	-	-	-	-	20.81	1.34
Steam coal	0.01	0.06	-	0.10	0.10	0.08	0.05	-1.89	-
Lignite	1.20	0.96	0.01	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	12.92	19.83	18.90	23.62	20.00	18.85	18.78	18.06	15.96
Bituminous coal ⁴	2.19	10.53	10.78	16.66	14.37	14.56	14.77	14.67	12.18
Coking coal	10.58	9.14	7.61	6.11	5.36	3.05	2.50	2.42	2.57
Sub-bituminous coal	-	-	-	-	0.25	0.32	0.31	0.29	0.24
Lignite	0.02	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.13	0.11	0.51	0.84	0.02	0.92	1.20	0.67	0.98
Total exports	0.70	0.20	0.12	0.23	0.30	0.24	0.34	0.37	0.47
Bituminous coal ⁴	-	-	0.00	-	0.00	-	0.00	0.07	0.09
Coking coal	-	-	-	-	-	-	-	-	0.02
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.70	0.20	0.12	0.23	0.30	0.24	0.34	0.30	0.37

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

ITALY

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	12526	20578	19027	24158	22112	20137	19931	19634	16821
Coking coal	10007	8648	7198	5784	5066	2882	2362	2292	2430
Australia	1347	1045	2463	2109	1896	744	591	757	711
Canada	-	212	1280	637	865	669	366	266	300
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	2537	804	-	-	-	-	-	-	-
Poland	1525	158	-	283	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	3027	6236	3281	2431	2305	1413	1371	1269	1419
Other OECD	-	12	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	15	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	174	205	-	-	-	-	-
Former Soviet Union ⁴	1036	131	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	14	-	56	27	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	105	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	535	35	-	-	-	-	7	-	-
Steam coal	2451	11797	11817	18366	17040	17250	17566	17339	14389
Australia	-	-	1141	682	598	-	-	-	6
Canada	-	-	-	506	-	467	357	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	109	1	1	-	-	-	-	-
Poland	1437	507	912	182	-	-	-	63	-
United Kingdom	52	-	-	-	-	-	-	-	-
United States	-	4800	4	204	460	4303	4059	1701	287
Other OECD	-	148	-	1	995	474	790	482	208
China, People's Rep.	-	310	369	-	-	-	-	-	-
Colombia	-	290	1759	2997	1762	1928	2333	2930	4406
Indonesia	-	-	1919	6800	7027	3440	3569	3387	1079
South Africa	960	4884	3548	4395	3919	2156	1772	4144	3196
Former Soviet Union ⁴	-	609	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	993	1082	2092	4354	3974	4064	4501
<i>Other FSU</i>	x	x	56	1025	89	36	579	480	632
Venezuela	-	140	1115	445	98	92	123	88	74
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	2	-	-	46	-	-	10	-	-
Lignite	68	133	12	8	6	5	3	3	2

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

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Figure 1: Coal supply indicators (1971 = 100)

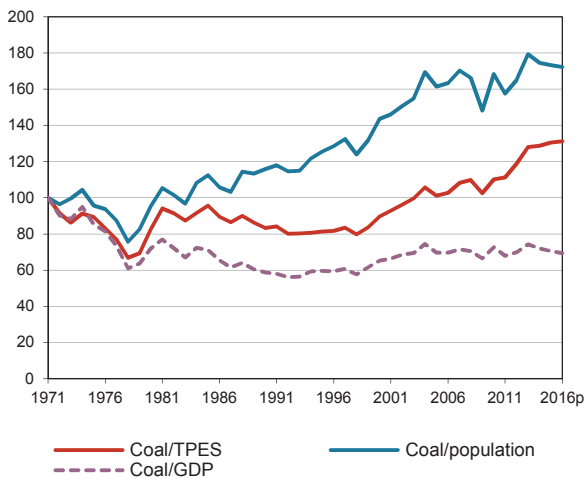


Figure 2: TPES by fuel (Mtce)

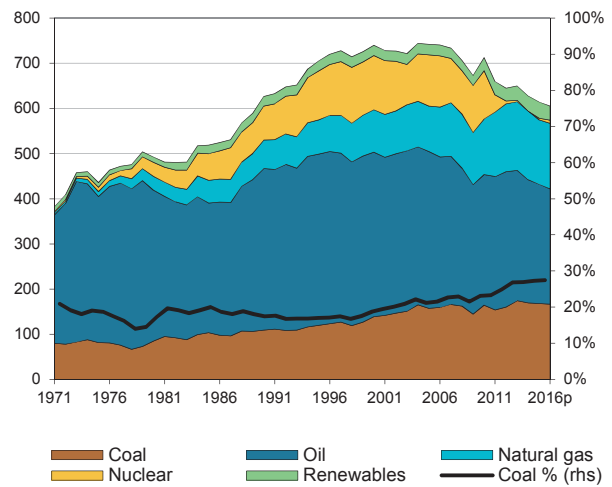


Figure 3: Primary coal supply (Mtce)

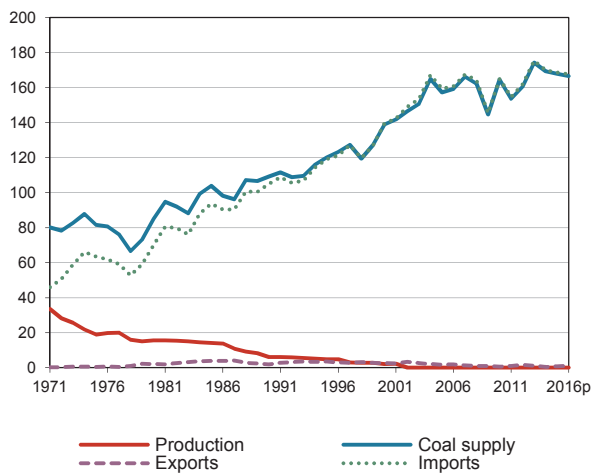


Figure 4: Coal consumption (Mtce)

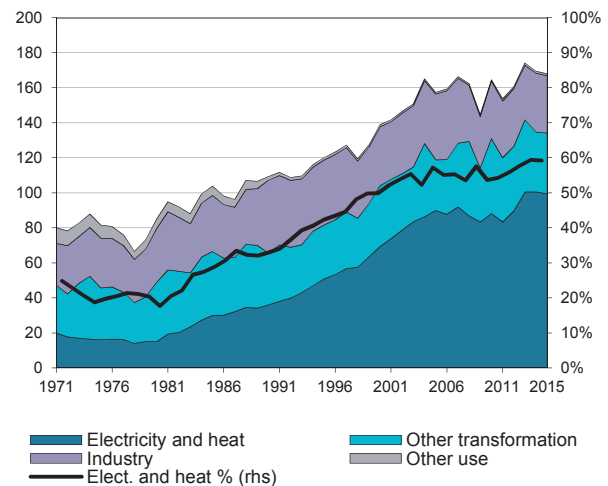
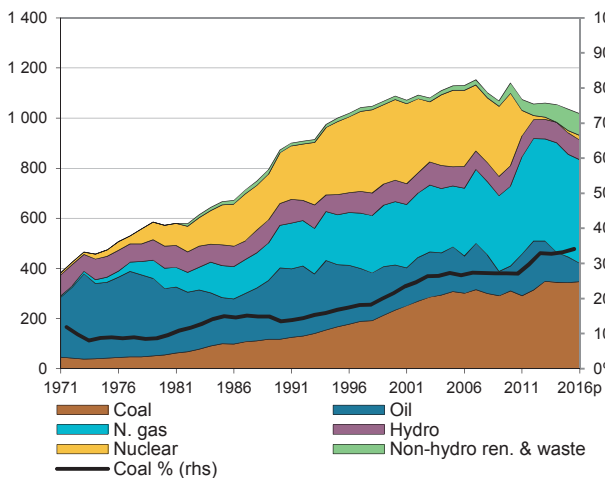
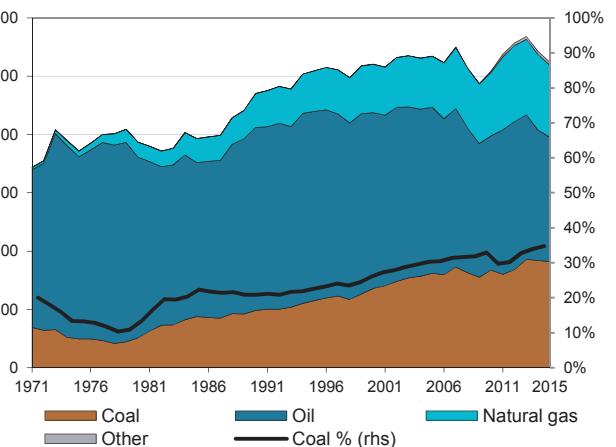


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

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1. Coal balance¹
(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	25.6	15.6	6.2	2.2	-	-	-	-	-8.0	-
Imports	59.0	70.0	104.9	139.5	165.0	169.8	168.6	167.7	3.4	1.9
Exports	-0.6	-2.1	-1.9	-2.7	-0.7	-0.5	-0.8	-1.0	7.3	-3.5
Stock changes	-1.3	1.6	0.1	-0.2	0.1	-0.0	0.0	-0.2		
Primary supply	82.7	85.1	109.2	138.8	164.5	169.2	167.8	166.5	1.7	1.7
Statistical differences	-2.5	-1.9	3.4	-1.9	-7.2	0.0	-2.0	..		
Total transformation	-41.2 e	-43.4 e	-63.7 e	-97.6 e	-114.1 e	-126.2 e	-124.0 e	..	2.6	2.7
Electricity and heat gen.	-17.1	-15.0	-36.0	-69.3	-88.1	-100.5	-99.4	..	4.5	4.1
<i>Main activity producers</i> ³	-17.1	-11.5	-29.2	-57.4	-76.0	-86.1	-84.9	..	3.2	4.4
<i>Autoproducers</i>	-	-3.6	-6.8	-11.9	-12.1	-14.3	-14.5	..	-	3.1
Gas works	3.4	4.7	-0.6	-0.3	-	-	-	..	-	-
Coal transformation ⁴	-27.5 e	-33.1 e	-27.1 e	-28.0 e	-26.0 e	-25.7 e	-24.7 e	..	-0.1	-0.4
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-24.5 e	-20.1 e	-25.6 e	-28.3 e	-26.7 e	-27.2 e	-25.9 e	..	0.3	0.0
<i>Coke ovens</i>	-3.0	-13.1	-1.5	0.3	0.7	1.5	1.3	..	-4.2	-
<i>Patent fuel plants</i>	-0.0	0.1	-0.0	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-4.4	-3.4	-5.5	-4.5	-9.6	-8.5	-8.1	..	1.3	1.5
Losses	-0.1	-0.3	-	-	-	-	-	..		
Final consumption ⁶	34.4	36.1	43.5	34.9	33.6	34.5	33.8	..	1.4	-1.0
Industry ⁷	26.6	30.6	41.4	33.6	32.8	33.4	32.7	..	2.6	-0.9
<i>Iron and steel</i>	23.2 e	23.0 e	22.8 e	17.5 e	18.5 e	19.4 e	18.7 e	..	-0.1	-0.8
<i>Chemical</i>	-	0.4	5.8	4.6	5.7	5.6	5.6	..	-	-0.1
<i>Non-metallic minerals</i>	-	4.3	9.0	8.0	5.7	5.6	5.5	..	-	-1.9
<i>Paper, pulp and print</i>	-	0.1	1.4	2.0	2.0	2.2	2.3	..	-	2.1
<i>Other industry</i> ⁸	3.4	2.6	2.5	1.5	0.9	0.6	0.5	..	-1.9	-5.9
Transport ⁹	0.3	-	0.0	0.0	0.0	0.0	0.0	..	-29.0	-
Other	7.5	5.5	1.3	0.7	0.3	0.6	0.6	..	-9.7	-3.3
<i>Comm. and pub. services</i>	1.3	1.0	1.2	0.7	0.3	0.6	0.6	..	-0.3	-3.0
<i>Residential</i>	6.1	4.5	0.1	-	-	-	-	..	-21.8	-
<i>Other sectors</i> ¹⁰	0.1	-	-	-	-	-	-	..	-	-
Non-energy use	-	-	0.8	0.5	0.5	0.5	0.5	..	-	-1.5
Electricity gen. - TWh	37.3	54.9	117.7	233.8	309.6	345.2	343.2	347.1	7.0	4.4

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

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2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	69.84	115.70	153.64	186.68	195.61	188.07	189.59	4.30	2.00
Total electricity and heat	8.57	31.37	65.27	91.32	103.52	103.85	104.62	11.42	4.94
<i>Main activity producers</i>	8.57	27.27	57.81	82.39	93.73	92.25	92.64	10.12	5.01
<i>Autoproducers</i>	-	4.10	7.46	8.93	9.79	11.60	11.98	-	4.38
Patent fuel/BKB plants	0.34	0.11	-	-	-	-	-	-9.34	-
Coke ovens/Liquefaction ³	55.20	66.56	57.99	57.87	54.07	52.53	51.40	1.57	-1.03
Blast furnace inputs	-	5.24 e	10.93 e	11.64 e	14.68 e	14.20 e	14.00 e	-	4.01
Gas manufacture	4.52	-	-	-	-	-	-	-	-
Industry	2.67	15.80	17.07	15.94	17.27	16.13	15.81	15.98	0.00
<i>Iron and steel</i>	0.29	1.52 e	2.59 e	3.20 e	3.40 e	3.24 e	3.04 e	14.79	2.82
<i>Chemical</i>	0.23	2.69	3.57	4.14	4.03	4.18	4.15	22.87	1.75
<i>Non-metallic minerals</i>	0.71	9.31	8.22	5.89	7.19	6.03	5.90	23.92	-1.81
<i>Paper, pulp and print</i>	0.05	1.59	2.31	2.42	2.58	2.60	2.66	34.37	2.06
<i>Other industry</i>	1.40	0.69 e	0.39 e	0.29 e	0.07 e	0.08 e	0.07 e	-5.71	-8.96
Other sectors ⁴	0.59	-	-	0.09	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	11.08	50.76	95.79	129.00	141.76	137.01	138.93	13.52	4.11
Total electricity and heat	8.57	31.37	65.27	91.32	103.52	103.85	104.62	11.42	4.94
<i>Main activity producers</i>	8.57	27.27	57.81	82.39	93.73	92.25	92.64	10.12	5.01
<i>Autoproducers</i>	-	4.10	7.46	8.93	9.79	11.60	11.98	-	4.38
Patent fuel/BKB plants	0.34	0.11	-	-	-	-	-	-9.34	-
Coke ovens/Liquefaction ³	0.08	7.23	12.02	12.52	15.83	15.35	15.07	46.01	2.98
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	0.07	-	-	-	-	-	-	-	-
Industry	2.52	15.80	17.07	15.94	17.27	16.13	15.81	16.52	0.00
<i>Iron and steel</i>	0.23	1.52	2.58	3.19	3.40	3.24	3.04	17.15	2.82
<i>Chemical</i>	0.19	2.69	3.57	4.14	4.03	4.18	4.15	24.76	1.75
<i>Non-metallic minerals</i>	0.71	9.31	8.22	5.89	7.19	6.03	5.90	23.92	-1.81
<i>Paper, pulp and print</i>	0.05	1.59	2.31	2.42	2.58	2.60	2.66	34.37	2.06
<i>Other industry</i>	1.35	0.69	0.39	0.29	0.07	0.08	0.07	-5.45	-8.96
Other sectors ⁴	0.58	-	-	0.09	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	58.72	64.94	57.85	57.68	53.85	51.06	50.66	0.84	-0.99
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	55.12	59.33	45.97	45.35	38.24	37.19	36.33	0.61	-1.94
Blast furnace inputs	-	5.24 e	10.93 e	11.64 e	14.68 e	14.20 e	14.00 e	-	4.01
Gas manufacture	4.45	-	-	-	-	-	-	-	-
Industry	0.12	0.00	0.00	0.00	0.00	0.00	0.00	-32.71	-
<i>Iron and steel</i>	0.06	0.00 e	0.00 e	0.00 e	0.00 e	0.00 e	0.00 e	-29.20	-
<i>Chemical</i>	0.01	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.04	-	-	-	-	-	-	-	-
Other sectors ⁴	0.01	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

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3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	8.72	-	-	-	-	-	-	-	-
Steam coal	7.23	6.16	2.17	-	-	-	-	-1.32	-
Lignite	0.02	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	8.66	-	-	-	-	-	-	-1.85	-
Steam coal	9.99	7.99	2.96	-	-	-	-	-	-
Lignite	0.04	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	52.67	104.88	139.45	159.45	164.99	175.37	169.78	168.58	167.73
Bituminous coal ⁴	1.43	36.00	81.14	102.24	108.40	121.60	117.51	117.30	116.70
Coking coal	51.24	68.37	55.72	54.44	55.55	51.59	48.91	48.53	48.99
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	-	0.51	2.60	2.76	1.04	2.18	3.35	2.74	2.04
Total exports	1.05	1.93	2.67	1.68	0.67	1.22	0.50	0.79	1.03
Bituminous coal ⁴	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coking coal	0.05	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	1.00	1.93	2.66	1.68	0.67	1.22	0.50	0.78	1.02

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

JAPAN

5. Total coal imports by origin¹

(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	52858	107649 e	150787 e	177670 e	186680 e	195609 e	188068 e	189593 e	189415
Coking coal	50876	64935 e	57849 e	56527 e	57679 e	53852 e	51060 e	50663 e	51140
Australia	24149	29385 e	37763 e	39976 e	43365 e	37589 e	35482 e	37229 e	35696
Canada	10895	17759 e	12474 e	6372 e	8486 e	7326 e	8007 e	7029 e	6635
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	398	-	-	-	-	-	-	-	-
Poland	429	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	9956	9169 e	436 e	1886 e	2628 e	4623 e	3716 e	2922 e	3568
Other OECD	11	255 e	356 e	433 e	372 e	133 e	133 e	94 e	126
China, People's Rep.	420	1515 e	3818 e	4570 e	472 e	404 e	-	43 e	265
Colombia	-	40 e	-	-	-	60 e	170 e	20 e	927
Indonesia	-	37 e	129 e	129 e	82 e	795 e	391 e	397 e	241
South Africa	2360	1253 e	317 e	-	-	-	-	-	-
Former Soviet Union ⁴	2244	5517 e	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	2434 e	3107 e	2211 e	2675 e	2758 e	2777 e	2808
<i>Other FSU</i>	x	x	-	-	-	-	-	152 e	31
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	97 e	-	-	-	-	-	-
Non-specified/other	14	5 e	25 e	54 e	61 e	247 e	403 e	-	843
Steam coal	1982	42714 e	92938 e	121143 e	129001 e	141757 e	137008 e	138930 e	138275
Australia	668	26316 e	52147 e	62005 e	75684 e	86804 e	84192 e	87878 e	84997
Canada	105	1506 e	1421 e	867 e	2190 e	2764 e	2225 e	1635 e	1594
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	2376 e	3920 e	139 e	476 e	2171 e	2902 e	1355 e	2073
Other OECD	-	48 e	611 e	260 e	108 e	14 e	97 e	-	-
China, People's Rep.	513	3803 e	13948 e	19193 e	5787 e	1745 e	1790 e	1529 e	2376
Colombia	-	80 e	103 e	-	61 e	152 e	-	-	-
Indonesia	-	899 e	14454 e	28739 e	34183 e	36714 e	33004 e	31633 e	31548
South Africa	157	3775 e	1710 e	140 e	302 e	477 e	133 e	183 e	60
Former Soviet Union ⁴	149	3261 e	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	3239 e	7441 e	8617 e	9908 e	12128 e	14260 e	15097
<i>Other FSU</i>	x	x	-	21	-	1	-	-	-
Venezuela	-	-	-	15	-	-	-	-	-
Viet Nam	-	150	902	2043	1591	1006	534	456	527
Non-specified/other	390	500 e	352	280	1	1	3	1	3
Lignite	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

KOREA¹

Figure 1: Coal supply indicators (1971 = 100)

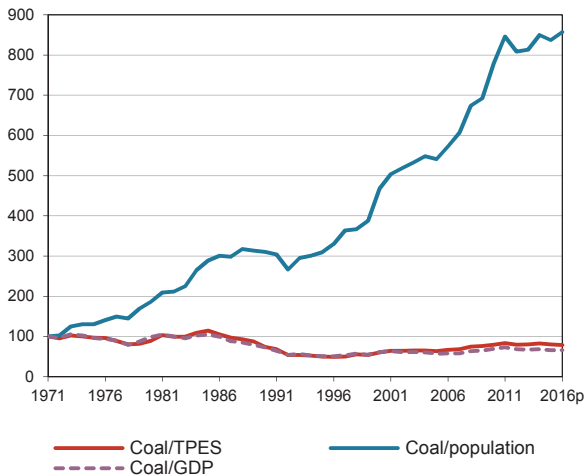


Figure 2: TPES by fuel (Mtce)

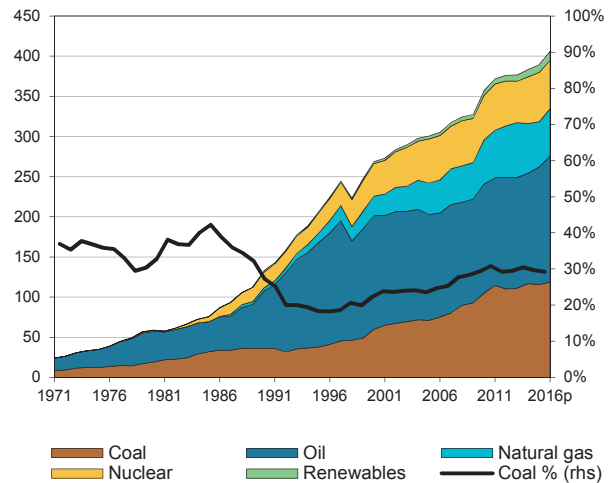


Figure 3: Primary coal supply (Mtce)

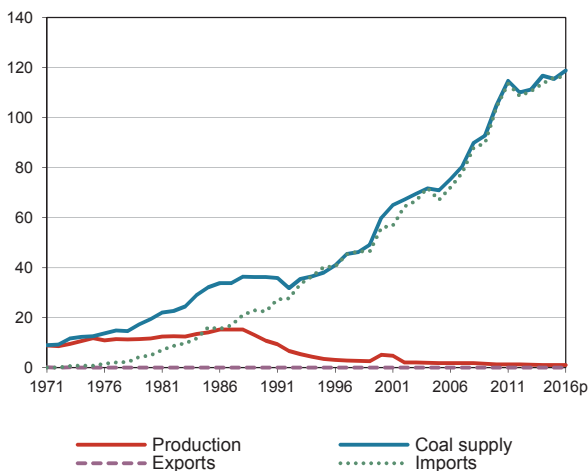


Figure 4: Coal consumption (Mtce)

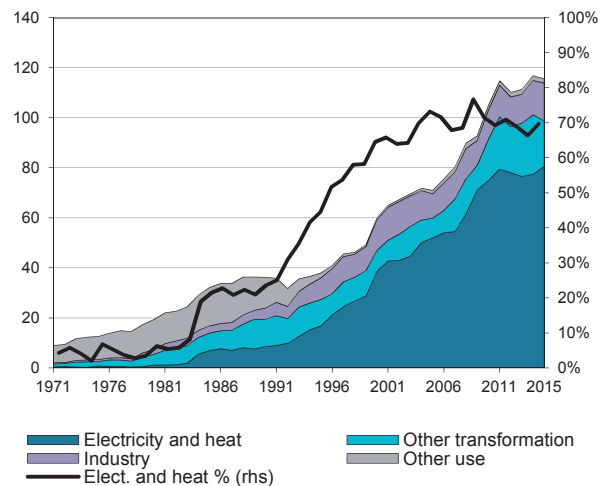
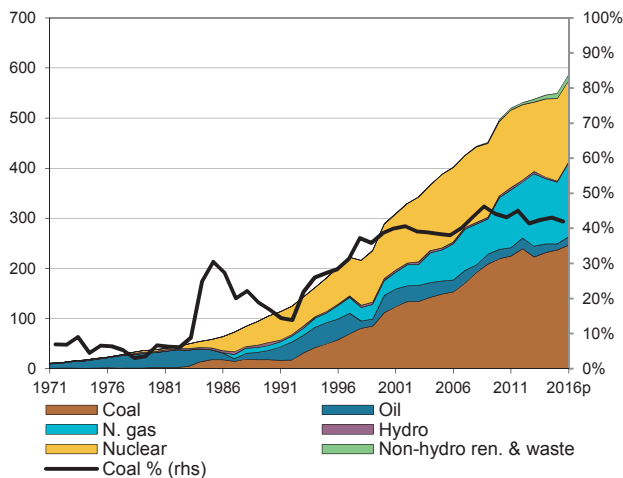
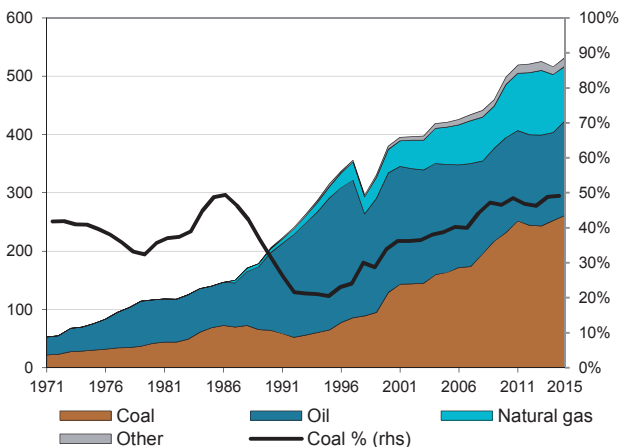


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

KOREA

1. Coal balance¹
(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	9.5 e	11.7	10.8	5.2	1.4	1.1	1.1	1.1	0.8	-8.7
Imports	0.6 e	5.0 e	22.5 e	55.9 e	104.2	113.6	115.9	116.4	23.2	6.8
Exports	-0.2 e	-	-	-	-	-	-	-	-	-
Stock changes	1.7 e	2.7 e	3.0 e	-1.2 e	-0.6	2.0	-1.5	1.2		
Primary supply	11.6	19.3	36.3	59.9	104.9	116.7	115.5	118.7	6.9	4.7
Statistical differences	-0.0	-0.5	1.4	4.1	-0.6	-3.3	0.9	..		
Total transformation	-2.2 e	-3.5 e	-18.8 e	-48.0 e	-87.3 e	-93.3 e	-95.0 e	..	13.5	6.7
Electricity and heat gen.	-0.5 e	-1.2 e	-8.5	-38.7	-74.9	-77.4	-80.5	..	18.5	9.4
<i>Main activity producers</i> ³	-0.4	-1.2	-5.6	-34.9	-67.3	-69.1	-70.4	..	16.4	10.6
<i>Autoproducers</i>	-0.1 e	-0.0 e	-2.9	-3.7	-7.6	-8.2	-10.2	..	25.9	5.1
Gas works	-	-	-	-	-	-	-	..	-	-
Coal transformation ⁴	-1.7 e	-2.3 e	-10.3 e	-9.4 e	-12.4 e	-16.0 e	-14.5 e	..	11.1	1.4
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-0.2 e	-1.4 e	-4.9	-7.8	-11.0 e	-13.2 e	-12.8 e	..	21.7	3.9
<i>Coke ovens</i>	-0.0 e	-0.2 e	-0.6	-0.6	-1.4	-2.7	-1.7	..	28.5	4.6
<i>Patent fuel plants</i>	-1.5 e	-0.7 e	-4.8 e	-0.9 e	-	-	-	..	7.0	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-0.1 e	-1.4 e	-2.1	-3.0	-3.4	-4.5	-4.5	..	17.8	3.1
Losses	-	-	-	-	-	-	-	..		
Final consumption ⁶	9.3	13.9	16.7	13.0	13.6	15.5	16.9	..	3.5	0.0
Industry ⁷	0.6	1.9	4.4	12.1	11.8	13.7	15.1	..	12.9	5.1
<i>Iron and steel</i>	0.6 e	1.3 e	0.7	3.7	6.2 e	8.6 e	10.1 e	..	1.4	11.3
<i>Chemical</i>	-	-	0.1	0.2	0.1	0.2	0.2	..	-	3.7
<i>Non-metallic minerals</i>	-	0.7	2.9	4.4	3.8	4.1	3.9	..	-	1.2
<i>Paper, pulp and print</i>	-	-	0.0	-	0.0	0.0	0.1	..	-	13.4
<i>Other industry</i> ⁸	-	-	0.7	3.9	1.7	0.7	0.9	..	-	1.2
Transport ⁹	0.0	0.0	-	-	-	-	-	..	-	-
Other	8.7	12.0	12.4	0.8	1.2	1.0	0.9	..	2.1	-9.8
<i>Comm. and pub. services</i>	0.1	0.1 e	0.0 e	-	-	-	-	..	-7.3	-
<i>Residential</i>	8.6 e	11.9 e	12.3 e	0.8 e	1.2	1.0	0.9	..	2.2	-9.8
<i>Other sectors</i> ¹⁰	-	-	-	-	-	-	-	..	-	-
Non-energy use	-	-	-	-	0.6	0.8	0.8	..	-	-
Electricity gen. - TWh	1.3	2.5	17.7	111.4	219.3	231.5	236.6	246.3	16.4	10.9

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

KOREA

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	21.89	44.78	71.80	120.05	127.92	134.93	133.89	6.15	4.48
Total electricity and heat	0.52	7.71	39.01	83.17	85.61	85.60	89.75	25.23	10.32
<i>Main activity producers</i>	0.52	7.71	39.01	78.81	80.49	79.73	81.56	25.23	9.90
<i>Autoproducers</i>	-	-	-	4.36	5.12	5.87	8.19	-	-
Patent fuel/BKB plants	18.29 e	20.70	2.41	1.86	1.92	1.63	1.47	1.04	-10.03
Coke ovens/Liquefaction ³	2.01	11.74	16.38	19.52	22.66	27.24	26.78	15.84	3.36
Blast furnace inputs	-	-	3.03	7.55 e	8.11 e	7.37 e	7.48 e	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.84	4.59	11.02	7.38	8.32	8.87	9.15	15.15	2.80
<i>Iron and steel</i>	0.68	0.17	0.73	1.52 e	2.56 e	3.27 e	3.55 e	-10.91	12.90
<i>Chemical</i>	-	0.08	0.27	0.17	0.23	0.25	0.19	-	3.66
<i>Non-metallic minerals</i>	0.16	3.53	5.31	4.50	4.65	4.86	4.65	29.42	1.10
<i>Paper, pulp and print</i>	-	0.00	-	0.04	0.04	0.04	0.07	-	13.30
<i>Other industry</i>	-	0.80	4.71	1.15 e	0.85 e	0.45 e	0.70 e	-	-0.56
Other sectors ⁴	0.22	0.05	-	-	-	-	-	-12.19	-
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	19.88	33.04	52.38	92.84	98.55	100.15	100.60	4.32	4.55
Total electricity and heat	0.52	7.71	39.01	83.17	85.61	85.60	89.75	25.23	10.32
<i>Main activity producers</i>	0.52	7.71	39.01	78.81	80.49	79.73	81.56	25.23	9.90
<i>Autoproducers</i>	-	-	-	4.36	5.12	5.87	8.19	-	-
Patent fuel/BKB plants	18.29 e	20.70	2.41	1.86	1.92	1.63	1.47	1.04	-10.03
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.84	4.59	11.02	7.23	7.33	7.41	7.04	15.15	1.72
<i>Iron and steel</i>	0.68	0.17	0.73	1.37	1.57	1.82	1.43	-10.91	8.87
<i>Chemical</i>	-	0.08	0.27	0.17	0.23	0.25	0.19	-	3.66
<i>Non-metallic minerals</i>	0.16	3.53	5.31	4.50	4.65	4.86	4.65	29.42	1.10
<i>Paper, pulp and print</i>	-	0.00	-	0.04	0.04	0.04	0.07	-	13.30
<i>Other industry</i>	-	0.80	4.71	1.15	0.85	0.45	0.70	-	-0.56
Other sectors ⁴	0.22	0.05	-	-	-	-	-	-12.19	-
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	2.01	11.74	19.42	27.21	29.37	34.78	33.29	15.84	4.26
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	2.01	11.74	16.38	19.52	22.66	27.24	26.78	15.84	3.36
Blast furnace inputs	-	-	3.03	7.55 e	8.11 e	7.37 e	7.48 e	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	0.15	0.98	1.46	2.12	-	-
<i>Iron and steel</i>	-	-	-	0.15 e	0.98 e	1.46 e	2.12 e	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

KOREA

3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change 78-90	90-15
Mtce:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	11.35	10.82	5.20	1.80	1.37	1.12	1.10	-0.39	-8.67
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	-	-	-	-	-	-	-	-0.39	-8.71
Steam coal	18.05	17.22	8.30	2.83	2.08	1.76	1.73	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	2.20 e	22.46 e	55.91 e	67.04	104.21	110.54	113.60	115.90	116.39
Bituminous coal ⁴	0.15 e	10.73 e	33.82 e	45.24	72.79	79.79	77.72	77.87	77.76
Coking coal	1.95 e	11.13 e	18.42	19.45	27.15	29.07	31.94	32.67	33.51
Sub-bituminous coal	-	0.60	3.67	2.04	3.64	1.31	3.54	4.97	4.79
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.10	-	-	0.32	0.63	0.36	0.40	0.38	0.34
Total exports	0.00	-	-	-	-	-	-	-	-
Bituminous coal ⁴	-	-	-	-	-	-	-	-	-
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.00	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

KOREA

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	2169	23729 e	64895 e	76758	118591	126507	131032	133904	134461
Coking coal	2009	11287 e	19575 e	20627	28160	30194	33175	33933	34803
Australia	1150	5053 e	10641 e	11664	16445	15697	17052	21706	21150
Canada	409	2026 e	4097 e	4315	4944	5450	1309	4813	5046
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	450	2908 e	1419 e	901	3238	3536	3291	2639	2706
Other OECD	-	-	-	-	-	-	-	-	166
China, People's Rep.	-	-	2781 e	3258	1936	825	2390	1061	773
Colombia	-	-	-	-	-	-	-	-	13
Indonesia	-	-	209 e	-	44	22	124	90	130
South Africa	-	100 e	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	1200	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	394 e	489	1553	2378	5482	3532	4293
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	34 e	-	-	2286	3527	92	526
Steam coal	160	12442 e	45320 e	56131	90431	96313	97857	99971	99658
Australia	-	3506 e	12019 e	19207	26512	34754	37945	39446	31163
Canada	-	1250 e	1647 e	4	4980	7434	11437	4520	1498
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	1235 e	166 e	365	66	2524	603	1328	1059
Other OECD	-	-	62 e	56	-	-	-	-	446
China, People's Rep.	-	1000 e	21281 e	17580	5356	2203	1040	641	2918
Colombia	-	-	-	-	-	324	-	15	2455
Indonesia	-	397 e	5277 e	15382	40126	34648	32420	33977	36322
South Africa	-	5054 e	2503 e	-	2346	165	323	167	2343
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	2197 e	3018	7004	13001	12679	19536	21155
<i>Other FSU</i>	x	x	-	-	-	133	76	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	135 e	358	1863	1123	1250	341	60
Non-specified/other	160	-	33	161	2178	4	84	-	239
Lignite	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

LATVIA¹

Figure 1: Coal supply indicators (1971 = 100)

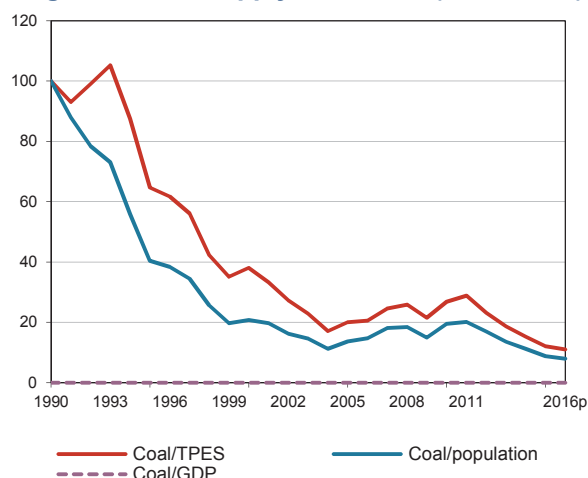


Figure 2: TPES by fuel (Mtce)

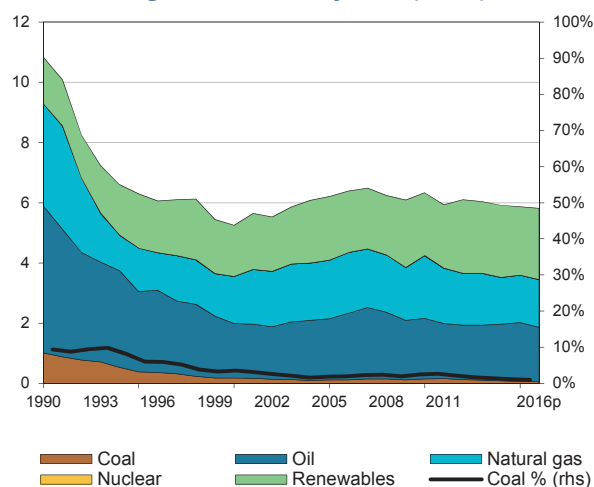


Figure 3: Primary coal supply (Mtce)

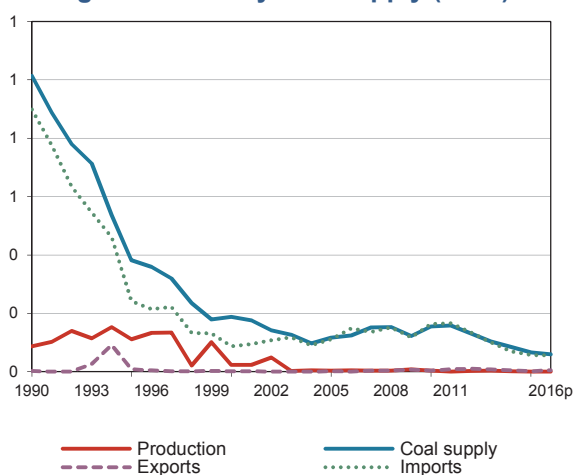


Figure 4: Coal consumption (Mtce)

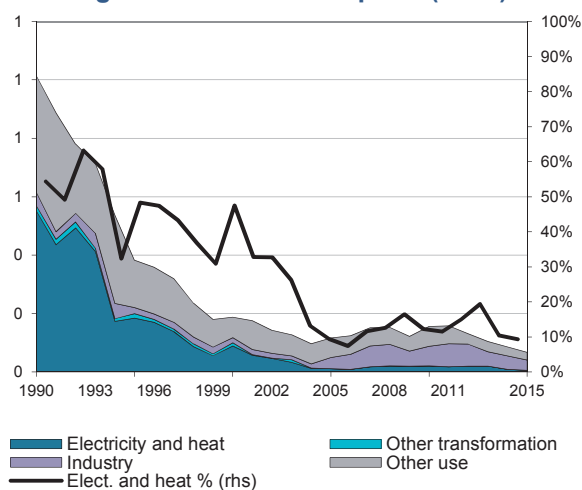
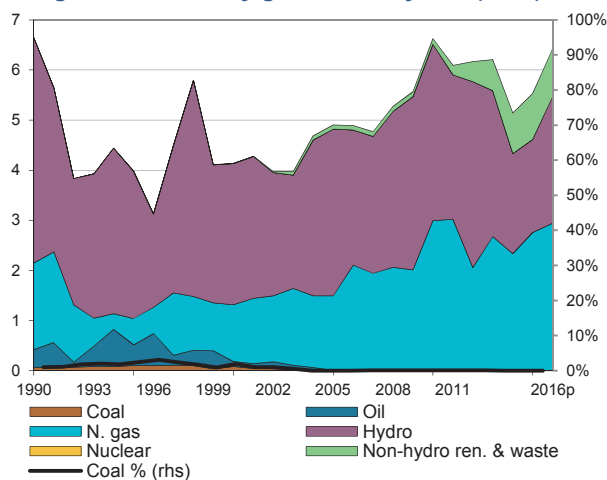
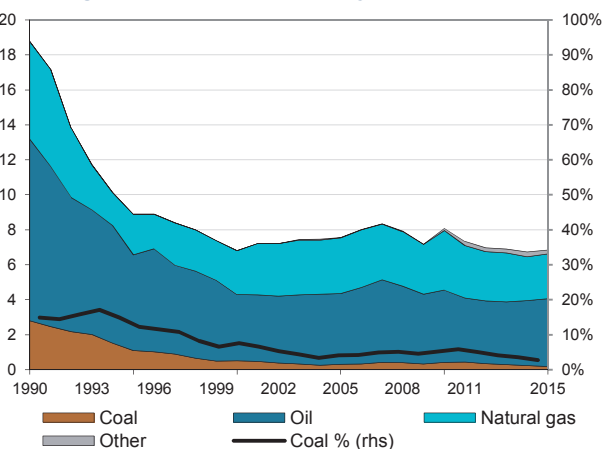


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

LATVIA

1. Coal balance¹
(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	x	x	0.1	0.0	0.0	0.0	-	0.0	-	-
Imports	x	x	0.9	0.1	0.2	0.1	0.1	0.1	-	-10.4
Exports	x	x	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-	-
Stock changes	x	x	0.0	0.1	-0.0	0.0	0.0	0.0	-	-
Primary supply	x	x	1.0	0.2	0.2	0.1	0.1	0.1	-	-10.3
Statistical differences	x	x	0.0	-	-	0.0	0.0	..	-	-
Total transformation	x	x	-0.6	-0.1	-0.0	-0.0	-0.0	..	-	-16.5
Electricity and heat gen.	x	x	-0.6	-0.1	-0.0	-0.0	-0.0	..	-	-16.4
<i>Main activity producers</i> ³	x	x	-0.1	-0.1	-0.0	-0.0	-0.0	..	-	-13.3
<i>Autoproducers</i>	x	x	-0.4	-0.0	-0.0	-0.0	-0.0	..	-	-18.3
Gas works	x	x	-	-	-	-	-	..	-	-
Coal transformation ⁴	x	x	-0.0	-0.0	-	-	-	..	-	-
<i>BKB plants</i>	x	x	-0.0	-0.0	-	-	-	..	-	-
<i>Blast furnaces</i>	x	x	-	-	-	-	-	..	-	-
<i>Coke ovens</i>	x	x	-	-	-	-	-	..	-	-
<i>Patent fuel plants</i>	x	x	-	-	-	-	-	..	-	-
Other transformation ⁵	x	x	-	-	-	-	-	..	-	-
Energy ind. own use	x	x	-0.0	-0.0	-	-	-	..	-	-
Losses	x	x	-0.0	-0.0	-0.0	-	-	..	-	-
Final consumption ⁶	x	x	0.4	0.1	0.1	0.1	0.1	..	-	-7.7
Industry ⁷	x	x	0.0	0.0	0.1	0.0	0.0	..	-	-
<i>Iron and steel</i>	x	x	0.0	0.0	0.0	-	-	..	-	-
<i>Chemical</i>	x	x	-	-	-	0.0	-	..	-	-
<i>Non-metallic minerals</i>	x	x	0.0	0.0	0.1	0.0	0.0	..	-	-
<i>Paper, pulp and print</i>	x	x	-	-	-	-	-	..	-	-
<i>Other industry</i> ⁸	x	x	0.0	0.0	0.0	0.0	0.0	..	-	-
Transport ⁹	x	x	-	-	-	-	-	..	-	-
Other	x	x	0.4	0.1	0.1	0.0	0.0	..	-	-10.3
<i>Comm. and pub. services</i>	x	x	0.1	0.1	0.0	0.0	0.0	..	-	-10.6
<i>Residential</i>	x	x	0.2	0.0	0.0	0.0	0.0	..	-	-9.9
<i>Other sectors</i> ¹⁰	x	x	0.0	0.0	0.0	0.0	-	..	-	-
Non-energy use	x	x	-	-	-	-	-	..	-	-
Electricity gen. - TWh	x	x	0.1	0.1	0.0	-	-	-	-	-

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

LATVIA

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	x	0.92	0.10	0.17	0.12	0.10	0.08	-	-9.26
Total electricity and heat	x	0.51	0.02	0.02	0.02	0.01	0.01	-	-15.74
<i>Main activity producers</i>	x	0.08	0.01	0.02	0.02	0.01	0.00	-	-11.34
<i>Autoproducers</i>	x	0.43	0.01	0.01	0.00	0.00	0.00	-	-17.97
Patent fuel/BKB plants	x	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	x	-	-	-	-	-	-	-	-
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	-	-	-	-	-	-	-	-
Industry	x	0.04	0.01	0.07	0.06	0.06	0.04	-	0.30
<i>Iron and steel</i>	x	-	-	0.00	0.00	-	-	-	-
<i>Chemical</i>	x	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	x	0.01	0.00	0.07	0.05	0.05	0.04	-	6.65
<i>Paper, pulp and print</i>	x	-	-	-	-	-	-	-	-
<i>Other industry</i>	x	0.03	0.01	0.00	0.00	0.00	0.00	-	-10.38
Other sectors ⁴	x	0.37	0.07	0.08	0.04	0.04	0.03	-	-9.34
Non-energy use	x	-	-	-	-	-	-	-	-
Steam coal	x	0.92	0.10	0.17	0.12	0.10	0.08	-	-9.25
Total electricity and heat	x	0.51	0.02	0.02	0.02	0.01	0.01	-	-15.74
<i>Main activity producers</i>	x	0.08	0.01	0.02	0.02	0.01	0.00	-	-11.34
<i>Autoproducers</i>	x	0.43	0.01	0.01	0.00	0.00	0.00	-	-17.97
Patent fuel/BKB plants	x	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	x	-	-	-	-	-	-	-	-
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	-	-	-	-	-	-	-	-
Industry	x	0.04	0.01	0.07	0.06	0.06	0.04	-	0.62
<i>Iron and steel</i>	x	-	-	0.00	0.00	-	-	-	-
<i>Chemical</i>	x	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	x	0.01	0.00	0.07	0.05	0.05	0.04	-	8.67
<i>Paper, pulp and print</i>	x	-	-	-	-	-	-	-	-
<i>Other industry</i>	x	0.03	0.01	0.00	0.00	0.00	0.00	-	-10.38
Other sectors ⁴	x	0.37	0.07	0.08	0.04	0.04	0.03	-	-9.34
Non-energy use	x	-	-	-	-	-	-	-	-
Coking coal	x	-	-	-	-	-	-	-	-
Total electricity and heat	x	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	x	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	x	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	x	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	x	-	-	-	-	-	-	-	-
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	-	-	-	-	-	-	-	-
Industry	x	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	x	-	-	-	-	-	-	-	-
<i>Chemical</i>	x	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	x	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	x	-	-	-	-	-	-	-	-
<i>Other industry</i>	x	-	-	-	-	-	-	-	-
Other sectors ⁴	x	-	-	-	-	-	-	-	-
Non-energy use	x	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

LATVIA

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	x	0.00	-	-	-	-	-	-	-
Total electricity and heat	x	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	x	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	x	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	x	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	x	-	-	-	-	-	-	-	-
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	-	-	-	-	-	-	-	-
Industry	x	0.00	-	-	-	-	-	-	-
<i>Iron and steel</i>	x	-	-	-	-	-	-	-	-
<i>Chemical</i>	x	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	x	0.00	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	x	-	-	-	-	-	-	-	-
<i>Other industry</i>	x	-	-	-	-	-	-	-	-
Other sectors ³	x	-	-	-	-	-	-	-	-
Non-energy use	x	-	-	-	-	-	-	-	-
Peat	x	0.33	0.24	0.01	0.01	0.00	0.00	-	-20.67
Total electricity and heat	x	0.17	0.21	0.00	0.00	-	-	-	-
<i>Main activity producers</i>	x	0.13	0.20	0.00	0.00	-	-	-	-
<i>Autoproducers</i>	x	0.04	0.01	-	-	-	-	-	-
Patent fuel/BKB plants	x	0.11	0.00	-	0.00	-	-	-	-
Coke ovens/Liquefaction ²	x	-	-	-	-	-	-	-	-
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	-	-	-	-	-	-	-	-
Industry	x	-	-	0.00	-	0.00	0.00	-	-
<i>Iron and steel</i>	x	-	-	-	-	-	-	-	-
<i>Chemical</i>	x	-	-	-	-	0.00	-	-	-
<i>Non-metallic minerals</i>	x	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	x	-	-	-	-	-	-	-	-
<i>Other industry</i>	x	-	-	0.00	-	0.00	0.00	-	-
Other sectors ³	x	0.03	0.00	0.00	-	0.00	-	-	-
Non-energy use	x	-	-	-	-	-	-	-	-
Oil shale and oil sands	x	-	-	-	-	-	-	-	-
Total electricity and heat	x	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	x	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	x	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	x	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	x	-	-	-	-	-	-	-	-
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	-	-	-	-	-	-	-	-
Industry	x	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	x	-	-	-	-	-	-	-	-
<i>Chemical</i>	x	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	x	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	x	-	-	-	-	-	-	-	-
<i>Other industry</i>	x	-	-	-	-	-	-	-	-
Other sectors ³	x	-	-	-	-	-	-	-	-
Non-energy use	x	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

LATVIA

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	x	-	-	-	-	-	-	-	-
Steam coal	x	-	-	-	-	-	-	-	-
Lignite	x	-	-	-	-	-	-	-	-
Peat	x	0.09	0.02	0.00	0.00	-	0.00	-	-
Oil shale and oil sands	x	-	-	-	-	-	-	-	-
Mt:									
Coking coal	x	-	-	-	-	-	-	-	-
Steam coal	x	-	-	-	-	-	-	-	-
Lignite	x	-	-	-	-	-	-	-	-
Peat	x	0.25	0.07	0.01	0.01	-	0.00	-	-
Oil shale and oil sands	x	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	x	0.90	0.09	0.11	0.16	0.10	0.07	0.06	0.06
Bituminous coal ⁴	x	0.88	0.08	0.10	0.16	0.10	0.07	0.06	0.06
Coking coal	x	-	-	-	-	-	-	-	-
Sub-bituminous coal	x	-	-	-	-	-	-	-	-
Lignite	x	0.00	-	-	-	-	-	-	-
Peat	x	-	-	-	-	0.00	-	-	-
Coal products ⁵	x	0.01	0.01	0.01	0.00	0.00	-	-	-
Total exports	x	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Bituminous coal ⁴	x	0.00	-	-	0.00	0.01	0.00	0.00	0.00
Coking coal	x	-	-	-	-	-	-	-	-
Sub-bituminous coal	x	-	-	-	-	-	-	-	-
Lignite	x	-	-	-	-	-	-	-	-
Peat	x	-	0.00	0.00	0.00	0.00	-	-	-
Coal products ⁵	x	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

LATVIA

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	x	916	80	116	180	119	85	71	68
Coking coal	x	-	-	-	-	-	-	-	-
Australia	x	-	-	-	-	-	-	-	-
Canada	x	-	-	-	-	-	-	-	-
Czech Republic	x	-	-	-	-	-	-	-	-
Germany	x	-	-	-	-	-	-	-	-
Poland	x	-	-	-	-	-	-	-	-
United Kingdom	x	-	-	-	-	-	-	-	-
United States	x	-	-	-	-	-	-	-	-
Other OECD	x	-	-	-	-	-	-	-	-
China, People's Rep.	x	-	-	-	-	-	-	-	-
Colombia	x	-	-	-	-	-	-	-	-
Indonesia	x	-	-	-	-	-	-	-	-
South Africa	x	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	x	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	x	-	-	-	-	-	-	-	-
Viet Nam	x	-	-	-	-	-	-	-	-
Non-specified/other	x	-	-	-	-	-	-	-	-
Steam coal	x	911	80	116	180	119	85	71	68
Australia	x	-	-	-	-	-	-	-	-
Canada	x	-	-	-	-	-	-	-	-
Czech Republic	x	-	-	-	-	-	-	-	-
Germany	x	-	-	-	-	-	-	-	-
Poland	x	-	-	-	-	-	-	-	-
United Kingdom	x	-	-	-	5	-	-	-	4
United States	x	-	-	-	33	-	-	-	-
Other OECD	x	-	2	-	-	-	-	-	-
China, People's Rep.	x	-	-	-	-	-	-	-	-
Colombia	x	-	-	-	-	-	-	-	-
Indonesia	x	-	-	-	-	-	-	-	-
South Africa	x	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	x	911	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	78	115	141	116	79	71	64
<i>Other FSU</i>	x	x	-	1	1	3	6	-	-
Venezuela	x	-	-	-	-	-	-	-	-
Viet Nam	x	-	-	-	-	-	-	-	-
Non-specified/other	x	-	-	-	-	-	-	-	-
Lignite	x	5	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

LUXEMBOURG¹

Figure 1: Coal supply indicators (1971 = 100)

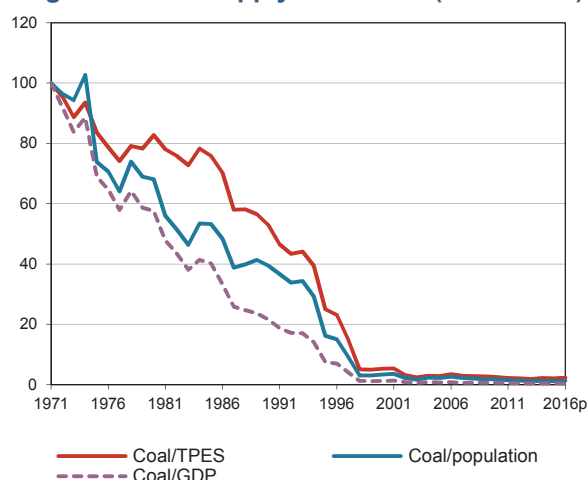


Figure 2: TPES by fuel (Mtce)

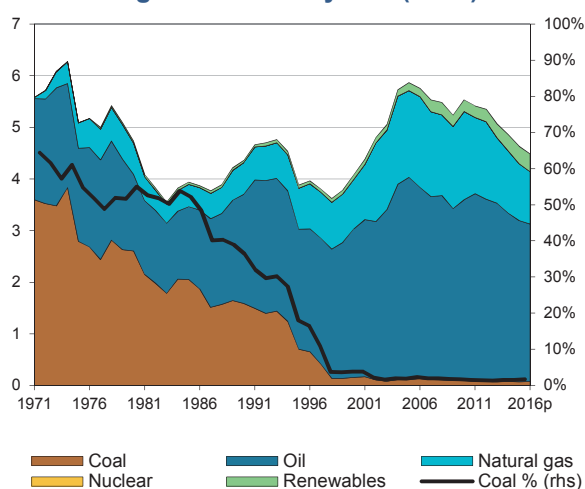


Figure 3: Primary coal supply (Mtce)

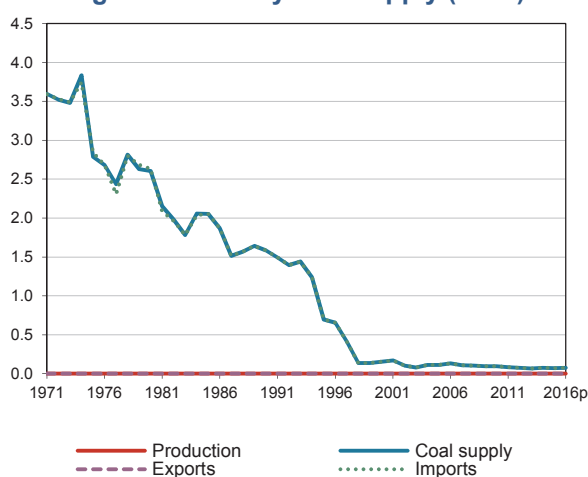


Figure 4: Coal consumption (Mtce)

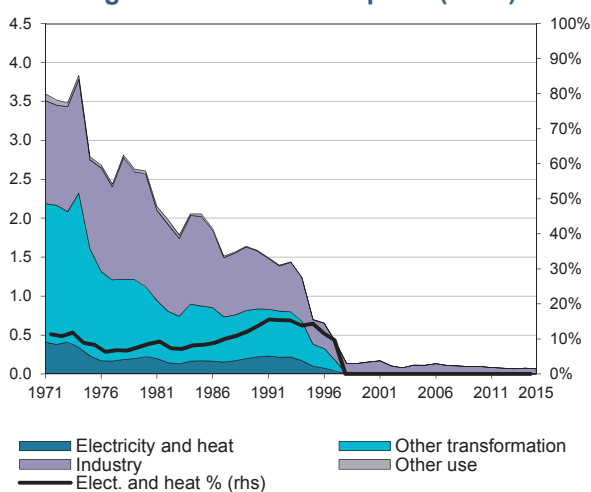
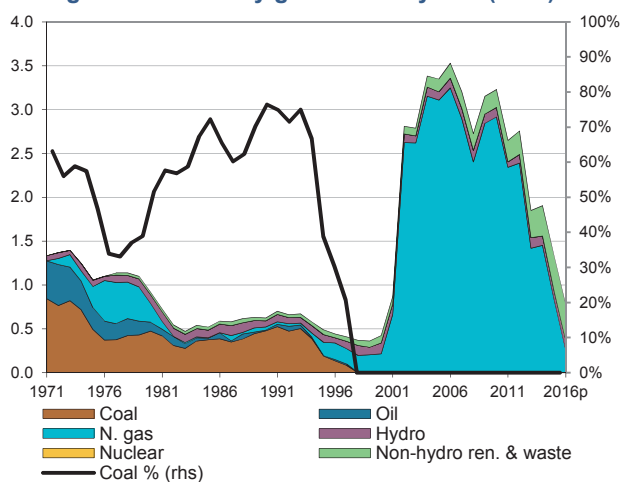
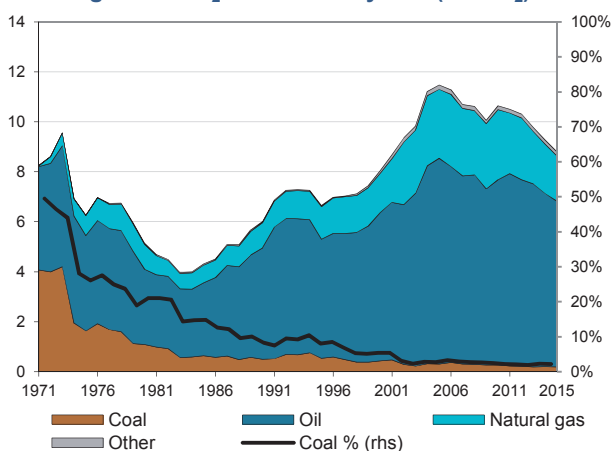


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

LUXEMBOURG

1. Coal balance¹
(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	-	-	-	-	-	-	-	-	-	-
Imports	3.5	2.6	1.6	0.2	0.1	0.1	0.1	0.1	-4.5	-11.7
Exports	-	-	-	-	-	-	-	-	-	-
Stock changes	-0.0	-0.0	-	-	-	-	-	-	-	-
Primary supply	3.5	2.6	1.6	0.2	0.1	0.1	0.1	0.1	-4.5	-11.7
Statistical differences	0.0	-	-	-	-	-	-	..	-	-
Total transformation	-1.9 e	-1.1 e	-0.8	-	-	-	-	..	-5.1	-
Electricity and heat gen.	-0.4	-0.2	-0.2	-	-	-	-	..	-3.7	-
<i>Main activity producers</i> ³	-0.4	-	-	-	-	-	-	..	-	-
<i>Autoproducers</i>	-	-0.2	-0.2	-	-	-	-	..	-	-
Gas works	-	-	-	-	-	-	-	..	-	-
Coal transformation ⁴	-1.5 e	-0.8 e	-0.6	-	-	-	-	..	-5.5	-
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-1.5 e	-0.8 e	-0.6	-	-	-	-	..	-5.5	-
<i>Coke ovens</i>	-	-	-	-	-	-	-	..	-	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-	-	-	-	-	-	-	..	-	-
Losses	-0.1	-0.1	-0.0	-	-	-	-	..	-	-
Final consumption ⁶	1.4	1.5	0.7	0.2	0.1	0.1	0.1	..	-3.6	-9.0
Industry ⁷	1.3	1.5	0.7	0.2	0.1	0.1	0.1	..	-3.5	-9.1
<i>Iron and steel</i>	1.3	1.3 e	0.6	0.0	0.0	0.0	0.0	..	-4.5	-14.8
<i>Chemical</i>	-	-	-	-	-	-	-	..	-	-
<i>Non-metallic minerals</i>	-	0.1	0.1	0.1	0.1	0.1	0.1	..	-	-3.7
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	..	-	-
<i>Other industry</i> ⁸	0.0	-	0.0	0.0	0.0	0.0	0.0	..	-	-
Transport ⁹	-	-	-	-	-	-	-	..	-	-
Other	0.0	0.0	0.0	0.0	0.0	-	0.0	..	-	-
<i>Comm. and pub. services</i>	-	-	-	-	-	-	-	..	-	-
<i>Residential</i>	0.0	0.0	0.0	0.0	0.0	-	0.0	..	-	-
<i>Other sectors</i> ¹⁰	-	-	-	-	-	-	-	..	-	-
Non-energy use	-	-	-	-	-	-	-	..	-	-
Electricity gen. - TWh	0.8	0.5	0.5	-	-	-	-	-	-3.1	-

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

LUXEMBOURG

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	0.52	0.20	0.17	0.10	0.08	0.09	0.07	-7.74	-3.89
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.51	0.20	0.17	0.10	0.08	0.09	0.07	-7.70	-3.87
<i>Iron and steel</i>	0.51	0.04	0.04	0.03	0.01	0.01	0.01	-19.50	-4.84
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	0.16	0.13	0.08	0.06	0.07	0.06	-	-3.67
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	0.00	-	-	-
Other sectors ⁴	0.01	0.00	-	-	-	-	-	-12.55	-
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	0.50	0.20	0.17	0.10	0.08	0.09	0.07	-7.48	-3.89
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.50	0.20	0.17	0.10	0.08	0.09	0.07	-7.45	-3.87
<i>Iron and steel</i>	0.50	0.04	0.04	0.03	0.01	0.01	0.01	-19.27	-4.84
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	0.16	0.13	0.08	0.06	0.07	0.06	-	-3.67
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	0.00	-	-	-
Other sectors ⁴	0.01	0.00	-	-	-	-	-	-12.55	-
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

LUXEMBOURG

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	2.80	1.59	0.16	0.11	0.10	0.07	0.08	0.07	0.07
Bituminous coal ⁴	0.48	0.16	0.14	0.10	0.09	0.06	0.07	0.06	0.07
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	0.01	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	2.31	1.42	0.01	0.01	0.01	0.00	0.00	0.01	0.01
Total exports	-	-	-	-	-	-	-	-	-
Bituminous coal ⁴	-	-	-	-	-	-	-	-	-
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

LUXEMBOURG

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	512	197	172	122	102	75	85	73	80
Coking coal	-	-	-	-	-	-	-	-	-
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Steam coal	495	197	172	122	102	75	85	73	80
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	299	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	12	-	-	-	-	-	-	-	-
United States	1	-	-	-	-	-	-	-	-
Other OECD	6	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	125	138	125	76	76	63	74	62	69
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	6	6	6	6
<i>Other FSU</i>	x	x	-	-	-	6	5	5	5
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	52	59	47	46	26	-	-	-	-
Lignite	17	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

MEXICO¹

Figure 1: Coal supply indicators (1971 = 100)

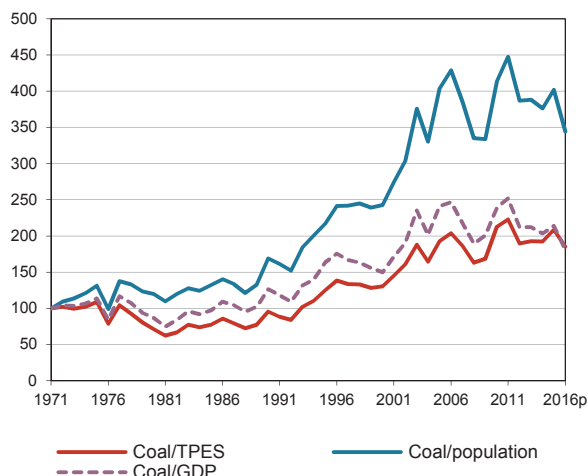


Figure 2: TPES by fuel (Mtce)

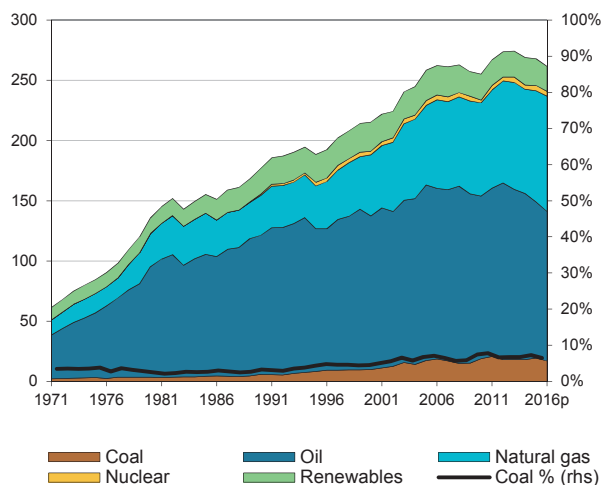


Figure 3: Primary coal supply (Mtce)

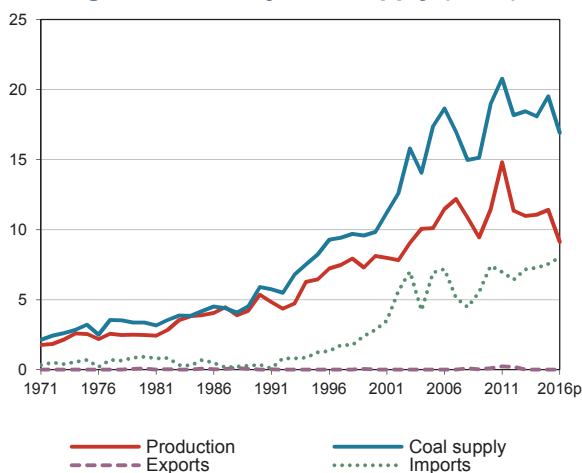


Figure 4: Coal consumption (Mtce)

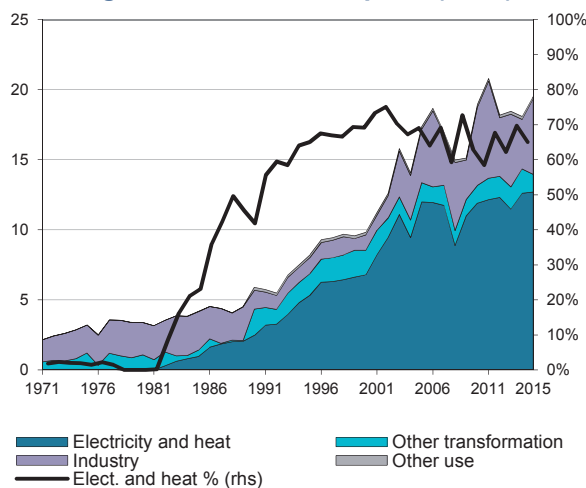
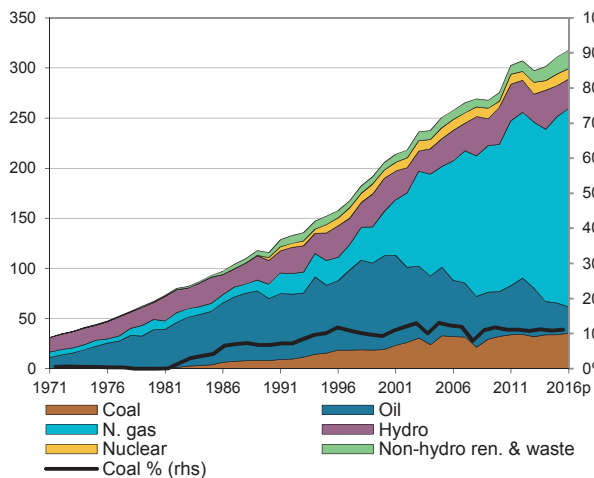
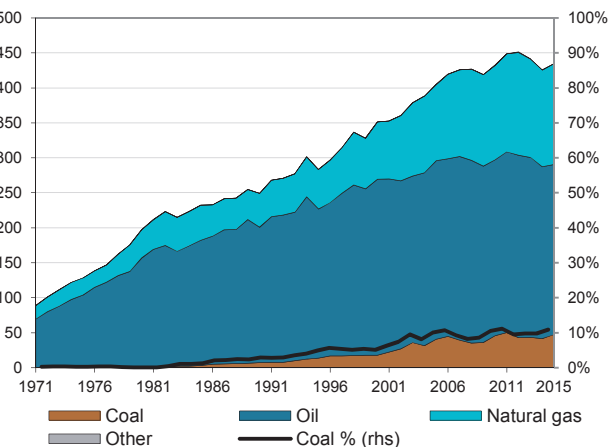


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

MEXICO

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	2.1	2.5	5.3	8.1	11.4	11.1	11.4	9.1	5.5	3.1
Imports	0.4	0.9	0.3	2.8	7.4 e	7.3 e	7.6 e	8.0	-0.7	13.2
Exports	-	-0.1	-0.0	-0.0	-0.1	-0.0	-0.0	-0.0	-	-
Stock changes	0.1	0.1	0.2 e	-1.1 e	0.2 e	-0.3 e	0.5 e	-0.2		
Primary supply	2.6	3.4	5.9	9.8	18.9	18.1	19.5	16.9	4.9	4.9
Statistical differences	-0.1	-0.2	0.0	-0.0	0.7	0.2	0.4	..		
Total transformation	-0.5	-0.9	-3.7 e	-8.1 e	-13.2 e	-13.9 e	-13.8 e	..	12.5	5.4
Electricity and heat gen.	-0.1	-	-2.5	-6.8	-11.9 e	-12.6 e	-12.7 e	..	25.5	6.8
<i>Main activity producers</i> ³	-0.1	-	-2.5	-6.2	-11.6 e	-12.4 e	-12.5 e	..	25.5	6.7
<i>Autoproducers</i>	-	-	-	-0.6	-0.3	-0.2	-0.2	..	-	-
Gas works	-	-	-	-	-	-	-	..	-	-
Coal transformation ⁴	-0.4	-0.9	-1.3 e	-1.3 e	-1.3 e	-1.3 e	-1.2 e	..	6.3	-0.4
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-	-	-1.0 e	-1.1 e	-1.1 e	-1.1 e	-1.0 e	..	-	0.0
<i>Coke ovens</i>	-0.4	-0.9	-0.2 e	-0.2 e	-0.3 e	-0.2 e	-0.1 e	..	-3.6	-2.5
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-0.1	-0.0	-0.6	-0.4 e	-0.6 e	-0.7	-0.6 e	..	13.9	-0.4
Losses	-0.0	-0.0	-	-	-	-	-	..		
Final consumption ⁶	2.0	2.3	1.6	1.3	5.8	3.7	5.5	..	-1.4	5.2
Industry ⁷	2.0	2.3	1.3	1.1	5.6	3.5	5.4	..	-2.2	5.7
<i>Iron and steel</i>	2.0	2.3	1.3 e	1.1 e	1.1 e	1.2 e	1.1 e	..	-2.2	-0.8
<i>Chemical</i>	-	-	-	-	-	-	-	..	-	-
<i>Non-metallic minerals</i>	-	-	-	-	0.1	0.2	0.2	..	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	..	-	-
<i>Other industry</i> ⁸	-	-	-	-	4.3	2.1	4.1	..	-	-
Transport ⁹	-	-	-	-	-	-	-	..	-	-
Other	-	-	-	-	-	-	-	..	-	-
<i>Comm. and pub. services</i>	-	-	-	-	-	-	-	..	-	-
<i>Residential</i>	-	-	-	-	-	-	-	..	-	-
<i>Other sectors</i> ¹⁰	-	-	-	-	-	-	-	..	-	-
Non-energy use	-	-	0.2	0.2	0.2	0.2	0.2	..	-	-1.1
Electricity gen. - TWh	0.2	-	7.8	19.0	32.3	33.9	33.8	35.3	23.8	6.1

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

MEXICO

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	4.05	7.38	12.57	23.35	23.21	22.49	23.75	5.12	4.79
Total electricity and heat	-	3.97	9.57	14.77 e	14.56 e	15.62 e	15.71 e	-	5.66
<i>Main activity producers</i>	-	3.97	9.57	14.69 e	14.48 e	15.53 e	15.69 e	-	5.65
<i>Autoproducers</i>	-	-	-	0.08	0.08	0.09	0.03	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	3.97	3.41 e	3.00 e	3.16 e	3.17	3.19	2.57	-1.27	-1.13
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	5.26	5.48	3.45	5.47	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	0.22	0.30	0.31	0.33	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	5.04	5.18	3.14	5.14	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	-	3.97	9.57	17.19	18.28	17.98	18.12	-	6.26
Total electricity and heat	-	3.97	9.57	14.77 e	14.56 e	15.62 e	15.71 e	-	5.66
<i>Main activity producers</i>	-	3.97	9.57	14.69 e	14.48 e	15.53 e	15.69 e	-	5.65
<i>Autoproducers</i>	-	-	-	0.08	0.08	0.09	0.03	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	0.78	3.18	2.48	2.38	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	0.22	0.30	0.31	0.33	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	0.56	2.88	2.17	2.05	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	4.05	3.41	3.00	5.44	4.23	3.93	5.05	-1.44	1.59
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	3.97	3.41 e	3.00 e	3.16 e	3.17	3.19	2.57	-1.27	-1.13
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	3.76	1.60	0.38	2.51	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	3.76	1.60	0.38	2.51	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

MEXICO

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	-	-	0.00	0.72	0.70	0.59	0.58	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	0.00	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	0.72	0.70	0.59	0.58	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	0.72	0.70	0.59	0.58	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

MEXICO

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	2.47	2.88	2.15	3.50	3.98	3.12	2.96	1.28	0.31
Steam coal	-	2.46	5.96	6.33	7.19	8.09	6.04	-	4.87
Lignite	-	-	-	0.29	0.27	0.21	0.12	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:								-0.34	0.20
Coking coal	3.09	2.96	2.21	3.52	4.02	3.11	2.96	-	4.39
Steam coal	-	3.97	9.13	9.20	10.59	11.62	8.66	-	-
Lignite	-	-	-	0.75	0.70	0.54	0.31	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	0.64	0.34	2.84	6.94 e	7.42 e	7.15 e	7.28 e	7.55 e	8.01
Bituminous coal ⁴	-	-	-	4.87 e	5.59 e	4.60 e	4.85 e	4.74 e	5.48
Coking coal	0.56	0.22	1.81	1.70 e	1.46 e	2.19 e	1.95 e	1.85 e	0.45
Sub-bituminous coal	-	-	0.42	0.00	-	-	-	0.29	1.03
Lignite	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.08	0.12	0.62	0.36	0.37	0.36	0.48	0.67	1.05
Total exports	-	0.01	0.01	0.01	0.11	0.00	0.00	0.00	0.00
Bituminous coal ⁴	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00
Coking coal	-	0.00	0.00	-	0.10	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	-	0.00	0.00	0.00	0.00	0.00	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

MEXICO

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	570	228	2436	7288 e	7862 e	7492 e	7521 e	7707 e	8280
Coking coal	570	228	1796	1773 e	1531 e	2279 e	2027 e	1874 e	456
Australia	-	-	1074	393 e	405 e	179 e	227 e	1247 e	-
Canada	-	122	538	507 e	361 e	278 e	158 e	130 e	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	470	6	61	537 e	670 e	1822 e	1642 e	497 e	456
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	1	3 e	3 e	-	-	-	-
Colombia	-	-	-	111 e	92 e	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	66	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	56	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	100	100	-	222 e	-	-	-	-	-
Steam coal	-	-	636	5512 e	6327 e	5210 e	5491 e	5829 e	7821
Australia	-	-	-	4933 e	2421 e	925 e	2210 e	2459 e	3397
Canada	-	-	-	72 e	275 e	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	636	483 e	1343 e	3366 e	2803 e	3019 e	2280
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	3	3	2	3	7	9
Colombia	-	-	-	21	1010 e	861 e	449 e	335 e	1934
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	1275 e	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	186
<i>Other FSU</i>	x	x	-	-	-	54	22	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	2	4	9	15
Lignite	-	-	4	3	4	3	3	4	3

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

NETHERLANDS¹

Figure 1: Coal supply indicators (1971 = 100)

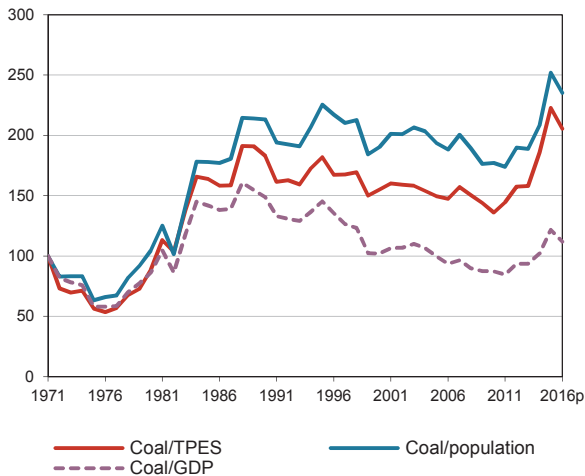


Figure 2: TPES by fuel (Mtce)

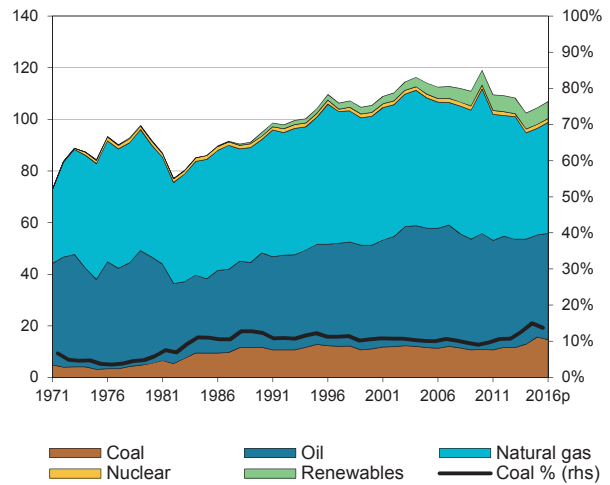


Figure 3: Primary coal supply (Mtce)

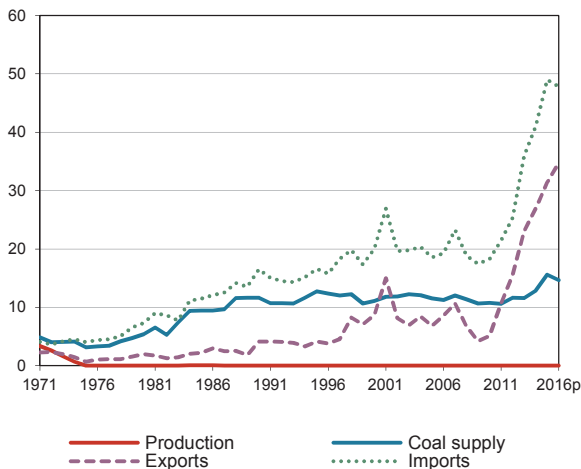


Figure 4: Coal consumption (Mtce)

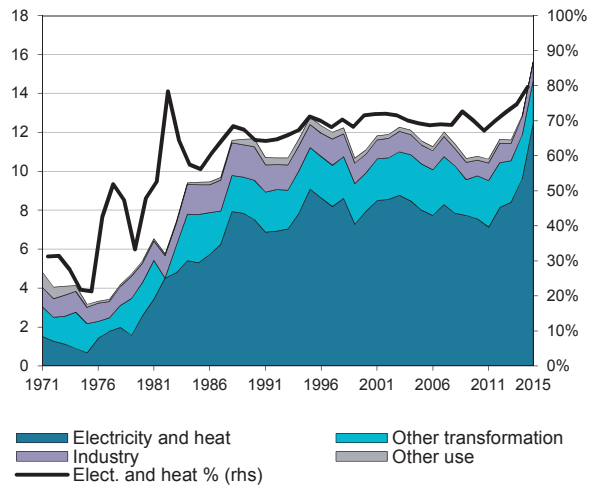
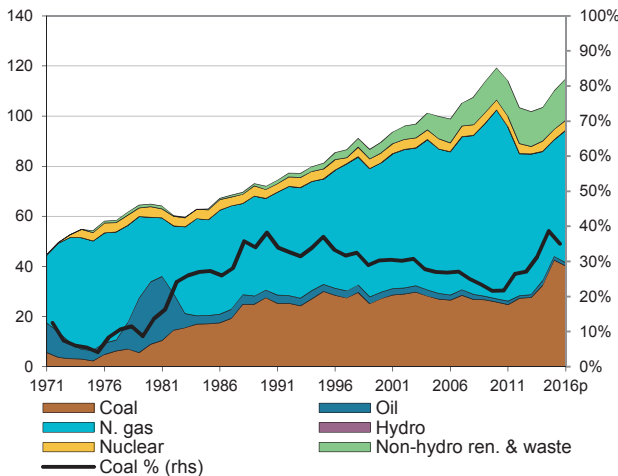
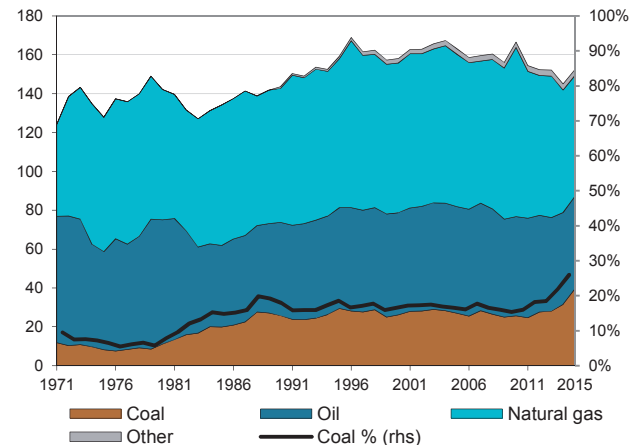


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

NETHERLANDS

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	1.6	-	-	-	-	-	-	-	-	-
Imports	4.2	7.3	16.5	20.0	18.3	41.0	49.0	47.8	8.4	4.4
Exports	-2.0	-2.0	-4.1	-8.7	-5.1	-27.0	-31.4	-34.7	4.4	8.4
Stock changes	0.3	0.1	-0.7	-0.2	-2.3	-1.1	-1.9	1.6		
Primary supply	4.1	5.4	11.7	11.1	10.8	12.9	15.6	14.7	6.4	1.2
Statistical differences	0.1	0.1	-0.3	-0.0	-0.0	0.1	0.2	..		
Total transformation	-1.8 e	-4.1	-8.8 e	-9.7 e	-9.5	-11.7 e	-14.6 e	..	10.0	2.0
Electricity and heat gen.	-1.1	-2.6	-7.5	-7.9	-7.5	-9.6	-12.4	..	11.8	2.0
<i>Main activity producers</i> ³	-1.1	-2.4	-7.4	-7.9	-7.5	-9.6	-12.4	..	11.7	2.1
<i>Autoproducers</i>	-	-0.2	-0.1	-0.0	-0.0	-0.0	-0.0	..	-	-5.0
Gas works	-	-	-	-	-	-	-	..	-	-
Coal transformation ⁴	-0.6 e	-1.6	-1.3 e	-1.7 e	-2.0	-2.1 e	-2.1 e	..	4.4	1.9
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-0.8 e	-1.2	-1.3 e	-1.6 e	-1.8	-1.9 e	-1.9 e	..	2.7	1.4
<i>Coke ovens</i>	0.2	-0.4	-0.0	-0.1	-0.2	-0.2	-0.2	..	-	12.7
<i>Patent fuel plants</i>	0.0	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-0.9	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	..	-5.4	-0.8
Losses	-0.1	-	-	-	-	-	-	..		
Final consumption ⁶	1.5	1.1	2.1	1.2	1.0	1.0	1.0	..	1.9	-3.1
Industry ⁷	1.1	1.0	1.7	1.0	0.8	0.9	1.0	..	2.7	-2.3
<i>Iron and steel</i>	0.7	0.6	1.2 e	0.8 e	0.7	0.8 e	0.9 e	..	3.1	-1.2
<i>Chemical</i>	0.2	0.2	0.3	0.0	-	-	-	..	2.1	-
<i>Non-metallic minerals</i>	0.0	0.2	0.1	0.1	0.1	0.0	0.0	..	10.5	-3.3
<i>Paper, pulp and print</i>	-	-	0.0	-	-	-	-	..	-	-
<i>Other industry</i> ⁸	0.1	0.1	0.1	0.0	0.1	0.1	0.1	..	-1.8	-2.3
Transport ⁹	-	-	-	-	-	-	-	..	-	-
Other	0.5	0.1	0.0	0.0	0.0	0.0	0.0	..	-14.5	-
<i>Comm. and pub. services</i>	-	-	0.0	0.0	0.0	0.0	0.0	..	-	-
<i>Residential</i>	0.3	0.1	0.0	0.0	0.0	0.0	0.0	..	-14.8	-
<i>Other sectors</i> ¹⁰	0.1	0.1	-	-	-	-	-	..	-	-
Non-energy use	-	-	0.4	0.2	0.2	0.1	0.0	..	-	-13.6
Electricity gen. - TWh	3.2	8.9	27.5	27.1	25.8	32.4	42.5	40.2	13.5	1.8

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

NETHERLANDS

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	4.87	12.88	12.74	11.89	12.99	14.64	18.04	8.44	1.36
Total electricity and heat	1.70	7.92	8.59	7.88	8.83	10.26	13.48	13.67	2.15
<i>Main activity producers</i>	1.59	7.89	8.59	7.88	8.83	10.26	13.48	14.28	2.17
<i>Autoproducers</i>	0.11	0.04	-	-	-	-	-	-9.31	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	3.28	3.77	3.01	2.93	2.81	2.91	2.97	1.15	-0.95
Blast furnace inputs	0.01 e	0.54 e	0.95 e	1.02	1.24 e	1.32 e	1.41 e	47.72	3.91
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.12	0.62	0.19	0.06	0.11	0.14	0.16	14.37	-5.23
<i>Iron and steel</i>	-	0.13 e	0.10 e	-	0.06 e	0.08 e	0.09 e	-	-1.55
<i>Chemical</i>	0.05	0.32	0.01	-	-	-	-	16.45	-
<i>Non-metallic minerals</i>	0.07	0.09	0.04	0.02	0.02	0.02	0.03	2.36	-4.53
<i>Paper, pulp and print</i>	-	0.00	-	-	-	-	-	-	-
<i>Other industry</i>	0.01	0.09 e	0.04 e	0.04	0.04 e	0.04 e	0.05 e	21.89	-2.39
Other sectors ⁴	0.10	0.03	0.00	-	-	-	-	-9.07	-
Non-energy use	-	0.00	0.01	0.00	0.00	0.01	0.01	-	4.49
Steam coal	1.85	8.39	8.66	7.91	8.90	10.30	13.53	13.42	1.93
Total electricity and heat	1.70	7.92	8.59	7.88	8.83	10.26	13.48	13.67	2.15
<i>Main activity producers</i>	1.59	7.89	8.59	7.88	8.83	10.26	13.48	14.28	2.17
<i>Autoproducers</i>	0.11	0.04	-	-	-	-	-	-9.31	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	0.01 e	-	-	-	0.03 e	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.06	0.44	0.07	0.04	0.03	0.04	0.03	18.23	-9.84
<i>Iron and steel</i>	-	0.01	0.01	-	0.00 e	-	-	-	-
<i>Chemical</i>	0.05	0.32	0.01	-	-	-	-	16.45	-
<i>Non-metallic minerals</i>	-	0.03	0.02	0.00	-	-	-	-	-
<i>Paper, pulp and print</i>	-	0.00	-	-	-	-	-	-	-
<i>Other industry</i>	0.01	0.09	0.04	0.04	0.03 e	0.04	0.03	21.89	-3.76
Other sectors ⁴	0.09	0.03	0.00	-	-	-	-	-8.83	-
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	2.95	4.44	4.05	3.95	4.07	4.31	4.47	3.45	0.03
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	3.28	3.77	3.01	2.93	2.81	2.91	2.97	1.15	-0.95
Blast furnace inputs	-	0.54 e	0.95 e	1.02	1.20 e	1.32 e	1.41 e	-	3.91
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	0.13	0.09	-	0.06	0.08	0.09	-	-1.39
<i>Iron and steel</i>	-	0.13 e	0.09 e	-	0.06 e	0.08 e	0.09 e	-	-1.39
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	0.00	0.01	0.00	0.00	0.01	0.01	-	4.49

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

NETHERLANDS

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	0.07	0.06	0.03	0.03	0.02	0.03	0.04	-1.60	-1.14
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.07	0.06	0.03	0.03	0.02	0.03	0.04	-1.23	-1.24
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	0.07	0.06	0.03	0.02	0.02	0.02	0.03	-1.23	-2.88
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	0.00	0.01	0.01	0.01	0.01	-	-
Other sectors ³	0.00	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

NETHERLANDS

3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change 78-90	90-15
Mtce:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	5.05	16.50	20.02	18.56	18.25	36.01	40.96	48.96	47.80
Bituminous coal ⁴	1.88	11.47	14.71	13.28	13.45	31.70	36.07	44.82	43.54
Coking coal	2.64	4.55	4.76	4.88	4.47	4.06	4.35	3.79	3.68
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	0.05	0.04	0.02	0.02	0.02	0.03	0.03	0.02	0.02
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.48	0.43	0.53	0.38	0.32	0.22	0.52	0.33	0.56
Total exports	1.13	4.14	8.70	6.82	5.14	23.07	26.95	31.40	34.71
Bituminous coal ⁴	0.41	3.29	7.21	6.21	4.98	22.74	26.33	30.82	34.17
Coking coal	0.01	-	0.92	0.23	-	0.01	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	0.00	0.00	0.00	0.00	0.00	-	-	0.00	0.04
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.71	0.84	0.57	0.38	0.16	0.32	0.62	0.58	0.50

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

NETHERLANDS

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	5108	17318	22572	20494	20466	41810	47302	57113	55487
Coking coal	2853	4647	4864	4987	4569	4152	4445	3876	3765
Australia	961	453	1902	1346	555	1648	1524	1689	1291
Canada	-	430	366	902	503	466	-	325	-
Czech Republic	89	-	-	-	-	-	-	-	-
Germany	782	466	-	-	1	-	-	-	-
Poland	376	99	319	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	644	3141	1621	1364	2859	1287	1710	1004	1448
Other OECD	1	4	1	303	-	116	316	118	268
China, People's Rep.	-	1	-	-	-	-	-	-	-
Colombia	-	6	10	-	-	-	-	-	-
Indonesia	-	46	441	-	-	-	-	31	-
South Africa	-	1	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	359	554	449	624	386	528
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	204	713	97	90	91	-	77
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	96	180	323	153
Steam coal	2185	12608	17675	15473	15871	37617	42816	53211	51691
Australia	529	5054	1110	440	-	577	880	1167	1063
Canada	55	-	-	-	-	3	25	-	30
Czech Republic	62	-	-	-	-	-	-	-	-
Germany	703	71	19	43	17	67	84	3955	102
Poland	264	1028	1246	97	73	-	-	247	-
United Kingdom	166	-	9	68	20	19	-	-	-
United States	14	2978	1242	291	819	8647	9750	10464	11775
Other OECD	10	234	365	239	797	520	662	595	786
China, People's Rep.	-	150	271	83	23	10	13	31	13
Colombia	-	1492	4989	5720	8656	15784	13522	18224	16333
Indonesia	-	131	2644	995	14	14	-	-	-
South Africa	309	1419	5287	6102	2015	4906	10290	5560	12429
Former Soviet Union ⁴	57	32	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	174	1254	3401	6937	7462	12695	9008
<i>Other FSU</i>	x	x	-	33	-	95	77	2	93
Venezuela	-	19	90	-	36	14	40	-	48
Viet Nam	-	-	157	-	-	2	10	42	10
Non-specified/other	16	-	72	108	-	22	1	229	1
Lignite	70	63	33	34	26	41	41	26	31

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

NETHERLANDS

6. Coking coal exports by destination¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	13	-	938	236	-	15	-	-	-
Total OECD	13	-	938	236	-	15	-	-	-
Australia	-	-	-	-	-	-	-	-	-
Austria	-	-	-	-	-	-	-	-	-
Belgium	13	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Chile	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-
France	-	-	10	-	-	-	-	-	-
Germany	-	-	928	236	-	15	-	-	-
Greece	-	-	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-	-
Italy	-	-	-	-	-	-	-	-	-
Japan	-	-	-	-	-	-	-	-	-
Korea	-	-	-	-	-	-	-	-	-
Latvia	x	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	-	-	-	-	-	-	-	-	-
New Zealand	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-
Slovak Republic	-	-	-	-	-	-	-	-	-
Slovenia	x	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-
Sweden	-	-	-	-	-	-	-	-	-
Switzerland	-	-	-	-	-	-	-	-	-
Turkey	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Total non-OECD	-	-	-	-	-	-	-	-	-
Brazil	-	-	-	-	-	-	-	-	-
China ³	-	-	-	-	-	-	-	-	-
Chinese Taipei	-	-	-	-	-	-	-	-	-
Egypt	-	-	-	-	-	-	-	-	-
India	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	-
Oth. Africa & Mid. East	-	-	-	-	-	-	-	-	-
Oth. non-OECD Americas	-	-	-	-	-	-	-	-	-
Other Asia & Oceania	-	-	-	-	-	-	-	-	-
Other non-OECD Europe and Eurasia	-	-	-	-	-	-	-	-	-
Non-specified/Other	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

NETHERLANDS

7. Steam coal exports by destination¹

(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	475	3599	8649	7214	5873	26994	31256	36589	40569
Total OECD	475	3551	8618	7187	5725	26941	31208	36470	40508
Australia	-	-	-	-	-	13	29	36	38
Austria	-	-	1	5	-	-	-	644	-
Belgium	231	643	154	44	219	1277	2260	3637	2933
Canada	-	-	-	18	23	-	8	-	10
Chile	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	3	-	67	176	23	34	58	44
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	1	-	311	-	3	-	-	-
France	9	377	321	1303	1058	1282	921	810	1190
Germany	228	2169	7475	4644	3753	23669	27278	30225	35417
Greece	-	-	-	71	-	19	10	-	13
Hungary	-	-	-	60	-	-	-	-	-
Iceland	-	-	-	33	56	43	58	102	75
Ireland	-	48	-	-	-	-	39	164	50
Israel	-	-	-	-	-	-	-	-	-
Italy	-	-	3	-	-	-	-	-	-
Japan	-	-	-	-	-	-	-	-	-
Korea	-	-	-	-	-	-	-	-	-
Latvia	x	-	-	-	-	-	38	95	49
Luxembourg	-	-	53	1	15	24	35	40	46
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	-	-	-	-	-	-	-	-	-
New Zealand	-	-	-	-	-	-	-	-	-
Norway	-	10	316	174	239	153	217	396	281
Poland	-	-	-	7	16	118	5	2	6
Portugal	-	5	-	-	-	-	-	-	-
Slovak Republic	-	-	-	-	-	-	-	-	-
Slovenia	x	-	-	-	-	-	-	-	-
Spain	-	30	20	18	4	11	57	89	74
Sweden	-	-	-	13	1	3	15	10	17
Switzerland	5	10	-	-	7	9	5	6	6
Turkey	-	-	-	-	-	-	-	-	-
United Kingdom	2	255	275	418	158	262	195	156	253
United States	-	-	-	-	-	32	4	-	6
Total non-OECD	-	48	-	24	147	53	27	28	34
Brazil	-	-	-	-	-	-	-	-	-
China ³	-	5	-	-	-	-	-	-	-
Chinese Taipei	-	-	-	-	-	-	-	-	-
Egypt	-	-	-	3	7	-	23	24	30
India	-	-	-	-	-	-	-	1	-
Romania	-	-	-	-	-	-	-	-	-
Oth. Africa & Mid. East	-	43	-	-	15	11	-	-	-
Oth. non-OECD Americas	-	-	-	-	15	30	-	-	-
Other Asia & Oceania	-	-	-	-	1	-	1	1	1
Other non-OECD Europe and Eurasia	-	-	-	21	109	12	3	2	3
Non-specified/Other	-	-	31	3	1	-	2	82	2

1. Please refer to the explanatory notes and definitions in Part I. Steam coal includes all sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

NEW ZEALAND¹

Figure 1: Coal supply indicators (1971 = 100)

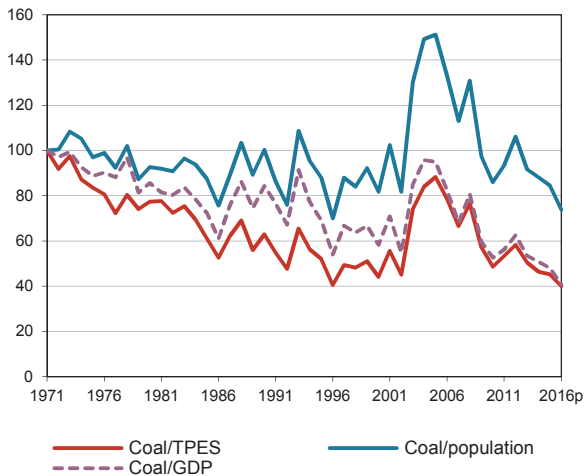


Figure 2: TPES by fuel (Mtce)

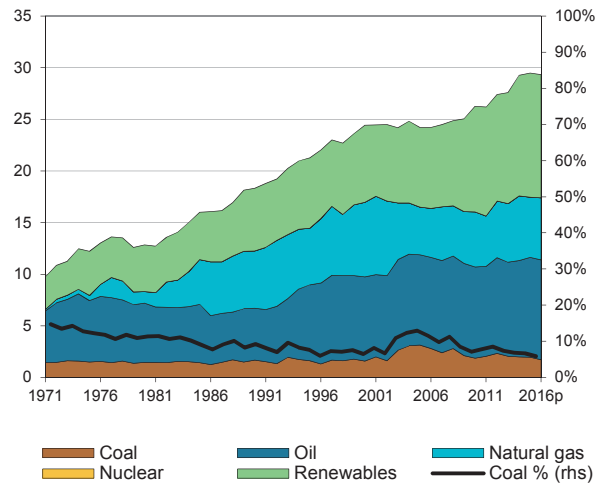


Figure 3: Primary coal supply (Mtce)

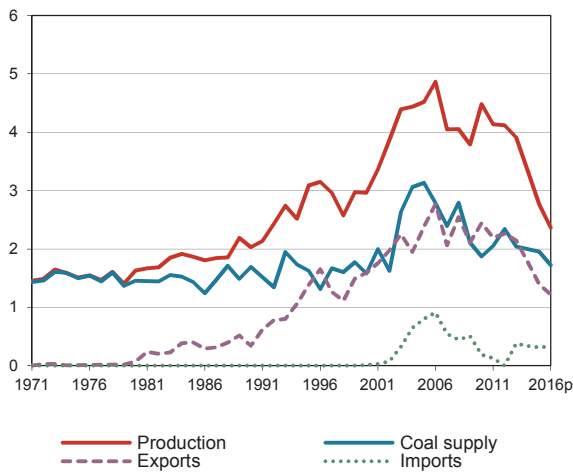


Figure 4: Coal consumption (Mtce)

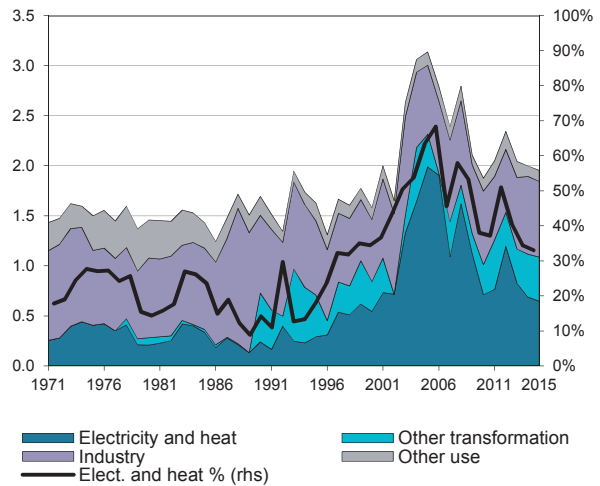
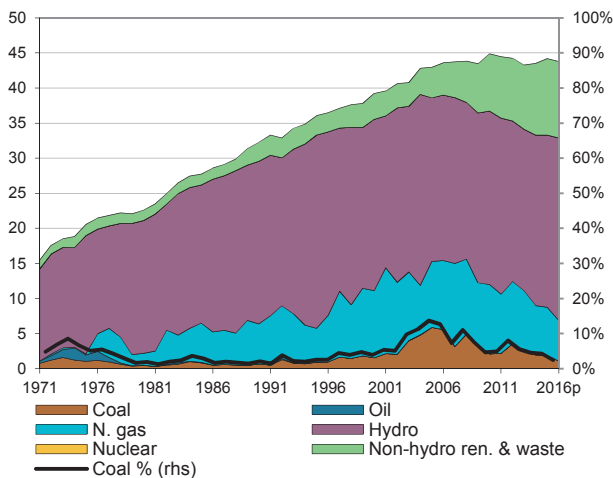
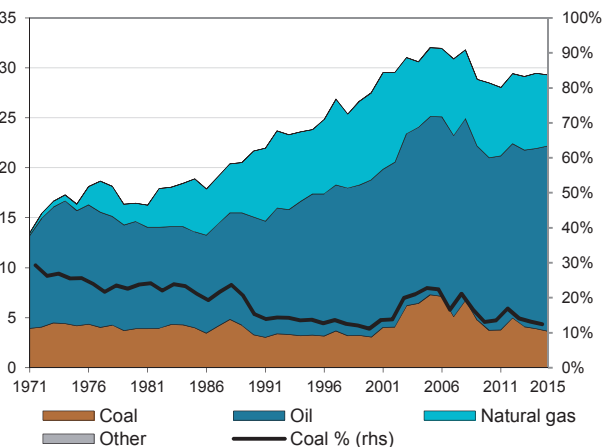


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

NEW ZEALAND

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	1.6 e	1.6	2.0	3.0	4.5	3.3	2.8	2.4	1.2	1.2
Imports	-	-	0.0	0.0	0.2	0.3	0.3	0.3	-	25.8
Exports	-0.0	-0.1	-0.3	-1.6	-2.4	-1.8	-1.4	-1.2	15.1	5.8
Stock changes	-0.0	-0.1	-	0.2	-0.4	0.1	0.3	0.3		
Primary supply	1.6	1.5	1.7	1.6	1.9	2.0	2.0	1.7	0.3	0.6
Statistical differences	-	-0.0	-0.1	-0.1	-0.0	-0.1	-0.1	..		
Total transformation	-0.4	-0.2	-0.4 e	-0.7	-0.9	-0.9	-0.9	..	0.9	2.8
Electricity and heat gen.	-0.4	-0.2	-0.2	-0.5	-0.7	-0.7	-0.6	..	-2.9	4.0
<i>Main activity producers</i> ³	-0.4	-0.2	-0.2	-0.3	-0.4	-0.4	-0.4	..	-5.0	3.4
<i>Autoproducers</i>	-	-	-0.1	-0.2	-0.3	-0.3	-0.3	..	-	5.3
Gas works	0.0	-0.0	-	-	-	-	-	..	-	-
Coal transformation ⁴	-0.0	-0.0	-0.2 e	-0.1	-0.2	-0.2	-0.2	..	23.6	0.7
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-	-	-0.2 e	-0.2	-0.2	-0.3	-0.3	..	-	0.7
<i>Coke ovens</i>	0.0	-0.0	0.0	0.0	0.0	0.0	0.0	..	-	-
<i>Patent fuel plants</i>	-0.0	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-	-0.0	-0.1	-0.1	-0.1	-0.1	-0.1	..	-	2.5
Losses	-0.0	-0.0	-0.2 e	-0.0	-0.0	-0.0	-0.0	..		
Final consumption ⁶	1.2	1.2	1.0	0.7	0.9	0.9	0.9	..	-1.4	-0.4
Industry ⁷	1.0	0.8	0.8	0.6	0.7	0.8	0.8	..	-1.3	-0.1
<i>Iron and steel</i>	0.1	0.1	0.0	0.0	0.1	0.1	0.1	..	-7.6	5.3
<i>Chemical</i>	-	-	-	-	-	-	-	..	-	-
<i>Non-metallic minerals</i>	-	0.1	-	-	0.1	0.1	0.1	..	-	-
<i>Paper, pulp and print</i>	-	0.1	-	-	-	-	-	..	-	-
<i>Other industry</i> ⁸	0.9	0.5	0.8	0.6	0.6	0.6	0.6	..	-1.1	-1.0
Transport ⁹	-	0.0	0.0	0.0	0.0	-	-	..	-	-
Other	0.3	0.4	0.2	0.1	0.1	0.1	0.1	..	-1.7	-2.0
<i>Comm. and pub. services</i>	0.0	0.2	0.1	0.1	0.0	0.0	0.0	..	12.6	-1.8
<i>Residential</i>	0.2 e	0.2	0.1	0.0	0.0	0.0	0.0	..	-2.8	-8.9
<i>Other sectors</i> ¹⁰	0.0	-	0.0	0.0	0.1	0.1	0.1	..	-	7.1
Non-energy use	-	-	-	-	-	-	-	..	-	-
Electricity gen. - TWh	1.6	0.4	0.7	1.5	2.1	2.0	1.9	1.1	-5.0	4.3

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

NEW ZEALAND

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	2.17	2.24	2.10	2.65	2.92	2.87	2.83	0.29	0.94
Total electricity and heat	0.59	0.27	0.46	0.66	0.83	0.63	0.57	-6.23	3.00
<i>Main activity producers</i>	0.59	0.23	0.43	0.64	0.81	0.61	0.56	-7.50	3.56
<i>Autoproducers</i>	-	0.04	0.03	0.02	0.02	0.02	0.02	-	-3.69
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	0.05	0.64	0.67	0.84	0.89	0.89	0.91	23.70	1.39
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	0.08	-	-	-	-	-	-	-	-
Industry	0.91	1.02	0.76	0.92	0.92	1.04	1.03	0.92	0.03
<i>Iron and steel</i>	0.18	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	0.13	-	-	0.12	0.16	0.12	0.12	-	-
<i>Paper, pulp and print</i>	0.06	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.54	1.02	0.76	0.80	0.76	0.91	0.91	5.38	-0.45
Other sectors ⁴	0.49	0.23	0.17	0.19	0.24	0.15	0.17	-6.19	-1.18
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	2.04	1.84	1.88	2.29	2.61	2.55	2.48	-0.83	1.20
Total electricity and heat	0.59	0.26	0.45	0.64	0.82	0.61	0.56	-6.61	3.09
<i>Main activity producers</i>	0.59	0.23	0.43	0.64	0.81	0.61	0.56	-7.50	3.56
<i>Autoproducers</i>	-	0.03	0.02	0.00	0.00	0.00	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	0.05	0.64	0.67	0.84	0.89	0.89	0.91	23.70	1.39
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	0.08	-	-	-	-	-	-	-	-
Industry	0.83	0.89	0.59	0.65	0.66	0.75	0.75	0.58	-0.66
<i>Iron and steel</i>	0.18	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	0.12	-	-	0.12	0.16	0.12	0.12	-	-
<i>Paper, pulp and print</i>	0.03	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.49	0.89	0.59	0.53	0.51	0.63	0.63	5.01	-1.33
Other sectors ⁴	0.45	0.17	0.09	0.12	0.20	0.13	0.13	-7.81	-1.07
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	-	0.24	0.00	0.07	0.01	-	0.03	-	-8.41
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	0.08	0.01	0.01	0.00	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	0.00	0.00	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	0.07	0.01	0.01	0.00	-	-
Other sectors ⁴	-	-	-	0.01	0.00	0.00	0.00	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

NEW ZEALAND

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	0.13	0.16	0.21	0.29	0.29	0.32	0.33	1.63	2.93
Total electricity and heat	-	0.01	0.01	0.02	0.01	0.02	0.02	-	0.83
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	0.01	0.01	0.02	0.01	0.02	0.02	-	0.83
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.09	0.14	0.17	0.20	0.25	0.28	0.27	3.63	2.86
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	0.00	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	0.03	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.05	0.14	0.17	0.20	0.25	0.28	0.27	8.27	2.86
Other sectors ³	0.04	0.06	0.08	0.06	0.03	0.02	0.04	2.87	-1.64
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

NEW ZEALAND

3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change 78-90	90-15
Mtce:									
Coking coal	0.01	0.59	1.35	2.50	2.37	1.37	1.25	39.10	3.45
Steam coal	1.53	1.37	1.51	1.89	1.97	1.23	0.96	-0.94	-0.41
Lignite	0.07	0.08	0.11	0.13	0.15	0.16	0.15	1.07	2.86
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:								39.12	3.40
Coking coal	0.01	0.58	1.31	2.45	2.34	1.33	1.21	-0.72	-0.24
Steam coal	2.01	1.84	1.94	2.58	2.70	1.73	1.36	0.43	2.89
Lignite	0.15	0.16	0.21	0.25	0.30	0.32	0.31	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	0.00	0.00	0.02	0.80	0.19	0.38	0.34	0.31	0.33
Bituminous coal ⁴	0.00	-	0.02	0.06	0.05	0.06	0.03	0.03	0.07
Coking coal	-	0.00	-	-	0.00	-	-	-	-
Sub-bituminous coal	-	-	-	0.74	0.14	0.32	0.31	0.28	0.26
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.00	-	-	-	-	-	-	-	-
Total exports	0.02	0.34	1.59	2.38	2.44	2.15	1.78	1.40	1.22
Bituminous coal ⁴	-	-	-	-	0.11	-	-	-	-
Coking coal	0.01	0.34	1.59	2.38	2.33	2.15	1.76	1.37	1.22
Sub-bituminous coal	-	-	-	-	-	-	0.02	0.03	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.01	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

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5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	1	1	16	1084	251	520	471	436	442
Coking coal	-	1	-	-	1	-	-	-	-
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	1	-	-	1	-	-	-	-
Steam coal	1	-	16	1084	250	520	471	436	442
Australia	-	-	16	62	51	62	30	31	74
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	1	-	-	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	1022	199	458	441	405	368
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

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6. Coking coal exports by destination¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	11	336	1551	2331	2301	2096	1719	1326	1187
Total OECD	11	285	1253	1172 e	529 e	545	413	258	211
Australia	-	-	122	49 e	-	-	-	-	-
Austria	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-
Canada	-	30	-	-	-	-	-	-	-
Chile	-	-	313	267 e	57 e	-	-	111	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-
France	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-	-
Italy	-	-	-	-	-	-	-	-	-
Japan	11	243	687	818 e	472 e	545	413	147	126
Korea	-	-	-	-	-	-	-	-	85
Latvia	x	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	-	12	85	-	-	-	-	-	-
New Zealand	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-
Slovak Republic	-	-	-	-	-	-	-	-	-
Slovenia	x	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-
Sweden	-	-	-	-	-	-	-	-	-
Switzerland	-	-	46	-	-	-	-	-	-
Turkey	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	38 e	-	-	-	-	-
Total non-OECD	-	51	276	858 e	1291 e	1362	1203	1068	976
Brazil	-	-	-	124 e	-	-	-	-	-
China ³	-	-	91	137 e	218 e	335	206	221	533
Chinese Taipei	-	-	-	-	-	-	-	-	-
Egypt	-	-	-	-	-	-	-	-	-
India	-	51	185	597 e	1073 e	1027	997	847	443
Romania	-	-	-	-	-	-	-	-	-
Oth. Africa & Mid. East	-	-	-	-	-	-	-	-	-
Oth. non-OECD Americas	-	-	-	-	-	-	-	-	-
Other Asia & Oceania	-	-	-	-	-	-	-	-	-
Other non-OECD Europe and Eurasia	-	-	-	-	-	-	-	-	-
Non-specified/Other	-	-	22	-	305 e	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

NEW ZEALAND

7. Steam coal exports by destination¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	-	-	-	-	119	-	22	43	-
Total OECD	-	-	-	-	-	-	-	-	-
Australia	-	-	-	-	-	-	-	-	-
Austria	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Chile	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-
France	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-	-
Italy	-	-	-	-	-	-	-	-	-
Japan	-	-	-	-	-	-	-	-	-
Korea	-	-	-	-	-	-	-	-	-
Latvia	x	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	-	-	-	-	-	-	-	-	-
New Zealand	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-
Slovak Republic	-	-	-	-	-	-	-	-	-
Slovenia	x	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-
Sweden	-	-	-	-	-	-	-	-	-
Switzerland	-	-	-	-	-	-	-	-	-
Turkey	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Total non-OECD	-	-	-	-	-	-	-	-	-
Brazil	-	-	-	-	-	-	-	-	-
China ³	-	-	-	-	-	-	-	-	-
Chinese Taipei	-	-	-	-	-	-	-	-	-
Egypt	-	-	-	-	-	-	-	-	-
India	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	-
Oth. Africa & Mid. East	-	-	-	-	-	-	-	-	-
Oth. non-OECD Americas	-	-	-	-	-	-	-	-	-
Other Asia & Oceania	-	-	-	-	-	-	-	-	-
Other non-OECD Europe and Eurasia	-	-	-	-	-	-	-	-	-
Non-specified/Other	-	-	-	-	119	-	22	43	-

1. Please refer to the explanatory notes and definitions in Part I. Steam coal includes all sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

NORWAY¹

Figure 1: Coal supply indicators (1971 = 100)

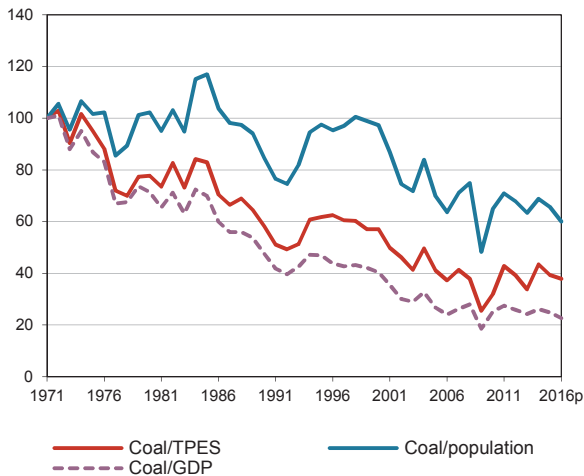


Figure 2: TPES by fuel (Mtce)

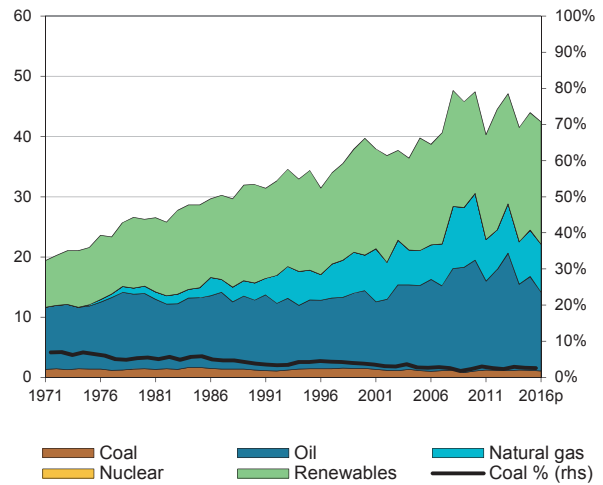


Figure 3: Primary coal supply (Mtce)

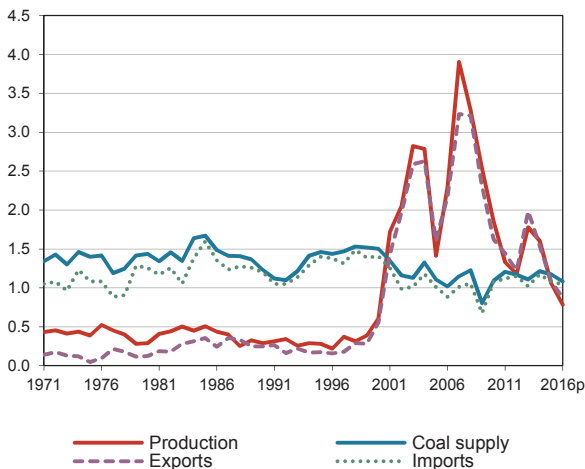


Figure 4: Coal consumption (Mtce)

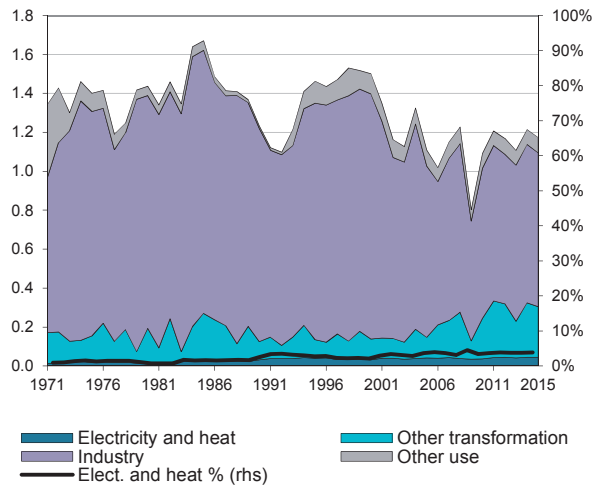
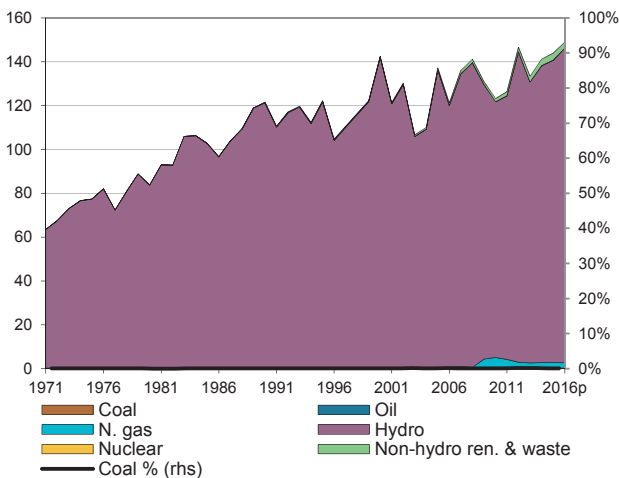
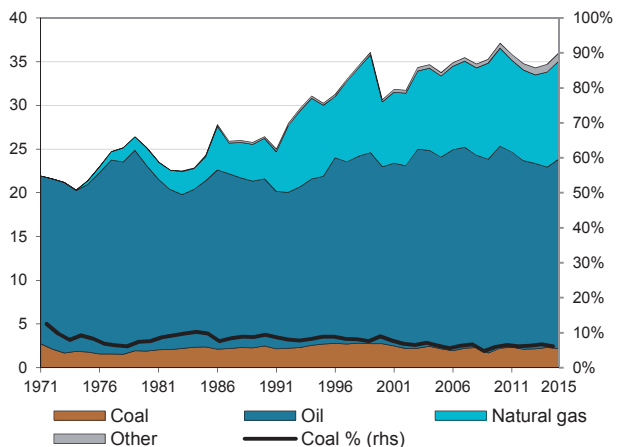


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

NORWAY

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	0.4	0.3	0.3	0.6	1.9	1.6	1.1	0.8	-2.1	5.3
Imports	1.0	1.3	1.2	1.4	1.1	1.2	1.1	1.0	1.3	-0.4
Exports	-0.1	-0.1	-0.2	-0.6	-1.6	-1.5	-1.1	-0.9	3.9	6.0
Stock changes	0.1	0.0	-0.0	0.0	-0.2	-0.0	0.1	0.1		
Primary supply	1.3	1.4	1.2	1.5	1.1	1.2	1.2	1.1	-0.3	-0.2
Statistical differences	0.0	-0.0	-0.0	0.0	-0.1	-0.1	-0.1	..		
Total transformation	-0.1 e	-0.1 e	-0.1	-0.1	-0.2	-0.2	-0.2 e	..	-0.5	2.6
Electricity and heat gen.	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	..	-	-
<i>Main activity producers</i> ³	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	..	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	..	-	-
Gas works	0.0	0.0	-	-	-	-	-	..	-	-
Coal transformation ⁴	-0.1 e	-0.1 e	-0.1	-0.1	-0.1	-0.2	-0.2 e	..	-2.3	3.0
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-0.1 e	-0.1 e	-0.1	-0.1	-0.1	-0.2	-0.2 e	..	-1.4	3.0
<i>Coke ovens</i>	-0.0	0.0	-	-	-	-	-	..	-	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-0.0	-0.0	-	-	-	-	-	..	-	-
Losses	-0.0	-0.0	-0.0	-0.0	-0.0	-	-0.0	..		
Final consumption ⁶	1.2	1.2	1.1	1.4	0.8	0.9	0.9	..	-0.3	-1.0
Industry ⁷	1.1	1.2	1.1	1.3	0.8	0.8	0.8	..	0.1	-1.3
<i>Iron and steel</i>	0.8 e	0.9 e	0.8	0.8	0.3	0.3	0.3 e	..	-0.6	-3.1
<i>Chemical</i>	0.1	0.2	0.2	0.3	0.3	0.4	0.3	..	3.4	2.8
<i>Non-metallic minerals</i>	0.1	0.1	0.1	0.2	0.1	0.1	0.1	..	1.5	-1.1
<i>Paper, pulp and print</i>	-	-	0.0	-	-	-	-	..	-	-
<i>Other industry</i> ⁸	0.0	0.0	0.0	0.0	-	-	-	..	-	-
Transport ⁹	-	-	-	-	-	-	-	..	-	-
Other	0.1	0.0	0.0	0.0	-	-	-	..	-10.7	-
<i>Comm. and pub. services</i>	0.0	-	-	-	-	-	-	..	-	-
<i>Residential</i>	0.1	0.0	0.0	0.0	-	-	-	..	-12.9	-
<i>Other sectors</i> ¹⁰	-	-	0.0	-	-	-	-	..	-	-
Non-energy use	-	-	-	0.1	0.1	0.1	0.1	..	-	-
Electricity gen. - TWh	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.1	8.0	2.5

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

NORWAY

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	0.83	0.75	1.00	0.71	0.73	0.80	0.79	-0.86	0.20
Total electricity and heat	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.84	0.86
<i>Main activity producers</i>	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.84	0.86
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	0.41	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	0.11	0.11	0.07 e	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.35	0.74	0.86	0.58	0.56	0.61	0.57	6.54	-1.07
<i>Iron and steel</i>	0.25	0.48	0.47	0.25	0.20	0.23	0.21 e	5.75	-3.24
<i>Chemical</i>	0.10	0.11	0.22	0.21	0.26	0.28	0.26	1.12	3.46
<i>Non-metallic minerals</i>	-	0.14	0.17	0.12	0.10	0.10	0.09	-	-1.57
<i>Paper, pulp and print</i>	-	0.01	-	-	-	-	-	-	-
<i>Other industry</i>	0.00	0.00	0.00	-	0.00	-	-	-	-
Other sectors ⁴	0.01	0.01	0.00	-	-	-	-	1.53	-
Non-energy use	-	-	0.11	0.08	0.08	0.08	0.08	-	-
Steam coal	0.42	0.75	1.00	0.71	0.73	0.80	0.79	5.00	0.20
Total electricity and heat	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.84	0.86
<i>Main activity producers</i>	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.84	0.86
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	0.11	0.11	0.07 e	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.35	0.74	0.86	0.58	0.56	0.61	0.57	6.54	-1.07
<i>Iron and steel</i>	0.25	0.48	0.47	0.25	0.20	0.23	0.21 e	5.75	-3.24
<i>Chemical</i>	0.10	0.11	0.22	0.21	0.26	0.28	0.26	1.12	3.46
<i>Non-metallic minerals</i>	-	0.14	0.17	0.12	0.10	0.10	0.09	-	-1.57
<i>Paper, pulp and print</i>	-	0.01	-	-	-	-	-	-	-
<i>Other industry</i>	0.00	0.00	0.00	-	0.00	-	-	-	-
Other sectors ⁴	0.01	0.01	0.00	-	-	-	-	1.53	-
Non-energy use	-	-	0.11	0.08	0.08	0.08	0.08	-	-
Coking coal	0.41	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	0.41	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

NORWAY

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	0.23	-	-	-	-	-	-	-	-
Steam coal	0.18	0.29	0.61	1.41	1.86	1.06	0.78	4.31	5.32
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	0.23	-	-	-	-	-	-	4.68	5.32
Steam coal	0.18	0.30	0.63	1.47	1.94	1.11	0.82	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	0.91	1.20	1.41	1.01	1.08	1.02	1.17	1.08	1.05
Bituminous coal ⁴	0.26	0.68	0.88	0.64	0.66	0.62	0.73	0.66	0.63
Coking coal	0.19	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.46	0.52	0.53	0.37	0.42	0.41	0.44	0.42	0.41
Total exports	0.18	0.25	0.55	1.60	1.63	1.98	1.54	1.08	0.87
Bituminous coal ⁴	0.08	0.24	0.55	1.60	1.62	1.98	1.54	1.08	0.87
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.10	0.00	0.00	0.00	0.00	0.00	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

NORWAY

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	450	713	919	667	684	644	761	693	660
Coking coal	187	-	-	-	-	-	-	-	-
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	125	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	62	-	-	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Steam coal	263	713	919	667	684	644	761	693	660
Australia	2	-	-	-	22	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	32	-	-	-	-	-	-	-
Germany	55	48	64	71	60	6	49	60	-
Poland	29	87	151	159	83	104	100	66	33
United Kingdom	77	181	169	103	91	67	42	23	42
United States	46	151	21	17	51	80	66	63	62
Other OECD	38	99	294	148	123	90	30	8	-
China, People's Rep.	-	4	36	30	6	-	-	-	-
Colombia	-	9	102	97	111	251	355	354	424
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	16	-	-	-	11	-	-	-	-
Former Soviet Union ⁴	-	97	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	82	39	122	46	118	114	94
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	5	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	3	4	-	1	5	5
Lignite	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

NORWAY

7. Steam coal exports by destination¹

(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	77	254	574	1666	1691	2068	1608	1124	912
Total OECD	76	253	570	1666	1691	2068	1608	1124	912
Australia	-	-	-	-	-	-	-	-	-
Austria	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	248
Canada	-	-	-	-	-	-	-	-	-
Chile	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	2	156	245	182	241	89	129	81
Estonia	x	-	-	-	-	10	-	-	-
Finland	-	-	50	-	-	-	-	-	-
France	-	50	-	111	-	208	81	80	-
Germany	75	87	330	994	816	865	445	105	429
Greece	-	-	-	71	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Iceland	-	-	7	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-	-
Italy	-	4	-	-	-	-	-	-	-
Japan	-	-	-	-	-	-	-	-	-
Korea	-	-	-	-	-	-	-	-	-
Latvia	x	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	-	46	-	-	282	320	549	645	154
New Zealand	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	2	1	110	119	229	-	-
Portugal	-	-	-	214	217	-	-	-	-
Slovak Republic	-	-	-	-	-	-	-	-	-
Slovenia	x	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	79	5	-	-
Sweden	-	3	-	-	-	3	60	90	-
Switzerland	-	-	-	-	15	-	-	-	-
Turkey	-	-	-	-	-	146	-	-	-
United Kingdom	1	61	25	30	69	77	150	75	-
United States	-	-	-	-	-	-	-	-	-
Total non-OECD	-	-	4	-	-	-	-	-	-
Brazil	-	-	-	-	-	-	-	-	-
China ³	-	-	-	-	-	-	-	-	-
Chinese Taipei	-	-	-	-	-	-	-	-	-
Egypt	-	-	-	-	-	-	-	-	-
India	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	-
Oth. Africa & Mid. East	-	-	2	-	-	-	-	-	-
Oth. non-OECD Americas	-	-	-	-	-	-	-	-	-
Other Asia & Oceania	-	-	-	-	-	-	-	-	-
Other non-OECD Europe and Eurasia	-	-	2	-	-	-	-	-	-
Non-specified/Other	1	1	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I. Steam coal includes all sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

POLAND¹

Figure 1: Coal supply indicators (1971 = 100)

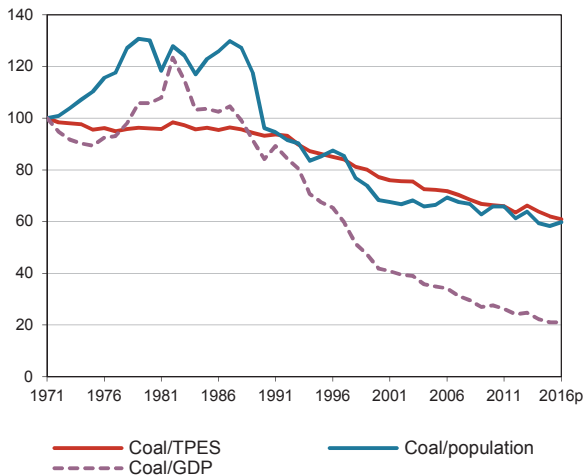


Figure 2: TPES by fuel (Mtce)

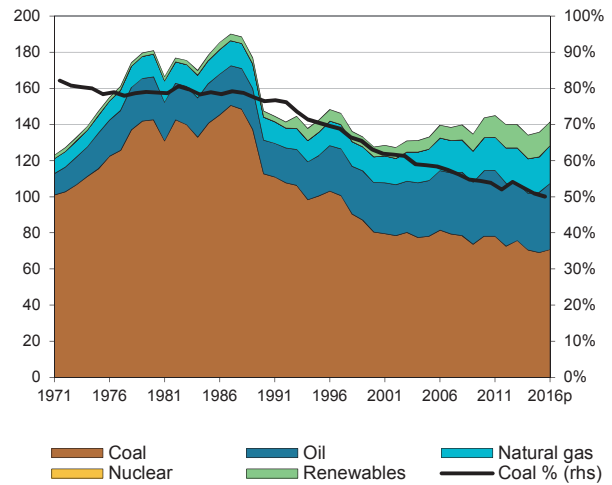


Figure 3: Primary coal supply (Mtce)

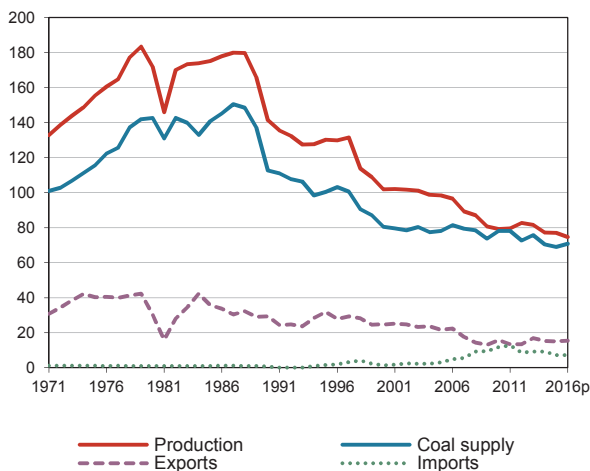


Figure 4: Coal consumption (Mtce)

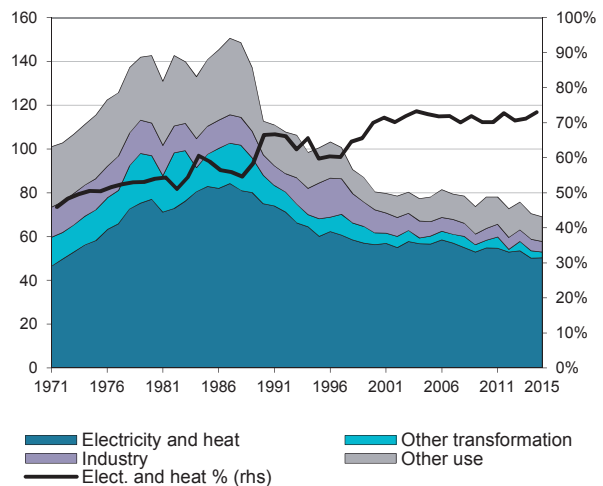
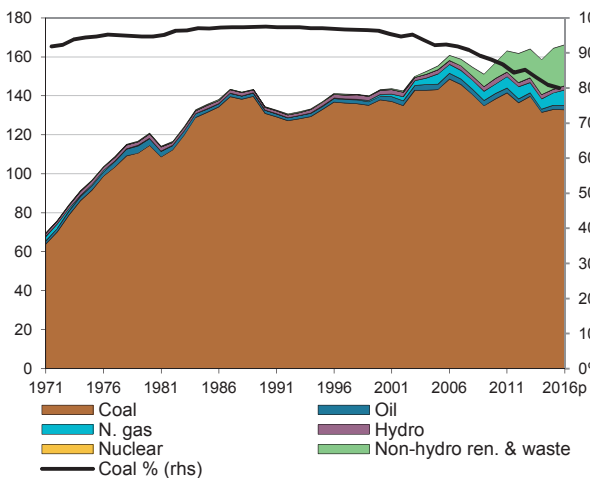
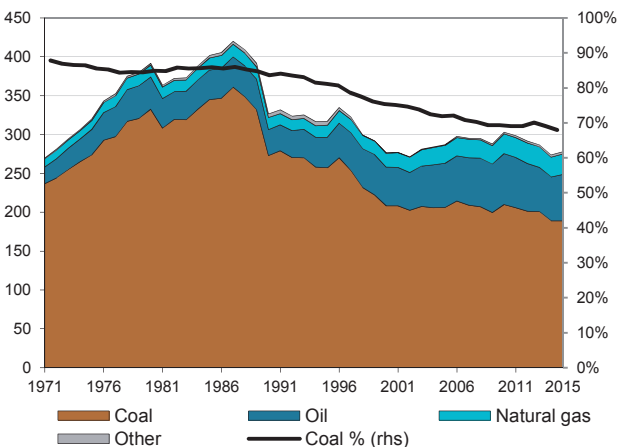


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

POLAND

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	143.9	171.9	141.4	101.9	79.1	77.2	77.0	74.6	-0.1	-2.4
Imports	1.2	1.0	0.6	1.5	11.8	9.2	7.2	7.2	-4.2	10.7
Exports	-38.5	-30.4	-29.3	-24.8	-15.7	-15.2	-15.1	-15.5	-1.6	-2.6
Stock changes	0.2	0.0	0.0	1.9	2.9	-0.7	-0.0	4.5		
Primary supply	106.7	142.6	112.7	80.4	78.1	70.4	69.0	70.8	0.3	-1.9
Statistical differences	-4.7	-9.8	-5.7	0.5	-0.2	0.5	1.5	..		
Total transformation	-57.7 e	-84.4 e	-80.2 e	-59.8	-56.5	-52.5	-52.8	..	2.0	-1.7
Electricity and heat gen.	-52.9 e	-77.0	-74.9	-56.3	-54.8	-50.1	-50.4	..	2.1	-1.6
<i>Main activity producers</i> ³	-36.7 e	-53.6	-56.3	-53.4	-53.2	-48.5	-48.9	..	2.5	-0.6
<i>Autoproducers</i>	-16.2 e	-23.4	-18.7	-2.9	-1.6	-1.6	-1.5	..	0.8	-9.6
Gas works	-0.5 e	-0.6	-0.0	0.0	0.0	0.0	0.0	..	-14.4	-
Coal transformation ⁴	-4.3 e	-6.8 e	-5.2 e	-3.3	-1.5	-2.2	-2.2	..	1.2	-3.4
<i>BKB plants</i>	0.0	0.0	0.0	0.0	-	-	-	..	-	-
<i>Blast furnaces</i>	-3.2 e	-4.2 e	-3.2 e	-1.7	-0.8	-1.2	-1.3	..	0.1	-3.5
<i>Coke ovens</i>	-1.2	-2.7	-2.0	-1.6	-0.7	-0.9	-0.9	..	2.9	-3.3
<i>Patent fuel plants</i>	0.1	0.1	0.0	-	-	-0.0	-0.0	..	-23.8	-
Other transformation ⁵	-	-	-	-0.2	-0.2	-0.2	-0.2	..	-	-
Energy ind. own use	-2.8 e	-2.7	-2.0	-2.3	-1.6	-1.5	-1.6	..	-2.1	-0.9
Losses	-0.1 e	-0.1	-0.0	-0.0	-0.1	-	-	..		
Final consumption ⁶	41.5	45.7	24.8	18.8	19.7	16.9	16.2	..	-3.0	-1.7
Industry ⁷	14.4	14.9	9.4	10.6	5.4	5.3	4.9	..	-2.5	-2.5
<i>Iron and steel</i>	3.1 e	3.7 e	2.6 e	3.0	0.9	1.1	1.0	..	-1.0	-3.8
<i>Chemical</i>	0.7	0.7	0.4	1.8	1.7	1.7	1.6	..	-3.7	6.0
<i>Non-metallic minerals</i>	5.6	5.1	3.1	2.1	1.1	1.0	0.9	..	-3.4	-4.9
<i>Paper, pulp and print</i>	0.1	0.1	0.1	0.5	0.3	0.4	0.4	..	-1.0	7.5
<i>Other industry</i> ⁸	5.0	5.4	3.2	3.2	1.3	1.1	1.1	..	-2.5	-4.2
Transport ⁹	5.2	2.6	0.2	-	-	-	-	..	-16.4	-
Other	20.8	27.6	14.9	8.1	14.3	11.5	11.1	..	-1.9	-1.2
<i>Comm. and pub. services</i>	6.1 e	8.0 e	3.1 e	0.7	1.3	1.0	0.9	..	-3.9	-4.7
<i>Residential</i>	13.6 e	17.8 e	10.5 e	6.1	11.3	9.1	8.9	..	-1.5	-0.7
<i>Other sectors</i> ¹⁰	1.1	1.7	1.3	1.3	1.7	1.4	1.3	..	1.0	-0.1
Non-energy use	1.0	0.6	0.3	0.1	0.1	0.2	0.1	..	-7.8	-2.6
Electricity gen. - TWh	78.8	114.5	131.0	137.9	138.4	131.6	133.0	132.9	3.0	0.1

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

POLAND

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	191.27	187.62	142.86	141.38	144.72	137.40	134.97	-0.16	-1.31
Total electricity and heat	121.67	144.47	110.78	106.33	111.09	105.67	104.90	1.44	-1.27
<i>Main activity producers</i>	94.07	121.63	107.70	104.64	109.42	103.98	103.35	2.16	-0.65
<i>Autoproducers</i>	27.61	22.84	3.08	1.69	1.67	1.69	1.55	-1.57	-10.20
Patent fuel/BKB plants	1.90	0.31	0.04	-	-	0.00	0.00	-14.00	-15.98
Coke ovens/Liquefaction ³	25.30	18.21	12.38	12.95	12.55	12.72	12.96	-2.70	-1.35
Blast furnace inputs	-	-	-	0.03	0.14	0.18	0.27	-	-
Gas manufacture	2.67	0.57	-	-	-	-	-	-12.07	-
Industry	9.42	6.78	9.76	5.52	5.20	5.12	4.63	-2.70	-1.52
<i>Iron and steel</i>	0.11	0.05	0.79	0.12	0.09	0.11	0.03	-6.00	-1.65
<i>Chemical</i>	0.36	0.32	2.17	2.07	2.10	2.06	1.86	-0.93	7.28
<i>Non-metallic minerals</i>	5.06	3.21	2.31	1.25	1.04	1.06	0.95	-3.73	-4.77
<i>Paper, pulp and print</i>	0.08	0.07	0.68	0.44	0.51	0.50	0.48	-1.35	8.10
<i>Other industry</i>	3.82	3.14	3.81	1.64	1.46	1.39	1.31	-1.62	-3.43
Other sectors ⁴	26.93	16.34	9.85	15.81	14.29	13.05	12.71	-4.08	-1.00
Non-energy use	0.04	0.02	0.01	0.09	0.16	0.15	0.16	-7.25	10.04
Steam coal	127.71	102.10	70.04	72.45	66.15	61.01	58.46	-1.85	-2.21
Total electricity and heat	84.76	77.55	51.63	50.47	45.92	42.34	42.39	-0.74	-2.39
<i>Main activity producers</i>	57.61	55.18	48.60	48.91	44.36	40.78	40.95	-0.36	-1.19
<i>Autoproducers</i>	27.15	22.38	3.03	1.56	1.57	1.56	1.43	-1.60	-10.41
Patent fuel/BKB plants	1.64	0.08	-	-	-	-	-	-22.50	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	1.49	0.38	-	-	-	-	-	-10.73	-
Industry	9.35	6.74	9.70	5.48	5.13	5.06	4.56	-2.69	-1.55
<i>Iron and steel</i>	0.11	0.05	0.79	0.11	0.09	0.11	0.03	-6.00	-1.77
<i>Chemical</i>	0.36	0.32	2.17	2.07	2.10	2.06	1.86	-0.96	7.33
<i>Non-metallic minerals</i>	5.05	3.19	2.30	1.23	1.01	1.02	0.90	-3.75	-4.95
<i>Paper, pulp and print</i>	0.08	0.07	0.68	0.44	0.51	0.50	0.48	-1.35	8.10
<i>Other industry</i>	3.76	3.11	3.76	1.62	1.42	1.38	1.29	-1.55	-3.45
Other sectors ⁴	26.49	16.18	9.60	14.94	13.53	12.44	12.15	-4.03	-1.14
Non-energy use	0.04	0.01	0.01	0.08	0.16	0.15	0.16	-7.78	10.34
Coking coal	25.85	18.13	13.33	12.34	12.64	12.55	13.46	-2.91	-1.18
Total electricity and heat	..	..	0.05	0.12	0.10	0.13	0.11	-	-
<i>Main activity producers</i>	..	..	0.00	-	-	-	-	-	-
<i>Autoproducers</i>	..	..	0.05	0.12	0.10	0.13	0.11	-	-
Patent fuel/BKB plants	-	-	-	-	-	0.00	0.00	-	-
Coke ovens/Liquefaction ³	25.30	18.21	12.38	12.95	12.55	12.72	12.96	-2.70	-1.35
Blast furnace inputs	-	-	-	0.03	0.14	0.18	0.27	-	-
Gas manufacture	1.17	0.16	-	-	-	-	-	-15.08	-
Industry	-	-	0.02	0.01	0.00	0.00	0.00	-	-
<i>Iron and steel</i>	..	..	-	0.00	-	0.00	0.00	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	..	..	0.00	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	..	..	0.01	0.01	0.00	0.00	0.00	-	-
Other sectors ⁴	-	-	0.00	0.00	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

POLAND

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	37.71	67.39	59.49	56.59	65.93	63.85	63.05	4.96	-0.27
Total electricity and heat	36.91	66.92	59.11	55.73	65.07	63.21	62.41	5.08	-0.28
<i>Main activity producers</i>	36.45	66.46	59.10	55.73	65.07	63.20	62.40	5.13	-0.25
<i>Autoproducers</i>	0.46	0.46	0.01	0.00	0.00	0.00	0.01	-0.05	-13.56
Patent fuel/BKB plants	0.26	0.23	0.04	-	-	-	-	-0.87	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	0.01	0.02	-	-	-	-	-	10.42	-
Industry	0.08	0.04	0.05	0.03	0.07	0.06	0.06	-4.76	1.51
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	0.00	0.00	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	0.02	0.02	0.01	0.02	0.03	0.04	0.05	0.54	4.49
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.06	0.02	0.04	0.01	0.04	0.01	0.02	-7.48	-1.61
Other sectors ³	0.44	0.16	0.25	0.86	0.76	0.61	0.56	-7.84	5.03
Non-energy use	-	0.00	-	0.00	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

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3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change 78-90	90-15
Mtce:									
Coking coal	41.12	28.99	17.24	14.21	11.74	13.08	13.18	-2.87	-3.13
Steam coal	125.04	93.12	67.30	65.96	50.87	46.30	44.68	-2.43	-2.76
Lignite	11.03	19.27	17.32	18.19	16.51	17.57	16.77	4.76	-0.37
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:								-2.87	-3.14
Coking coal	40.85	28.79	17.22	14.07	11.66	12.99	13.08	-2.01	-2.72
Steam coal	151.78	118.94	86.11	83.83	65.07	59.70	57.61	4.25	-0.27
Lignite	41.01	67.58	59.48	61.64	56.51	63.13	60.25	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	1.04	0.56	1.46	3.08	11.81	9.21	9.17	7.23	7.17
Bituminous coal ⁴	-	-	0.17	2.31	8.48	6.68	6.46	4.30	4.71
Coking coal	1.04	0.56	1.27	0.62	3.18	2.27	2.43	2.72	2.23
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	0.01	0.06	0.05	0.08	0.08
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	-	-	0.02	0.15	0.14	0.21	0.24	0.13	0.15
Total exports	41.28	29.30	24.75	21.63	15.73	16.94	15.20	15.13	15.49
Bituminous coal ⁴	22.19	14.41	15.89	13.60	7.26	7.83	6.11	6.07	5.84
Coking coal	16.20	11.34	5.33	3.19	1.84	2.27	2.16	2.33	2.46
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	0.90	0.06	0.00	0.00	0.03	0.06	0.08	0.06	0.06
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	1.98	3.49	3.53	4.85	6.60	6.78	6.85	6.68	7.13

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

POLAND

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	1044	560	1452	3372	13627	10710	10593	8570	8567
Coking coal	1044	560	1263	610	3155	2250	2404	2692	2210
Australia	-	-	-	35	283	1013	1224	1590	1688
Canada	-	-	-	-	-	120	-	64	-
Czech Republic	-	-	500	558	781	566	688	439	294
Germany	-	-	-	17	-	-	-	3	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	1839	521	300	385	168
Other OECD	-	-	1	-	-	3	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	198	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	736	-	54	26	171	194	60
<i>Other FSU</i>	x	x	26	-	-	1	8	17	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	1044	560	-	-	-	-	13	-	-
Steam coal	-	-	189	2762	10448	8265	8013	5597	6073
Australia	-	-	11	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	94	29	1408	1082	792	370	170
Germany	-	-	6	4	12	1	13	12	8
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	4	17
United States	-	-	1	-	11	-	79	107	-
Other OECD	-	-	2	4	89	40	371	-	45
China, People's Rep.	-	-	-	5	5	4	4	2	2
Colombia	-	-	4	56	146	60	107	313	646
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	7	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	13	2390	8101	6515	6335	4744	5135
<i>Other FSU</i>	x	x	51	274	676	563	311	44	50
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	1	1	-
Lignite	-	-	-	-	24	195	176	281	284

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

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6. Coking coal exports by destination¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	16042	11226	5290	3151	1815	2252	2141	2303	2438
Total OECD	6619	2570	3649	2769	1797	1944	2037	2101	2161
Australia	..	..	-	-	-	-	-	-	-
Austria	470	566	599	520	367	402	215	281	394
Belgium	392	105	-	-	12	-	1	1	1
Canada	..	..	-	-	-	-	-	-	-
Chile	..	..	-	-	-	-	-	-	-
Czech Republic	..	..	214	523	720	845	1500	1366	1280
Denmark	..	..	-	-	-	-	-	-	-
Estonia	x	..	-	-	-	-	-	-	-
Finland	..	203	717	13	-	41	-	-	-
France	1311	254	72	-	-	-	-	-	-
Germany	..	116	131	148	2	61	1	-	1
Greece	54	..	-	-	-	-	-	-	-
Hungary	..	..	266	219	119	64	37	120	75
Iceland	..	..	-	-	-	-	-	-	-
Ireland	..	2	-	-	-	-	-	-	-
Israel	..	..	-	-	-	-	-	-	-
Italy	1525	158	-	295	-	-	-	-	-
Japan	429	..	-	-	-	-	-	-	-
Korea	..	..	-	-	-	-	-	-	-
Latvia	x	..	-	-	-	-	-	-	-
Luxembourg	..	..	-	-	-	-	-	-	-
Mexico	..	..	-	-	-	-	-	-	-
Netherlands	376	98	323	48	-	-	-	-	-
New Zealand	..	..	-	-	-	-	-	-	-
Norway	125	..	53	-	-	-	-	-	-
Poland	..	..	-	-	-	-	-	-	-
Portugal	122	40	-	-	-	-	-	-	-
Slovak Republic	..	..	669	622	499	521	283	333	410
Slovenia	x	..	-	-	-	-	-	-	-
Spain	1369	234	7	99	-	3	-	-	-
Sweden	71	..	494	-	-	-	-	-	-
Switzerland	..	..	-	-	-	-	-	-	-
Turkey	..	..	100	212	78	-	-	-	-
United Kingdom	375	794	4	-	-	7	-	-	-
United States	..	..	-	70	-	-	-	-	-
Total non-OECD	1472	4576	1641	382	18	308	104	202	277
Brazil	..	1249	143	-	-	-	-	-	-
China ³	..	..	-	-	-	-	-	-	-
Chinese Taipei	..	..	-	-	-	-	-	-	-
Egypt	..	..	529	355	-	-	-	-	-
India	..	284	-	-	-	-	-	-	-
Romania	..	100	62	-	-	-	-	-	-
Oth. Africa & Mid. East	..	..	2	-	-	-	-	-	-
Oth. non-OECD Americas	..	1249	2	-	-	-	-	-	-
Other Asia & Oceania	..	..	-	-	-	-	-	-	-
Other non-OECD Europe and Eurasia	1472	1694	903	27	18	308	104	202	277
Non-specified/Other	7951	4080	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

POLAND

7. Steam coal exports by destination¹

(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	24064	16839	17955	16218	8150	8594	6815	6888	6628
Total OECD	16188	13038	17132	15745	8053	8122	6141	6221	5240
Australia	..	..	-	-	-	-	-	-	-
Austria	260	1202	1213	1187	443	404	670	568	418
Belgium	105	242	375	649	216	450	1	-	-
Canada	..	..	-	-	-	-	-	-	-
Chile	..	..	-	-	-	-	-	-	-
Czech Republic	274	2282	863	717	684	782	1155	1256	1523
Denmark	3078	972	2214	837	437	553	365	150	141
Estonia	x	..	3	-	-	-	-	-	-
Finland	4089	2609	1175	653	185	316	183	85	76
France	3441	141	1336	1230	583	534	-	228	157
Germany	2041	2583	6396	6906	4007	3314	2740	2679	1891
Greece	..	..	1	-	-	-	-	-	-
Hungary	..	..	279	240	54	24	18	36	82
Iceland	..	..	-	9	-	-	-	-	-
Ireland	331	458	196	286	228	179	148	108	93
Israel	..	..	-	-	-	-	-	-	-
Italy	1437	507	913	245	-	-	4	70	7
Japan	..	..	-	-	-	-	-	-	-
Korea	..	..	-	-	-	-	-	-	-
Latvia	x	..	-	-	-	-	-	-	-
Luxembourg	..	..	-	-	-	-	-	-	-
Mexico	..	..	-	-	-	-	-	-	-
Netherlands	264	1043	208	222	73	147	54	381	159
New Zealand	..	..	-	-	-	-	-	-	-
Norway	..	..	88	142	73	102	108	62	36
Poland	..	..	-	-	-	-	-	-	-
Portugal	..	..	5	223	-	-	-	-	-
Slovak Republic	..	..	286	250	133	242	257	280	222
Slovenia	x	..	12	9	-	-	-	-	-
Spain	..	16	382	41	23	16	26	25	25
Sweden	174	732	146	172	132	184	117	100	90
Switzerland	8	1	-	-	-	-	-	2	-
Turkey	..	..	-	66	214	214	67	68	269
United Kingdom	41	250	1040	1614	568	661	228	123	51
United States	645	..	1	47	-	-	-	-	-
Total non-OECD	29	34	823	473	97	472	674	667	1388
Brazil	..	..	-	-	-	-	-	-	-
China ³	..	..	-	-	-	-	-	-	-
Chinese Taipei	..	..	-	-	-	-	-	-	-
Egypt	..	..	-	-	-	-	-	132	539
India	..	..	-	-	-	-	-	-	-
Romania	..	16	-	-	-	38	37	50	51
Oth. Africa & Mid. East	29	18	1	436	-	387	588	377	522
Oth. non-OECD Americas	..	..	16	-	-	-	-	-	-
Other Asia & Oceania	..	..	3	-	-	-	-	-	-
Other non-OECD Europe and Eurasia	..	..	803	37	97	47	49	108	276
Non-specified/Other	7847	3767	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I. Steam coal includes all sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

PORTUGAL¹

Figure 1: Coal supply indicators (1971 = 100)

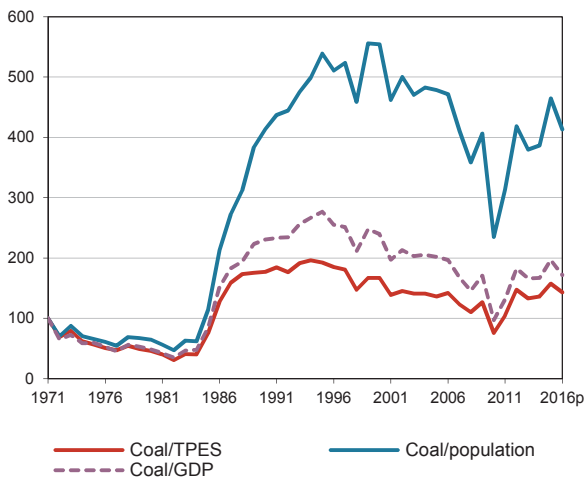


Figure 2: TPES by fuel (Mtce)

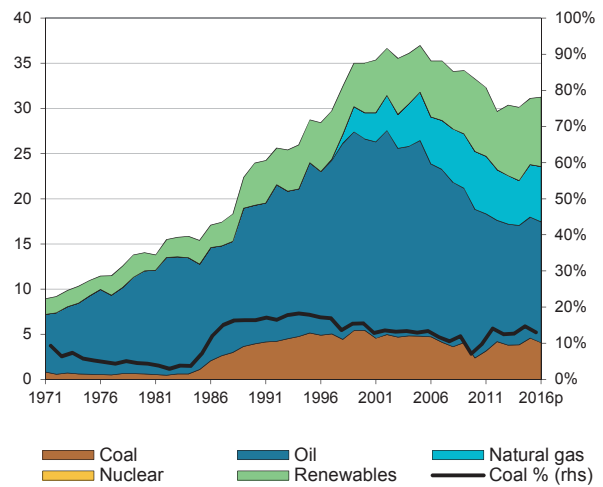


Figure 3: Primary coal supply (Mtce)

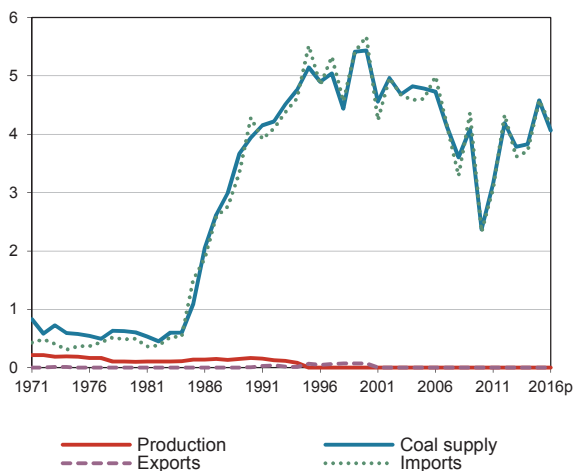


Figure 4: Coal consumption (Mtce)

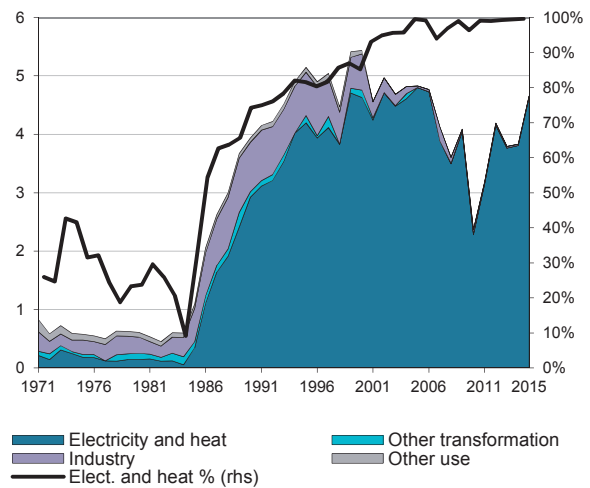
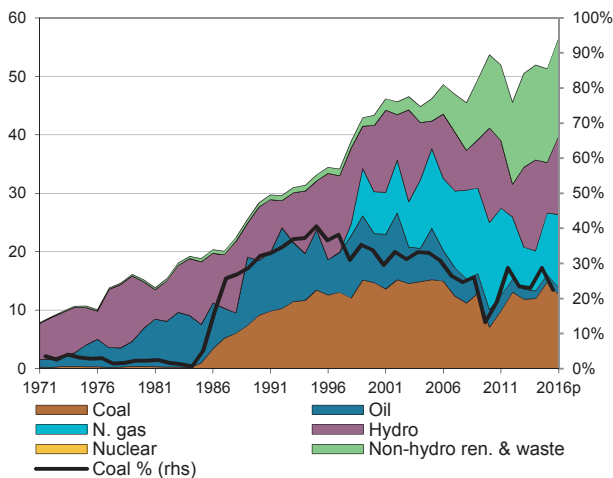
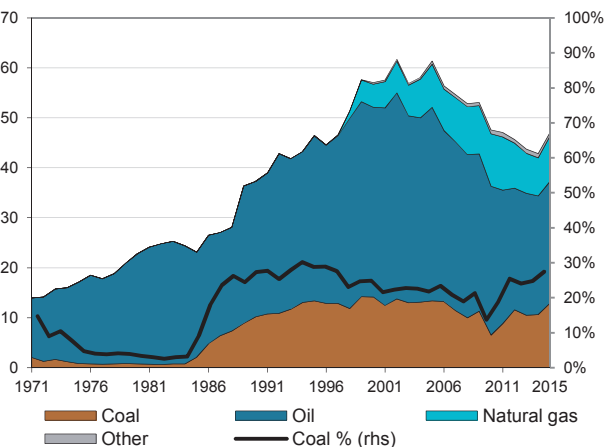


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

PORTUGAL

1. Coal balance¹
(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	0.2	0.1	0.2	-	-	-	-	-	-0.8	-
Imports	0.4	0.5	4.3	5.7	2.3	3.7	4.6	4.2	14.9	0.3
Exports	-0.0	-	-0.0	-0.1	-	-	-	-	-	-
Stock changes	0.1	0.0	-0.5	-0.2	0.0	0.1	-	-0.1		
Primary supply	0.7	0.6	3.9	5.4	2.4	3.8	4.6	4.1	10.5	0.6
Statistical differences	0.1	0.0	-0.0	-0.0	-0.0	0.0	0.1	..		
Total transformation	-0.4 e	-0.2 e	-3.0 e	-4.7 e	-2.3	-3.8	-4.6	..	12.6	1.8
Electricity and heat gen.	-0.3	-0.1	-2.9	-4.6	-2.3	-3.8	-4.6	..	14.1	1.9
<i>Main activity producers</i> ³	-0.3	-0.1	-2.9	-4.6	-2.3	-3.8	-4.6	..	14.1	1.9
<i>Autoproducers</i>	-	-0.0	-0.0	-0.1	-	-	-	..	-	-
Gas works	0.1	0.1	0.1	0.1	-	-	-	..	1.2	-
Coal transformation ⁴	-0.2 e	-0.1 e	-0.1 e	-0.1 e	-	-	-	..	-1.5	-
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-0.1 e	-0.1 e	-0.1 e	-0.1 e	-	-	-	..	-2.3	-
<i>Coke ovens</i>	-0.0	-0.0	-0.0	-0.0	-	-	-	..	-	-
<i>Patent fuel plants</i>	0.0	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-0.0	-0.0	-0.0	-0.0	-	-	-	..	-	-
Losses	-0.0	-0.0	-0.0	-0.0	-	-	-	..		
Final consumption ⁶	0.3	0.4	0.9	0.7	0.1	0.0	0.0	..	6.0	-14.7
Industry ⁷	0.2	0.3	0.8	0.6	0.1	0.0	0.0	..	8.9	-14.4
<i>Iron and steel</i>	0.1 e	0.2 e	0.1 e	0.1 e	0.0	0.0	0.0	..	0.9	-12.1
<i>Chemical</i>	-	0.0	0.0	0.0	0.0	0.0	0.0	..	-	-
<i>Non-metallic minerals</i>	0.0	0.0	0.7	0.4	0.0	0.0	0.0	..	26.6	-17.2
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	..	-	-
<i>Other industry</i> ⁸	0.1	0.1	0.0	0.1	-	-	-	..	-9.8	-
Transport ⁹	0.0	0.0	-	-	-	-	-	..	-	-
Other	0.1	0.1	0.1	0.1	-	-	-	..	-2.4	-
<i>Comm. and pub. services</i>	0.0	0.0	0.0	0.0	-	-	-	..	-	-
<i>Residential</i>	0.1	0.0	0.1	0.0	-	-	-	..	-1.8	-
<i>Other sectors</i> ¹⁰	0.0	0.0	-	-	-	-	-	..	-	-
Non-energy use	-	-	-	-	-	-	-	..	-	-
Electricity gen. - TWh	0.4	0.3	9.1	14.7	7.1	12.0	14.7	12.7	20.4	1.9

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

PORTUGAL

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	0.63	4.40	6.15	2.70	4.45	4.52	5.42	17.58	0.84
Total electricity and heat	0.17	3.26	5.17	2.61	4.41	4.51	5.49	27.72	2.11
<i>Main activity producers</i>	0.17	3.26	5.17	2.61	4.41	4.51	5.49	27.72	2.11
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	0.34	0.31	0.49	-	-	-	-	-0.59	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.09	0.82	0.48	0.08	0.03	0.01	0.01	19.97	-16.15
<i>Iron and steel</i>	0.01	-	-	0.01	0.01	0.01	0.01	-	-
<i>Chemical</i>	0.00	0.01	-	0.01	0.02	0.00	0.01	6.99	-2.32
<i>Non-metallic minerals</i>	0.03	0.81	0.48	0.06	-	-	-	32.70	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.06	0.00	-	-	-	-	-	-19.74	-
Other sectors ⁴	0.01	0.00	-	-	-	-	-	-9.91	-
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	0.21	4.08	5.66	2.70	4.45	4.52	5.42	28.21	1.14
Total electricity and heat	0.17	3.26	5.17	2.61	4.41	4.51	5.49	27.90	2.11
<i>Main activity producers</i>	0.17	3.26	5.17	2.61	4.41	4.51	5.49	27.90	2.11
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.04	0.82	0.48	0.08	0.03	0.01	0.01	29.73	-16.15
<i>Iron and steel</i>	0.01	-	-	0.01	0.01	0.01	0.01	-	-
<i>Chemical</i>	0.00	0.01	-	0.01	0.02	0.00	0.01	6.99	-2.32
<i>Non-metallic minerals</i>	0.03	0.81	0.48	0.06	-	-	-	32.70	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	0.00	-	-	-	-	-	-	-
Other sectors ⁴	0.00	0.00	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	0.42	0.31	0.50	-	-	-	-	-2.48	-
Total electricity and heat	0.00	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	0.00	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	0.34	0.31	0.49	-	-	-	-	-0.59	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.06	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.06	-	-	-	-	-	-	-	-
Other sectors ⁴	0.01	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

PORTUGAL

3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change 78-90	90-15
Mtce:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	0.11	0.16	-	-	-	-	-	3.78	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	-	-	-	-	-	-	-	3.78	-
Steam coal	0.18	0.28	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	0.52	4.28	5.67	4.61	2.33	3.61	3.71	4.58	4.16
Bituminous coal ⁴	0.01	3.89	5.18	4.60	2.32	3.61	3.70	4.57	4.15
Coking coal	0.40	0.38	0.49	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.11	0.01	-	0.01	0.00	-	0.01	0.01	0.01
Total exports	-	0.01	0.08	-	-	-	-	-	-
Bituminous coal ⁴	-	-	-	-	-	-	-	-	-
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	-	0.01	0.08	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

PORTUGAL

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	412	4669	6367	5272	2657	4246	4379	5419	4915
Coking coal	404	377	487	-	-	-	-	-	-
Australia	-	-	-	-	-	-	-	-	-
Canada	-	162	289	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	8	-	-	-	-	-	-	-	-
Poland	122	40	-	-	-	-	-	-	-
United Kingdom	3	20	-	-	-	-	-	-	-
United States	257	155	198	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	14	-	-	-	-	-	-	-	-
Steam coal	8	4292	5880	5272	2657	4246	4379	5419	4915
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	3	-	-	-	-	-	-	-	-
Poland	-	-	-	222	-	-	-	-	-
United Kingdom	-	177	-	-	-	-	-	-	-
United States	-	1555	343	378	609	507	288	121	85
Other OECD	-	4	19	228	221	-	8	5	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	390	2846	2314	1297	3390	3851	5288	4503
Indonesia	-	-	156	144	-	-	-	-	-
South Africa	5	2112	2426	1985	483	164	156	-	320
Former Soviet Union ⁴	-	54	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	90	-	47	11	-	5	-
<i>Other FSU</i>	x	x	-	1	-	11	76	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	163	-	-	7
Lignite	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

SLOVAK REPUBLIC¹

Figure 1: Coal supply indicators (1971 = 100)

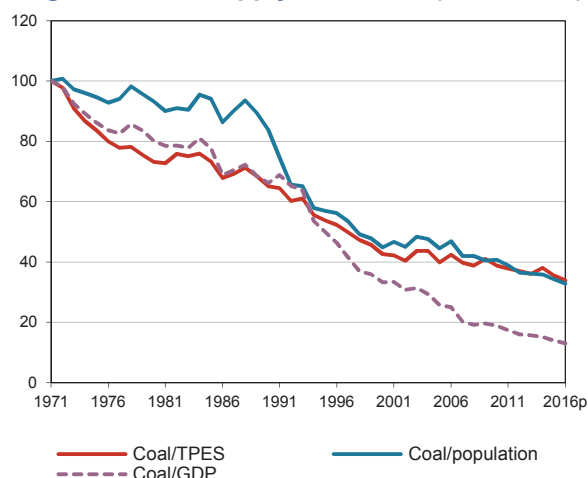


Figure 2: TPES by fuel (Mtce)

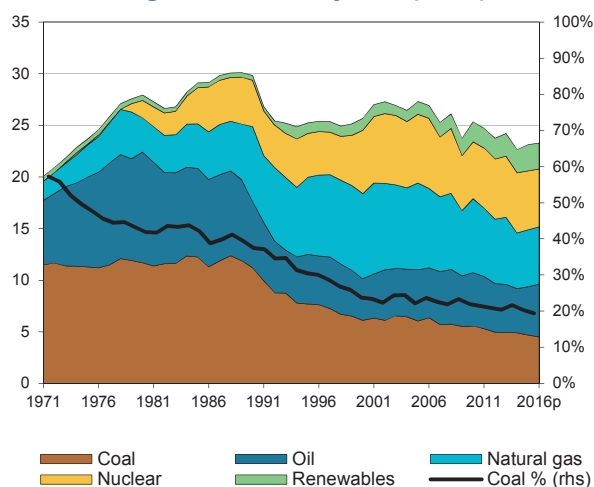


Figure 3: Primary coal supply (Mtce)

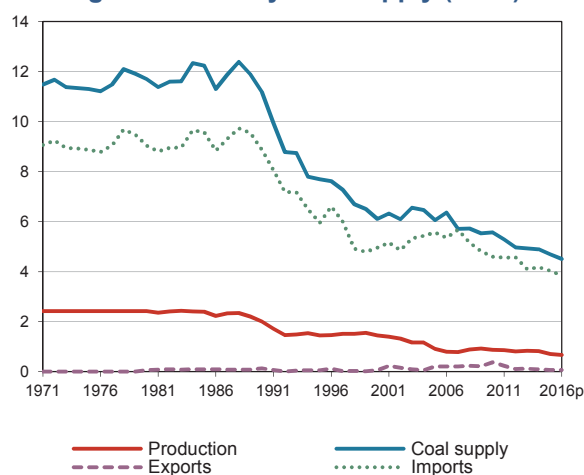


Figure 4: Coal consumption (Mtce)

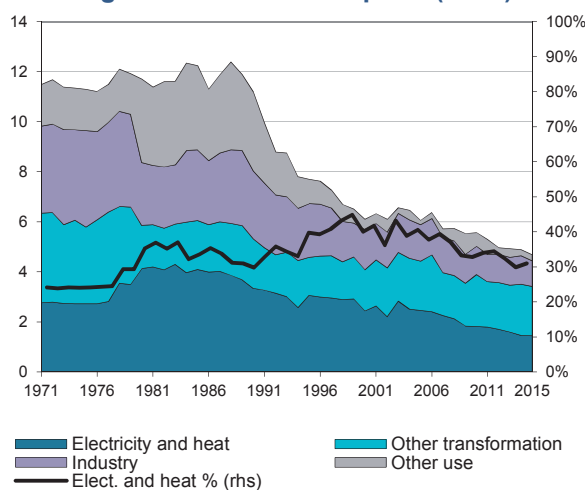
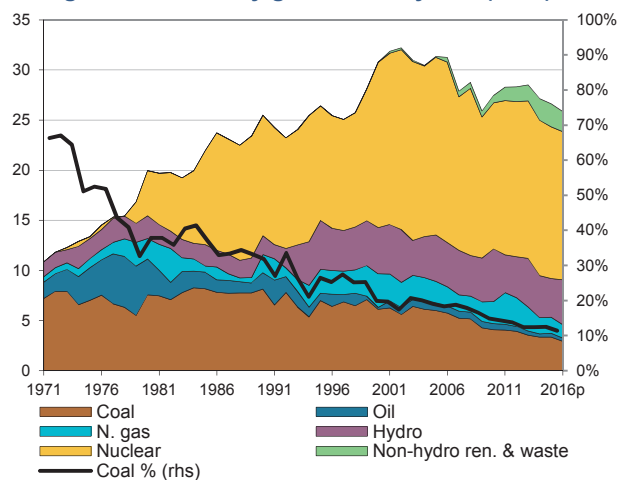
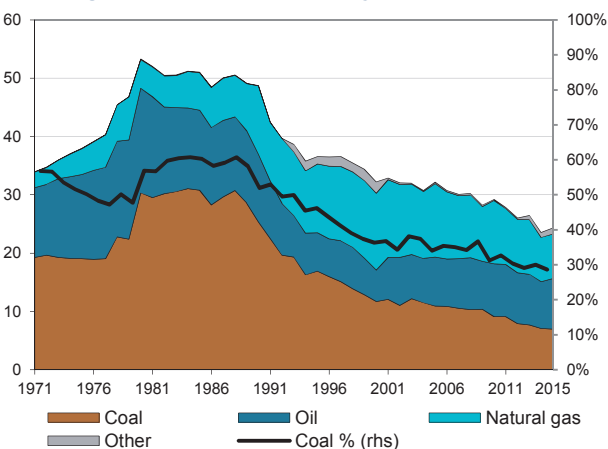


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

SLOVAK REPUBLIC

1. Coal balance¹
(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	2.4	2.4	2.0	1.5	0.9	0.8	0.7	0.7	-1.1	-4.1
Imports	8.9	9.0	8.9	5.0	4.6	4.2	4.0	3.8	-0.0	-3.1
Exports	-	-0.1	-0.1	-0.1	-0.4	-0.1	-0.1	-0.1	-	-2.5
Stock changes	-	0.3	0.5	-0.2	0.5	-0.0	0.0	0.1		
Primary supply	11.4	11.7	11.2	6.1	5.6	4.9	4.7	4.5	-0.1	-3.4
Statistical differences	-1.9	-0.1	-0.0	0.0	-0.1	-0.1	-0.1	..		
Total transformation	-4.0 e	-5.1 e	-4.6 e	-3.6 e	-3.2	-2.9 e	-2.8 e	..	0.8	-2.0
Electricity and heat gen.	-2.7	-4.1	-3.3	-2.4	-1.8	-1.5	-1.5	..	1.2	-3.3
<i>Main activity producers</i> ³	-2.7	-3.5	-2.9	-2.1	-1.6	-1.3	-1.3	..	0.3	-3.2
<i>Autoproducers</i>	-	-0.6	-0.5	-0.3	-0.2	-0.2	-0.2	..	-	-3.7
Gas works	-	-	-	-	-	-	-	..	-	-
Coal transformation ⁴	-1.3 e	-1.0 e	-1.3 e	-1.2 e	-1.4	-1.4 e	-1.3 e	..	0.1	0.2
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-0.6 e	-0.9 e	-1.2 e	-1.0 e	-1.3	-1.3 e	-1.2 e	..	4.4	0.1
<i>Coke ovens</i>	-0.7	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	..	-11.8	0.9
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-	-0.6	-0.6	-0.4	-0.5	-0.5	-0.5	..	-	-0.7
Losses	-0.0	-0.0	-0.0	-0.0	-0.1	-0.0	-0.0	..		
Final consumption ⁶	5.5	5.8	5.9	2.0	1.7	1.4	1.3	..	0.4	-5.9
Industry ⁷	3.8	2.5	2.7	1.6	1.1	1.1	1.0	..	-2.0	-3.8
<i>Iron and steel</i>	1.5 e	1.0 e	1.4 e	1.0 e	0.9	1.0 e	0.9 e	..	-0.4	-1.7
<i>Chemical</i>	-	0.3	0.3	0.1	0.0	-	-	..	-	-
<i>Non-metallic minerals</i>	-	0.2	0.2	0.2	0.2	0.1	0.1	..	-	-3.4
<i>Paper, pulp and print</i>	-	0.2	0.2	0.2	0.0	-	-	..	-	-
<i>Other industry</i> ⁸	2.3	0.8	0.6	0.1	0.0	0.0	0.0	..	-7.2	-12.5
Transport ⁹	-	-	-	-	-	-	-	..	-	-
Other	1.7	3.3	3.1	0.4	0.5	0.2	0.2	..	3.6	-10.7
<i>Comm. and pub. services</i>	-	2.7	2.4	0.3	0.4	0.2	0.2	..	-	-10.3
<i>Residential</i>	-	0.3	0.6	0.1	0.1	0.0	0.0	..	-	-12.0
<i>Other sectors</i> ¹⁰	1.7	0.4	0.1	0.0	0.0	0.0	0.0	..	-13.9	-20.9
Non-energy use	-	0.0	0.0	0.0	0.1	0.1	0.1	..	-	1.1
Electricity gen. - TWh	7.9	7.6	8.1	6.1	4.1	3.4	3.3	2.9	0.1	-3.5

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

SLOVAK REPUBLIC

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	19.52	18.36	8.87	7.21	6.65	6.30	6.36	-0.51	-4.15
Total electricity and heat	6.19	5.72	4.36	3.57	3.22	2.87	2.94	-0.66	-2.62
<i>Main activity producers</i>	6.19	5.11	4.01	3.48	3.12	2.78	2.86	-1.58	-2.30
<i>Autoproducers</i>	-	0.61	0.35	0.09	0.10	0.09	0.09	-	-7.43
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	2.15	2.92	2.21	2.13	1.98	2.03	2.13	2.56	-1.25
Blast furnace inputs	-	0.18 e	0.35 e	0.36	0.54 e	0.63 e	0.61 e	-	5.02
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	5.08	3.10	1.31	0.52	0.52	0.50	0.46	-4.05	-7.34
<i>Iron and steel</i>	-	0.62 e	0.42 e	0.33	0.42 e	0.39 e	0.35 e	-	-2.24
<i>Chemical</i>	-	0.62	0.30	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	0.21	0.20	0.17	0.07	0.07	0.07	-	-4.64
<i>Paper, pulp and print</i>	-	0.44	0.27	0.02	0.00	-	-	-	-
<i>Other industry</i>	5.08	1.21 e	0.12 e	0.00	0.04 e	0.04 e	0.05 e	-11.27	-12.34
Other sectors ⁴	2.93	6.35	0.62	0.61	0.34	0.24	0.19	6.66	-13.06
Non-energy use	-	-	-	0.02	0.03	0.03	0.03	-	-
Steam coal	3.97	2.74	2.06	1.67	1.36	1.17	1.03	-3.04	-3.86
Total electricity and heat	2.21	1.98	1.33	0.71	0.61	0.55	0.49	-0.91	-5.39
<i>Main activity producers</i>	2.21	1.68	1.12	0.62	0.51	0.47	0.41	-2.25	-5.47
<i>Autoproducers</i>	-	0.30	0.21	0.09	0.10	0.08	0.08	-	-4.98
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	1.24	0.65	0.68	0.50	0.44	0.43	0.40	-5.27	-1.87
<i>Iron and steel</i>	-	0.39	0.36	0.33	0.38	0.37	0.35	-	-0.44
<i>Chemical</i>	-	0.01	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	0.12	0.20	0.16	0.06	0.06	0.05	-	-3.18
<i>Paper, pulp and print</i>	-	0.03	0.11	0.01	-	-	-	-	-
<i>Other industry</i>	1.24	0.10	0.01	-	0.00	0.00	0.00	-19.12	-75.44
Other sectors ⁴	0.08	0.12	0.05	0.44	0.28	0.16	0.10	3.99	-0.61
Non-energy use	-	-	-	0.02	0.03	0.03	0.03	-	-
Coking coal	2.18	3.14	2.60	2.49	2.56	2.68	2.74	3.08	-0.54
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	2.15	2.92	2.21	2.13	1.98	2.03	2.13	2.56	-1.25
Blast furnace inputs	-	0.18 e	0.35 e	0.36	0.54 e	0.63 e	0.61 e	-	5.02
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.03	0.04	0.04	-	0.03	0.02	0.00	3.54	-11.38
<i>Iron and steel</i>	-	0.04 e	0.04 e	-	0.03 e	0.02 e	0.00 e	-	-11.38
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.03	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

SLOVAK REPUBLIC

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	13.36	12.48	4.21	3.05	2.73	2.45	2.60	-0.57	-6.08
Total electricity and heat	3.98	3.74	3.03	2.86	2.61	2.32	2.45	-0.52	-1.68
<i>Main activity producers</i>	3.98	3.43	2.89	2.86	2.61	2.32	2.45	-1.23	-1.35
<i>Autoproducers</i>	-	0.31	0.14	0.00	0.00	0.00	0.01	-	-15.21
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	3.82	2.41	0.60	0.01	0.05	0.05	0.06	-3.77	-13.97
<i>Iron and steel</i>	-	0.19	0.01	-	0.00	-	-	-	-
<i>Chemical</i>	-	0.61	0.30	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	0.09	0.01	0.01	0.01	0.01	0.01	-	-8.14
<i>Paper, pulp and print</i>	-	0.41	0.17	0.00	0.00	-	-	-	-
<i>Other industry</i>	3.82	1.11	0.11	0.00	0.04	0.03	0.05	-9.77	-12.04
Other sectors ³	2.85	6.23	0.57	0.17	0.06	0.08	0.09	6.72	-15.63
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

SLOVAK REPUBLIC

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-	-
Lignite	2.43	2.00	1.45	0.91	0.88	0.71	0.67	-1.62	-4.06
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-1.63	-3.53
Lignite	5.80	4.77	3.65	2.51	2.38	1.94	1.85	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	9.67	8.87	4.95	5.56	4.59	4.09	4.17	4.03	3.85
Bituminous coal ⁴	3.24	2.33	1.92	2.23	1.18	1.08	0.99	0.83	0.71
Coking coal	2.08	2.99	2.58	2.74	2.49	2.61	2.71	2.79	2.73
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	3.15	2.96	0.31	0.33	0.31	0.21	0.24	0.22	0.25
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	1.21	0.60	0.14	0.26	0.61	0.19	0.22	0.20	0.15
Total exports	-	0.13	0.06	0.21	0.38	0.12	0.10	0.07	0.07
Bituminous coal ⁴	-	-	-	-	-	-	-	-	-
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	0.13	0.00	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	-	-	0.06	0.21	0.38	0.12	0.10	0.07	0.07

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

SLOVAK REPUBLIC

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	13711	12941	5657	6000	4411	4276	4258	4099	3977
Coking coal	2180	3132	2596	2732	2472	2593	2680	2740	2686
Australia	-	-	-	-	-	-	-	-	69
Canada	-	-	-	-	-	-	91	263	289
Czech Republic	-	-	901 e	1586	1557	964	823	804	1064
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	669 e	579	445	538	385	354	413
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	290	309	303	455	257	70
Other OECD	-	-	-	-	-	-	-	-	14
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	1026 e	180	153	280	379	624	342
<i>Other FSU</i>	x	x	-	97	8	503	414	411	285
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	2180	3132	-	-	-	5	133	27	140
Steam coal	3971	2734	2255	2531	1326	1246	1104	923	797
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	931 e	22	279	225	202	244	61
Germany	-	-	-	-	2	-	-	-	-
Poland	-	-	286 e	227	96	162	147	123	181
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	82	25	-
Other OECD	-	-	-	2	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	579 e	1968	863	706	525	524	536
<i>Other FSU</i>	x	x	459 e	163	29	99	95	5	19
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	3971	2734	-	149	57	54	53	2	-
Lignite	7560	7075	806	737	613	437	474	436	494

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

SLOVENIA¹

Figure 1: Coal supply indicators (1971 = 100)

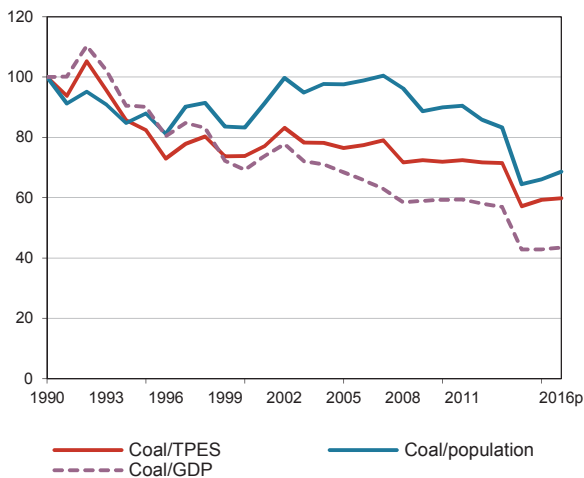


Figure 2: TPES by fuel (Mtce)

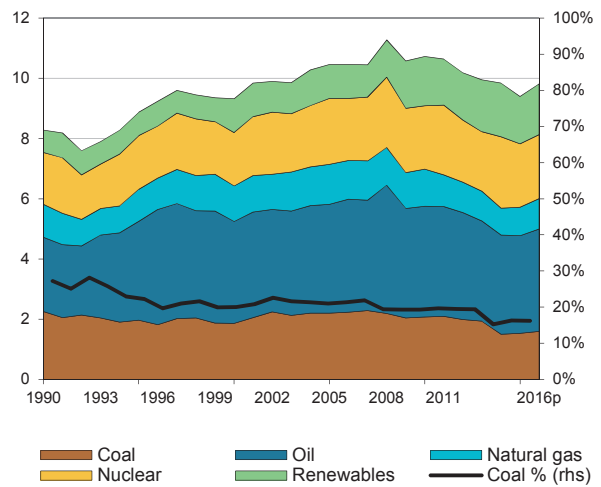


Figure 3: Primary coal supply (Mtce)

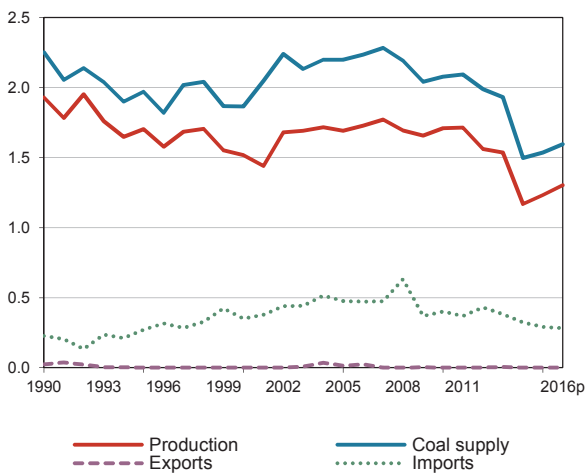


Figure 4: Coal consumption (Mtce)

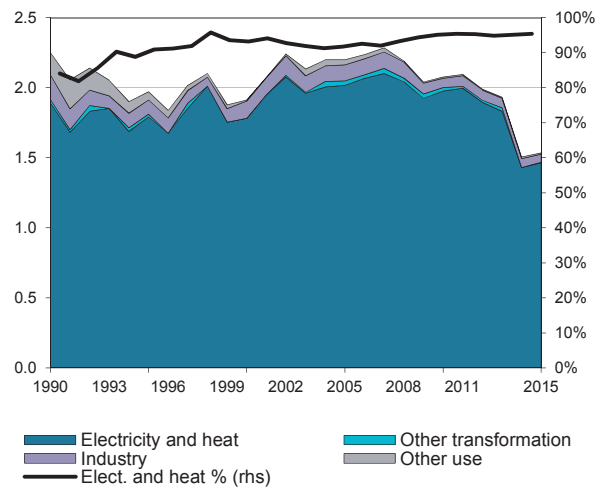
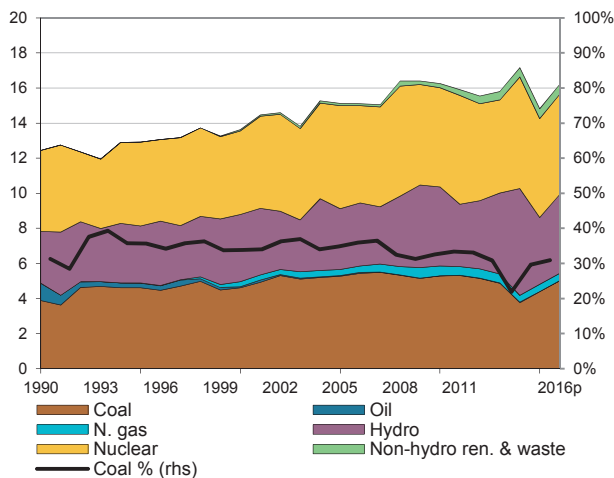
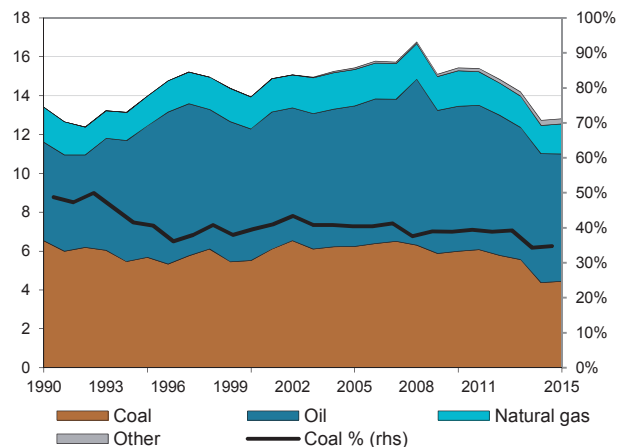


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

SLOVENIA

1. Coal balance¹
(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	x	x	1.9	1.5	1.7	1.2	1.2	1.3	-	-1.8
Imports	x	x	0.2	0.4	0.4	0.3	0.3	0.3	-	1.0
Exports	x	x	-0.0	-0.0	-	-0.0	-	-	-	-
Stock changes	x	x	0.1	-0.0	-0.0	0.0	0.0	0.0		
Primary supply	x	x	2.3	1.9	2.1	1.5	1.5	1.6	-	-1.5
Statistical differences	x	x	-0.0	0.0	-0.0	0.0	-0.0	..		
Total transformation	x	x	-1.9 e	-1.8	-2.0	-1.4	-1.5	..	-	-1.1
Electricity and heat gen.	x	x	-1.9	-1.8	-2.0	-1.4	-1.5	..	-	-1.0
<i>Main activity producers</i> ³	x	x	-1.9	-1.8	-2.0	-1.4	-1.5	..	-	-1.0
<i>Autoproducers</i>	x	x	-0.0	-0.0	-0.0	-0.0	-0.0	..	-	-
Gas works	x	x	0.0	-	-	-	-	..	-	-
Coal transformation ⁴	x	x	-0.0 e	-	-	-	-	..	-	-
<i>BKB plants</i>	x	x	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	x	x	-0.0 e	-	-	-	-	..	-	-
<i>Coke ovens</i>	x	x	-	-	-	-	-	..	-	-
<i>Patent fuel plants</i>	x	x	-	-	-	-	-	..	-	-
Other transformation ⁵	x	x	-	-	-	-	-	..	-	-
Energy ind. own use	x	x	-0.0	-	-	-	-	..	-	-
Losses	x	x	-0.0	-	-	-	-	..		
Final consumption ⁶	x	x	0.3	0.1	0.1	0.1	0.1	..	-	-6.3
Industry ⁷	x	x	0.2	0.1	0.1	0.1	0.1	..	-	-4.5
<i>Iron and steel</i>	x	x	0.0 e	0.0	0.0	0.0	0.0	..	-	-
<i>Chemical</i>	x	x	0.0	-	-	-	-	..	-	-
<i>Non-metallic minerals</i>	x	x	0.0	0.0	0.0	0.0	0.0	..	-	-
<i>Paper, pulp and print</i>	x	x	0.0	0.0	0.0	0.0	0.0	..	-	-
<i>Other industry</i> ⁸	x	x	0.1	0.0	0.0	0.0	0.0	..	-	-14.7
Transport ⁹	x	x	-	-	-	-	-	..	-	-
Other	x	x	0.2	0.0	0.0	0.0	-	..	-	-
<i>Comm. and pub. services</i>	x	x	-	-	-	-	-	..	-	-
<i>Residential</i>	x	x	0.2	0.0	0.0	0.0	-	..	-	-
<i>Other sectors</i> ¹⁰	x	x	-	-	-	-	-	..	-	-
Non-energy use	x	x	-	-	0.0	0.0	0.0	..	-	-
Electricity gen. - TWh	x	x	3.9	4.6	5.3	3.8	4.4	5.0	-	0.5

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

SLOVENIA

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	x	6.09	4.93	4.92	4.45	3.58	3.60	-	-2.08
Total electricity and heat	x	5.30	4.83	4.84	4.38	3.51	3.54	-	-1.61
<i>Main activity producers</i>	x	5.22	4.82	4.81	4.36	3.49	3.51	-	-1.57
<i>Autoproducers</i>	x	0.08	0.02	0.03	0.02	0.02	0.02	-	-5.30
Patent fuel/BKB plants	x	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	x	-	-	-	-	-	-	-	-
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	-	-	-	-	-	-	-	-
Industry	x	0.31	0.08	0.07	0.07	0.07	0.06	-	-6.32
<i>Iron and steel</i>	x	0.03	-	-	-	-	-	-	-
<i>Chemical</i>	x	0.00	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	x	-	-	0.01	0.00	0.00	0.00	-	-
<i>Paper, pulp and print</i>	x	0.08	0.06	0.06	0.07	0.07	0.06	-	-1.44
<i>Other industry</i>	x	0.19	0.02	0.00	0.00	0.00	0.00	-	-16.65
Other sectors ⁴	x	0.45	0.01	0.00	0.00	0.00	-	-	-
Non-energy use	x	-	-	-	-	-	0.00	-	-
Steam coal	x	0.26	0.45	0.50	0.42	0.39	0.39	-	1.57
Total electricity and heat	x	0.23	0.36	0.44	0.38	0.35	0.35	-	1.62
<i>Main activity producers</i>	x	0.23	0.35	0.42	0.37	0.34	0.33	-	1.46
<i>Autoproducers</i>	x	-	0.02	0.02	0.01	0.01	0.01	-	-
Patent fuel/BKB plants	x	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	x	-	-	-	-	-	-	-	-
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	-	-	-	-	-	-	-	-
Industry	x	0.03	0.08	0.06	0.04	0.04	0.04	-	0.82
<i>Iron and steel</i>	x	0.01	-	-	-	-	-	-	-
<i>Chemical</i>	x	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	x	-	-	0.01	0.00	0.00	0.00	-	-
<i>Paper, pulp and print</i>	x	-	0.06	0.04	0.04	0.04	0.04	-	-
<i>Other industry</i>	x	0.02	0.01	0.00	0.00	0.00	0.00	-	-8.80
Other sectors ⁴	x	-	0.01	0.00	0.00	0.00	-	-	-
Non-energy use	x	-	-	-	-	-	0.00	-	-
Coking coal	x	0.00	-	-	-	-	-	-	-
Total electricity and heat	x	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	x	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	x	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	x	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	x	-	-	-	-	-	-	-	-
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	-	-	-	-	-	-	-	-
Industry	x	0.00	-	-	-	-	-	-	-
<i>Iron and steel</i>	x	-	-	-	-	-	-	-	-
<i>Chemical</i>	x	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	x	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	x	-	-	-	-	-	-	-	-
<i>Other industry</i>	x	0.00	-	-	-	-	-	-	-
Other sectors ⁴	x	-	-	-	-	-	-	-	-
Non-energy use	x	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

SLOVENIA

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	x	5.83	4.48	4.42	4.03	3.19	3.21	-	-2.35
Total electricity and heat	x	5.07	4.47	4.40	4.00	3.16	3.19	-	-1.84
<i>Main activity producers</i>	x	4.99	4.47	4.39	3.99	3.15	3.18	-	-1.78
<i>Autoproducers</i>	x	0.08	-	0.01	0.01	0.01	0.01	-	-8.89
Patent fuel/BKB plants	x	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	x	-	-	-	-	-	-	-	-
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	-	-	-	-	-	-	-	-
Industry	x	0.28	0.01	0.02	0.03	0.03	0.02	-	-9.61
<i>Iron and steel</i>	x	0.02	-	-	-	-	-	-	-
<i>Chemical</i>	x	0.00	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	x	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	x	0.08	-	0.02	0.03	0.03	0.02	-	-5.13
<i>Other industry</i>	x	0.17	0.01	-	-	-	-	-	-
Other sectors ³	x	0.45	0.00	-	-	-	-	-	-
Non-energy use	x	-	-	-	-	-	-	-	-
Peat	x	-	-	-	-	-	-	-	-
Total electricity and heat	x	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	x	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	x	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	x	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	x	-	-	-	-	-	-	-	-
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	-	-	-	-	-	-	-	-
Industry	x	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	x	-	-	-	-	-	-	-	-
<i>Chemical</i>	x	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	x	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	x	-	-	-	-	-	-	-	-
<i>Other industry</i>	x	-	-	-	-	-	-	-	-
Other sectors ³	x	-	-	-	-	-	-	-	-
Non-energy use	x	-	-	-	-	-	-	-	-
Oil shale and oil sands	x	-	-	-	-	-	-	-	-
Total electricity and heat	x	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	x	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	x	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	x	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	x	-	-	-	-	-	-	-	-
Blast furnace inputs	x	-	-	-	-	-	-	-	-
Gas manufacture	x	-	-	-	-	-	-	-	-
Industry	x	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	x	-	-	-	-	-	-	-	-
<i>Chemical</i>	x	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	x	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	x	-	-	-	-	-	-	-	-
<i>Other industry</i>	x	-	-	-	-	-	-	-	-
Other sectors ³	x	-	-	-	-	-	-	-	-
Non-energy use	x	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

SLOVENIA

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	x	-	-	-	-	-	-	-	-
Steam coal	x	-	-	-	-	-	-	-	-
Lignite	x	1.93	1.52	1.69	1.71	1.23	1.30	-	-1.78
Peat	x	-	-	-	-	-	-	-	-
Oil shale and oil sands	x	-	-	-	-	-	-	-	-
Mt:									
Coking coal	x	-	-	-	-	-	-	-	-
Steam coal	x	-	-	-	-	-	-	-	-2.24
Lignite	x	5.58	4.48	4.54	4.43	3.17	3.35	-	-
Peat	x	-	-	-	-	-	-	-	-
Oil shale and oil sands	x	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	x	0.23	0.35	0.48	0.40	0.38	0.32	0.29	0.28
Bituminous coal ⁴	x	0.02	0.01	0.04	0.02	0.02	0.02	0.01	0.01
Coking coal	x	0.00	-	-	-	-	-	-	-
Sub-bituminous coal	x	0.14	0.27	0.38	0.31	0.26	0.25	0.24	0.24
Lignite	x	-	-	-	0.04	0.07	0.02	0.01	0.00
Peat	x	-	-	-	-	-	-	-	-
Coal products ⁵	x	0.07	0.07	0.05	0.03	0.03	0.03	0.03	0.03
Total exports	x	0.02	0.00	0.01	-	0.01	0.00	-	-
Bituminous coal ⁴	x	-	-	-	-	0.01	0.00	-	-
Coking coal	x	-	-	-	-	-	-	-	-
Sub-bituminous coal	x	-	-	0.01	-	-	-	-	-
Lignite	x	0.02	0.00	-	-	-	-	-	-
Peat	x	-	-	-	-	-	-	-	-
Coal products ⁵	x	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

SLOVENIA

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	x	254	448	593	575	555	454	403	385
Coking coal	x	1	-	-	-	-	-	-	-
Australia	x	-	-	-	-	-	-	-	-
Canada	x	-	-	-	-	-	-	-	-
Czech Republic	x	-	-	-	-	-	-	-	-
Germany	x	-	-	-	-	-	-	-	-
Poland	x	-	-	-	-	-	-	-	-
United Kingdom	x	-	-	-	-	-	-	-	-
United States	x	-	-	-	-	-	-	-	-
Other OECD	x	-	-	-	-	-	-	-	-
China, People's Rep.	x	-	-	-	-	-	-	-	-
Colombia	x	-	-	-	-	-	-	-	-
Indonesia	x	-	-	-	-	-	-	-	-
South Africa	x	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	x	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	x	-	-	-	-	-	-	-	-
Viet Nam	x	-	-	-	-	-	-	-	-
Non-specified/other	x	1	-	-	-	-	-	-	-
Steam coal	x	253	448	593	500	412	406	373	374
Australia	x	-	-	-	-	-	-	-	-
Canada	x	-	-	-	-	-	-	-	-
Czech Republic	x	-	8	22	9	7	3	3	3
Germany	x	-	-	1	2	1	1	1	1
Poland	x	-	-	11	-	-	-	-	1
United Kingdom	x	-	-	-	-	-	-	-	-
United States	x	-	-	-	-	1	-	-	-
Other OECD	x	-	-	12	13	34	8	7	10
China, People's Rep.	x	-	-	1	-	-	-	-	-
Colombia	x	-	-	2	-	9	9	-	-
Indonesia	x	-	427	501	434	353	381	357	359
South Africa	x	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	x	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	41	7	2	2	5	-
<i>Other FSU</i>	x	x	-	-	-	1	-	-	-
Venezuela	x	-	-	-	11	-	-	-	-
Viet Nam	x	-	-	-	-	-	-	-	-
Non-specified/other	x	253	13	2	24	4	2	-	-
Lignite	x	-	-	-	75	143	48	30	11

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

SPAIN¹

Figure 1: Coal supply indicators (1971 = 100)

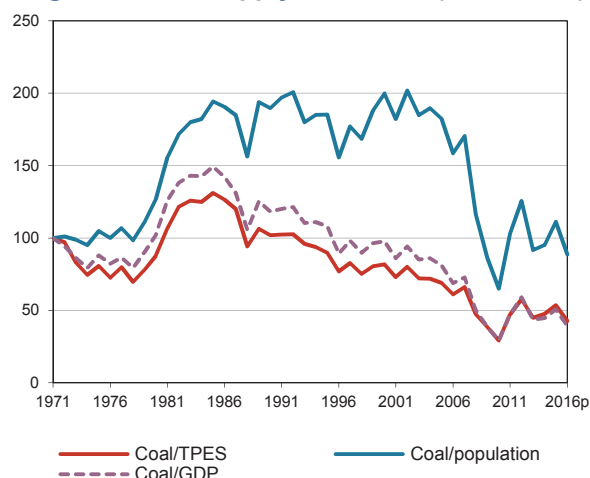


Figure 2: TPES by fuel (Mtce)

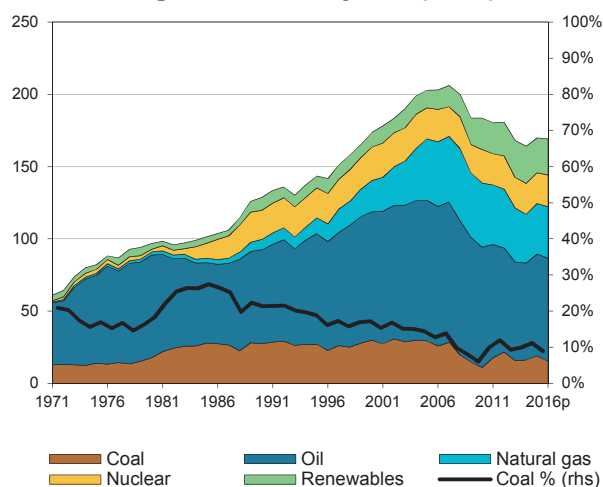


Figure 3: Primary coal supply (Mtce)

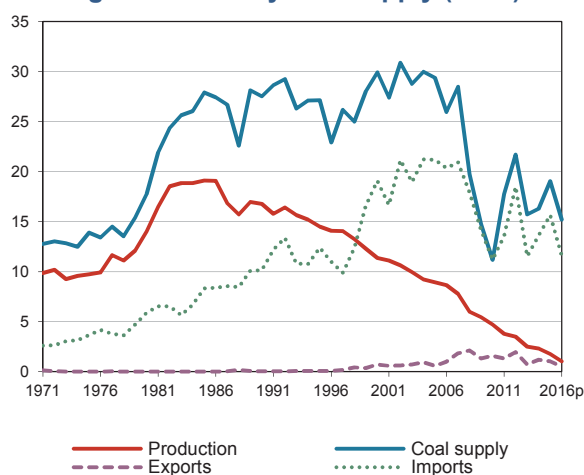


Figure 4: Coal consumption (Mtce)

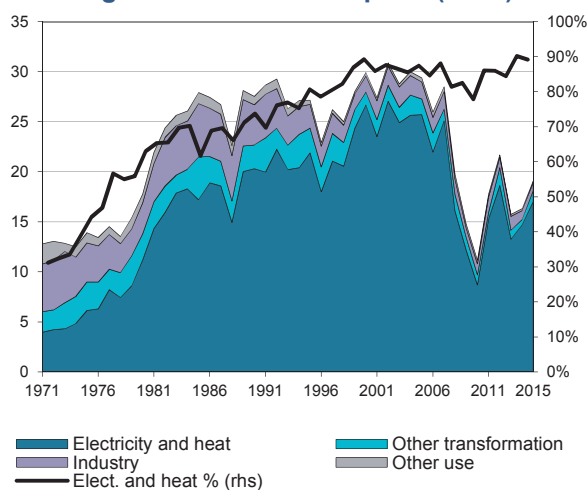
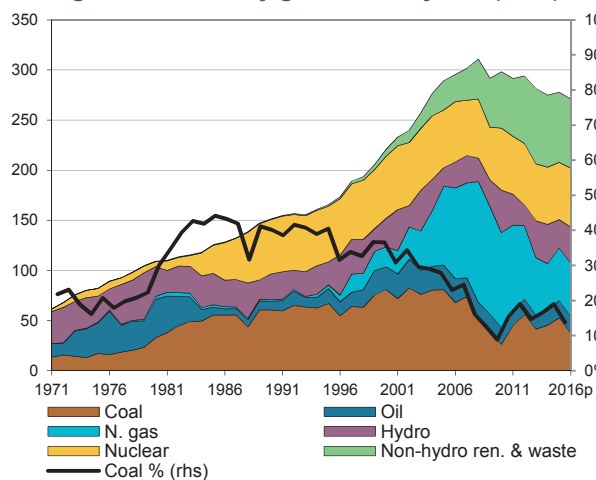
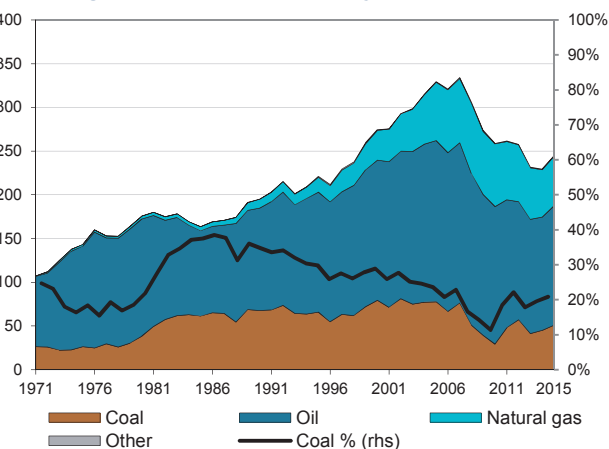


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

SPAIN

1. Coal balance¹
(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	9.3	14.0	16.8	11.4	4.7	2.3	1.8	1.0	3.6	-8.6
Imports	3.1	5.9	10.1	19.1	11.2	13.6	15.6	11.6	7.3	1.7
Exports	-0.0	-0.0	-0.0	-0.7	-1.6	-1.2	-1.0	-0.5	-	13.5
Stock changes	0.6	-2.2	0.6	0.2	-3.2	1.6	2.7	3.1		
Primary supply	12.9	17.8	27.5	29.9	11.2	16.3	19.1	15.2	4.6	-1.5
Statistical differences	1.2	0.0	-0.1	0.7	0.7	1.0	0.7	..		
Total transformation	-7.4 e	-12.9 e	-22.0 e	-28.3 e	-9.5 e	-15.9 e	-18.3	..	6.6	-0.7
Electricity and heat gen.	-4.3	-11.2	-20.3	-26.7	-8.7	-14.7	-17.0	..	9.5	-0.7
<i>Main activity producers</i> ³	-4.3	-11.1	-20.1	-26.4	-8.5	-14.5	-16.8	..	9.5	-0.7
<i>Autoproducers</i>	-	-0.1	-0.2	-0.3	-0.2	-0.2	-0.2	..	-	-0.1
Gas works	0.4	0.5	0.4	0.1	0.0	0.0	0.0	..	-0.2	-24.9
Coal transformation ⁴	-3.5 e	-2.3 e	-2.2 e	-1.7 e	-0.8 e	-1.2 e	-1.3	..	-2.9	-2.0
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-2.3 e	-1.6 e	-1.4 e	-1.0 e	-0.9 e	-1.1 e	-1.2	..	-2.8	-0.6
<i>Coke ovens</i>	-1.3	-0.7	-0.8	-0.7	0.0	-0.1	-0.1	..	-2.9	-7.6
<i>Patent fuel plants</i>	-0.0	0.0 e	0.0	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-0.7	-0.8	-0.5	-0.4	-0.8	-0.2	-0.2	..	-1.7	-3.1
Losses	-0.0	-0.0	-0.0	-0.0	-0.1	-0.1	-0.3	..		
Final consumption ⁶	5.9	4.0	4.8	2.0	1.5	1.1	1.0	..	-1.2	-6.3
Industry ⁷	5.1	3.1	4.0	1.6	1.1	0.9	0.8	..	-1.4	-6.3
<i>Iron and steel</i>	3.1 e	2.3 e	1.9 e	1.0 e	0.8 e	0.6 e	0.4	..	-2.9	-5.6
<i>Chemical</i>	0.4	0.3	0.2	0.1	0.2	0.3	0.3	..	-3.9	0.7
<i>Non-metallic minerals</i>	-	0.3	1.6	0.4	0.0	0.0	0.0	..	-	-18.5
<i>Paper, pulp and print</i>	-	0.0	0.0	-	-	-	-	..	-	-
<i>Other industry</i> ⁸	1.6	0.2	0.2	0.1	0.1	0.1	0.1	..	-10.4	-3.9
Transport ⁹	0.0	0.0	-	-	-	-	-	..	-	-
Other	0.8	0.8	0.8	0.4	0.4	0.2	0.2	..	0.3	-6.2
<i>Comm. and pub. services</i>	0.1	0.1	0.1	0.1 e	0.0	0.0	0.0	..	-1.1	-19.3
<i>Residential</i>	0.7	0.7	0.8	0.3	0.3	0.1	0.1	..	0.3	-6.9
<i>Other sectors</i> ¹⁰	-	-	0.0	-	0.1	0.1	0.0	..	-	-
Non-energy use	-	-	-	-	-	-	-	..	-	-
Electricity gen. - TWh	14.3	32.8	60.7	80.9	26.3	45.3	52.7	37.4	8.9	-0.6

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

SPAIN

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	21.35	46.82	45.65	14.66	20.61	21.39	24.41	6.76	-2.57
Total electricity and heat	14.90	39.50	41.02	10.97	17.70	19.83	22.69	8.46	-2.19
<i>Main activity producers</i>	14.77	39.42	40.83	10.71	17.44	19.62	22.46	8.52	-2.22
<i>Autoproducers</i>	0.13	0.08	0.19	0.26	0.27	0.21	0.23	-4.23	4.35
Patent fuel/BKB plants	0.06	0.01	-	-	-	-	-	-18.93	-
Coke ovens/Liquefaction ³	5.16	4.48	3.64	2.65	2.12	2.02	2.03	-1.17	-3.12
Blast furnace inputs	-	-	0.57 e	0.56 e	0.56 e	0.73 e	0.88	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.78	2.33	0.65	0.38	0.52	0.40	0.32	9.49	-7.69
<i>Iron and steel</i>	0.31	0.30	0.11 e	0.12 e	0.30 e	0.15 e	0.08	-0.16	-5.15
<i>Chemical</i>	0.23	0.14	0.06	0.22	0.21	0.23	0.21	-3.99	1.75
<i>Non-metallic minerals</i>	0.18	1.78	0.47	0.04	0.02	0.01	0.01	21.25	-18.12
<i>Paper, pulp and print</i>	0.00	0.06	-	-	-	-	-	33.31	-
<i>Other industry</i>	0.08	0.05	-	-	0.01 e	0.01 e	0.01	-3.32	-6.23
Other sectors ⁴	0.38	0.58	0.30	0.35	0.21	0.19	0.18	3.53	-4.67
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	11.30	25.79	33.70	12.16	18.50	19.53	22.58	7.12	-0.53
Total electricity and heat	9.71	22.92	32.62	10.97	17.70	19.83	22.69	7.42	-0.04
<i>Main activity producers</i>	9.58	22.84	32.43	10.71	17.44	19.62	22.46	7.51	-0.07
<i>Autoproducers</i>	0.13	0.08	0.19	0.26	0.27	0.21	0.23	-4.23	4.35
Patent fuel/BKB plants	0.06	0.01	-	-	-	-	-	-18.93	-
Coke ovens/Liquefaction ³	0.30	0.02	-	-	-	-	-	-18.94	-
Blast furnace inputs	-	-	0.57 e	0.56 e	0.56 e	0.73 e	0.88	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.78	2.33	0.65	0.38	0.52	0.40	0.32	9.49	-7.69
<i>Iron and steel</i>	0.31	0.30	0.11 e	0.12 e	0.30 e	0.15 e	0.08	-0.16	-5.15
<i>Chemical</i>	0.23	0.14	0.06	0.22	0.21	0.23	0.21	-3.99	1.75
<i>Non-metallic minerals</i>	0.18	1.78	0.47	0.04	0.02	0.01	0.01	21.25	-18.12
<i>Paper, pulp and print</i>	0.00	0.06	-	-	-	-	-	33.31	-
<i>Other industry</i>	0.08	0.05	-	-	0.01 e	0.01 e	0.01	-3.32	-6.23
Other sectors ⁴	0.38	0.58	0.30	0.35	0.21	0.19	0.18	3.53	-4.67
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	4.86	4.46	3.56	2.50	2.11	1.86	1.83	-0.73	-3.49
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	4.86	4.46	3.64	2.65	2.12	2.02	2.03	-0.73	-3.10
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

SPAIN

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	5.20	16.58	8.40	-	-	-	-	10.15	-
Total electricity and heat	5.20	16.58	8.40	-	-	-	-	10.15	-
<i>Main activity producers</i>	5.20	16.58	8.40	-	-	-	-	10.15	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

SPAIN

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	1.87	0.28	-	-	-	-	-	-14.69	-
Steam coal	7.86	12.12	9.23	7.27	4.71	1.78	1.05	3.68	-7.39
Lignite	1.38	4.38	2.15	1.68	-	-	-	10.09	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:								-14.39	-
Coking coal	1.80	0.28	-	-	-	-	-	3.48	-7.04
Steam coal	12.63	19.03	14.95	11.89	8.43	3.06	1.80	9.99	-
Lignite	5.22	16.37	8.52	7.59	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	3.63	10.15	19.07	21.19	11.21	11.54	13.60	15.64	11.60
Bituminous coal ⁴	0.24	5.48	15.09	17.40	8.26	8.86	11.74	13.62	9.67
Coking coal	3.14	4.29	3.84	3.66	2.75	2.50	1.63	1.72	1.76
Sub-bituminous coal	0.00	0.00	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.24	0.39	0.13	0.13	0.20	0.17	0.23	0.31	0.17
Total exports	0.01	0.04	0.72	0.59	1.59	0.72	1.19	1.03	0.50
Bituminous coal ⁴	0.01	0.00	-	-	1.23	0.57	1.04	0.90	0.38
Coking coal	-	-	-	-	-	-	0.02	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	-	0.04	0.72	0.59	0.36	0.15	0.12	0.13	0.13

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

SPAIN

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	3382	10456	21649	24756	12817	13662	16394	18735	13830
Coking coal	3029	4169	3755	3571	2777	2527	1631	1721	1767
Australia	454	672	1388	1682	1272	1006	710	788	1065
Canada	68	-	383	285	60	58	-	1	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	395	364	-	-	-	-	-	-	-
Poland	1369	234	-	99	-	3	-	-	-
United Kingdom	-	-	-	-	1	-	-	-	-
United States	743	2899	1912	1273	1384	1275	901	932	702
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	178	-	-	-	-	-
Colombia	-	-	-	-	60	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	72	-	-	77	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	54	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	108	20	-	-
Steam coal	353	6287	17894	21185	10040	11135	14763	17014	12063
Australia	-	271	1627	1433	400	-	206	464	296
Canada	-	-	-	16	1	1	1	1	1
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	43	102	169	80	38	45	54	45
Poland	-	16	313	28	12	14	22	18	18
United Kingdom	12	153	27	4	16	10	20	-	11
United States	-	275	585	227	481	466	326	390	447
Other OECD	27	90	39	12	18	185	316	125	322
China, People's Rep.	-	-	191	47	7	9	-	9	12
Colombia	-	404	1112	1938	2796	2519	5611	6276	4047
Indonesia	-	-	2804	3784	2411	3392	3936	3851	3997
South Africa	114	4667	9180	8736	2584	1552	1555	1209	315
Former Soviet Union ⁴	196	285	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	1496	4235	852	2275	2222	4035	2448
<i>Other FSU</i>	x	x	29	450	322	543	445	144	33
Venezuela	-	53	389	91	54	117	-	113	-
Viet Nam	-	-	-	15	-	-	-	105	-
Non-specified/other	4	30	-	-	6	14	58	220	71
Lignite	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

SPAIN

7. Steam coal exports by destination¹

(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	10	3	-	-	1488	677	1259	1088	453
Total OECD	10	3	-	-	1288	629	1031	936	348
Australia	-	-	-	-	-	-	-	5	7
Austria	-	-	-	-	-	-	-	-	-
Belgium	10	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Chile	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-
France	-	3	-	-	1	17	32	18	40
Germany	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	62	22	32	4
Hungary	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	-	4	-	9	-	8
Israel	-	-	-	-	-	-	-	-	-
Italy	-	-	-	-	1172	343	786	764	243
Japan	-	-	-	-	-	-	-	-	-
Korea	-	-	-	-	-	-	-	-	-
Latvia	x	-	-	-	-	-	4	9	-
Luxembourg	-	-	-	-	-	-	-	-	-
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	-	-	-	-	2	3	2	2	2
New Zealand	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	11	11	6	4	-
Poland	-	-	-	-	-	-	40	-	-
Portugal	-	-	-	-	28	7	11	21	14
Slovak Republic	-	-	-	-	-	-	-	-	-
Slovenia	x	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-
Sweden	-	-	-	-	-	-	-	-	-
Switzerland	-	-	-	-	-	-	-	-	-
Turkey	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	70	186	119	81	30
United States	-	-	-	-	-	-	-	-	-
Total non-OECD	-	-	-	-	29	47	165	121	98
Brazil	-	-	-	-	-	-	-	-	-
China ³	-	-	-	-	-	-	-	-	-
Chinese Taipei	-	-	-	-	-	-	-	-	-
Egypt	-	-	-	-	14	-	55	-	-
India	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	-
Oth. Africa & Mid. East	-	-	-	-	15	11	62	35	37
Oth. non-OECD Americas	-	-	-	-	-	20	8	-	11
Other Asia & Oceania	-	-	-	-	-	-	-	-	-
Other non-OECD Europe and Eurasia	-	-	-	-	-	16	40	86	50
Non-specified/Other	-	-	-	-	171	1	63	26	2

1. Please refer to the explanatory notes and definitions in Part I. Steam coal includes all sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

SWEDEN¹

Figure 1: Coal supply indicators (1971 = 100)

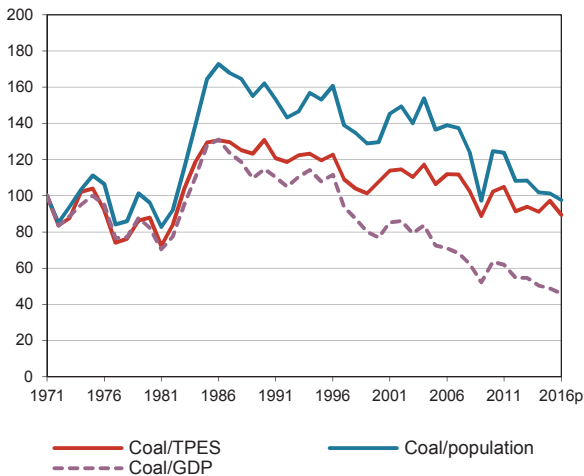


Figure 2: TPES by fuel (Mtce)

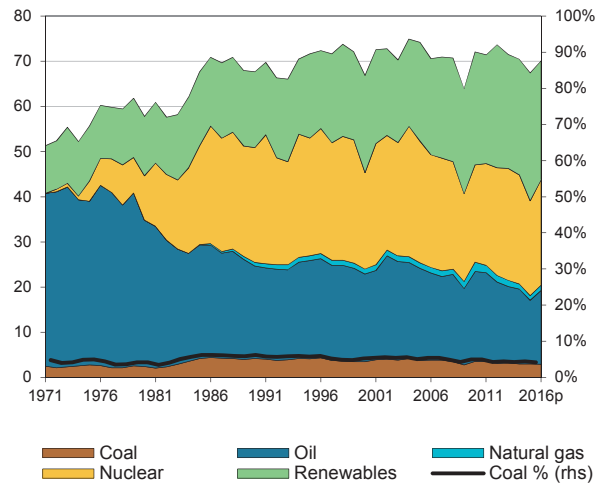


Figure 3: Primary coal supply (Mtce)

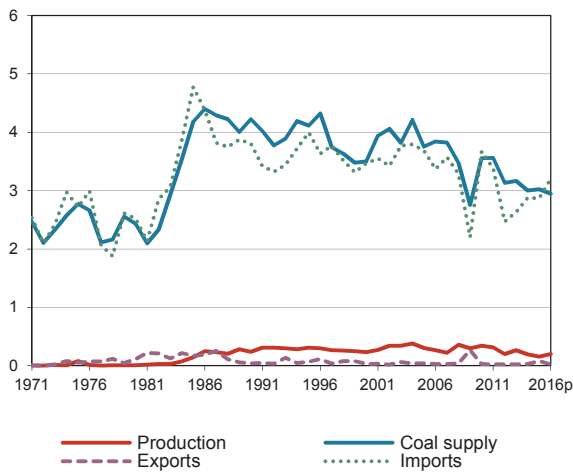


Figure 4: Coal consumption (Mtce)

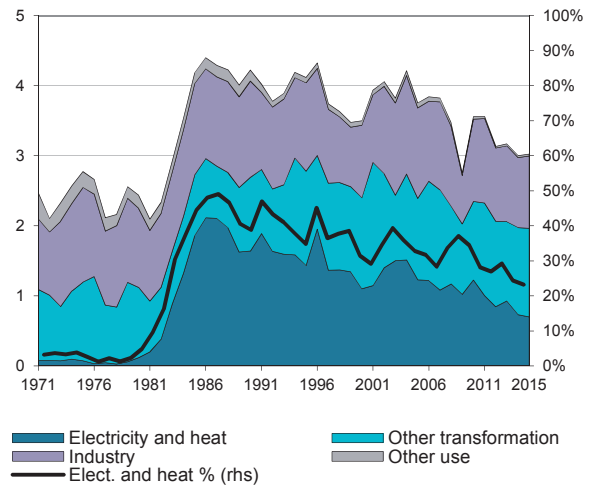
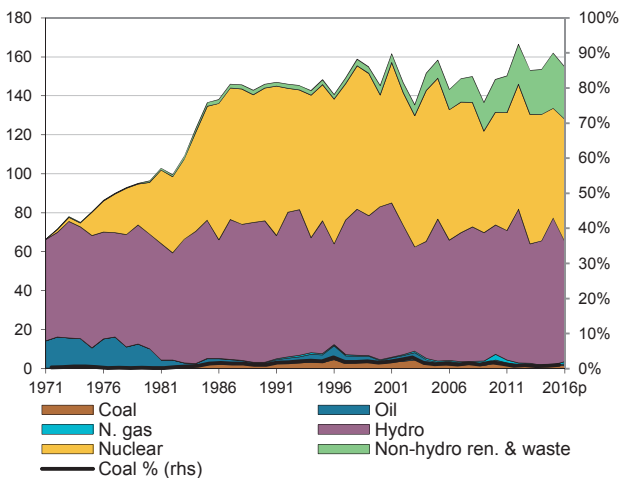
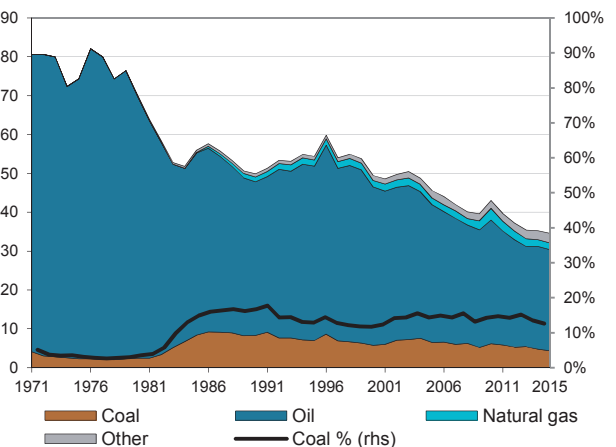


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

SWEDEN

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	0.0	0.0	0.2	0.2	0.3	0.2	0.2	0.2	19.5	-1.6
Imports	2.4	2.5	3.8	3.5	3.7	2.9	2.9	3.2	2.7	-1.1
Exports	-0.0	-0.1	-0.0	-0.0	-0.0	-0.0	-0.1	-0.0	-	2.6
Stock changes	-0.1	0.0	0.2	-0.2	-0.4	-0.0	0.1	-0.4		
Primary supply	2.3	2.4	4.2	3.5	3.6	3.0	3.0	2.9	3.6	-1.3
Statistical differences	0.0	0.0	0.0	0.1	0.3	-0.2	-0.2	..		
Total transformation	-0.7 e	-0.9 e	-2.5 e	-2.3 e	-2.4 e	-1.6 e	-1.6 e	..	7.5	-1.8
Electricity and heat gen.	-0.1	-0.1	-1.6	-1.1	-1.2	-0.7	-0.7	..	19.8	-3.3
<i>Main activity producers</i> ³	-0.1	-0.1	-1.6	-1.0	-1.1	-0.7	-0.6	..	19.7	-3.7
<i>Autoproducers</i>	-	-0.0	-0.0	-0.1	-0.1	-0.0	-0.1	..	-	7.0
Gas works	0.2	0.1	0.1	0.1	0.0	0.0	0.0	..	-6.0	-6.6
Coal transformation ⁴	-0.8 e	-0.9 e	-0.9 e	-1.2 e	-1.2 e	-0.9 e	-0.9 e	..	0.7	-0.0
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-0.8 e	-0.7 e	-0.7 e	-0.8 e	-0.8 e	-0.7 e	-0.7 e	..	-0.8	0.1
<i>Coke ovens</i>	-0.0	-0.2	-0.2	-0.4	-0.5	-0.2	-0.2	..	11.2	-0.4
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-0.1 e	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	..	3.6	0.7
Losses	-0.1 e	-0.1	-0.1	-0.1	-0.1	-0.1	-0.0	..		
Final consumption ⁶	1.5	1.3	1.5	1.1	1.2	1.0	1.1	..	0.2	-1.5
Industry ⁷	1.2	1.1	1.4	1.0	1.2	1.0	1.0	..	0.7	-1.1
<i>Iron and steel</i>	0.7 e	0.6 e	0.6 e	0.5 e	0.7 e	0.6 e	0.6 e	..	-1.4	0.2
<i>Chemical</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	..	-	-
<i>Non-metallic minerals</i>	0.3	0.2	0.4	0.3	0.2	0.2	0.2	..	2.8	-2.0
<i>Paper, pulp and print</i>	0.0	0.0	0.1	0.0	0.0	0.0	0.0	..	16.8	-8.2
<i>Other industry</i> ⁸	0.2	0.2	0.3	0.2	0.2	0.2	0.2	..	0.8	-1.6
Transport ⁹	-	0.0	-	-	-	-	-	..	-	-
Other	0.2	0.1	0.1	0.0	0.0	0.0	0.0	..	-4.2	-10.1
<i>Comm. and pub. services</i>	-	0.0	0.0	0.0	0.0	0.0	0.0	..	-	-
<i>Residential</i>	0.2	0.1	0.0	0.0	0.0	0.0	0.0	..	-11.8	-
<i>Other sectors</i> ¹⁰	-	0.0	0.1	-	-	-	-	..	-	-
Non-energy use	0.1	0.1	0.1	0.0	0.0	0.0	0.0	..	0.3	-4.7
Electricity gen. - TWh	0.5	0.2	1.6	2.5	2.7	1.1	1.3	1.6	7.0	-0.9

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

SWEDEN

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	1.57	3.71	2.86	2.86	2.83	2.67	2.80	7.43	-1.12
Total electricity and heat	0.02	1.19	0.50	0.44	0.45	0.29	0.29	43.16	-5.53
<i>Main activity producers</i>	0.02	1.17	0.49	0.44	0.45	0.29	0.29	43.02	-5.49
<i>Autoproducers</i>	-	0.01	0.01	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	1.23	1.52	1.77	1.85	1.40	1.46	1.59	1.77	0.19
Blast furnace inputs	-	0.18 e	0.27 e	0.31 e	0.35 e	0.34 e	0.26 e	-	1.48
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.30	0.74	0.50	0.53	0.55	0.50	0.52	7.88	-1.41
<i>Iron and steel</i>	0.02	0.05 e	0.04 e	0.12 e	0.11 e	0.07 e	0.06 e	6.32	0.96
<i>Chemical</i>	0.01	0.03	-	-	-	-	-	9.89	-
<i>Non-metallic minerals</i>	0.19	0.39	0.25	0.23	0.22	0.21	0.25	6.43	-1.77
<i>Paper, pulp and print</i>	0.00	0.10	0.03	0.01	0.01	0.02	0.01	33.48	-8.30
<i>Other industry</i>	0.08	0.18 e	0.17 e	0.18 e	0.21 e	0.21 e	0.20 e	7.07	0.47
Other sectors ⁴	0.00	0.07	-	-	-	-	-	33.66	-
Non-energy use	0.03	0.02	-	-	-	-	-	-3.02	-
Steam coal	0.34	2.19	1.09	0.99	1.43	1.22	1.21	16.72	-2.35
Total electricity and heat	0.02	1.19	0.50	0.44	0.45	0.29	0.29	43.16	-5.53
<i>Main activity producers</i>	0.02	1.17	0.49	0.44	0.45	0.29	0.29	43.02	-5.49
<i>Autoproducers</i>	-	0.01	0.01	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	0.18 e	0.27 e	0.31 e	0.35 e	0.34 e	0.26 e	-	1.48
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.30	0.74	0.50	0.53	0.55	0.50	0.52	7.88	-1.41
<i>Iron and steel</i>	0.02	0.05 e	0.04 e	0.12 e	0.11 e	0.07 e	0.06 e	6.32	0.96
<i>Chemical</i>	0.01	0.03	-	-	-	-	-	9.89	-
<i>Non-metallic minerals</i>	0.19	0.39	0.25	0.23	0.22	0.21	0.25	6.43	-1.77
<i>Paper, pulp and print</i>	0.00	0.10	0.03	0.01	0.01	0.02	0.01	33.48	-8.30
<i>Other industry</i>	0.08	0.18 e	0.17 e	0.18 e	0.21 e	0.21 e	0.20 e	7.07	0.47
Other sectors ⁴	0.00	0.07	-	-	-	-	-	33.66	-
Non-energy use	0.03	0.02	-	-	-	-	-	-3.02	-
Coking coal	1.23	1.52	1.77	1.87	1.40	1.46	1.59	1.77	0.20
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	1.23	1.52	1.77	1.85	1.40	1.46	1.59	1.77	0.19
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

SWEDEN

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	-	0.83	0.77	1.16	0.77	0.56	0.45	-	-2.41
Total electricity and heat	-	0.81	0.76	1.13	0.74	0.54	0.44	-	-2.45
<i>Main activity producers</i>	-	0.81	0.76	1.13	0.74	0.53	0.43	-	-2.49
<i>Autoproducers</i>	-	-	0.01	0.00	0.00	0.00	0.01	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	0.02	0.01	0.03	0.02	0.02	0.01	-	-0.83
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	0.01	0.02	0.02	0.02	0.01	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	0.02	-	0.00	0.00	0.01	0.00	-	-6.48
<i>Other industry</i>	-	-	-	0.00	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

SWEDEN

3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change	
								78-90	90-15
Mtce:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	0.01	0.01	-	-	-	-	-	-3.07	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	0.23	0.23	0.30	0.34	0.16	0.20	-	-1.56
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	-	-	-	-	-	-	-	-3.07	-
Steam coal	0.02	0.01	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-1.80
Peat	-	0.58	0.54	0.71	0.80	0.37	0.47	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹ (Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	1.88	3.81	3.47	3.68	3.67	2.64	2.87	2.87	3.20
Bituminous coal ⁴	0.26	2.05	1.19	1.17	0.96	1.28	1.15	1.14	0.98
Coking coal	1.21	1.35	1.86	2.00	2.31	1.20	1.58	1.61	2.10
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	0.00	-	-	-	-	-	-	-
Peat	-	0.10	0.10	0.13	0.16	0.06	0.05	0.04	0.03
Coal products ⁵	0.41	0.31	0.32	0.38	0.24	0.09	0.09	0.08	0.10
Total exports	0.12	0.04	0.03	0.04	0.03	0.03	0.03	0.08	0.03
Bituminous coal ⁴	0.03	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.09	0.04	0.03	0.04	0.03	0.02	0.03	0.08	0.03

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

SWEDEN

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	1545	3545	3092	3203	3285	2540	2774	2791	3096
Coking coal	1239	1315	1814	1955	2258	1173	1542	1573	2047
Australia	-	449 e	990	1000	1373	901	988	1031	1536
Canada	78	102 e	54	-	-	-	-	22	-
Czech Republic	99	-	-	-	-	-	-	-	-
Germany	231	-	-	-	-	-	-	-	-
Poland	71	-	-	22	-	-	-	-	-
United Kingdom	5	-	-	-	-	-	-	-	-
United States	338	764 e	570	462	529	272	554	520	511
Other OECD	-	-	-	1	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	417	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	470	356	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	200	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Steam coal	306	2228	1278	1248	1027	1367	1232	1218	1049
Australia	-	187 e	83	370	73	143	188	185	111
Canada	-	1 e	-	-	-	-	-	-	-
Czech Republic	8	6 e	-	-	-	-	-	-	-
Germany	42	7 e	-	3	1	6	-	1	2
Poland	174	732 e	698	127	178	261	125	100	97
United Kingdom	30	103 e	15	2	-	8	-	-	4
United States	-	117 e	25	30	24	-	-	-	-
Other OECD	-	8 e	66	286	368	387	410	363	331
China, People's Rep.	-	8 e	-	-	-	-	-	-	-
Colombia	-	108 e	120	-	-	-	-	3	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	52	573	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	271	377	300	550	505	548	504
<i>Other FSU</i>	x	x	-	-	17	8	4	14	-
Venezuela	-	375 e	-	53	66	2	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	3 e	-	-	-	2	-	4	-
Lignite	-	2	-	-	-	-	-	-	-

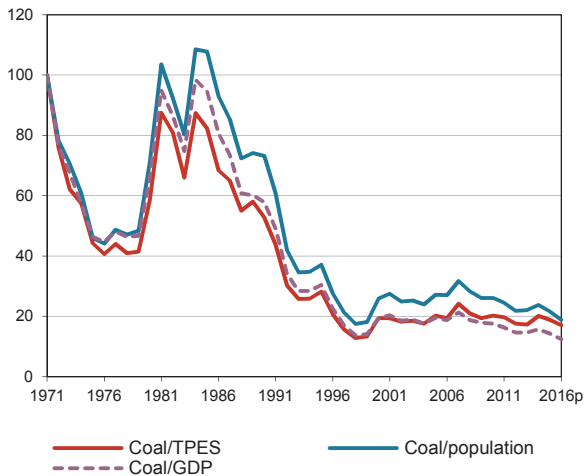
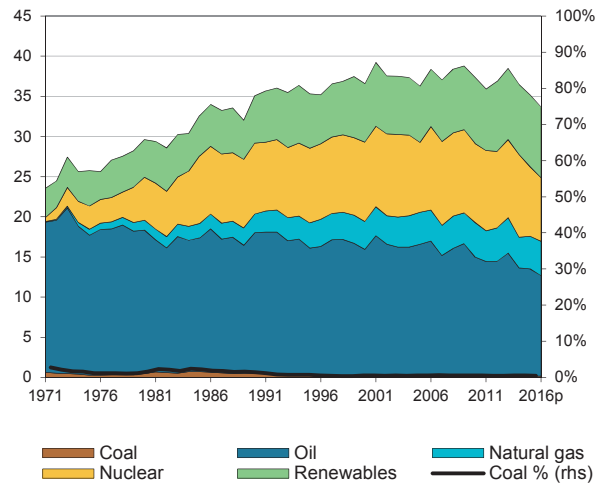
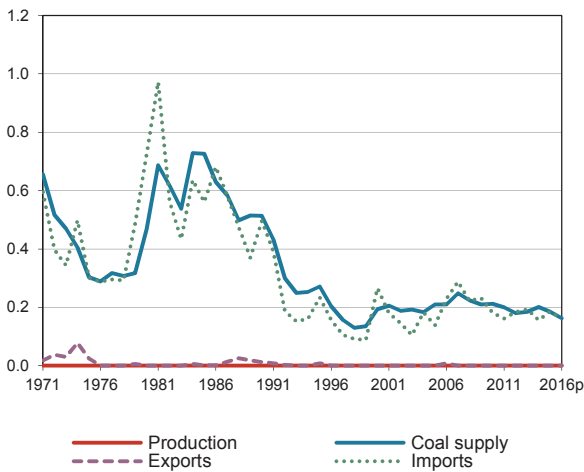
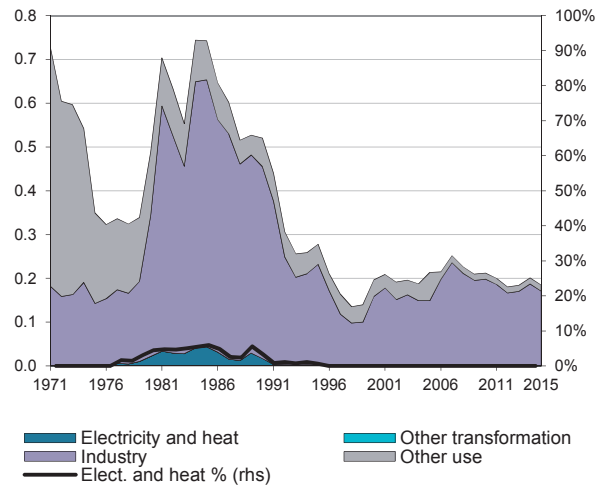
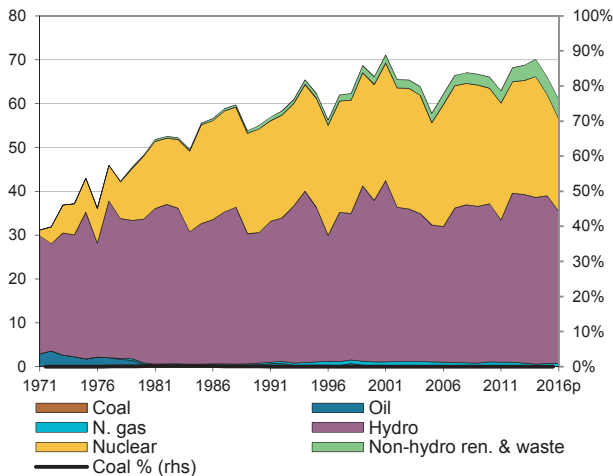
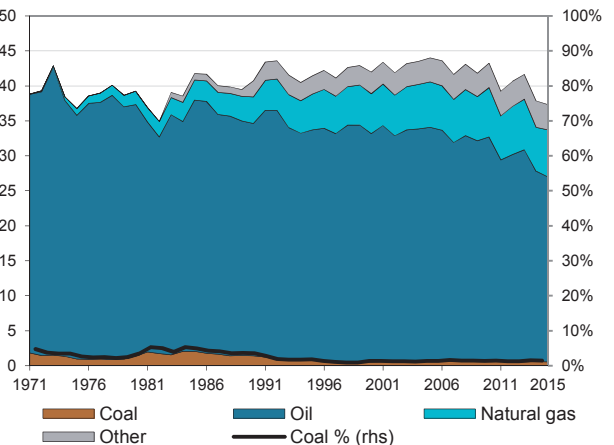
1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

SWITZERLAND¹

Figure 1: Coal supply indicators (1971 = 100)

Figure 2: TPES by fuel (Mtce)

Figure 3: Primary coal supply (Mtce)

Figure 4: Coal consumption (Mtce)

Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)


1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

SWITZERLAND

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	-	-	-	-	-	-	-	-	-	-
Imports	0.3	0.7	0.5	0.3	0.2	0.2	0.2	0.2	2.2	-3.9
Exports	-0.0	-	-0.0	-	-	-	-	-	-	-
Stock changes	0.2	-0.3	0.0	-0.1	0.0	0.0	-0.0	-	-	-
Primary supply	0.5	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.5	-4.0
Statistical differences	-	-	-0.0	-	-	-	-	..	-	-
Total transformation	0.2	0.0	-0.0	0.0	-	-	-	..	-	-
Electricity and heat gen.	-	-0.0	-0.0	-	-	-	-	..	-	-
<i>Main activity producers</i> ³	-	-0.0	-0.0	-	-	-	-	..	-	-
<i>Autoproducers</i>	-	-0.0	-0.0	-	-	-	-	..	-	-
Gas works	0.2	0.0	0.0	0.0	-	-	-	..	-15.7	-
Coal transformation ⁴	-	-	-	-	-	-	-	..	-	-
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-	-	-	-	-	-	-	..	-	-
<i>Coke ovens</i>	-	-	-	-	-	-	-	..	-	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-0.0	-0.0	-	-	-	-	-	..	-	-
Losses	-0.0	-0.0	-0.0	-0.0	-	-	-	..	-	-
Final consumption ⁶	0.6	0.5	0.5	0.2	0.2	0.2	0.2	..	-1.0	-3.9
Industry ⁷	0.2	0.3	0.4	0.2	0.2	0.2	0.2	..	6.0	-3.7
<i>Iron and steel</i>	0.0	-	-	0.0	0.0	0.0	0.0	..	-	-
<i>Chemical</i>	0.0	0.0	0.0	-	-	-	-	..	-	-
<i>Non-metallic minerals</i>	0.0	0.2	0.4	0.1	0.2	0.2	0.2	..	19.2	-3.6
<i>Paper, pulp and print</i>	0.0	0.0	0.0	-	-	-	-	..	-	-
<i>Other industry</i> ⁸	0.1	0.1	0.0	0.0	0.0	0.0	0.0	..	-6.9	-
Transport ⁹	-	-	-	-	-	-	-	..	-	-
Other	0.4	0.1	0.1	0.0	0.0	0.0	0.0	..	-10.9	-5.7
<i>Comm. and pub. services</i>	-	-	0.0	-	-	-	-	..	-	-
<i>Residential</i>	0.4	0.1	0.0	0.0	0.0	0.0	0.0	..	-17.0	-
<i>Other sectors</i> ¹⁰	-	-	0.0	0.0	-	-	-	..	-	-
Non-energy use	-	0.0	0.0	-	-	-	-	..	-	-
Electricity gen. - TWh	-	0.1	0.0	-	-	-	-	-	-	-

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

SWITZERLAND

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	0.15	0.49	0.18	0.23	0.20	0.22	0.21	10.50	-3.42
Total electricity and heat	0.01	0.02	-	-	-	-	-	12.70	-
<i>Main activity producers</i>	0.00	0.02	-	-	-	-	-	26.63	-
<i>Autoproducers</i>	0.00	0.00	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.10	0.45	0.17	0.21	0.18	0.21	0.19	13.51	-3.40
<i>Iron and steel</i>	-	-	0.02	0.01	0.01	0.01	0.01	-	-
<i>Chemical</i>	0.01	0.01	-	-	-	-	-	-6.82	-
<i>Non-metallic minerals</i>	0.05	0.40	0.14	0.20	0.17	0.19	0.18	19.28	-3.21
<i>Paper, pulp and print</i>	0.02	0.04	-	-	-	-	-	6.70	-
<i>Other industry</i>	0.02	0.01	0.01	0.00	0.00	0.00	0.00	-4.17	-9.46
Other sectors ⁴	0.03	0.02	0.01	0.02	0.02	0.02	0.02	-4.62	-0.24
Non-energy use	0.02	0.00	-	-	-	-	-	-12.55	-
Steam coal	0.15	0.48	0.17	0.17	0.14	0.09	0.08	10.26	-7.07
Total electricity and heat	0.01	0.02	-	-	-	-	-	12.70	-
<i>Main activity producers</i>	0.00	0.02	-	-	-	-	-	26.63	-
<i>Autoproducers</i>	0.00	0.00	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.10	0.45	0.17	0.15	0.12	0.08	0.06	13.51	-7.71
<i>Iron and steel</i>	-	-	0.02	0.01	0.01	0.01	0.01	-	-
<i>Chemical</i>	0.01	0.01	-	-	-	-	-	-6.82	-
<i>Non-metallic minerals</i>	0.05	0.40	0.14	0.14	0.11	0.06	0.05	19.28	-8.27
<i>Paper, pulp and print</i>	0.02	0.04	-	-	-	-	-	6.70	-
<i>Other industry</i>	0.02	0.01	0.01	0.00	0.00	0.00	0.00	-4.17	-9.46
Other sectors ⁴	0.03	0.00	0.01	0.02	0.02	0.02	0.02	-15.46	5.70
Non-energy use	0.02	0.00	-	-	-	-	-	-12.55	-
Coking coal	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

SWITZERLAND

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	-	0.01	0.01	0.06	0.06	0.13	0.13	-	9.65
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	0.06	0.06	0.13	0.13	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	0.06	0.06	0.13	0.13	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	0.01	0.01	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

SWITZERLAND

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:									
Coking coal	-	-	-	-	-	-	-	-	-
Steam coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹ (Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	0.29	0.50	0.27	0.14	0.18	0.19	0.16	0.19	0.16
Bituminous coal ⁴	0.13	0.46	0.24	0.09	0.11	0.13	0.03	0.07	0.04
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	0.01	0.00	0.03	0.05	0.05	0.11	0.11	0.11
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.15	0.03	0.03	0.02	0.02	0.02	0.01	0.01	0.01
Total exports	-	0.01	-	-	-	-	-	-	-
Bituminous coal ⁴	-	0.01	-	-	-	-	-	-	-
Coking coal	-	-	-	-	-	-	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	-	0.00	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

SWITZERLAND

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	141	490	256	139	196	208	173	208	181
Coking coal	-	-	-	-	-	-	-	-	-
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Steam coal	141	482	250	100	130	144	39	76	48
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	14	-	-	-	-	-	-	-	-
Germany	79	55	12	4	5	11	7	4	4
Poland	8	1	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	17	6	2	2	16	14	1	1	14
China, People's Rep.	-	-	-	-	-	1	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	23	420	234	91	107	114	29	64	21
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	2	3	2	4	-	2	3
<i>Other FSU</i>	x	x	-	-	-	-	1	3	4
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	1	1	1
Non-specified/other	-	-	-	-	-	-	-	1	1
Lignite	-	8	6	39	66	64	134	132	133

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

TURKEY¹

Figure 1: Coal supply indicators (1971 = 100)

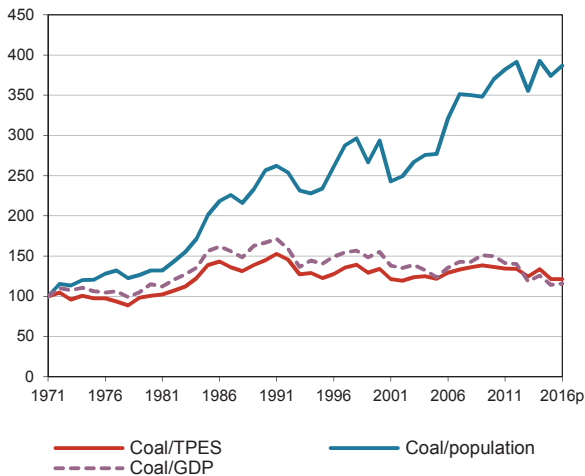


Figure 2: TPES by fuel (Mtce)

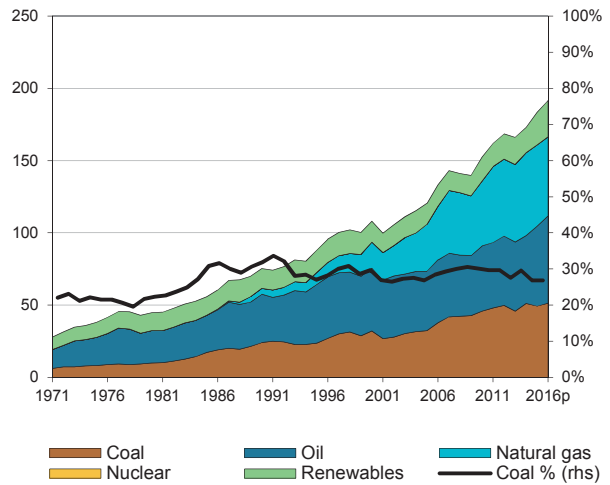


Figure 3: Primary coal supply (Mtce)

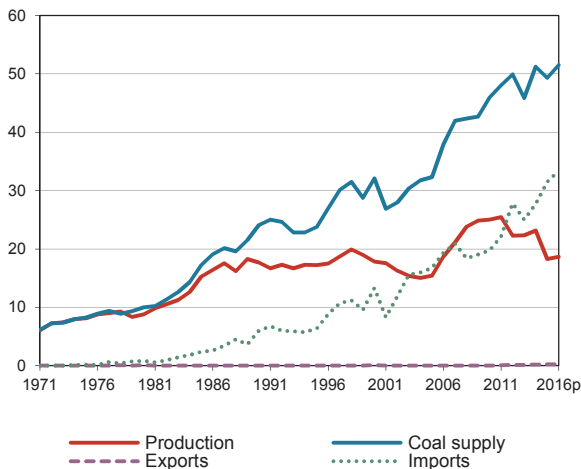


Figure 4: Coal consumption (Mtce)

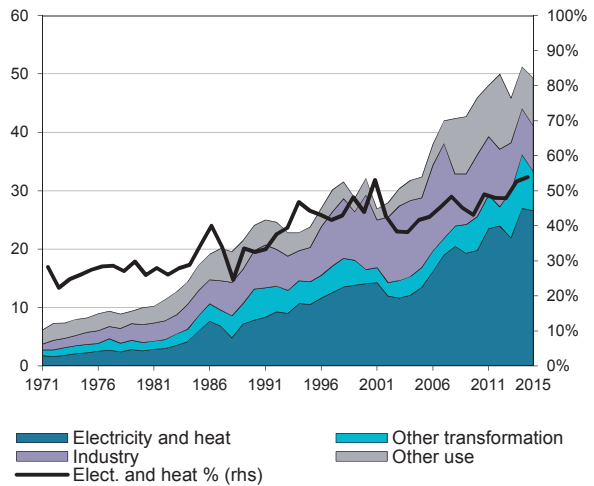
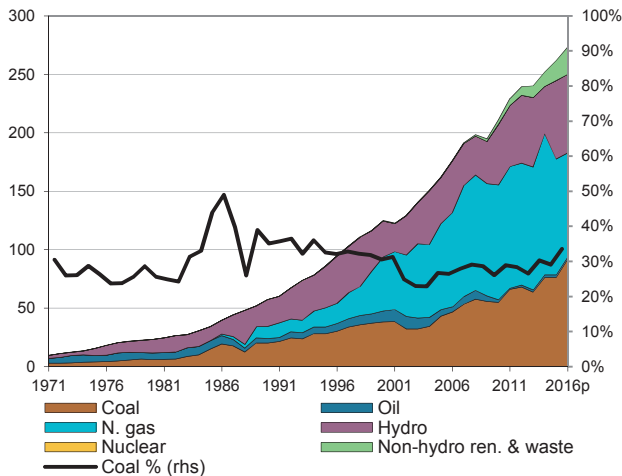
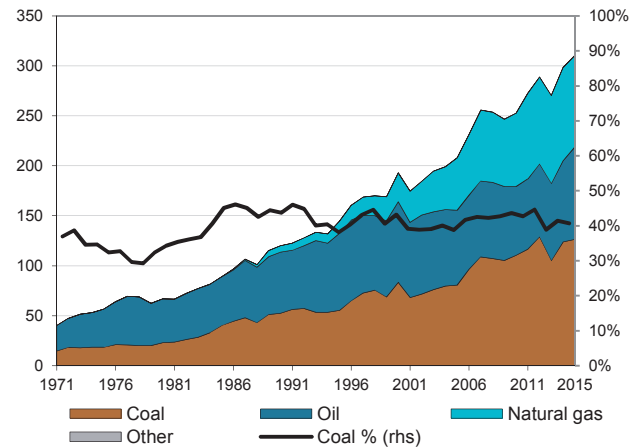


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

TURKEY

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	7.4	8.8	17.7	17.8	25.0	23.1	18.3	18.7	5.2	0.1
Imports	0.0	0.8	6.0	13.3	19.8	27.7	31.5	33.4	42.3	6.8
Exports	-	-0.1	-0.0	-0.1	-0.0	-0.2	-0.2	-0.2	-	9.3
Stock changes	-0.1	0.4	0.4	1.0	1.1	0.5	-0.2	-0.4		
Primary supply	7.4	10.0	24.1	32.1	46.0	51.2	49.3	51.5	7.2	2.9
Statistical differences	-	-0.3	-1.9	0.5	-2.7	-4.1	-1.5	..		
Total transformation	-2.9 e	-3.4 e	-10.8 e	-16.6 e	-22.0 e	-30.4 e	-30.4 e	..	8.1	4.2
Electricity and heat gen.	-1.8	-2.6	-7.8	-14.1	-19.8	-27.0	-26.6	..	9.0	5.0
<i>Main activity producers</i> ³	-1.8	-2.2	-7.2	-13.4	-18.2	-26.4	-26.6	..	8.4	5.4
<i>Autoproducers</i>	-	-0.4	-0.7	-0.7	-1.6	-0.6	-	..	-	-
Gas works	-0.1	-0.0	-0.0	-	-	-	-	..	-6.8	-
Coal transformation ⁴	-0.9 e	-0.7 e	-3.0 e	-2.5 e	-2.2 e	-3.4 e	-3.8 e	..	6.9	1.0
<i>BKB plants</i>	0.0	0.0	0.0	0.0	-	-	-	..	-	-
<i>Blast furnaces</i>	-0.6 e	-0.9 e	-1.6 e	-1.8 e	-2.0 e	-2.7 e	-2.9 e	..	6.3	2.3
<i>Coke ovens</i>	-0.4	0.1	-1.3	-0.7	-0.2	-0.7	-0.9	..	7.7	-1.6
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-0.2	-0.3	-0.4	-0.4	-0.9	-1.7	-1.4	..	3.9	4.8
Losses	-0.0	-0.0	-0.0	-0.0	-0.0	-	-	..		
Final consumption ⁶	4.2	6.0	10.9	15.6	20.3	15.0	16.0	..	5.7	1.6
Industry ⁷	1.6	3.1	6.6	12.7	10.6	7.9	7.8	..	8.5	0.7
<i>Iron and steel</i>	0.4 e	0.9 e	1.1 e	1.4 e	2.9 e	1.1 e	1.2 e	..	7.0	0.2
<i>Chemical</i>	0.3	0.2	0.4	0.0	0.3	0.3	0.6	..	2.1	1.4
<i>Non-metallic minerals</i>	-	-	0.9	1.3	2.4	3.9	4.0	..	-	6.1
<i>Paper, pulp and print</i>	-	-	0.0	0.0	0.0	0.1	0.2	..	-	22.5
<i>Other industry</i> ⁸	1.0	2.0	4.1	10.0	4.9	2.5	1.9	..	8.7	-3.1
Transport ⁹	0.7	0.3	0.0	0.0	-	-	-	..	-18.9	-
Other	1.9	2.6	4.3	2.9	9.8	7.2	8.2	..	5.1	2.6
<i>Comm. and pub. services</i>	0.0	0.0	0.0	-	0.4	4.5	5.4	..	-	41.5
<i>Residential</i>	1.9	2.6	4.3	2.9	9.2	2.6	2.8	..	5.1	-1.7
<i>Other sectors</i> ¹⁰	-	-	-	-	0.1	0.0	-	..	-	-
Non-energy use	-	-	-	-	-	-	-	..	-	-
Electricity gen. - TWh	3.2	6.0	20.2	38.2	55.0	76.3	76.2	91.8	11.4	5.5

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

TURKEY

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	17.86	54.32	79.93	95.61	84.24	96.89	92.51	9.71	2.15
Total electricity and heat	5.49	30.36	54.48	62.79	57.96	71.90	66.57	15.31	3.19
<i>Main activity producers</i>	5.30	30.08	53.94	61.77	56.86	71.55	66.57	15.57	3.23
<i>Autoproducers</i>	0.19	0.28	0.54	1.02	1.10	0.36	-	3.17	-
Patent fuel/BKB plants	0.02	0.04	0.00	-	-	-	-	6.74	-
Coke ovens/Liquefaction ³	2.49	4.72	4.19	5.32	5.57	5.72	6.04	5.49	0.99
Blast furnace inputs	-	-	-	0.46 e	0.65 e	0.62 e	0.67 e	-	-
Gas manufacture	0.29	0.10	-	-	-	-	-	-8.83	-
Industry	3.97	9.98	15.55	13.04	9.56	8.92	8.81	7.99	-0.50
<i>Iron and steel</i>	0.00	-	0.09	1.31 e	0.32 e	0.33 e	0.41 e	-	-
<i>Chemical</i>	0.73	0.93	0.11	0.57	0.54	0.49	0.72	2.10	-1.04
<i>Non-metallic minerals</i>	-	0.92	1.28	3.24	5.24	4.92	4.71	-	6.74
<i>Paper, pulp and print</i>	-	0.00	0.02	0.02	0.12	0.21	0.25	-	24.61
<i>Other industry</i>	3.24	8.13	14.05	7.91 e	3.34 e	2.98 e	2.72 e	7.97	-4.28
Other sectors ⁴	5.10	9.10	5.71	13.88	10.18	8.80	9.88	4.94	0.33
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	1.21	3.10	8.51	18.85	22.46	25.91	29.16	8.19	9.38
Total electricity and heat	0.68	0.37	1.66	6.81	11.44	13.95	15.98	-5.01	16.27
<i>Main activity producers</i>	0.68	0.37	1.66	6.81	11.44	13.95	15.98	-5.01	16.27
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	0.09	0.06	-	-	-	-	-	-3.28	-
Blast furnace inputs	-	-	-	0.46 e	0.65 e	0.62 e	0.67 e	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	0.29	1.18	6.16	3.85	4.28	4.83	5.08	12.55	6.03
<i>Iron and steel</i>	-	-	-	0.28 e	0.32 e	0.33 e	0.41 e	-	-
<i>Chemical</i>	-	-	-	0.08	0.13	0.10	0.39	-	-
<i>Non-metallic minerals</i>	-	0.92	1.28	3.10	3.00	3.01	3.61	-	5.61
<i>Paper, pulp and print</i>	-	0.00	0.02	-	0.00	0.04	0.04	-	16.24
<i>Other industry</i>	0.29	0.25	4.87	0.39 e	0.82 e	1.36 e	0.63 e	-0.96	3.71
Other sectors ⁴	0.10	1.49	0.69	7.72	5.86	5.73	6.98	25.02	6.38
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	3.43	5.34	7.04	7.52	6.49	6.33	6.69	3.75	0.91
Total electricity and heat	0.36	0.11	0.28	0.54	0.60	0.54	0.65	-9.80	7.55
<i>Main activity producers</i>	0.31	0.08	-	-	-	0.33	0.65	-11.22	9.01
<i>Autoproducers</i>	0.05	0.03	0.28	0.54	0.60	0.21	-	-4.01	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	2.39	4.66	4.19	5.32	5.57	5.72	6.04	5.71	1.04
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	0.29	0.10	-	-	-	-	-	-8.83	-
Industry	0.05	0.34	2.47	1.43	0.24	0.01	-	17.37	-
<i>Iron and steel</i>	-	-	0.09	0.89	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	0.05	0.34	2.38	0.54	0.24	0.01	-	17.37	-
Other sectors ⁴	0.11	0.13	0.10	0.18	0.07	0.06	-	1.19	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

TURKEY

2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	13.23	45.89	64.38	69.24	55.29	64.66	56.66	10.92	0.85
Total electricity and heat	4.45	29.88	52.54	55.44	45.92	57.41	49.94	17.21	2.08
<i>Main activity producers</i>	4.30	29.63	52.29	54.96	45.42	57.26	49.94	17.45	2.11
<i>Autoproducers</i>	0.15	0.25	0.26	0.48	0.50	0.15	-	4.71	-
Patent fuel/BKB plants	0.02	0.04	0.00	-	-	-	-	6.74	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	3.63	8.47	6.92	7.75	5.04	4.08	3.72	7.31	-3.23
<i>Iron and steel</i>	0.00	-	-	0.13	-	-	-	-	-
<i>Chemical</i>	0.73	0.93	0.11	0.49	0.41	0.38	0.33	2.10	-4.13
<i>Non-metallic minerals</i>	-	-	-	0.14	2.24	1.91	1.11	-	-
<i>Paper, pulp and print</i>	-	-	-	0.02	0.12	0.17	0.20	-	-
<i>Other industry</i>	2.90	7.54	6.81	6.98	2.27	1.62	2.09	8.27	-5.00
Other sectors ³	4.88	7.48	4.93	5.98	4.25	3.01	2.89	3.62	-3.73
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

TURKEY

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	2.58	2.03	0.71	0.65	0.94	0.72	0.69	-2.00	-4.04
Steam coal	1.16	1.06	0.81	1.59	1.95	1.12	1.32	-0.77	0.25
Lignite	5.55	14.59	16.31	13.20	22.15	16.44	16.65	8.38	0.48
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:								-3.97	-3.41
Coking coal	2.96	1.82	0.74	0.65	1.09	0.77	0.73	-0.88	0.97
Steam coal	1.33	1.20	1.68	2.41	2.61	1.53	1.82	9.39	0.94
Lignite	15.12	44.41	60.85	55.28	69.70	56.12	56.85	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	0.41	6.02	13.30	16.74	19.78	25.00	27.70	31.47	33.42
Bituminous coal ⁴	-	1.76	6.30	11.10	14.76	18.33	21.52	24.84	26.95
Coking coal	0.41	4.25	6.27	5.23	4.86	6.17	5.85	6.10	5.96
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	0.01	0.00	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	-	-	0.72	0.41	0.16	0.50	0.33	0.53	0.52
Total exports	0.09	0.03	0.06	-	0.01	0.14	0.19	0.24	0.22
Bituminous coal ⁴	-	-	-	-	-	0.00	0.06	0.13	0.05
Coking coal	-	-	-	-	-	0.00	-	-	-
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	0.09	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	-	0.03	0.06	-	0.01	0.13	0.13	0.11	0.17

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

TURKEY

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	475	5572	13001	17360	21333	26633	29816	33979	36215
Coking coal	475	3717	6202	4943	5135	5759	5466	5931	5793
Australia	-	1318	2793	882	1376	905	517	2544	2282
Canada	-	51	847	1175	865	339	492	504	1344
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	70	-	-	-	-	2	-	-	-
Poland	-	-	100	187	78	-	-	-	-
United Kingdom	-	-	-	6	-	2	-	-	-
United States	405	2011	2150	1810	2518	3541	4098	1777	1031
Other OECD	-	-	-	-	-	-	-	-	60
China, People's Rep.	-	-	-	101	-	-	-	-	-
Colombia	-	-	-	-	-	-	96	238	265
Indonesia	-	-	-	-	-	147	-	242	56
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	337	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	259	574	14	18	185	626	650
<i>Other FSU</i>	x	x	-	208	55	717	-	-	103
Venezuela	-	-	-	-	90	-	-	-	-
Viet Nam	-	-	53	-	-	-	-	-	-
Non-specified/other	-	-	-	-	139	88	78	-	2
Steam coal	-	1840	6788	12417	16198	20874	24350	28048	30422
Australia	-	-	-	24	-	-	114	249	-
Canada	-	-	-	-	89	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	3	-	-
Poland	-	-	-	-	292	214	67	112	196
United Kingdom	-	-	69	1	84	-	-	-	-
United States	-	58	-	-	-	488	227	235	184
Other OECD	-	-	36	-	35	146	17	44	358
China, People's Rep.	-	-	-	1517	215	16	-	11	-
Colombia	-	-	-	2456	2841	7158	9279	11017	15182
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	1252	1440	1448	1812	3347	3985	4976	2317
Former Soviet Union ⁴	-	530	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	5023	6198	9844	8572	8460	10599	11779
<i>Other FSU</i>	x	x	174	611	590	590	1987	196	-
Venezuela	-	-	-	11	234	-	-	27	-
Viet Nam	-	-	-	-	-	-	-	33	-
Non-specified/other	-	-	46	151	162	343	109	365	279
Lignite	-	15	11	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

UNITED KINGDOM¹

Figure 1: Coal supply indicators (1971 = 100)

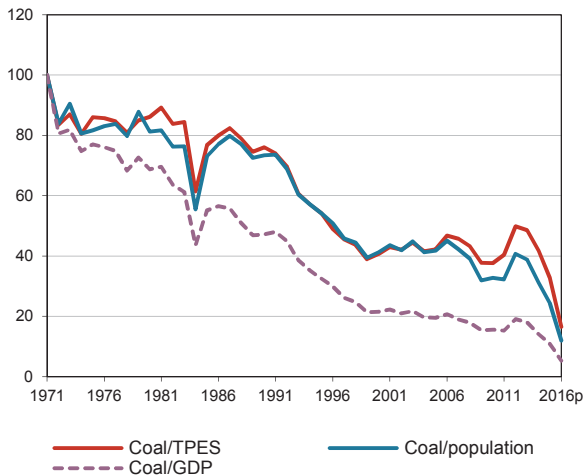


Figure 2: TPES by fuel (Mtce)

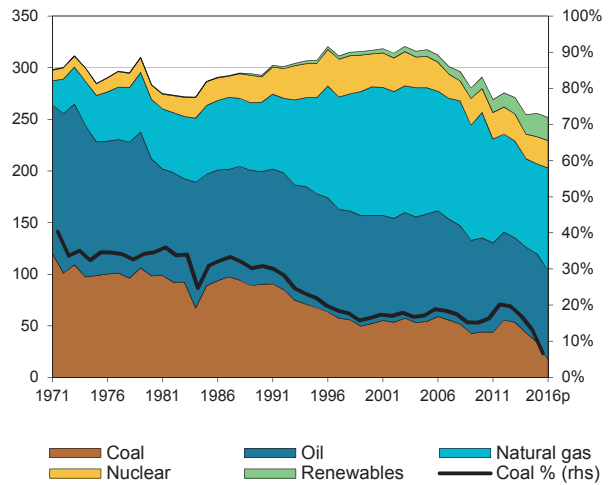


Figure 3: Primary coal supply (Mtce)

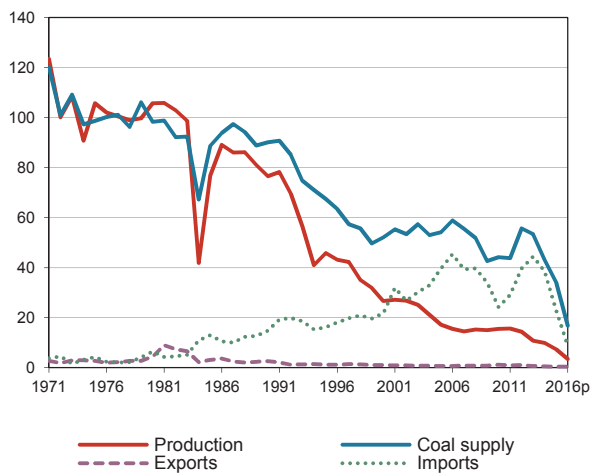


Figure 4: Coal consumption (Mtce)

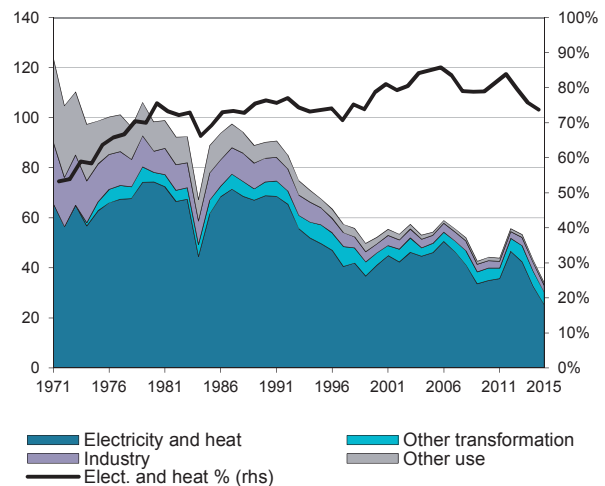
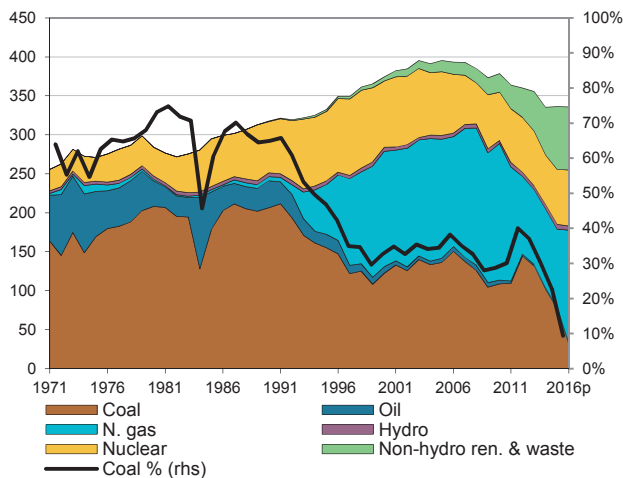
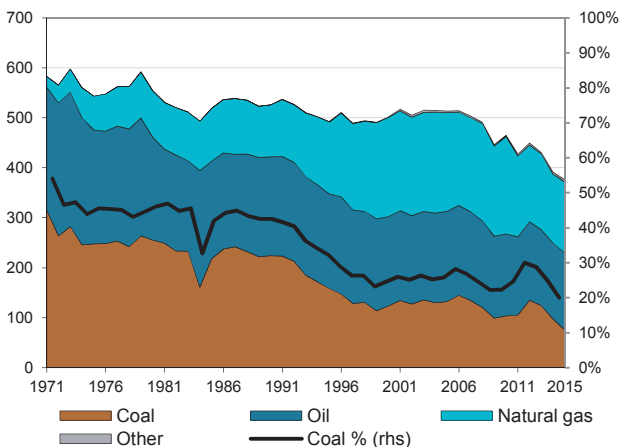


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

UNITED KINGDOM

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	108.4	105.7	76.6	26.7	15.5	9.9	7.3	3.6	-2.0	-9.0
Imports	1.6	6.4	14.8	21.8	24.2	38.4	22.8	8.9	14.0	1.7
Exports	-2.8	-4.4	-2.6	-1.1	-1.3	-0.5	-0.5	-0.5	-0.6	-6.3
Stock changes	2.0	-9.4	1.4	4.9	5.8	-4.5	4.5	4.9		
Primary supply	109.2	98.3	90.2	52.2	44.2	43.2	34.1	16.9	-1.1	-3.8
Statistical differences	3.3	0.1	-0.9	0.1	-1.5	-1.5	-1.1	..		
Total transformation	-62.1 e	-76.3 e	-72.3 e	-44.3 e	-37.2 e	-35.9 e	-27.8 e	..	0.9	-3.7
Electricity and heat gen.	-65.0	-74.3	-68.8	-41.1	-34.9	-32.7	-25.1	..	0.3	-3.9
<i>Main activity producers</i> ³	-65.0	-72.0	-66.9	-37.7	-32.5	-31.1	-23.8	..	0.2	-4.1
<i>Autoproducers</i>	-	-2.3	-1.9	-3.3	-2.4	-1.6	-1.4	..	-	-1.3
Gas works	8.4	0.3	0.0	-	-	-	-	..	-37.0	-
Coal transformation ⁴	-5.5 e	-2.4 e	-3.5 e	-3.3 e	-2.4 e	-3.2 e	-2.8 e	..	-2.7	-1.0
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-2.3 e	-0.9 e	-2.6 e	-3.0 e	-2.1 e	-2.8 e	-2.6 e	..	0.9	-0.0
<i>Coke ovens</i>	-3.2	-1.4	-0.7	-0.3	-0.4	-0.3	-0.1	..	-8.8	-6.0
<i>Patent fuel plants</i>	-0.0	-0.0	-0.2	0.1	0.1	0.0	-0.0	..	9.7	-13.7
Other transformation ⁵	-	-	-	0.0	0.0	0.0	0.0	..	-	-
Energy ind. own use	-3.2	-1.9	-1.1	-1.5	-0.9	-1.1	-1.0	..	-6.1	-0.5
Losses	-1.8	-0.0	-0.0	-0.2	-0.2	-0.3	-0.3	..		
Final consumption ⁶	45.3	20.2	15.9	6.2	4.3	4.5	3.9	..	-6.0	-5.5
Industry ⁷	20.1	8.5	9.5	3.6	3.0	3.5	2.9	..	-4.3	-4.6
<i>Iron and steel</i>	9.0 e	3.6 e	4.3 e	1.5 e	1.2 e	1.3 e	1.1 e	..	-4.3	-5.2
<i>Chemical</i>	0.3	0.2	0.9	0.0	0.1	0.1	0.1	..	6.2	-10.0
<i>Non-metallic minerals</i>	3.5	2.5	1.4	1.1	1.0	1.1	0.9	..	-5.4	-1.6
<i>Paper, pulp and print</i>	1.2	0.1	0.6	0.1	0.1	0.1	0.1	..	-4.5	-6.3
<i>Other industry</i> ⁸	6.0	2.0	2.4	0.9	0.6	0.9	0.7	..	-5.2	-4.8
Transport ⁹	0.1	0.1	0.0	-	0.0	0.0	0.0	..	-18.3	-
Other	25.2	11.6	6.3	2.3	1.1	0.8	0.8	..	-7.8	-7.9
<i>Comm. and pub. services</i>	4.2	1.9	1.3	0.1	0.0	0.0	0.0	..	-6.6	-17.0
<i>Residential</i>	20.9	9.7	5.0	2.2	1.0	0.8	0.8	..	-8.0	-7.1
<i>Other sectors</i> ¹⁰	0.1	0.0	0.0	0.0	0.0	0.0	0.0	..	-8.2	-
Non-energy use	-	-	-	0.3	0.2	0.2	0.1	..	-	-
Electricity gen. - TWh	174.6	207.9	206.4	122.3	108.8	101.6	76.7	31.5	1.0	-3.9

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

UNITED KINGDOM

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	120.67	106.72	59.84	51.38	60.27	48.47	37.55	-1.02	-4.09
Total electricity and heat	83.21	84.01	46.85	41.98	50.24	38.51	29.41	0.08	-4.11
<i>Main activity producers</i>	80.64	82.56	44.76	40.23	49.84	38.22	29.18	0.20	-4.07
<i>Autoproducers</i>	2.57	1.46	2.09	1.75	0.40	0.29	0.23	-4.59	-7.09
Patent fuel/BKB plants	1.19	0.78	0.54	0.23	0.26	0.26	0.22	-3.51	-4.87
Coke ovens/Liquefaction ³	16.76	10.09	8.23	5.40	5.29	4.98	3.70	-4.15	-3.93
Blast furnace inputs	-	0.62 e	0.43 e	0.85 e	1.29 e	1.37 e	1.31 e	-	3.04
Gas manufacture	0.01	-	-	-	-	-	-	-	-
Industry	6.19	5.40	1.90	2.08	2.25	2.54	2.15	-1.13	-3.61
<i>Iron and steel</i>	0.11	0.16 e	0.03 e	0.19 e	0.17 e	0.19 e	0.18 e	3.38	0.51
<i>Chemical</i>	0.03	1.04	0.03	0.08	0.09	0.10	0.07	35.13	-10.03
<i>Non-metallic minerals</i>	3.09	1.50	1.24	1.06	1.17	1.21	1.01	-5.84	-1.57
<i>Paper, pulp and print</i>	0.32	0.63	0.12	0.12	0.12	0.16	0.12	5.93	-6.32
<i>Other industry</i>	2.65	2.07 e	0.48 e	0.63 e	0.70 e	0.87 e	0.76 e	-2.04	-3.93
Other sectors ⁴	12.19	5.45	1.97	0.76	0.67	0.58	0.57	-6.50	-8.63
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	105.68	96.21	51.02	45.01	53.54	42.31	32.55	-0.78	-4.24
Total electricity and heat	83.21	84.01	46.85	41.98	50.24	38.51	29.41	0.08	-4.11
<i>Main activity producers</i>	80.64	82.56	44.76	40.23	49.84	38.22	29.18	0.20	-4.07
<i>Autoproducers</i>	2.57	1.46	2.09	1.75	0.40	0.29	0.23	-4.59	-7.09
Patent fuel/BKB plants	1.19	0.78	0.54	0.23	0.26	0.26	0.22	-3.51	-4.87
Coke ovens/Liquefaction ³	1.85	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	0.01	-	-	-	-	-	-	-	-
Industry	6.19	5.25	1.88	1.96	2.13	2.40	2.01	-1.36	-3.76
<i>Iron and steel</i>	0.11	0.01	0.00	0.06	0.05	0.05	0.04	-16.73	5.33
<i>Chemical</i>	0.03	1.04	0.03	0.08	0.09	0.10	0.07	35.13	-10.03
<i>Non-metallic minerals</i>	3.09	1.50	1.24	1.06	1.17	1.21	1.01	-5.84	-1.57
<i>Paper, pulp and print</i>	0.32	0.63	0.12	0.12	0.12	0.16	0.12	5.93	-6.32
<i>Other industry</i>	2.65	2.07	0.48	0.63	0.70	0.87	0.76	-2.04	-3.93
Other sectors ⁴	12.19	5.45	1.97	0.76	0.67	0.58	0.57	-6.50	-8.63
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	14.99	10.52	8.82	6.37	6.73	6.17	5.00	-2.91	-2.93
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	14.91	10.09	8.23	5.40	5.29	4.98	3.70	-3.21	-3.93
Blast furnace inputs	-	0.62 e	0.43 e	0.85 e	1.29 e	1.37 e	1.31 e	-	3.04
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	0.15	0.03	0.12	0.12	0.14	0.14	-	-0.28
<i>Iron and steel</i>	-	0.15 e	0.03 e	0.12 e	0.12 e	0.14 e	0.14 e	-	-0.28
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

UNITED KINGDOM

3. Solid fossil-fuel production by type^{1,2}

								Average annual percent change	
	1978 ³	1990	2000	2005	2010	2015	2016p	78-90	90-15
Mtce:									
Coking coal	14.68	1.60	0.26	0.29	0.28	0.08	0.06	-16.87	-11.49
Steam coal	84.26	74.99	26.40	16.95	15.20	7.23	3.50	-0.97	-8.93
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:								-17.06	-11.67
Coking coal	15.11	1.60	0.26	0.27	0.27	0.07	0.05	-1.44	-9.04
Steam coal	108.47	91.16	30.94	20.22	18.08	8.53	4.13	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	2.18	14.78	21.78	39.66	24.18	44.44	38.39	22.80	8.89
Bituminous coal ⁴	0.75	5.54	12.94	32.27	17.15	37.15	30.89	16.75	4.75
Coking coal	1.34	8.84	8.34	6.45	6.91	6.44	6.55	4.90	2.87
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.08	0.40	0.51	0.93	0.12	0.85	0.95	1.15	1.27
Total exports	2.75	2.59	1.13	0.71	1.25	0.72	0.55	0.51	0.47
Bituminous coal ⁴	1.69	2.12	0.66	0.57	0.73	0.60	0.43	0.39	0.45
Coking coal	0.09	0.05	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Sub-bituminous coal	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.97	0.42	0.47	0.14	0.52	0.12	0.11	0.11	0.02

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

UNITED KINGDOM

5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	2352	14783	23446	43968	26541	49402	42225	24199	8294
Coking coal	1383	8614	8462	6551	6635	6246	6344	4751	2781
Australia	380	2966	4880	3468	3437	2058	1249	910	778
Canada	-	961	1633	1092	458	56	434	334	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	207	2	-	-	-	-	-	-	-
Poland	375	794	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	421	3791	1936	1284	2276	2668	3019	2075	1043
Other OECD	-	7	2	-	1	8	32	33	42
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	70	106	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	93	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	11	707	376	1060	1396	1291	730
<i>Other FSU</i>	x	x	-	-	17	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	290	214	108	188
Steam coal	969	6169	14984	37417	19906	43156	35881	19448	5513
Australia	645	67	1222	828	12	89	-	-	-
Canada	-	24	-	-	-	505	-	-	-
Czech Republic	-	2	-	-	3	7	-	-	-
Germany	53	248	-	17	31	41	38	34	49
Poland	41	250	1107	630	563	529	212	208	85
United Kingdom	-	-	-	-	-	-	-	-	-
United States	1	1641	837	266	2347	9528	8164	3241	362
Other OECD	73	1868	204	396	443	943	633	338	262
China, People's Rep.	-	69	143	130	17	34	107	23	11
Colombia	-	956	5649	3369	6247	11388	9700	7070	2667
Indonesia	-	-	9	1682	271	-	-	-	-
South Africa	26	356	4756	12911	763	484	151	317	98
Former Soviet Union ⁴	106	499	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	480	16964	9209	19189	16474	7896	1563
<i>Other FSU</i>	x	x	-	-	-	334	387	173	403
Venezuela	-	169	208	-	-	55	-	138	-
Viet Nam	-	-	123	-	-	-	-	-	-
Non-specified/other	24	20	246	224	-	30	15	10	13
Lignite	-	-	-	-	-	-	-	-	-

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

UNITED KINGDOM

7. Steam coal exports by destination¹

(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	2176	2258	656	533	714	585	424	384	443
Total OECD	2174	1960	651	525	682	562	381	372	393
Australia	-	1	-	-	-	-	-	-	-
Austria	-	-	-	-	-	-	-	-	-
Belgium	113	67	-	83	166	67	32	49	40
Canada	-	-	-	1	1	1	1	2	2
Chile	-	-	-	-	-	-	-	2	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	125	366	12	4	4	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	6	204	-	-	5	-	7	-	27
France	950	271	77	32	5	13	9	21	14
Germany	446	214	13	1	9	-	1	-	7
Greece	-	-	-	-	-	20	17	-	-
Hungary	-	-	-	-	-	-	-	-	-
Iceland	-	18	-	2	-	-	-	-	-
Ireland	202	246	265	310	372	331	245	222	234
Israel	-	-	-	-	-	-	-	-	-
Italy	53	-	1	-	-	-	-	27	-
Japan	-	-	-	-	-	-	-	-	-
Korea	-	-	-	-	-	-	-	-	-
Latvia	x	-	-	-	-	-	-	-	-
Luxembourg	-	-	71	-	-	-	-	-	-
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	168	25	15	3	5	13	2	5	8
New Zealand	-	-	-	-	-	-	-	-	-
Norway	79	145	158	84	80	63	39	23	46
Poland	-	-	-	-	-	6	6	-	-
Portugal	3	178	-	-	-	-	-	-	-
Slovak Republic	-	-	-	-	-	-	-	-	-
Slovenia	x	-	-	-	-	-	-	-	-
Spain	3	138	31	-	10	2	22	21	15
Sweden	26	87	8	5	25	3	-	-	-
Switzerland	-	-	-	-	-	-	-	-	-
Turkey	-	-	-	-	-	43	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Total non-OECD	2	289	4	6	11	19	6	8	48
Brazil	-	5	-	-	-	-	-	-	-
China ³	-	-	2	-	-	-	-	-	-
Chinese Taipei	-	-	-	-	-	-	-	-	-
Egypt	-	1	1	1	1	1	-	-	-
India	-	1	-	1	2	2	3	2	3
Romania	-	-	-	-	-	-	-	-	-
Oth. Africa & Mid. East	2	282	-	-	1	1	-	4	5
Oth. non-OECD Americas	-	-	-	-	-	-	-	-	-
Other Asia & Oceania	-	-	1	4	2	6	3	2	3
Other non-OECD Europe and Eurasia	-	-	-	-	5	9	-	-	37
Non-specified/Other	-	9	1	2	21	4	37	4	2

1. Please refer to the explanatory notes and definitions in Part I. Steam coal includes all sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

UNITED STATES¹

Figure 1: Coal supply indicators (1971 = 100)

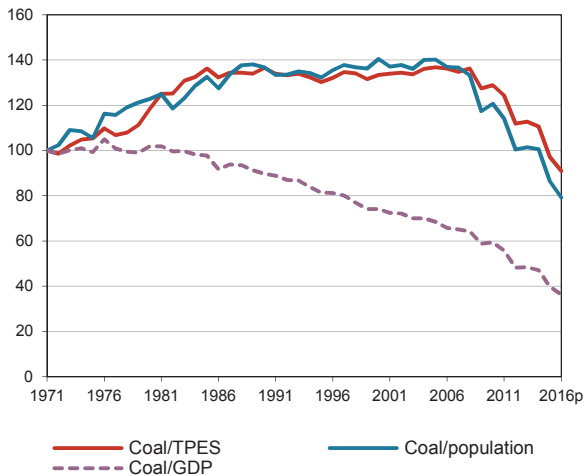


Figure 2: TPES by fuel (Mtce)

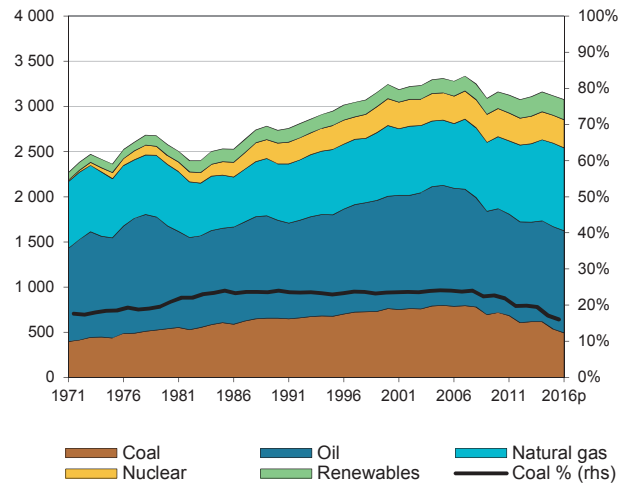


Figure 3: Primary coal supply (Mtce)

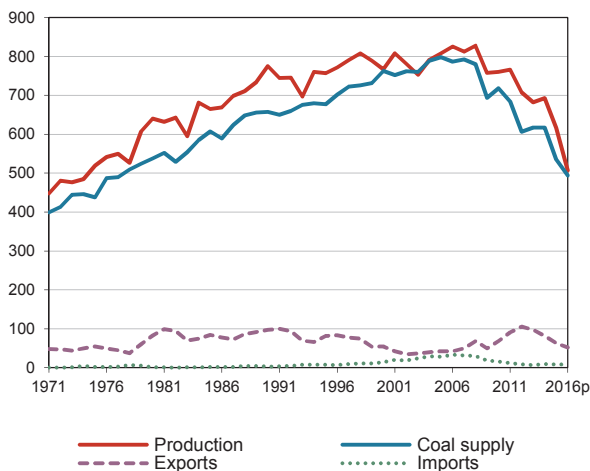


Figure 4: Coal consumption (Mtce)

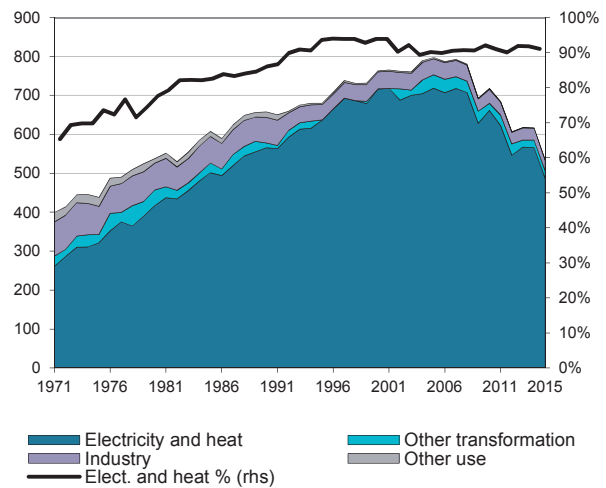
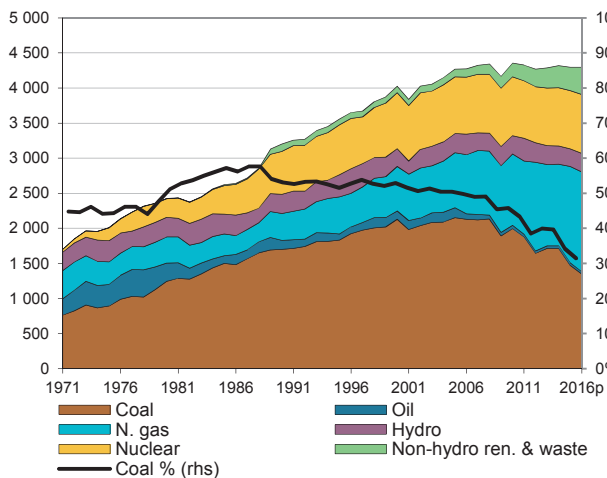
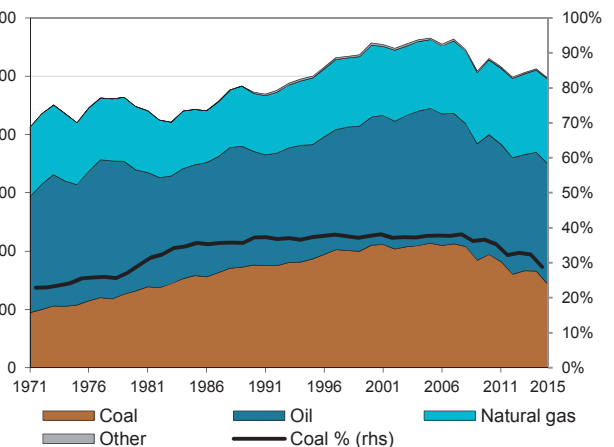


Figure 5: Electricity generation by fuel (TWh)

Figure 6: CO₂ emissions by fuel (Mt CO₂)

1. Please refer to notes and definitions in Part I. Peat and oil shale and oil sands are included in coal for all figures.

Sources: IEA/OECD World Energy Balances, IEA/OECD CO₂ Emissions from Fuel Combustion, OECD Main Economic Indicators

UNITED STATES

1. Coal balance¹

(Mtce)

	1973	1980	1990	2000	2010	2014	2015	2016p ²	Average annual percent change	
									73-90	90-15
Production	476.2	639.9	774.7	766.9	759.8	692.9	616.1	507.1	2.9	-0.9
Imports	1.0	1.5	3.0	14.3	16.3	9.1	8.6	7.5	6.6	4.3
Exports	-44.3	-83.0	-97.1	-54.7	-68.9	-81.7	-62.8	-51.8	4.7	-1.7
Stock changes	11.4	-21.0	-23.1	35.8	10.8	-3.6	-27.5	30.7		
Primary supply	444.4	537.5	657.5	762.3	718.0	616.7	534.5	493.5	2.3	-0.8
Statistical differences	18.1	-11.1	9.0	21.6	-4.0	-4.1	-3.8	..		
Total transformation	-348.1 e	-442.6	-585.2 e	-735.5 e	-673.4 e	-578.7 e	-500.9 e	..	3.1	-0.6
Electricity and heat gen.	-309.9	-417.2	-565.7 e	-716.5 e	-661.1	-565.7	-486.8	..	3.6	-0.6
<i>Main activity producers</i> ³	-309.9	-417.2	-559.6	-699.7 e	-654.8	-561.2	-483.0	..	3.5	-0.6
<i>Autoproducers</i>	-	-	-6.2 e	-16.8 e	-6.3	-4.5	-3.9	..	-	-1.9
Gas works	0.5	c	-2.6 e	-2.7 e	-2.7	-2.8	-2.8	..	-	0.3
Coal transformation ⁴	-38.7 e	-25.3 e	-16.8 e	-16.2 e	-9.6 e	-10.2 e	-11.2 e	..	-4.8	-1.6
<i>BKB plants</i>	-	-	-	-	-	-	-	..	-	-
<i>Blast furnaces</i>	-25.8 e	-16.2 e	-11.4 e	-10.9 e	-6.0 e	-6.6 e	-5.9 e	..	-4.7	-2.6
<i>Coke ovens</i>	-12.9	-9.1	-5.4	-5.3 e	-3.6	-3.7	-5.3	..	-5.0	-0.1
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	..	-	-
Other transformation ⁵	-	-	-	-	-	-	-	..	-	-
Energy ind. own use	-8.6	-3.6	-1.8	-2.0 e	-2.2	-2.2	-1.9	..	-8.9	0.3
Losses	-	-	-	-	-	-	-	..		
Final consumption ⁶	105.8	80.2	79.5	46.5	38.4	31.7	27.9	..	-1.7	-4.1
Industry ⁷	86.1	68.9	65.7	43.4	36.2	30.5	26.9	..	-1.6	-3.5
<i>Iron and steel</i>	48.4 e	29.6 e	18.1 e	11.2 e	7.0 e	5.3 e	4.2 e	..	-5.6	-5.7
<i>Chemical</i>	11.9	11.2	12.5 e	9.6 e	6.1	5.2	4.6	..	0.3	-3.9
<i>Non-metallic minerals</i>	5.2	10.0	11.1	11.4	7.3	8.5	8.1	..	4.5	-1.2
<i>Paper, pulp and print</i>	6.8	7.1	10.4	3.7	5.8	3.8	3.3	..	2.5	-4.5
<i>Other industry</i> ⁸	13.7	11.1	13.7 e	7.5 e	10.0	7.8	6.8	..	0.0	-2.8
Transport ⁹	-	-	-	-	-	-	-	..	-	-
Other	19.8	11.3	13.8	3.2	2.2	1.2	1.0	..	-2.1	-10.1
<i>Comm. and pub. services</i>	4.9	2.6	3.4	1.3 e	2.2	1.2	1.0	..	-2.0	-5.0
<i>Residential</i>	4.5	2.2	2.1	1.9 e	-	-	-	..	-4.4	-
<i>Other sectors</i> ¹⁰	10.3	6.5	8.2	-	-	-	-	..	-1.4	-
Non-energy use	-	-	-	-	-	-	-	..	-	-
Electricity gen. - TWh	907.4	1242.9	1699.6	2129.5	1994.2	1712.6	1471.0	1350.0	3.8	-0.6

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, and lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products, and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Provisional data cover primary "coal" products only. Net trade of secondary products will influence TPES for all other years.

3. Main activity electricity and heat generation includes district heating.

4. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

5. Other transformation includes Liquefaction and Non-specified transformations.

6. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

7. Please refer to the explanatory notes and definitions in Part I for a more detailed explanation.

8. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

9. Transport includes Rail and Inland waterways.

10. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

UNITED STATES

2a. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Total coal²	584.39	815.95	966.39	949.70	839.95	839.05	718.79	2.82	-0.51
Total electricity and heat	436.57	709.04 e	905.54 e	892.21	782.40	775.91	672.72	4.12	-0.21
<i>Main activity producers</i>	436.57	701.67	888.82 e	884.55	777.69	771.53	668.95	4.03	-0.19
<i>Autoproducers</i>	-	7.37 e	16.72 e	7.66	4.70	4.38	3.78	-	-2.64
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	64.77	35.27	25.96 e	19.13	19.48	19.32	17.88	-4.94	-2.68
Blast furnace inputs	-	0.17 e	2.39 e	1.28 e	1.14 e	0.94 e	0.71 e	-	5.77
Gas manufacture	-	5.64 e	5.67	5.57	5.10	5.39	5.55	-	-0.06
Industry	46.82	53.42	37.30	32.72	28.29	28.24	25.04	1.11	-2.99
<i>Iron and steel</i>	3.66	1.71 e	1.46 e	0.68 e	0.33 e	0.27 e	0.16 e	-6.17	-8.96
<i>Chemical</i>	10.08	14.49 e	10.75 e	7.09	6.50	6.24	5.37	3.07	-3.89
<i>Non-metallic minerals</i>	11.51	11.97	12.23	8.00	8.79	9.33	8.78	0.33	-1.23
<i>Paper, pulp and print</i>	7.54	11.28	4.07	6.50	4.39	4.27	3.64	3.41	-4.42
<i>Other industry</i>	14.02	13.98 e	8.79 e	10.45 e	8.28 e	8.14 e	7.09 e	-0.02	-2.68
Other sectors ⁴	19.04	15.45	3.73	2.51	1.31	1.50	1.22	-1.73	-9.67
Non-energy use	-	-	-	-	-	-	-	-	-
Steam coal	484.73	701.66	866.16	862.25	750.78	742.49	633.17	3.13	-0.41
Total electricity and heat	408.08	637.00	835.53 e	830.29	718.54	711.96	612.36	3.78	-0.16
<i>Main activity producers</i>	408.08	630.72	820.06 e	825.21	713.85	707.59	608.59	3.70	-0.14
<i>Autoproducers</i>	-	6.27	15.48 e	5.08	4.70	4.38	3.77	-	-2.02
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	0.17 e	2.39 e	1.28 e	1.14 e	0.94 e	0.71 e	-	5.77
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	44.63	52.18	35.88	32.42	27.99	27.78	24.60	1.31	-2.96
<i>Iron and steel</i>	3.66	1.71 e	1.46 e	0.68 e	0.33 e	0.27 e	0.16 e	-6.17	-8.96
<i>Chemical</i>	10.08	14.26 e	10.51 e	6.84	6.26	5.82	4.97	2.93	-4.13
<i>Non-metallic minerals</i>	11.51	11.97	12.23	8.00	8.78	9.33	8.78	0.32	-1.23
<i>Paper, pulp and print</i>	7.54	11.28	4.07	6.50	4.39	4.27	3.64	3.41	-4.42
<i>Other industry</i>	11.83	12.98 e	7.62 e	10.41 e	8.24 e	8.10 e	7.05 e	0.77	-2.41
Other sectors ⁴	18.95	15.34	3.68	2.51	1.31	1.50	1.22	-1.75	-9.64
Non-energy use	-	-	-	-	-	-	-	-	-
Coking coal	68.89	35.27	25.96	19.15	19.44	20.07	17.71	-5.43	-2.72
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ³	64.77	35.27	25.96 e	19.13	19.48	19.32	17.88	-4.94	-2.68
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ⁴	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Total coal comprises anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite.

3. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

4. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

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2b. Use of coal for selected end-uses¹

(million tonnes)

	1978	1990	2000	2010	2013	2014	2015	Average annual percent change	
								78-90	90-15
Lignite	30.77	79.02	74.27	68.30	69.73	76.49	67.92	8.18	-0.60
Total electricity and heat	28.49	72.04 e	70.01 e	61.92	63.86	63.95	60.36	8.04	-0.70
<i>Main activity producers</i>	28.49	70.94	68.76	59.34	63.85	63.94	60.36	7.90	-0.64
<i>Autoproducers</i>	-	1.10 e	1.25 e	2.57	0.01	0.01	0.01	-	-19.39
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	5.64 e	5.67	5.57	5.10	5.39	5.55	-	-0.06
Industry	2.19	1.24	1.42	0.30	0.29	0.46	0.44	-4.61	-4.08
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	0.23 e	0.24 e	0.26	0.24	0.43	0.40	-	2.14
<i>Non-metallic minerals</i>	-	0.00	0.00	-	0.01	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	2.19	1.01 e	1.18 e	0.04	0.05	0.03	0.04	-6.27	-12.01
Other sectors ³	0.09	0.11	0.05	-	-	-	-	1.52	-
Non-energy use	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Total electricity and heat	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i>	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-
Patent fuel/BKB plants	-	-	-	-	-	-	-	-	-
Coke ovens/Liquefaction ²	-	-	-	-	-	-	-	-	-
Blast furnace inputs	-	-	-	-	-	-	-	-	-
Gas manufacture	-	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-
<i>Other industry</i>	-	-	-	-	-	-	-	-	-
Other sectors ³	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-

1. Coal totals may not match the sum of the individual rows due to statistical differences. Please refer to notes and definitions in Part I.

2. Liquefaction primarily refers to direct distillation processes. Liquefaction from syngas may be reported here or as gas manufacture.

3. Other sectors are Residential, Commercial and public services, Agriculture/Forestry, Fishing, and Non-specified other.

Source: IEA/OECD World Energy Statistics

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3. Solid fossil-fuel production by type^{1,2}

	1978 ³	1990	2000	2005	2010	2015	2016p	Average annual percent change	
								78-90	90-15
Mtce:									
Coking coal	93.39	96.20	56.00	45.21	65.91	56.88	50.08	0.25	-2.08
Steam coal	417.76	641.20	674.42	726.85	660.22	528.43	425.47	3.63	-0.77
Lignite	15.55	37.33	36.51	35.48	33.64	30.81	31.55	7.57	-0.77
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-
Mt:								0.10	-1.91
Coking coal	92.20	93.26	54.29	46.44	68.65	57.52	50.65	3.83	-0.38
Steam coal	484.60	760.39	839.69	916.00	856.49	691.24	554.69	8.16	-0.83
Lignite	31.16	79.91	77.62	76.15	70.97	64.93	66.51	-	-
Peat	-	-	-	-	-	-	-	-	-
Oil shale and oil sands	-	-	-	-	-	-	-	-	-

4. Coal and peat trade by type of coal¹
(Mtce)

	1978 ³	1990	2000	2005	2010	2013	2014	2015	2016p
Total imports	7.23	3.03	14.31	28.00	16.34	7.22	9.09	8.64	7.52
Bituminous coal ⁴	2.37	2.34	9.27	21.96	12.93	6.07	7.12	5.53	5.07
Coking coal	-	-	1.60	1.54	1.33	0.84	1.39	1.50	0.84
Sub-bituminous coal	-	-	0.03	1.28	0.94	0.14	0.46	1.44	1.36
Lignite	-	-	0.04	0.06	0.06	0.05	0.05	0.05	0.04
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	4.87	0.68	3.38	3.15	1.08	0.12	0.07	0.13	0.20
Total exports	37.11	97.12	54.74	42.09	68.91	97.26	81.71	62.81	51.82
Bituminous coal ⁴	8.69	37.19	22.24	11.57	15.23	33.33	25.93	19.16	14.04
Coking coal	27.79	59.39	30.72	24.46	47.88	56.09	51.30	39.29	34.95
Sub-bituminous coal	-	-	0.73	4.39	4.40	7.07	3.62	3.58	1.93
Lignite	0.04	0.03	0.03	0.10	0.10	0.02	0.01	0.01	0.01
Peat	-	-	-	-	-	-	-	-	-
Coal products ⁵	0.59	0.51	1.02	1.56	1.31	0.75	0.85	0.77	0.89

1. Please refer to the explanatory notes and definitions in Part I.

2. Solid fossil-fuels exclude oil products such as petroleum coke and paraffin wax.

3. Earliest year for which split by coal type is available.

4. Bituminous coal includes anthracite.

5. Coal products includes products derived from coal, for example: coke, coal tar, briquettes, patent fuels and also peat products.

Source: IEA/OECD World Energy Balances, IEA/OECD World Energy Statistics

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5. Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	2679	2449	11351	27634	17556	8078	10297	10267	8934
Coking coal	-	-	1547	1603	1385	876	1449	1557	870
Australia	-	-	-	144	-	-	-	-	-
Canada	-	-	1511	1458	1385	860	755	868	706
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	16	694	689	164
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	36	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	1	-	-	-	-	-
Steam coal	2679	2449	9724	25903	16036	7090	8748	8611	7977
Australia	933	22	152	66	345	-	-	55	111
Canada	49	883	155	244	86	51	84	112	188
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	645	-	-	70	-	-	-	-	-
United Kingdom	-	5	-	1	3	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	6	86	1	1	-	-	-
China, People's Rep.	-	-	18	18	47	37	29	14	5
Colombia	-	1296	6928	19247	13230	5950	6832	7418	6993
Indonesia	-	-	651	2239	1728	805	1385	808	557
South Africa	996	-	-	70	-	-	-	46	26
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	357	-	33	39	-	54
<i>Other FSU</i>	x	x	-	32	38	164	94	53	-
Venezuela	-	238	1813	3387	528	38	262	67	-
Viet Nam	-	-	-	85	-	-	-	-	5
Non-specified/other	56	5	1	1	30	11	23	38	38
Lignite	-	-	80	128	135	112	100	99	87

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. Total coal consists of steam coal (anthracite, other bituminous coal and sub-bituminous coal), coking coal and lignite.

4. For years prior to 1990.

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6. Coking coal exports by destination¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	27433	57568	29780	26001	50906	59585	54495	41736	37131
Total OECD	23813	47721	22752	19577	31740	36511	37049	27086	23479
Australia	-	-	-	-	-	-	-	-	-
Austria	-	-	-	239	412	558	426	378	381
Belgium	956	5532	2343	1470	1689	1000	810	1066	1031
Canada	5410	3988	3501	4034	3091	3363	3945	3886	3425
Chile	-	68	-	-	-	329	353	60	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	50	-	-	-	-	-	-	-
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	86	288	260	262	374	670	352	341
France	1468	4501	2197	1116	1792	2402	1887	1126	1039
Germany	560	636	419	473	1478	1876	2304	1600	1504
Greece	-	-	-	-	-	-	-	-	-
Hungary	-	-	65	-	40	-	-	-	-
Iceland	-	28	48	57	59	71	56	41	18
Ireland	-	-	-	-	-	-	-	-	-
Israel	-	50	56	-	-	-	-	-	-
Italy	2905	6377	3297	2203	2388	2162	2222	1840	1418
Japan	8991	10019	852	1652	2696	3624	3032	3201	3568
Korea	505	2908	1096	727	2715	3625	2871	2651	2858
Latvia	x	-	-	-	96	71	-	-	-
Luxembourg	-	-	-	-	77	-	-	-	-
Mexico	-	3	355	588	700	2822	1642	406	456
Netherlands	929	3606	1735	1548	4929	3948	5212	4053	3743
New Zealand	-	-	-	-	-	-	-	-	-
Norway	68	99	42	18	75	90	75	49	58
Poland	-	-	-	-	2149	496	600	513	219
Portugal	265	234	198	-	-	218	75	-	85
Slovak Republic	-	-	-	-	201	289	454	210	-
Slovenia	x	-	-	163	223	114	187	198	-
Spain	688	3156	1993	1685	1393	1361	1015	1135	1040
Sweden	299	764	642	464	401	438	651	585	262
Switzerland	-	-	-	-	37	-	-	-	-
Turkey	409	1906	1584	1642	2076	3937	3729	1780	1177
United Kingdom	360	3710	2041	1238	2761	3343	4833	1956	856
United States	-	-	-	-	-	-	-	-	-
Total non-OECD	3620	9847	6642	6424	19097	22649	16935	14319	13429
Brazil	1342	5219	4093	3113	7125	7439	6759	5577	6187
China ³	-	-	-	-	3808	6638	1367	207	653
Chinese Taipei	205	357	116	-	227	-	-	-	-
Egypt	218	586	682	280	1042	305	375	148	-
India	-	-	22	1078	2299	2760	3149	3587	2583
Romania	673	1559	443	547	812	846	370	229	179
Oth. Africa & Mid. East	1	485	269	377	161	643	349	129	647
Oth. non-OECD Americas	914	580	184	207	321	455	413	412	94
Other Asia & Oceania	24	21	-	-	-	-	-	-	-
Other non-OECD Europe and Eurasia	243	1040	833	822	3302	3563	4153	4030	3086
Non-specified/Other	-	-	386	-	69	93	-	-	32

1. Please refer to the explanatory notes and definitions in Part I.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

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7. Steam coal exports by destination¹

(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	9837	38344	23226	19094	23023	47127	33712	25331	17526
Total OECD	9370	33473	22026	16990	19962	40702	27636	22390	13785
Australia	-	1	-	-	105	135	1	-	-
Austria	-	-	-	-	-	-	-	1	2
Belgium	-	2178	278	411	367	821	109	19	107
Canada	8782	10083	13524	13625	7245	3084	2152	1518	1122
Chile	-	274	48	76	1053	2049	763	720	179
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	2842	70	66	73	-	-	41	55
Estonia	x	-	-	-	-	-	-	-	-
Finland	-	-	-	-	166	-	-	-	54
France	38	1740	564	28	1080	1326	265	82	176
Germany	36	320	467	133	935	3092	2063	2045	1674
Greece	-	-	-	-	47	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Iceland	-	15	-	-	-	-	-	-	-
Ireland	-	1322	456	-	-	-	-	-	-
Israel	-	530	-	-	-	-	-	-	-
Italy	22	4451	65	23	612	3820	3023	1272	315
Japan	160	2074	3181	236	175	1239	1411	1023	565
Korea	300	719	508	580	2523	4022	4297	2912	1200
Latvia	x	-	-	-	33	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Mexico	-	188	373	341	983	2284	2626	3005	2351
Netherlands	27	3982	643	829	1700	7582	6108	7657	5474
New Zealand	-	1	-	-	-	-	-	-	-
Norway	-	62	74	-	-	14	7	15	7
Poland	-	-	-	-	65	96	53	-	-
Portugal	-	1386	343	143	531	138	126	126	-
Slovak Republic	-	-	-	-	-	-	-	-	-
Slovenia	x	-	-	-	182	146	-	-	-
Spain	-	282	441	-	373	69	252	16	223
Sweden	-	21	-	71	275	-	-	-	-
Switzerland	-	-	-	-	-	1287	-	-	-
Turkey	5	15	55	67	220	584	316	83	172
United Kingdom	-	987	936	361	1219	8914	4064	1855	109
United States	-	-	-	-	-	-	-	-	-
Total non-OECD	95	4869	923	1946	3061	5450	4059	2686	3203
Brazil	11	79	22	693	63	370	527	173	107
China ³	-	108	9	-	1445	1351	243	1	249
Chinese Taipei	-	3820	-	1	-	342	91	-	89
Egypt	-	-	-	-	146	-	-	-	1
India	-	-	-	217	171	796	1011	2208	2431
Romania	-	-	-	844	-	-	-	17	-
Oth. Africa & Mid. East	1	682	825	63	1044	2302	1918	110	294
Oth. non-OECD Americas	82	128	1	13	115	215	266	175	1
Other Asia & Oceania	1	5	-	-	77	4	2	1	1
Other non-OECD Europe and Eurasia	-	47	66	115	-	70	1	1	30
Non-specified/Other	372	2	277	158	-	109	1477	-	196

1. Please refer to the explanatory notes and definitions in Part I. Steam coal includes all sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. China comprises the People's Republic of China and Hong Kong, China.

COUNTRY NOTES

GENERAL NOTES

In some cases, data submitted by Member countries to the Secretariat do not conform to the standard reporting methodology or have other particular characteristics. Information set out below will assist readers to interpret data for particular countries and aid in the comparison of data among countries.

The notes given below refer to the years 1960 to the provisional 2016 data cover the summary tables at the back of the book, as well as the information on CD-ROM and the on-line data service. In general, more detailed notes are available for data since 1990.

Data for anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite are available separately from 1978. Prior to 1978, only data for hard coal (anthracite + coking coal + other bituminous coal) and brown coal (lignite + sub-bituminous coal) are available. In prior editions to *Coal Information 2014*, sub-bituminous coal was included under hard coal for the following countries, namely; Australia, Belgium, Chile, Finland, France, Iceland, Japan, Korea, Mexico, New Zealand, Portugal and the United States. While this is no longer the case since 1978, data earlier than this were aggregated into either hard coal or brown coal, and unless specified, there has been no attempt to reclassify portions of data from hard coal to brown coal in this period.

In 1996, the IEA Secretariat extensively revised data on coal and coke use in blast furnaces, and in the iron and steel industry (for those countries with blast furnaces), based on data provided to the OECD Steel Committee and other sources. Where necessary, the quantities of fuels transformed into blast furnace gas have been estimated by the IEA Secretariat based on its blast furnace model.

Australia

Source

Department of Environment and Energy, Canberra.

General notes

- All data refer to the fiscal year (e.g. July 2015 to June 2016 for 2016).
- In the 2013 edition and following, data for Australia were revised back to 2003 due to the adoption of the National Greenhouse and Energy Reporting (NGER) as the main energy consumption data source for the Australian Energy Statistics. As a result, there are breaks in the time series for many data between 2002 and 2003. The revisions have also introduced some methodological issues, including identifying inputs and outputs to certain transformation processes such as gas works plants, electricity plants and CHP plants. Energy industry own use and inputs to the transformation processes are sometimes not reported separately in the correct categories. More detail is given in the notes below.
- In the 2017 edition, the Australian Administration revised data on **coal tar** back to 2010 resulting in breaks in time series between 2009 and 2010.
- In the 2016 edition, extensive revisions were made to 2010 to 2013 data for many primary and manufactured products causing breaks in production, trade and consumption between 2009 and 2010. Series which begin in 2010 may be reported in other flows until 2009. 2014 data were reported on the same basis as 2010 to 2013.
- In the 2015 edition, increases of production and consumption of **other bituminous coal** for 2013 are due to both new mine capacity and improved

classification data. In the 2016 edition, these revisions were extended back to 2010. Apparent switching between **sub-bituminous coal** and **other bituminous coal** between 2009 and 2010 suggests that some **other bituminous coal** was reported as **sub-bituminous coal** prior to this, across several flows.

- In the 2013 edition, production data for all **manufactured gases** were revised downwards as part of the new national methodology, leading to significant statistical differences.
- Reclassification of some **coal** types in the 2013 edition were calculated on an energy basis and resulted in a net increase of quantities of primary coal from 2003 to 2011.
- Breaks in the time series for **gas works gas** between 2008 and 2009 are due to a change of survey, while reduced production and consumption between 2006 and 2008 are due to the removal of some **natural gas** inputs.
- Data on **blast furnace gas** for electricity production by autoproducers begins in 1986.
- **Hard coal** data prior to 1978 may include **sub-bituminous coal**.

Supply

- Only **anthracite** exports are reported separately; the remainder that is consumed domestically is included with **other bituminous coal**.
- Export trade in **coke oven coke** between 2005 and 2011 exists, but data are unavailable for reasons of confidentiality.

Transformation

- In 2015 a new plant within the mining sector started its operations increasing the consumption of **coke oven coke**.
- The one company producing **BKB** closed its operation during 2015. As such, production and consumption declined significantly.
- For 2003 to 2012, **Coke oven gas** reported as energy industry own-use in electricity or CHP plants is used for generation purposes, while **natural gas** used for own-use plant support is reported in the transformation sector.
- **Natural gas** consumed to fuel the distribution of **natural gas** in natural gas networks is reported as transformation for **gas works gas** production until 2005.

- The drop in **BKB** production in 2004 was due to a fire in the main production plant.

Consumption

- In the 2016 edition, revisions for 2010 onwards have increased the quantities of **sub-bituminous coal** and decreased the quantities of **other bituminous coal** being used in the non-metallic minerals industry as more accurate information has become available.
- Consumption in wood and wood products is included in paper, pulp and print from 2001 onwards.

Austria

Source

Bundesanstalt Statistik Österreich, Vienna.

General notes

- In the 2016 and 2017 edition, widespread data revisions were received due to enhanced reporting from 2005 onwards as a consequence of the Austrian Energy Efficiency Act (Bundes-Energieeffizienzgesetz). For some time series, these revisions were extrapolated back to 1990. As a consequence, there may be breaks between 2004 and 2005, and 1989 and 1990.
- In the 2017 edition, revisions concerning the iron and steel industry were received for data since 2005. The revisions impacted the energy sector for **coke oven gas** and **blast furnace gas**.
- In the 2016 edition, revisions concerning the iron and steel industry were received for data since 1990. The following flows were impacted by these revisions: inputs to blast furnaces, the breakdown between transformation and own-use energy support, and calorific values.
- The last **lignite** mine closed in the second quarter of 2004 and **lignite** use for power generation ceased in 2006.
- Since 1996, **gas works gas** data are reported with **natural gas** because it is distributed in the same network. The amount of **gas works gas** is negligible and it is mostly consumed by households.
- “Trockenkohle” is included with **BKB** because of its high calorific value.

- LD gas, which should normally be reported as **other recovered gases**, is reported with **blast furnace gas**.

Belgium

Source

Observatoire de l'Energie, Brussels.

General notes

- In the 2016 Edition, improved data collection has led to some breaks in time series. These revisions include **hard coal** classifications, products and processes in integrated iron and steel manufacture and may be extended further back in future editions.
- Data for **anthracite** prior to 2014 may include a small portion of **other bituminous coal**.
- **Hard coal** data prior to 1978 may include **sub-bituminous coal**.
- **Other bituminous coal** and **sub-bituminous coal** data reported in *from other sources* refer to coal recuperated from coal dumps.

Supply

- Supply-side data are obtained through surveying questionnaires instead of customs data.
- Conventional production of **other bituminous coal** ceased on 31 August 1992.

Transformation

- In 2015, the decrease of **coke oven gas** inputs to autoproducter CHP plants is due to a power plant closure in 2015.
- In 2014 and 2015, **coking coal** inputs to coke ovens decreased due to a coke oven closure in June 2014.
- In 2014, the decrease of **other bituminous coal** inputs to main activity producer electricity plants is due to a power plant closure in 2014.

Consumption

- The decrease of **other bituminous coal** and **coke oven coke** in the iron and steel industry in 2002 is due to the closure of several plants.
- The use of **coke oven gas** in chemical and petrochemical activities ceased in 1996.

Canada

Source

Natural Resources Canada, Ottawa.

General notes

- Due to confidentiality constraints, breakdown of **coal** by type has been estimated by Natural Resources Canada for 2016p.
- In the 2016 and 2017 edition, extensive revisions for the period 2005 to 2015 were received as more data became available due to improvements in data collection.
- In the 2014 and 2015 editions, some revisions to the 2004 to 2006 data were received in addition to some time series and products for 2007 to 2011. The Canadian administration is planning to further refine its reporting.
- From the 2014 edition, the Canadian administration revised time series back to 2005, using additional data from the Annual Industrial Consumption of Energy, the Annual Survey of Secondary Distributors, the Report on Energy Supply and Demand and the Natural Resources Canada Office of Energy Efficiency. Breaks in time series also between appear 1989 and 1990, due to changes in methodology, incorporated in 2002.
- Due to a Canadian confidentiality law, it is not possible for the Canadian administration to submit disaggregated series for all of the **coal** types. Between 2002 and 2006, the IEA Secretariat has estimated some of the missing series. The data for 2007 onwards are given directly as reported, however data may be present in non-representative products, and additionally these ad hoc reclassification methodologies contribute significantly to larger than normal statistical differences across products.
- At this point in time, **oil shale and oil sands** data are not submitted, and this energy source is deemed to enter the supply stream as shale oil (**other hydrocarbons**).

Supply

- Due to confidentiality constraints, from 2014 the breakdown of production by type of coal is estimated by the Canadian Administration, while stock changes and statistical differences are estimated since 2001.

Transformation

- Injection of pulverised coal into blast furnaces (**PCI**) occurs, but is not available for confidentiality reasons. Coals consumed in this manner are reported in the iron and steel industry along with other consumption.
- Before 1978, **lignite** inputs to main activity producer heat plants are included in final consumption. Starting in 1979, these inputs are included in main activity producer electricity plants.

Consumption

- Since 2001 consumption of anthracite in non-energy use is estimated by the Canadian Administration. Statistical differences include consumption in iron and steel.
- Due to the unavailability of data, non-energy use of **coke oven coke** and **hard coal** is included with final consumption sectors prior to 1978 and 1980, respectively.

Chile

Source

Energía Abierta, Comisión Nacional de Energía, Ministerio de Energía, Santiago.

General notes

- Data are available starting in 1971.
- **Other bituminous coal** data includes **sub-bituminous coal** for all years, if present.
- In the 2017 edition, data for 2014 and 2015 were revised to replace figures previously estimated by the Secretariat.
- From 1990, consumption in paper and pulp includes forestry and consumption in agriculture is included in non-specified industry. In general, a new methodology has been applied for data since 1990, leading to other breaks in series between 1989 and 1990.

Czech Republic

Source

Czech Statistical Office, Prague.

General notes

- Data are available starting in 1971.
- **Other bituminous coal** data includes **sub-bituminous coal** for all years, if present.
- In the 2017 edition, data for the Czech Republic were revised back to 2010 based on administrative data causing breaks in time series between 2009 and 2010. Additionally, due to the new survey in households made by Czech Statistical Office, coal consumption in the residential sector has been revised back to 2010 creating breaks in time series between 2009 and 2010.
- Increased production and consumption of **other recovered gases** in 2014 is due to improved tracking of by-products from various transformation processes. Tail gases from the production of carbon black from **coal tar** are reported here, as are off gases from the manufacture and cleaning of syngas from **lignite** for an IGCC plant.
- Coal which had been previously classified as **sub-bituminous coal** until the 2008 edition is now reported under **lignite** for all years.
- Revisions by the Czech administration have resulted in some breaks in series between 2001 and 2002.
- Data for 1990 to 1995 were estimated based on the Czech publication *Energy Economy Year Book*.
- In 1995, town gas production (included in **gas works gas**) ceased.

Supply

- **Other recovered gases** are combustible gases obtained during the production of **gas works gas** and as a result of chemical processes.
- Production *from other sources* of **other bituminous coal** is from coal slurries, and these data are not available for 2016p.
- A portion of **other bituminous coal** reported under *from other sources* for the period 2010-2015 correspond to reclassified **coking coal**.
- Statistical differences for **coking coal** for the period 2010-2015 are partly due to the reclassification of coking coal to **other bituminous coal**.

Consumption

- In the 2015 edition, improved reporting enabled revisions to be made for some primary **coal** consumption flows between 2010 and 2012.
- In the 2014 edition, residential consumption for the period 1990 through 2011 was revised for **other**

bituminous coal, lignite, coke oven coke and BKB, as more accurate consumption data became available.

- Due to economic restructuring in consumption in the late 1990s (big state enterprises subdividing and/or privatising and the utilisation of new technologies by businesses), there may be breaks in time series in these sectors.

Denmark

Source

Danish Energy Agency, Copenhagen.

General note

- In the 2004 edition, major revisions were made by the Danish administration for the 1990 to 2001 data, which may cause breaks in time series between 1989 and 1990.

Supply

- A large increase of **steam coal** imports in 2003 was related to a drought in Scandinavia. Thermal power plants were operated more intensively to replace hydro-generated electricity that was consumed in the country. Additionally, more coal-generated electricity was exported to other countries in the region. Significant fluctuations in demand are also evident for other years for similar reasons, including 2006 and 2013, but exist to a lesser extent.
- Declines in stocks of steam coal stem from extensive deployment of renewable generation technologies and policy to further reduce Denmark's utilisation of coal-fired power and implement co-firing with renewable fuels as a part of their *Energy Strategy 2050*.

Estonia

Source

Statistics Estonia, Tallinn.

General notes

- Fuels reported as **coke oven coke** and **gas works gas** are the solid and gaseous by-products of **oil shale** liquefaction. Inputs of **oil shale** to “gas works”, “coke ovens” and for coal liquefaction plants, while reported separately, combined, are the inputs for retorting in liquefaction plants.

- In the 2013 edition, data for **oil shale** production for the period 1991 to 1997 were revised to match Estonian GHG National Inventory values. Consumption data remained unchanged.
- Data for Estonia are available starting in 1990. Prior to that, they are included in Former Soviet Union in World Energy Statistics.

Finland

Source

Statistics Finland, Helsinki.

General notes

- **Coal tar** used for non-energy purposes or exported is not reported in either production or consumption.
- In the 2015 edition, revisions were received for some consumption flows of **other bituminous coal** and **coke oven coke**, while **other recovered gases** (from ferrochromium manufacture) were reported separately for the first time, with revisions back to 2000. Prior to 2000, off-gases from ferrochromium manufacture are included in **blast furnace gas**, and inputs of **coke oven coke** for ferrochromium manufacture in inputs to blast furnaces instead of non-specified transformation.
- In 2014, a new survey system and a reclassification of the data lead to breaks in the time series between 1999 and 2000 for most products and sectors. The new survey system is more detailed and has better product coverage, especially in electricity, CHP and heat production, as well as in industry.
- Prior to 2008, **peat products** are included with **peat** data.
- A large increase of **steam coal** imports in 2003 is related to a drought in Scandinavia. Thermal power plants were operated more intensively to replace hydro-generated electricity that is consumed in the country. Additionally, more coal-generated electricity was exported to other countries in the region.
- The increase of **other bituminous coal** inputs into main activity producer electricity plants from 1993 to 1994 was due to coal replacing imported electricity and hydro power.
- Production of **gas works gas** ceased in April 1994.
- **Hard coal** data prior to 1978 may include **sub-bituminous coal**.

Transformation

- In the 2017 edition, fuel inputs and heat production from **peat** main activity heat plants have been revised from 2000 as a result of new data access for smaller peat heat plant units.
- The significant increases and decreases of **other bituminous coal** inputs into main activity producer electricity plants from year to year are due to coal replacing imported electricity and hydro power.
- Likewise, **peat** production is highly dependent upon favourable weather conditions and the pricing of other fuels. The decrease in **peat** and **other bituminous coal** usage in main activity electricity plants in 2008 was due to record electricity generation from hydro plants. A similar circumstance occurred in 2012.
- The first coking plant started operation in 1987, hence imports of **coking coal** and production of **coke oven coke** and **coke oven gas** started in that year.

France

Source

Ministère de la Transition Écologique et Solidaire, Paris.

General notes

- In the 2017 edition, the French Administration undertook comprehensive revisions on sectoral coal consumption back to 2011. Starting this edition, new information became available for **anthracite**, **BKB** and **other recovered gases**. Breaks in time series for **coke oven gas** and **blast furnace gas** consumption between 2010 and 2011 are due to a change in the methodology, impacting significantly consumption in the iron and steel sector.
- From 2012, the energy consumption is more detailed due to a more precise national survey.
- Prior to 2011, **other manufactured gases** (oxygen steel furnace gas) are included in **blast furnace gas**.
- For 1989 to 1998, the IEA Secretariat has estimated industry consumption based on *Consommations d'Énergie dans l'Industrie*, SESSI.
- Prior to 1985, consumption of colliery gas is included with the use of **coke oven gas** by auto-producers.

- Hard coal data prior to 1978 may include **sub-bituminous coal**.

Consumption

- **Blast furnace gas** and **coke oven gas** used for energy purposes in blast furnaces prior to 2011 are reported under the iron and steel industry.
- Final consumption in industry is estimated by the secretariat from 1986 to 2001 for some products.

Germany

Source

Federal Ministry for Economic Affairs and Energy, Berlin.

General notes

- Data start in 1960. German data include the new federal states of Germany from 1970 onwards.
- Comprehensive official data are only collected for the aggregate of hard coal. Due to the unavailability of detailed data, the split into **anthracite**, **coking coal** and **other bituminous coal** is partly estimated by the National Administration.
- Due to the unavailability of detailed information, imports of **other bituminous coal** and **coking coal** have been estimated by the IEA Secretariat for 2016p. The large amount of **coking coal** imports allocated to *Other OECD* corresponds to Netherlands and therefore may not constitute the country of origin. For more details please refer to the country note of Netherlands.
- In the 2014 edition, significant revisions were submitted for all primary coal types, derived products and manufactured gases for the period 2003 to 2011 as previous estimations were updated with more accurate information. Revisions primarily affected consumption, including industry and other sectors; but also supply, statistical differences and weighted calorific values.
- Up to 2002, **other bituminous coal** includes **anthracite**.
- The German administration has changed the methodology for reporting heat over time:
 - Starting in 2007, more information is available on main activity heat plants and additional inputs started to be reported for this category. This causes breaks in series between 2006 and 2007.

- Between 2003 and 2006, autoproducer heat output was provided, but no inputs.
- Between 2002 and 2003 and between 2003 and 2004, breaks in series occur, due to the implementation of the Energy Statistics Act, collection concerning heat produced in heat plants and district heating plants became more efficient and more complete.
- Between 1998 and 2005, breaks in series may occur for **coke oven gas** and **blast furnace gas**.
- Between 1990 and 1992, breaks in series may occur due to earlier reclassification of several sectors by the German administration; this particularly affects **BKB**, **lignite** and **coke oven coke**.

Transformation

- Breaks in time series between 2014 and 2015 for **coke oven gas** and **blast furnace gas** are due to a reclassification of main activity producers and autoproducers.
- In 1997, **BKB** inputs to gas works plants stopped.

Consumption

- Consumption of **non-renewable municipal waste** and **other solid biofuels** as a reductant occurs in German blast furnaces, but is not currently quantified. Likewise, **coal tar** is a by-product of coke ovens, but not currently reported.

Greece

Source

Ministry for Environment and Energy, Athens.

Hungary

Source

Hungarian Energy and Public Utility Regulatory Authority, Budapest.

General notes

- Data are available starting in 1965.
- From 1992, the production of **sub-bituminous** coal has been included with **lignite** due to the low quality of the coal. For 1990 to 1999, the use of this domestic coal in main activity producer

electricity and CHP plants has also been reclassified to **lignite**.

Transformation

- Autoproducer heat and power plants using **coke oven gas** and **blast furnace gas** were reclassified in 1998 as main activity power plants.

Iceland

Source

National Energy Authority, Reykjavik

General notes

- The industrial classifications used by the Icelandic administration were changed in 1987.
- Hard coal data prior to 1978 may include sub-bituminous coal
- Prior to 1970, final consumption includes inputs and outputs to heat production.

Consumption

- Final consumption increased in 2000 as a new iron and steel plant came on-line.

Ireland

Sources

- Department of Communications, Energy and Natural Resources, Dublin.
- Sustainable Energy Authority of Ireland, Cork.

General notes

- Due to confidentiality reasons, inputs of **anthracite**, **other bituminous coal** and **peat briquettes** for patent fuel transformation are reported with residential consumption, while production and consumption of **patent fuel** is not reported.
- Prior to 1990, any imports of **BKB**, were included with imports of **peat products**, as is the case for consumption.

Supply

- The country of origin for imports of **other bituminous coal** is known for 2016p, but unavailable for reasons of confidentiality.

- Rainfall in 2012 led to the lowest **peat** harvest since IEA records began in 1960, requiring large stock drawdown and increased use of **biofuels** for electricity generation. In 2013, production targets were met before the end of the year however production continued in order to further build stocks to alleviate the potential impacts of future weather events.
- Low production of **peat** in 1985 was due to a poor “harvest” due to an unusually wet summer.
- Production data for **peat products** (briquettes) are available from 1975.

Transformation

- A reclassification caused a break in the series for **peat** consumption in the energy industry own use in BKB/peat product plants from 1989 to 1990.
- The production of **gas works gas** ceased in 1987 due to fuel switching to **natural gas**.
- **Other bituminous coal** inputs to main activity producer electricity plants increased from 1986 due to three new generating units at Moneypoint coming on-line.

Israel

Source

Israel Central Bureau of Statistics, Jerusalem.

General notes

- Due to confidentiality constraints, imports of **other bituminous coal** have been estimated by the IEA Secretariat for 2016p.
- Data are available starting in 1971.
- 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 and/or the IEA 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.

Italy

Sources

- Ministry of Economic Development, Rome.
- Terna, Rome.

General notes

- The increase in production of **coke oven gas** in 2012 was the consequence of improvements in scope of reporting. As such, coke oven gas data in prior years should be viewed as under-representing production and consumption, and coke oven efficiencies will likewise appear lower than actual.
- A change in methodology lead to breaks in series for industry and transformation between 2003 and 2004.
- Due to a change in the survey system, breaks in series may occur between 1997 and 1998 for final consumption.
- From 1986 onwards, figures from **lignite** are given using the same methodology as in the *Bilancio Energetico Nazionale*.

Transformation

- Reported production of **blast furnace gas** and **other recovered gases** are inputs for electricity generation or CHP. Production of **blast furnace gas** and **other recovered gases** used elsewhere in the iron and steel industry are not reported. As such, reported production and consumption data are lower than actual. Normalisation of blast furnace efficiencies will result in inputs of **coke oven coke** and **other bituminous coal** (PCI) to blast furnaces being lower than reported, with these re-located portions reported alongside generic consumption in the iron and steel industry instead.
- Breaks in the time series between 2014 and 2015 for **coke oven gas**, **blast furnace gas** and **other recovered gases** are due to a reclassification of main activity producers and autoproducers.
- Prior to 2009, **sub-bituminous coal** used in main activity electricity plants was included with **other bituminous coal**.
- For data since 2001, calorific values for imports of **other bituminous coal** and **sub-bituminous coal** are derived from inputs to main activity electricity generation.

Consumption

- In 1991, all industrial activities were reclassified on the basis of ISTAT/NACE 91. This has implied some transfers of activities which may result in some anomalies between 1991 and earlier years.

Japan

Source

The Institute of Energy Economics Japan, Tokyo.

General notes

- From 1990, data are reported on a fiscal year basis (e.g. April 2015 to March 2016 for 2015).
- **Other bituminous coal** includes **sub-bituminous coal**.
- The net calorific values for **coal** and **coal products** have been recalculated by the IEA Secretariat based upon gross values submitted by Japan.
- Consumption data for commercial/public services may include consumption in small and medium-size industries. The Japanese administration expects that this shortcoming will be corrected in the near future.
- In the past three editions, imports of **other bituminous coal** and **coking coal** – total and by partner country - have been estimated by the IEA Secretariat for data from 1990 to the provisional year, based on customs data and total imports by coal type.
- In the 2014 edition, further supply-side revisions to data from 1990 through 2011 were received, primarily to imports of **other bituminous coal**, in order to reconcile differences between submissions to the IEA and UNFCCC.
- Between 2004 and 2007, a series of revisions were received from the Japanese Administration. These changes were mainly due to the Government of Japan's efforts to improve the input-output balances in the production of oil products and coal products in response to inquiries from the UNFCCC Secretariat. To cope with this issue, the Japanese Administration established a working group in March 2004. The working group completed its work in April 2006. Many of its conclusions were incorporated in the 2006 edition, but some further revisions to the time series (especially in industry and other) were submitted for the 2007 edition.
- **Hard coal** data prior to 1978 may include **sub-bituminous coal**.

Supply

- Statistical differences for **hard coal** include stock changes since 2001. Large positive differences for several years since 2004 are partly due to stock build by final consumers.

Transformation

- The inputs of **coke oven coke** to blast furnaces as well as the final consumption of **coke oven coke** in the iron and steel industry have been estimated by the IEA Secretariat since 1990.
- From 1998, inputs of **coke oven gas**, **blast furnace gas** and **other recovered gases** into auto-producer electricity plants include the amount used to produce electricity with TRT technology (Top pressure Recovery Turbines) which was previously included in industry.
- Inputs of manufactured gases (**coke oven gas**, **blast furnace gas** and **other recovered gases**) to main activity electricity and heat plants are calculated based on outputs and using efficiencies of main activity producers from other fuels. For auto-producers, the specific inputs are known, however the specific electricity production by each gas is estimated based on a pro-rata of the total electricity generation from all gas types.
- Coal injected in blast furnaces (PCI) is classified as **coking coal** in order to be consistent with Japanese trade statistics.

Korea

Source

Korea Energy Economics Institute, Ulsan.

General notes

- Data are available from 1971.
- Imports of **anthracite**, **other bituminous coal** and **coking coal** from partner countries have been estimated by the IEA Secretariat for 2016p.
- **Coal tar** production data prior to 2007 are not available at this time.
- Data for 2002 onwards have been reported on a different basis, causing breaks in series between 2001 and 2002, especially for inputs and outputs to electricity generation and consumption in the iron and steel industry. The Korean Administration is planning to revise the historical series as time and resources allow.
- Data for **coal** and **coal products** from 1971 to 2001 are based on information provided by the Korean administration, as well as information from the *Yearbook of Energy Statistics 2002*, the *Yearbook of Coal Statistics 2001* (both from the Ministry of Commerce, Industry and Energy), and

Statistics of Electric Power in Korea 2001 (from the Korea Electric Power Corporation). During this period, import data by coal type were estimated by the IEA Secretariat, based on statistics of the exporting countries.

- **Hard coal** data prior to 1978 may include **sub-bituminous coal**.

Transformation

- For 2015, **coking coal** inputs to coke ovens decreased while **coke oven coke** production increased, impacting efficiency trends. To cope with this issue, the Korean Administration is working to improve data collection. Revisions on these data are expected in future editions.
- Statistical differences for **manufactured gases** in 2012 are partly the result of classification issues. The national administration is working to improve reporting of coal-derived gases production and consumption.

Consumption

- Data on **blast furnace gas** used for energy purposes in blast furnaces prior to 2007 are reported in the iron and steel industry.
- Consumption of imported **coke oven coke** starting in 2002 is reported under non-specified industry.
- Consumption of **manufactured gases** in the iron and steel industry starting in 2002 includes the consumption in blast furnaces, oxygen steel furnaces and other iron and steel processing plants.

Latvia

Source

- Central Statistical Bureau, Riga

General note

- Data for Latvia are available starting in 1990. Prior to that, they are included in Former Soviet Union in the publication *World Energy Statistics*.

Supply

- The increase of distribution losses for peat in 2003 is due to a fire in one of the warehouses.

Consumption

- The fall in the iron and steel industry in 2014 is due to the bankruptcy of the major company in the market.

Luxembourg

Source

STATEC, Institut national de la statistique et des études économiques du Grand-Duché du Luxembourg, Luxembourg.

General notes

- For the 2011 edition, the Luxembourgian administration revised the time series from 2000 for most **coal** and coal products. Time series for **BKB** consumption were revised from 1990.
- Prior to 1978, some **sub-bituminous coal** may be included in **hard coal**.
- Steel production from blast furnaces ceased at the end of 1997.

Mexico

Source

Ministry of Energy (SENER), Mexico City.

General notes

- Data are available starting in 1971. The Mexican administration submitted data directly by questionnaire for the first time with 1992 data. As a result, some breaks in series may occur between 1991 and 1992. For prior years, data are partly estimated based on the publication *Balance Nacional - Energía*.
- In the 2016 edition, the Mexican administration completed a major work on revisions of the time series back to 1990.
- The Mexican administration is currently undertaking major work on revisions of the time series back to 1990. For several products, only revisions back to 2003 have been provided. Some of these revisions could not be implemented in the 2016 edition. Further revisions to historical data are pending. Revisions for some products include reporting of new consumption flows, increased quantities of coal and higher calorific values, resulting in increases of total primary energy supply.
- Prior to 2003, **other bituminous coal** is either reported as **coking coal** or **sub-bituminous coal**,

depending upon usage, while **anthracite** and indigenously produced **lignite** were included with **sub-bituminous coal**. Calorific values currently in use may not accurately reflect any of this.

- The time series for **blast furnace gas** and inputs of **coke oven coke** to blast furnaces start in 1991.
- **Hard coal** data prior to 1978 may include **sub-bituminous coal**.

Consumption

- Use of pulverised coal injection in blast furnaces occurs in Mexico, but is not currently reported.
- Oxygen steel furnace gas production and production of other **other recovered gases** occur as by-products of heavy industry, but are not reported.

IEA Estimations

- Trade of **coking coal** and **other bituminous coal** were estimated by the IEA secretariat based on partner data for 2016p. Consumption data were also estimated for these coal types.
- For **coking coal**, amounts reported for consumption in main activity electricity generation and associated imports for the years 2003 to 2015 have been reallocated to other bituminous coal by the IEA Secretariat.
- Imports by country of origin for other **bituminous coal** and **coking coal** are based off partner data and splits provided in earlier cycles.
- **Blast furnace gas** production and consumption have been estimated by the IEA for 1990 to 2015 based on inputs of **coke oven coke** to blast furnaces in a ratio provided by Mexico, as are the proportions of **blast furnace gas** consumed in auto-producer electricity production, energy support for blast furnaces and consumption elsewhere in the iron and steel industry.
- **Coke oven coke** production was estimated by the IEA for some years between 1999 and 2012 based off historical and commodities data, as were inputs of **coking coal** to coke ovens between 1990 and 2012.
- Current Mexican methodology estimates production of **coal tar** and **coke oven gas** using **coke oven coke** production as a guide. This was extended for 1990 to 2001 and for years where **coke oven coke** production was estimated by the IEA.

Netherlands

Source

Statistics Netherlands, The Hague.

General notes

- The Netherlands Central Bureau of Statistics has conducted reviews and revisions of their energy balance three times; in 2005, 2011 and 2015. The 2005 revisions were to improve basic energy statistics, particularly with respect to carbon and CO₂ reporting, while the 2011 revisions were part of a harmonization program with international energy statistics. The 2015 revisions were the result of increased data collection, availability of new source information, and further alignment with international energy definitions. More details are available here: <http://www.cbs.nl>
- Following revisions made in the previous edition to data for 1995 onwards, this edition includes further revisions made by the Dutch Administration for the period 1990 to 1994. These revisions are the result of increased data collection, availability of new source information, and further alignment with international energy.
- In the national statistical system of the Netherlands, use of fuel in manufacturing industries for CHP production is considered to be consumption in transformation. However, in IEA statistics, this own use for heat production (autoproduced heat) is reported under the relevant industry sub-sector, based on estimates provided by the Central Bureau of Statistics.
- International trade into and through the hub ports of Amsterdam and Rotterdam is complicated by the capacity to purchase coal directly at these points. The majority of coal passing through these ports is intended for consumption in European countries other than the Netherlands, which is neither the country of origin or destination, therefore these data have been removed where possible.

Supply

- From 2013 onwards, trade reported by the Central Bureau of Statistics includes **coal** in transit, to align more closely with gross trade data.
- In the 2013 edition, non-specified exports for 2011 were estimated by the Central Bureau of Statistics due to a lack of information from key market players.

- For data prior to 2011, stock changes for primary coal types were estimated by the Dutch administration based on trade and consumption data.
- For 1984 to 1986, production *from other sources* of other bituminous coal represents a stock of “smalls” washed for re-use.

Consumption

- Prior to 1989, non-energy use is included with industry consumption.

New Zealand

Source

Ministry of Business, Innovation and Employment, Wellington.

General notes

- Prior to 1994, data refer to fiscal year (April 1993 to March 1994 for 1993). From 1994, data refer to calendar year.
- **Peat**, although produced in New Zealand, is not used as a fuel, and is used for agricultural purposes only.
- In the 2014 edition, the definition of **hard coal** was aligned with the International Recommendations for Energy Statistics. Prior to this, **hard coal** for New Zealand from 1960 to 1977 had contained **sub-bituminous coal**. The portion of **sub-bituminous coal** production and residential consumption has been estimated by the IEA Secretariat for this period and moved to **brown coal**.
- In the 2011 edition, the New Zealand administration has revised some of the **coal**, natural gas, oil, renewable and electricity time series back to 1990.

Supply

- Breakdown of exports of **coking coal** by country of destination for 2016p has been estimated by the IEA Secretariat, based on partner data.
- The decrease of **other bituminous coal** production in 2015 is due to a temporary shutdown in one of the coal mines at the beginning of 2015 and another one at the end of 2015.
- A detailed breakdown of exports of **coking coal** by country of destination between 2001 and 2011 is estimated by the IEA, based on secondary sources and partner data.

Transformation

- **Sub-bituminous coal** inputs into coke ovens refers to coal that is merged with iron sands and limestone to form the inputs for the multi-hearth-furnaces, kilns and melters that produce direct reduced iron (Glenbrook Steel Site), with off-gases and supplemental and natural gas driving CHP plants. This method, while not the typical iron and steel process, produces similar by-products. The **sub-bituminous coal** inputs are reported under coke oven coke transformation and the resulting off-gases are reported as production of **coke oven gas** and **blast furnace gas**.
- **Blast furnace gas** production and distribution losses prior to 1998 are IEA Secretariat estimates. Portions of this gas will have been used for energy purposes in the multi-hearth furnaces or elsewhere in the plant. Some transformation efficiencies will appear higher than normal due to non-reporting of certain inputs, including some confidential data.

Consumption

- In final consumption, some industry data are reported in non-specified industry for confidentiality reasons.
- In 2014, the increase in consumption of **sub-bituminous coal** in mines included the combustion of some unsold coal fines for safety reasons.
- Prior to 2010, the construction sector is included with commercial/public services.
- Prior to 2009, mining and quarrying is included in agriculture.

Norway

Source

Statistics Norway, Oslo.

General notes

- **Other bituminous coal** includes **lignite**.
- Production of **coking coal**, **coke oven coke** and **coke oven gas** ceased in the late 1980s. Supply
- The decrease of **other bituminous coal** production in 2015 is due to a temporary shutdown in one of the coal mines.
- The decrease of **other bituminous coal** production in 2005 is due to a fire in one of the coal mines; this entailed a break in the production for a large part of the year.

Poland

Source

Central Statistical Office, Warsaw.

General note

- Other recovered gases which appear in the balances as output from blast furnaces include off-gases from zinc and copper smelting, ceramics kilns and steel production.

Transformation

- In the past two editions, the Central Statistical Office has revised their methodology which accounts for sold heat produced from autoproducer heat plants using **coking coal** and **other bituminous coal**, resulting in lower, but more accurate data for 2007 onwards.

Consumption

- Consumption in agriculture/forestry for BKB, and own use in power stations for lignite are residual flows, so may contain statistical differences and other consumption not reported elsewhere. As a consequence, changes in these time series may not be wholly representative of the activities shown.
- Prior to 2010, own use in coal mines included workers' take home allowance, which should be included in residential consumption.

Portugal

Source

Direcção-Geral de Energia e Geologia, Lisbon.

General note

- **Hard coal** data prior to 1978 may include **sub-bituminous coal**.

Consumption

- Between 1997 and 2001 **gas works gas** was gradually replaced by **natural gas** in the commercial/public service and residential sectors.
- The production of pig iron ceased in the first quarter of 2001, leading to decreases in supply and consumption of **coking coal**, **coke oven coke**, **coke oven gas** and **blast furnace gas** in 2001.

Slovak Republic

Source

Statistical Office of the Slovak Republic, Bratislava.

General notes

- Data are available starting in 1971.
- The Slovak Republic became a separate state in 1993 and harmonised its statistics to EU standards in 2000. These two facts lead to several breaks in time series between 1992 and 1993, and between 2000 and 2001.
- Data for **anthracite**, **patent fuel** and **coal tar** all begin in 2005. Prior to this, **anthracite** was included with other hard coals, and **patent fuel** and **coal tar** data were not reported.
- Since 2005, data for **coal tar** and **patent fuel** are based solely on trade receipts. Production of **coal tar** which is consumed within the national boundary is not reported. Consumption of **patent fuel** adopts the residual methodology for statistical differences described above.
- Breaks in time series may exist between 2000 and 2001 as the result of the implementation of a new survey system.
- Commercial/public services also includes statistical differences for **other bituminous coal**, **lignite**, **patent fuel** and **coke oven coke** from 1980 onwards and **BKB** from 1989 onwards.

Slovenia

Source

Statistical Office of the Republic of Slovenia, Ljubljana.

General notes

- Data for Slovenia are available starting in 1990. Prior to that, they are included in *Energy Statistics of Non-OECD Countries* in Former Yugoslavia.
- A new energy data collection system was implemented in January 2001, causing some breaks in time series between 1999 and 2000.

Transformation

- In 2015, a main activity electricity plant burning **lignite** ceased its operations.

Spain

Source

Ministerio de Industria, Energía e Turismo, Madrid.

General note

- The calorific values for **sub-bituminous coal** are correct on an as received basis, and comply with definitions of **sub-bituminous coal** on a moist, but ash free basis.

Supply

- **Lignite** mining ceased in 2008.

Transformation

- Data associated with the **coke oven coke** transformation process are under review by Spain and revised data are pending.

Sweden

Sources

- Statistics Sweden, Örebro.
- Swedish Energy Agency, Energimyndigheten, Eskilstuna.

General notes

- **Peat products** data may be reported under the category of **peat**, particularly for imports.
- Autoproducer inputs to waste heat production that are sold are reported in the respective final consumption sectors and not in transformation.
- Some mixture of **LNG** with air to form a lower calorie product is reported as **gas works gas** production replacing traditional gas works gas manufacture.

Supply

- **Other bituminous coal** production until 1992 is coal recovered during the quarrying of clay.

Switzerland

Sources

- Swiss Federal Office of Energy (SFOE), Ittigen.
- Carbur, Swiss Organisation for Stockholding of Oil Products, Zurich.

General notes

- From 1999, data on consumption result from a new survey and are not comparable with data for previous years.
- Calorific values for **anthracite, other bituminous coal** and **coke oven coke** are taken from a common default figure. **Lignite** calorific values are also default data, but are based on dried **lignite** fines which have a higher calorific value.

Consumption

- From 1985, industrial consumption of **gas works gas** is reported in non-specified industry to prevent the disclosure of commercially confidential data.
- Allocation of consumption data between certain coal types is estimated by the Swiss administration.

Turkey

Sources

- Ministry of Energy and Natural Resources (Enerji ve Tabii Kaynaklar Bakanlığı), Ankara.
- Petrol İleri Genel Müdürlüğü, Ankara.

General notes

- In the 2017 edition, historical revisions on **coal tar** data were conducted by the Turkish Administration due to new available information.
- Data from 2012 onwards utilised the latest census data, causing breaks in time series between 2011 and 2012.
- Data from 2008 are provided from the results of an improved questionnaire. Significant changes occur in consumption patterns within the iron and steel industry, coal mining as well as across industry, residential and commercial/public services for **other bituminous coal**.
- Calorific values for fuels consumed in electricity, CHP and heat plants are obtained from data submitted to the Ministry of Energy and Natural Resources (MENR) by the Turkish Electricity Transmission Company, and these values may differ significantly from production and import values provided by MENR, causing imbalances for some years.
- Production of **gas works gas** declined in 1989 due to plant closures; the last plant closed in 1994. Use of **gas coke** and **gas works gas** ceased in 1994.
- Due to government regulations in industry and residential, in particular, there has been a shift

from the use of domestically produced **coal** to imported **coal** and **natural gas**.

Transformation

- In the middle of 2014, most autoproducer plants in Turkey were reclassified as main activity producer due to a change in the legislation. Amongst other things, this brought the reporting of unsold heat and prorated inputs, in line with IEA methodology.

Consumption

- Privatisation of state owned coke ovens in recent years results in incomplete information on **coke oven gas** distribution.
- In 2017 edition, consumption of **sub-bituminous coal** in construction has been reclassified by the Turkish Administration as consumption in the non-metallic minerals industry.
- In 2015, a new survey was introduced by the Turkish Administration to collect more detailed industrial consumption data, resulting in breaks in time series between 2014 and 2015.

United Kingdom

Source

Department for Business, Energy & Industrial Strategy, London.

General notes

- Oxygen steel furnace gas data are reported with blast furnace **gas** rather than as **other recovered gases**.
- In the 2017 edition, calorific values of **other bituminous coal** were revised for the period 2002-2015 due to a change in the methodology, impacting all flows.
- Prior to 1994, the consumption of substitute natural gas is included with natural gas while its production is included with gas works gas.

Transformation

- The consumption of **solid biofuels** has increased in 2015, as the largest power station in the UK converted a further unit from **coal** to **biomass** midyear, and the previously converted unit had a full year of operation in 2015 rather than just the last few months of 2014.
- The market decline in use of **other bituminous coal** from 2013 onwards for autoproducer electricity

generation was due to a plant being sold to a dedicated main-activity electricity producer.

Consumption

- Consumption data shown for the commercial/public services includes consumption of some of *other non-specified*.

United States

Source

Energy Information Administration, Washington, DC.

General notes

- Since the Energy Information administration (EIA) and the US Department of Commerce do not collect separate data on **patent fuel** exports by country, total exports data of **patent fuel** are included in the exports of **other bituminous coal**.
- End-use energy consumption data for the United States present a break in series with historical data due to a change in methodology in 2014. The break in series occurs between 2011 and 2012 for oil; and between 2001 and 2002 for electricity and natural gas. The new methodology is based on the last historical year of the most recent Annual Energy Outlook (AEO) publication. Changes occur primarily in reported end-use energy consumption in the industrial sector and its subsectors, including the non-manufacturing industries of mining, construction and agriculture. Historical revisions are pending. Due to other changes in reporting methodologies, there are numerous breaks in series for the US data, particularly in 1992, 1999, 2001, 2002 and 2013. Care should be taken when evaluating consumption by sector since inputs of fuel to autoproducers are included in final consumption for some years.
- **Coal tar** as a by-product of coke ovens is not currently reported.
- In 2002, the United States reported “synfuel” production as **patent fuel** for the first time. Prior to 2002, the consumption of this fuel was reported with **other bituminous coal**. Production ceased in 2007 for economic reasons.
- **Hard coal** data prior to 1978 may include **sub-bituminous coal**.

Supply

- *Other sources coal* production represents coal production that does not have a Mine Health and Safety Administration (MSHA) identifier.

2015 COUNTRY SPECIFIC AVERAGE NET CALORIFIC VALUES [kJ/kg]

	Anthracite	Coking coal	Other bituminous coal	Sub-bituminous coal	Lignite / Oil shale and oil sands ¹	Peat	Patent fuels	Coke oven coke	Coal tar	BKB / Peat products ²
Australia	26 700	28 486	-	18 478	9 800	-	-	27 000	35 714	20 995
Austria	26 700	28 971	27 414	22 082	9 700	8 800	31 000	28 595	36 912	19 800
Belgium	28 425	29 250	26 264	-	-	-	30 480	29 308	37 654	20 682
Canada	26 381	30 694	27 302	17 897	14 019	-	-	27 457	-	-
Chile	-	28 638	24 545	-	-	-	-	30 150	37 347	-
Czech Republic	28 349	28 459	23 736	-	12 457	-	-	28 587	36 435	19 793
Denmark	-	-	22 889	-	-	-	-	29 300	-	-
Estonia	-	-	27 150	-	9 000 ¹	10 112	-	28 500	-	15 200
Finland	27 550	29 300	24 708	-	-	10 050	-	29 300	37 000	-
France	26 700	30 500	26 000	-	17 000	-	32 000	28 000	37 883	16 920
Germany	29 700	29 000	26 725	-	9 023	-	31 400	28 650	-	20 683
Greece	-	-	25 921	-	5 138	-	-	-	-	-
Hungary	-	29 785	25 864	19 328	6 921	-	-	29 756	38 000	19 103
Iceland	28 050	-	-	-	-	-	-	26 670	-	-
Ireland	29 377	-	25 552	-	-	8 994	-	-	-	19 816
										18 548 ²
Israel	-	-	24 961	-	3 970	-	-	-	-	-
Italy	-	30 984	25 459	18 832	10 468	-	-	29 000	-	-
Japan	27 246	28 076	24 625	-	-	-	-	29 181	35 393	-
Korea	19 958	28 219	24 660	21 353	-	-	18 631	28 889	37 000	-
Latvia	-	-	23 910	-	-	-	-	-	-	-
Luxembourg	26 700	-	24 400	-	-	-	28 200	28 500	-	22 200
Mexico	25 893	29 192	25 875	20 307	11 166	-	-	28 408	37 970	18 000
Netherlands	29 300	28 671	24 676	-	20 000	-	-	28 500	41 900	20 000
New Zealand	-	30 170	28 111	20 562	14 493	-	-	29 500	-	-
Norway	-	-	28 100	-	-	-	-	28 500	-	-
Poland	-	29 521	22 346	-	8 157	-	23 565	28 000	37 738	17 500
Portugal	25 680	-	24 736	-	-	-	-	30 657	-	-
Slovak Republic	26 422	29 800	26 216	-	11 474	-	28 000	28 139	33 490	17 917
Slovenia	-	-	27 036	19 298	10 592	-	-	30 078	-	-
Spain	23 406	29 250	23 084	13 405	-	-	-	26 795	38 519	-
Sweden	-	30 000	27 400	-	-	12 580	-	28 080	-	-
Switzerland	25 500	-	25 500	-	23 600	-	-	25 500	-	-
Turkey	-	29 857	25 895	20 410	8 583	-	-	27 214	37 681	-
United Kingdom	-	30 247	25 054	-	-	-	28 310	29 800	34 927	-
United States	29 941	32 266	26 410	19 001	13 906	-	-	28 865	-	-

Source: IEA/OECD Coal Statistics

Data are weighted averages of supply side statistics, on a net as received (NAR) basis.

PART IV

NON-OECD COAL DATA

BRAZIL

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	3.6	2.8	2.9	3.8	3.5	3.0	4.3	4.4	-2.5	1.8
Imports	5.3	11.3	14.0	14.8	15.2	17.3	21.0	21.2	7.9	2.6
Exports	-	-	-	-	-0.0	-	-	-	-	-
Stock changes	-0.4	-0.2	0.0	0.1	-0.1	0.4	-0.3	-0.3		
Primary supply	8.5	13.8	16.9	18.6	18.6	20.7	25.0	25.2	5.0	2.4
Statistical differences	0.2	0.1	-0.1	0.2	-0.0	0.0	0.0	-0.0		
Total transformation	-4.0	-6.7	-8.0	-9.3	-9.3	-9.3	-13.3	-13.3	5.2	2.8
Electricity and heat gen.	-1.3	-2.1	-2.5	-4.6	-4.1	-4.5	-8.7	-9.0	5.4	5.9
<i>Main activity producers</i> ²	-1.0	-1.4	-1.9	-3.3	-2.7	-2.5	-6.0	-6.1	3.6	6.0
<i>Autoproducers</i>	-0.3	-0.7	-0.6	-1.3	-1.5	-2.0	-2.8	-2.8	10.3	5.6
Gas works	-	-	-	-	-	-	-	-	-	-
Coal transformation ³	-2.8	-4.5	-5.5	-4.7	-5.2	-4.7	-4.6	-4.4	5.1	-0.1
<i>BKB plants</i>	-	-	-	-	-	-	-	-	-	-
<i>Blast furnaces</i>	-2.2	-3.4	-4.6	-4.2	-4.9	-4.9	-5.1	-4.9	4.5	1.5
<i>Coke ovens</i>	-0.6	-1.1	-1.0	-0.6	-0.3	0.2	0.5	0.5	7.3	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	-	-	-
Other transformation ⁴	-	-	-	-	-	-	-	-	-	-
Energy ind. own use	-0.4	-0.8	-0.8	-0.8	-0.8	-0.7	-0.6	-0.5	6.8	-1.5
Losses	-1.3	-1.2	-1.7	-0.5	-0.5	-0.3	-0.4	-0.4		
Final consumption ⁵	3.0	5.2	6.4	8.2	7.9	10.4	10.7	11.0	5.9	3.0
Industry ⁶	2.8	5.1	6.3	8.0	7.7	10.2	10.5	10.8	6.3	3.1
<i>Iron and steel</i>	2.1	3.5	4.8	6.5	5.9	7.8	7.3	7.8	5.0	3.3
<i>Chemical</i>	0.0	0.1	0.2	0.1	0.1	0.2	0.2	0.2	47.6	2.3
<i>Non-metallic minerals</i>	0.4	0.9	0.6	0.3	0.2	0.1	0.4	0.3	7.2	-4.3
<i>Paper, pulp and print</i>	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	8.3	-2.3
<i>Other industry</i> ⁷	0.1	0.4	0.6	1.0	1.3	2.0	2.5	2.3	14.5	7.1
Transport ⁸	0.0	0.0	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
<i>Comm. and pub. services</i>	-	-	-	-	-	-	-	-	-	-
<i>Residential</i>	-	-	-	-	-	-	-	-	-	-
<i>Other sectors</i> ⁹	-	-	-	-	-	-	-	-	-	-
Non-energy use	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	-0.9	0.8
Electricity gen. - TWh	3.4	4.8	5.5	11.0	10.7	11.3	26.8	27.5	3.3	7.3

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

BRAZIL

Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	3547	10146	14833	13699	17590	18040	20351	20273	19502
Coking coal	3503	9801	10695	9396	13647	10592	10960	10304	10698
Australia	164	1291	5247	3501	4627	3153	3834	4660	4949
Canada	600	1108	1382	1944	1574	-	1985	1090	990
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	15	-	-	-	-	-	-	-	-
Poland	-	1249	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	2724	5219	4066	3523	7303	7439	5141	4549	4759
Other OECD	-	-	-	128	-	-	-	-	-
China, People's Rep.	-	-	-	-	3	-	-	-	-
Colombia	-	254	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	670	-	300	61	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	30	-	-	5	-
<i>Other FSU</i>	x	x	-	-	49	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	10	-	-	-	-	-	-	-
Steam coal⁵	44	345	4138	4303	3943	7448	9391	9969	8804
Australia	-	158	18	32	34	-	152	83	166
Canada	-	98	2	-	134	1721	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	5	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	5	-	-	-	-	-	-	-
United States	11	79	-	660	68	216	1407	327	104
Other OECD	-	-	-	644	39	-	-	26	-
China, People's Rep.	-	-	585	366	6	5	5	5	6
Colombia	-	-	149	426	1601	2492	5051	6157	5249
Indonesia	-	-	468	211	-	-	-	33	-
South Africa	-	-	1919	249	895	808	998	991	668
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	514	387	1329	1043	1724	2022
<i>Other FSU</i>	x	x	-	226	166	116	237	-	129
Venezuela	33	-	997	450	608	202	225	427	247
Viet Nam	-	-	-	429	-	394	-	-	-
Non-specified/other	-	-	-	96	5	165	273	196	213
Lignite	-	-	-	-	-	-	-	-	-

1. In these tables coal used for PCI and for blending has been classified by the IEA as steam coal. Accordingly, trade data reported here may differ from those reported in Part III where this coal may be shown as coking coal to be consistent with data reported by importing countries and with industry terminology and practice.

2. Earliest year for which split by coal type is available.

3. Total coal does not include peat or oil shale and oil sands.

4. For years prior to 1990.

5. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

BULGARIA

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	7.4	7.7	7.6	6.1	6.0	7.1	7.3	8.4	0.4	0.3
Imports	6.1	5.0	3.5	3.4	3.7	2.5	1.4	1.1	-1.9	-6.0
Exports	-	-0.1	-0.0	-0.2	-0.0	-0.1	-0.0	-0.0	-	-4.9
Stock changes	-0.1	0.1	-0.2	-0.2	0.3	0.4	0.5	0.0		
Primary supply	13.4	12.7	10.9	9.1	9.9	9.9	9.1	9.4	-0.5	-1.2
Statistical differences	-0.0	-0.1	-0.3	-0.0	0.1	0.1	0.0	-0.0		
Total transformation	-8.3	-10.1	-8.8	-7.7	-8.6	-9.3	-8.6	-8.8	2.0	-0.6
Electricity and heat gen.	-7.7	-10.2	-8.1	-7.0	-8.2	-9.2	-8.4	-8.7	2.9	-0.6
<i>Main activity producers</i> ²	-7.4	-9.4	-7.3	-6.8	-8.0	-9.2	-8.4	-8.7	2.5	-0.3
<i>Autoproducers</i>	-0.2	-0.7	-0.8	-0.2	-0.2	-	-	-	11.6	-
Gas works	-	-	-	-	-	-	-	-	-	-
Coal transformation ³	-0.6	0.0	-0.7	-0.6	-0.4	-0.0	-0.1	-0.1	-	-
<i>BKB plants</i>	0.0	-0.0	-0.0	-0.0	0.1	-0.0	-0.1	-0.1	-	6.9
<i>Blast furnaces</i>	-0.5	-0.0	-0.5	-0.4	-0.4	-	-	-	-21.1	-
<i>Coke ovens</i>	-0.2	0.1	-0.2	-0.3	-0.1	-	-	-	-	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	-	-	-
Other transformation ⁴	-	-	-	-	-	0.0	-	-	-	-
Energy ind. own use	-	-0.2	-0.2	-0.4	-0.2	-0.0	-0.0	-0.0	-	-18.4
Losses	-0.0	-0.0	-	-	-	-0.0	-0.0	-0.0		
Final consumption ⁵	5.1	2.3	1.6	1.1	1.1	0.7	0.5	0.6	-7.6	-5.6
Industry ⁶	3.6	1.2	0.9	0.7	0.7	0.3	0.3	0.3	-10.2	-6.0
<i>Iron and steel</i>	0.5	0.8	0.6	0.3	0.3	-	-	-	3.6	-
<i>Chemical</i>	-	0.2	0.1	0.2	0.1	0.1	0.1	0.1	-	-0.2
<i>Non-metallic minerals</i>	-	0.1	0.1	0.1	0.2	0.2	0.1	0.1	-	0.2
<i>Paper, pulp and print</i>	-	-	-	-	-	-	0.0	0.0	-	-
<i>Other industry</i> ⁷	3.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	-23.7	-11.7
Transport ⁸	-	-	0.0	-	-	-	-	-	-	-
Other	1.5	1.1	0.7	0.3	0.3	0.3	0.2	0.2	-3.1	-6.3
<i>Comm. and pub. services</i>	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-
<i>Residential</i>	1.2	1.0	0.7	0.3	0.3	0.3	0.2	0.2	-2.2	-6.3
<i>Other sectors</i> ⁹	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-11.9	-7.3
Non-energy use	-	-	-	-	-	0.1	0.1	0.1	-	-
Electricity gen. - TWh	17.1	21.2	17.6	17.2	18.6	22.6	21.3	22.5	2.1	0.2

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

BULGARIA

Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	6201	5790	1184	1744	2939	1547	1371	1061	787
Coking coal	1921	1100	536	10	-	-	-	-	-
Australia	-	-	-	1	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	140	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	44	298	8	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	1921	1056	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	98	1	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Steam coal⁵	4280	4690	648	1734	2939	1547	1369	1061	787
Australia	-	-	-	66	-	-	-	-	-
Canada	-	-	-	100	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	38	-	-	-	-	-
Other OECD	-	-	-	-	44	-	-	-	1
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	285	-	-	2	41	49	80
Former Soviet Union ⁴	4280	4690	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	363	858	251	363	692	844	302
<i>Other FSU</i>	x	x	-	623	2599	1177	598	138	385
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	33	30	-
Non-specified/other	-	-	-	49	45	5	5	-	19
Lignite	-	-	-	-	-	-	2	-	-

1. In these tables coal used for PCI and for blending has been classified by the IEA as steam coal. Accordingly, trade data reported here may differ from those reported in Part III where this coal may be shown as coking coal to be consistent with data reported by importing countries and with industry terminology and practice.

2. Earliest year for which split by coal type is available.

3. Total coal does not include peat or oil shale and oil sands.

4. For years prior to 1990.

5. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

PEOPLE'S REPUBLIC OF CHINA

	Coal balance ¹ (Mtce)								Average annual percent change	
	1980	1990	1995	2000	2005	2010	2014	2015	80-90	90-15
Production	443.9	740.6	962.3	1019.3	1752.9	2460.7	2706.2	2668.8	5.3	5.3
Imports	1.5	1.5	1.2	2.1	21.3	141.1	220.7	155.4	-0.0	20.5
Exports	-6.0	-17.3	-35.0	-65.1	-78.9	-20.8	-13.1	-13.7	11.1	-0.9
Stock changes	7.1	28.9	-2.7	-6.7	24.3	-23.3	-32.0	20.9		
Primary supply	446.5	753.7	925.8	949.6	1719.6	2557.7	2881.8	2831.4	5.4	5.4
Statistical differences	-25.0	-49.7	17.8	17.6	27.6	-81.4	-38.4	-14.6		
Total transformation	-111.9	-242.5	-396.1	-524.6	-982.6	-1424.7	-1734.3	-1735.6	8.0	8.2
Electricity and heat gen.	-88.7	-209.4	-347.9	-471.0	-858.6	-1228.7	-1491.7	-1487.9	9.0	8.2
<i>Main activity producers</i> ²	-88.2	-208.5	-346.2	-468.5	-848.8	-1201.5	-1446.9	-1443.5	9.0	8.0
<i>Autoproducers</i>	-0.5	-1.0	-1.6	-2.5	-9.8	-27.1	-44.8	-44.4	7.0	16.6
Gas works	-0.5	-1.6	-0.6	-2.2	-3.3	-1.7	-4.4	-6.8	12.0	6.0
Coal transformation ³	-22.7	-31.5	-47.6	-51.4	-120.7	-192.5	-233.1	-235.7	3.3	8.4
<i>BKB plants</i>	-	-	-	-	-	-	-	-	-	-
<i>Blast furnaces</i>	-14.0	-22.2	-35.5	-34.9	-93.7	-138.5	-153.3	-148.3	4.7	7.9
<i>Coke ovens</i>	-8.7	-9.3	-12.0	-16.1	-23.6	-48.4	-72.2	-81.6	0.7	9.1
<i>Patent fuel plants</i>	-	-	-0.1	-0.4	-3.4	-5.7	-7.6	-5.7	-	-
Other transformation ⁴	-	-	-	-	-	-1.7	-5.1	-5.2	-	-
Energy ind. own use	-4.5	-21.2	-39.6	-50.4	-54.8	-107.8	-93.9	-80.1	16.7	5.5
Losses	-	-	-	-0.1	-	-	-	-		
Final consumption ⁵	305.1	440.2	507.8	392.1	709.7	943.8	1015.3	1001.1	3.7	3.3
Industry ⁶	188.4	244.1	342.7	264.8	532.1	750.9	788.9	769.5	2.6	4.7
<i>Iron and steel</i>	47.4	32.7	63.4	67.8	131.5	233.3	280.9	274.0	-3.6	8.9
<i>Chemical</i>	42.1	31.6	60.4	36.0	86.0	107.7	115.9	129.4	-2.8	5.8
<i>Non-metallic minerals</i>	32.5	70.4	95.7	73.8	173.5	224.3	245.9	231.4	8.0	4.9
<i>Paper, pulp and print</i>	5.5	10.0	14.0	10.5	17.6	23.0	14.4	12.5	6.2	0.9
<i>Other industry</i> ⁷	60.9	99.4	109.2	76.7	123.5	162.6	132.0	122.2	5.0	0.8
Transport ⁸	13.6	14.0	9.0	6.1	5.7	4.6	4.0	3.5	0.3	-5.4
Other	103.2	154.6	136.5	98.7	132.9	136.6	147.2	148.7	4.1	-0.2
<i>Comm. and pub. services</i>	3.2	8.6	8.0	11.9	20.4	23.8	28.3	28.8	10.3	4.9
<i>Residential</i>	81.1	117.0	100.2	66.5	77.8	72.1	70.6	70.3	3.7	-2.0
<i>Other sectors</i> ⁹	18.8	29.0	28.3	20.4	34.8	40.7	48.3	49.6	4.4	2.2
Non-energy use	-	27.5	19.7	22.4	38.9	51.7	75.2	79.4	-	4.3
Electricity gen. - TWh	159.4	441.3	743.3	1060.4	1980.3	3239.7	4115.3	4109.0	10.7	9.3

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

PEOPLE'S REPUBLIC OF CHINA

Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	2440	2003	2119	26173	163065	327182	291586	204132	255604
Coking coal	-	900	547	7195	47082	75421	62440	47999	59307
Australia	-	600	547	4422	24152	30177	31279	25704	26819
Canada	-	300	-	1239	4018	11087	7204	5711	5189
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	2754	6065	2090	115	-
Other OECD	-	-	-	179	138	562	500	277	533
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	23	175	105	-	-
Indonesia	-	-	-	-	767	2673	657	231	574
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	61	1804	8442	5760	3228	2620
<i>Other FSU</i>	x	x	-	-	-	237	38	-	10
Venezuela	-	-	-	-	39	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	1294	13387	16003	14807	12733	23562
Steam coal⁵	2440	1103	1572	18978	115983	251761	229146	156133	196297
Australia	-	-	1034	2307	15158	58032	63227	45208	43723
Canada	-	-	-	-	710	888	994	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	12	1132	2769	1696	-	-
Other OECD	-	-	-	796	26	1	150	-	4
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	3756	328	1	-	-
Indonesia	-	-	141	2260	56295	123110	105698	73531	103226
South Africa	-	-	325	-	4183	12740	5759	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	72	791	6801	18812	19632	12569	16227
<i>Other FSU</i>	x	x	-	-	1	333	15	10	10
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	11469	18065	13146	6831	719	487
Non-specified/other	2440	1103	-	1343	9856	21602	25143	24096	32620
Lignite	-	-	-	-	-	-	-	-	-

1. In these tables coal used for PCI and for blending has been classified by the IEA as steam coal. Accordingly, trade data reported here may differ from those reported in Part III where this coal may be shown as coking coal to be consistent with data reported by importing countries and with industry terminology and practice.

2. Earliest year for which split by coal type is available.

3. Total coal does not include peat or oil shale and oil sands.

4. For years prior to 1990.

5. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

PEOPLE'S REPUBLIC OF CHINA

Coking coal exports by destination
(thousand tonnes)

	1978 ¹	1990	2000	2005	2010	2013	2014	2015	2016p
World	300	4000	6470	5260	1139	1111	797	969	1203
OECD	300	1302	5989	4984	932	981	625	863	971
Austria	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-
France	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-	-
Italy	-	-	-	-	-	-	-	-	-
Japan	300	1301	3631	3279	345	457	121	70	230
Korea	-	-	2358	1627	587	524	504	793	741
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	-	1	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-
Spain	-	-	-	78	-	-	-	-	-
Sweden	-	-	-	-	-	-	-	-	-
Turkey	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD ²	-	-	-	-	-	-	-	-	-
Non-OECD	-	2698	481	276	207	130	172	104	232
Brazil	-	100	-	-	-	-	-	-	-
Bulgaria	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Hong Kong, China	-	-	21	-	-	-	58	-	-
India	-	-	360	266	-	-	-	-	-
Morocco	-	-	-	-	-	-	-	-	-
Romania	-	400	-	-	-	-	-	-	-
Russian Federation	-	-	-	-	-	3	-	-	-
Chinese Taipei	-	-	-	-	-	-	-	-	72
Ukraine	-	-	-	-	-	-	-	-	-
Other Africa	-	-	-	-	-	-	-	-	-
Other Asia	-	2198	100	10	207	127	77	66	160
Other Eastern Europe	-	-	-	-	-	-	-	-	-
Other FSU	-	-	-	-	-	-	-	-	-
Other non-OECD Americas	-	-	-	-	-	-	-	-	-
Other Middle East	-	-	-	-	-	-	37	38	-
Non-specified/other	-	-	-	-	-	-	-	2	-

1. Earliest year for which split by coal type is available.

2. Australia, Chile, Estonia, Iceland, Ireland, Latvia, Luxembourg, New Zealand, Slovak Republic, Slovenia and Switzerland.

PEOPLE'S REPUBLIC OF CHINA

Steam coal¹ exports by destination
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	2820	13280	48578	66413	20169	8465	6401	6166	7351
OECD	534	6879	33172	37207	14584	5478	4503	3009	5210
Austria	-	-	-	-	-	-	-	-	-
Belgium	-	292	109	297	114	-	-	-	-
Canada	-	-	114	70	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	57	-	-	-	-	-	-	-
Finland	-	100	-	-	-	-	-	-	-
France	-	1776	452	8	-	12	-	10	-
Germany	21	8	-	79	-	-	-	16	-
Greece	-	-	228	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Israel	-	-	-	2	-	4	-	-	-
Italy	-	310	383	-	-	-	-	-	-
Japan	513	3258	12585	15947	6877	2562	2170	1790	2408
Korea	-	838	18760	18481	7389	2779	2330	1092	2802
Mexico	-	-	2	8	-	-	-	7	-
Netherlands	-	152	146	148	-	10	-	31	-
Norway	-	4	36	24	6	-	-	-	-
Poland	-	-	-	-	-	4	-	2	-
Portugal	-	-	-	-	-	-	-	-	-
Spain	-	-	199	184	-	9	-	9	-
Sweden	-	8	-	-	-	-	-	-	-
Turkey	-	-	43	1736	189	16	-	11	-
United Kingdom	-	69	107	163	-	34	-	23	-
United States	-	-	8	60	9	47	3	14	-
Other OECD ³	-	7	-	-	-	1	-	4	-
Non-OECD	2286	6401	15406	29162	5585	861	515	2985	2141
Brazil	-	-	585	293	-	5	-	-	-
Bulgaria	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Hong Kong, China	-	1708	1963	993	395	-	1	-	-
India	-	-	1562	3492	-	-	-	2	1
Morocco	-	-	36	138	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	-
Russian Federation	-	-	-	3	-	-	-	-	-
Chinese Taipei	-	-	9076	20992	4989	835	466	333	904
Ukraine	-	-	-	-	-	-	-	-	-
Other Africa	-	-	-	-	2	-	-	-	-
Other Asia	2286	4693	2182	3186	199	21	46	2650	1226
Other Eastern Europe	-	-	-	65	-	-	-	-	-
Other FSU	-	-	2	-	-	-	-	-	-
Other non-OECD Americas	-	-	-	-	-	-	-	-	-
Other Middle East	-	-	-	-	-	-	2	-	10
Non-specified/other	-	-	-	44	-	2126	1383	172	-

1. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. Australia, Chile, Estonia, Iceland, Ireland, Latvia, Luxembourg, New Zealand, Slovak Republic, Slovenia and Switzerland.

COLOMBIA

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	3.9	19.8	23.8	35.5	54.8	69.0	82.3	79.4	17.8	5.7
Imports	-	-	-	-	0.0	-	-	-	-	-
Exports	-1.4	-12.6	-17.1	-33.0	-49.8	-64.4	-76.7	-73.6	24.9	7.3
Stock changes	0.1	-2.8	-1.6	1.3	-1.2	-	-	-	-	-
Primary supply	2.6	4.4	5.1	3.8	3.9	4.6	5.5	5.9	5.6	1.2
Statistical differences	1.0	0.3	0.1	0.8	0.1	-0.2	-0.1	-0.1		
Total transformation	-1.1	-1.9	-2.0	-1.0	-1.2	-2.1	-2.9	-3.3	5.7	2.3
Electricity and heat gen.	-0.7	-1.5	-1.7	-0.8	-1.0	-1.6	-2.4	-2.8	8.2	2.6
<i>Main activity producers</i> ²	-0.4	-1.0	-1.2	-0.7	-0.8	-1.4	-2.0	-2.6	9.5	4.0
<i>Autoproducers</i>	-0.3	-0.5	-0.5	-0.1	-0.2	-0.2	-0.5	-0.2	6.2	-3.1
Gas works	-	-	-	-	-	-	-	-	-	-
Coal transformation ³	-0.4	-0.4	-0.2	-0.2	-0.2	-0.5	-0.5	-0.5	-0.4	1.0
<i>BKB plants</i>	-	-	-	-	-	-	-	-	-	-
<i>Blast furnaces</i>	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.4	-3.4
<i>Coke ovens</i>	-0.3	-0.2	-0.1	-0.1	-0.1	-0.4	-0.4	-0.4	-0.8	2.5
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	-	-	-
Other transformation ⁴	-	-	-	-	-	-	-	-	-	-
Energy ind. own use	-0.5	-0.5	-0.5	-0.3	-0.3	-0.0	-0.0	-0.0	0.8	-10.7
Losses	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		
Final consumption ⁵	1.9	2.3	2.7	3.2	2.4	2.2	2.4	2.4	1.8	0.2
Industry ⁶	1.7	2.1	2.5	3.1	2.4	2.1	2.3	2.3	2.3	0.4
<i>Iron and steel</i>	0.1	0.1	0.6	0.6	0.5	1.0	1.2	1.2	0.3	9.3
<i>Chemical</i>	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	-1.9	-0.4
<i>Non-metallic minerals</i>	0.9	1.2	0.9	1.2	0.9	0.6	0.5	0.5	2.9	-3.3
<i>Paper, pulp and print</i>	0.2	0.3	0.4	0.5	0.4	0.2	0.2	0.2	2.8	-0.8
<i>Other industry</i> ⁷	0.3	0.4	0.5	0.6	0.5	0.3	0.3	0.3	2.0	-1.8
Transport ⁸	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
Other	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	-2.6	-2.0
<i>Comm. and pub. services</i>	-	-	-	-	-	-	-	-	-	-
<i>Residential</i>	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	-2.6	-2.0
<i>Other sectors</i> ⁹	-	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-	-
Electricity gen. - TWh	1.6	3.7	4.3	2.2	2.5	4.1	7.1	8.2	8.7	3.2

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

COLOMBIA

Steam coal¹ exports by destination
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	50	13377	33565	53609	65141	78982	79752	76524	82120
OECD	-	12623	32284	50231	54404	70985	72303	70145	69601
Austria	-	-	-	-	-	49	-	-	-
Belgium	-	170	153	499	165	604	-	-	-
Canada	-	-	1590	2086	1731	1594	1515	1711	1389
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	2077	819	1225	1358	1905	1248	573	411
Finland	-	334	-	-	411	-	-	-	-
France	-	2033	2832	2181	1966	2256	694	756	1077
Germany	-	351	899	2873	180	11295	890	817	166
Greece	-	-	-	-	152	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Israel	-	548	773	4620	3619	5229	7938	5846	4546
Italy	-	290	1694	2442	1645	1265	1205	2661	3374
Japan	-	35	-	-	487	278	-	20	2324
Korea	-	-	-	-	1115	-	-	-	1706
Mexico	-	-	-	-	854	9	354	241	2038
Netherlands	-	1634	6822	5581	10419	8524	14878	17496	16333
Norway	-	-	-	-	317	-	-	-	-
Poland	-	-	-	-	194	-	88	153	172
Portugal	-	390	2544	2467	1398	3246	4197	5358	4503
Spain	-	404	908	1946	2616	2981	6068	5869	4047
Sweden	-	108	83	-	-	-	-	-	-
Turkey	-	-	-	2525	2738	7661	9300	11017	15182
United Kingdom	-	2136	4950	2576	5417	9767	9274	4100	598
United States	-	1305	6412	17260	12973	5950	6977	7418	6993
Other OECD ³	-	808	1805	1950	4649	8372	7677	6109	4742
Non-OECD	50	702	1159	3051	10458	7997	7449	6379	12519
Brazil	-	-	149	279	1312	2491	3904	3579	4007
Bulgaria	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	3725	223	-	-	325
Hong Kong, China	-	600	-	-	-	-	-	-	-
India	-	-	-	-	289	494	-	-	2644
Morocco	-	29	-	-	-	-	-	23	188
Romania	-	-	69	-	-	-	-	-	-
Russian Federation	-	-	-	7	-	-	-	-	-
Chinese Taipei	-	-	-	-	2099	-	-	-	-
Ukraine	-	-	-	-	-	-	-	-	-
Other Africa	-	-	-	-	72	-	-	-	55
Other Asia	-	-	-	-	201	25	-	-	329
Other Eastern Europe	-	-	146	121	412	618	210	144	278
Other FSU	-	-	-	-	-	-	-	-	-
Other non-OECD Americas	50	73	795	2644	2348	4146	3335	2633	4534
Other Middle East	-	-	-	-	-	-	-	-	159
Non-specified/other	-	52	122	327	279	-	-	-	-

1. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. Australia, Chile, Estonia, Iceland, Ireland, Latvia, Luxembourg, New Zealand, Slovak Republic, Slovenia and Switzerland.

HONG KONG (CHINA)

	Coal balance ¹ (Mtce)							Average annual percent change	
	1980	1990	1995	2000	2005	2010	2014	2015	80-90 90-15
Production	-	-	-	-	-	-	-	-	-
Imports	0.0	7.9	8.0	5.3	9.5	9.1	12.1	9.8	98.2 0.9
Exports	-	-	-	-	-	-	-	-	-
Stock changes	-	-	-	-	-	-	-	-	-
Primary supply	0.0	7.9	8.0	5.3	9.5	9.1	12.1	9.8	98.2 0.9
Statistical differences	-	0.8	0.5	0.7	-	-	-	-	
Total transformation	-0.0	-8.7	-8.6	-6.1	-8.8	-7.7	-9.9	-8.0	122.2 -0.3
Electricity and heat gen.	-	-8.7	-8.6	-6.1	-8.8	-7.7	-9.9	-8.0	- -0.3
<i>Main activity producers</i> ²	-	-8.7	-8.6	-6.1	-8.8	-7.7	-9.9	-8.0	- -0.3
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	- -
Gas works	-	-	-	-	-	-	-	-	- -
Coal transformation ³	-0.0	-0.0	-0.0	-	-	-	-	-	- -
<i>BKB plants</i>	-	-	-	-	-	-	-	-	- -
<i>Blast furnaces</i>	-0.0	-0.0	-0.0	-	-	-	-	-	- -
<i>Coke ovens</i>	-	-	-	-	-	-	-	-	- -
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	-	- -
Other transformation ⁴	-	-	-	-	-	-	-	-	- -
Energy ind. own use	-	-	-	-	-	-	-	-	- -
Losses	-	-	-	-	-	-	-	-	- -
Final consumption ⁵	0.0	0.0	0.0	-	0.8	1.3	2.2	1.8	- 36.5
Industry ⁶	0.0	0.0	0.0	-	0.8	1.3	2.2	1.8	- 36.5
<i>Iron and steel</i>	0.0	0.0	0.0	-	-	-	-	-	- -
<i>Chemical</i>	-	-	-	-	-	-	-	-	- -
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	- -
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	- -
<i>Other industry</i> ⁷	0.0	-	-	-	0.8	1.3	2.2	1.8	- -
Transport ⁸	-	-	-	-	-	-	-	-	- -
Other	-	-	-	-	-	-	-	-	- -
<i>Comm. and pub. services</i>	-	-	-	-	-	-	-	-	- -
<i>Residential</i>	-	-	-	-	-	-	-	-	- -
<i>Other sectors</i> ⁹	-	-	-	-	-	-	-	-	- -
Non-energy use	-	-	-	-	-	-	-	-	- -
Electricity gen. - TWh	-	28.4	27.2	18.9	27.0	23.8	30.4	24.9	- -0.5

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

HONG KONG (CHINA)

Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	8	8928	6058	10823	10324	12972	13789	11184	11161
Coking coal	-	-	43	-	-	-	-	-	-
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	43	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Steam coal⁵	8	8928	6015	10823	10324	12972	13789	11184	11161
Australia	-	3003	276	-	441	527	528	246	231
Canada	-	-	-	-	-	-	77	154	77
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	108	-	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	8	1708	2265	938	395	-	-	-	-
Colombia	-	234	-	-	-	-	-	-	-
Indonesia	-	659	2846	9825	9303	12300	12610	9849	9634
South Africa	-	3216	567	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	61	60	135	145	574	935	1219
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	50	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-

1. In these tables coal used for PCI and for blending has been classified by the IEA as steam coal. Accordingly, trade data reported here may differ from those reported in Part III where this coal may be shown as coking coal to be consistent with data reported by importing countries and with industry terminology and practice.

2. Earliest year for which split by coal type is available.

3. Total coal does not include peat or oil shale and oil sands.

4. For years prior to 1990.

5. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

INDIA

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	68.3	133.3	168.3	186.6	233.3	304.1	362.1	376.5	6.9	4.2
Imports	0.5	6.0	12.5	21.1	37.2	100.8	181.5	170.4	27.4	14.4
Exports	-0.1	-0.1	-0.4	-0.8	-1.2	-1.7	-0.8	-1.0	-0.9	12.1
Stock changes	-5.5	-6.8	-4.1	1.5	-6.1	-4.5	-2.9	-4.5		
Primary supply	63.3	132.4	176.1	208.5	263.2	398.6	539.9	541.3	7.7	5.8
Statistical differences	-0.0	-0.0	-0.0	-0.0	-0.0	0.0	0.0	0.0		
Total transformation	-27.2	-75.1	-120.2	-157.5	-195.8	-267.7	-376.8	-384.6	10.7	6.8
Electricity and heat gen.	-22.9	-69.1	-111.4	-147.4	-182.3	-253.2	-355.4	-362.9	11.7	6.9
<i>Main activity producers</i> ²	-21.6	-64.5	-104.4	-136.2	-166.1	-220.7	-301.1	-318.3	11.6	6.6
<i>Autoproducers</i>	-1.3	-4.6	-6.9	-11.2	-16.2	-32.6	-54.3	-44.5	13.4	9.5
Gas works	-	-	-	-0.0	-0.0	-0.0	-0.0	-0.0	-	-
Coal transformation ³	-4.3	-6.0	-8.9	-10.1	-13.5	-14.4	-21.3	-21.8	3.4	5.3
<i>BKB plants</i>	-0.1	-0.3	-0.3	-0.2	-0.2	-0.3	-0.2	-0.1	7.9	-4.7
<i>Blast furnaces</i>	-5.1	-5.2	-5.7	-8.4	-8.4	-11.5	-16.9	-17.2	0.1	4.9
<i>Coke ovens</i>	0.9	-0.6	-2.9	-1.4	-5.0	-2.7	-4.3	-4.5	-	8.7
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	-	-	-
Other transformation ⁴	-	-	-	-	-	-	-	-	-	-
Energy ind. own use	-0.8	-2.2	-2.3	-1.7	-1.8	-1.6	-2.2	-2.0	10.3	-0.3
Losses	-	-	-	-	-	-	-	-		
Final consumption ⁵	35.3	55.1	53.6	49.3	65.6	129.3	160.9	154.6	4.6	4.2
Industry ⁶	19.2	37.7	37.4	36.8	51.4	107.1	140.1	134.6	7.0	5.2
<i>Iron and steel</i>	8.1	11.8	15.0	13.7	21.5	43.5	69.2	69.3	3.8	7.3
<i>Chemical</i>	1.7	3.6	4.5	3.6	2.5	2.9	2.2	2.1	7.7	-2.1
<i>Non-metallic minerals</i>	4.5	8.7	9.8	13.4	13.4	16.7	28.2	23.9	6.8	4.1
<i>Paper, pulp and print</i>	1.2	1.8	2.3	1.9	1.9	2.5	1.4	1.0	4.0	-2.5
<i>Other industry</i> ⁷	3.6	11.7	5.8	4.2	12.0	41.5	39.1	38.3	12.4	4.8
Transport ⁸	6.9	3.2	0.2	-	-	-	-	-	-7.3	-
Other	9.2	14.2	16.0	12.5	14.2	22.2	20.8	20.0	4.5	1.4
<i>Comm. and pub. services</i>	3.9	4.9	5.6	4.4	4.5	5.8	7.3	7.4	2.3	1.7
<i>Residential</i>	2.8	4.0	4.1	4.2	4.1	4.6	4.9	4.6	3.5	0.5
<i>Other sectors</i> ⁹	2.4	5.3	6.3	3.9	5.7	11.8	8.6	8.0	8.1	1.7
Non-energy use	-	-	-	-	-	-	-	-	-	-
Electricity gen. - TWh	61.5	191.6	296.3	390.2	478.5	658.0	963.7	1041.5	12.0	7.0

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

INDIA

Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	220	5100	16565	38586	115717	183277	237592	215560	200073
Coking coal	220	5000	8372	16892	34424	39069	51663	49438	47905
Australia	20	4665	7824	13973	30730	32201	40822	41451	40205
Canada	200	-	-	-	-	1360	1711	1639	2697
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	284	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	11	837	2299	2760	3188	3458	2583
Other OECD	-	51	63	92	1073	1027	997	816	443
China, People's Rep.	-	-	474	603	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	1365	70	-	-	-	-
South Africa	-	-	-	-	226	-	-	404	104
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	22	6	25	62	35	238
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	20	1696	4883	1635	1635
Steam coal⁵	-	100	8193	21694	81293	144207	185929	166122	152168
Australia	-	100	2748	1438	2227	2550	6517	5272	4778
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	1	2	3	2	2
United States	-	-	-	86	773	931	1012	2208	2431
Other OECD	-	-	-	-	-	859	1364	637	1411
China, People's Rep.	-	-	1610	3152	2	-	-	3	1
Colombia	-	-	-	-	260	494	-	-	2644
Indonesia	-	-	2256	13889	53677	118287	142473	121755	100252
South Africa	-	-	1507	3044	24030	20783	32842	33268	37568
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	72	33	220	301	1689	2937	3039
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	29	-	-
Viet Nam	-	-	-	-	57	-	-	40	42
Non-specified/other	-	-	-	52	46	-	-	-	-
Lignite	-	-	-	-	-	1	-	-	-

1. In these tables coal used for PCI and for blending has been classified by the IEA as steam coal. Accordingly, trade data reported here may differ from those reported in Part III where this coal may be shown as coking coal to be consistent with data reported by importing countries and with industry terminology and practice.

2. Earliest year for which split by coal type is available.

3. Total coal does not include peat or oil shale and oil sands.

4. For years prior to 1990.

5. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

INDONESIA

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	0.2	8.4	34.1	64.9	140.3	266.2	377.4	348.9	42.2	16.1
Imports	0.0	0.6	-	0.1	0.1	0.1	2.4	2.9	32.6	6.4
Exports	-0.1	-3.9	-26.1	-47.9	-108.8	-220.7	-326.6	-293.2	45.1	18.9
Stock changes	0.0	-	1.0	-	-	-	-	-	-	-
Primary supply	0.2	5.1	9.0	17.2	31.6	45.5	53.2	58.6	36.5	10.3
Statistical differences	-0.0	1.4	0.4	1.5	-0.5	-7.2	0.0	-0.0		
Total transformation	-0.0	-3.3	-4.9	-12.0	-19.2	-26.9	-42.3	-44.9	71.3	11.0
Electricity and heat gen.	-	-3.3	-4.9	-12.0	-19.2	-26.9	-42.3	-44.9	-	11.0
<i>Main activity producers</i> ²	-	-3.3	-4.9	-9.9	-12.7	-18.0	-28.6	-31.4	-	9.4
<i>Autoproducers</i>	-	-	-	-2.1	-6.5	-8.9	-13.7	-13.5	-	-
Gas works	-	-	-	-	-	-	-	-	-	-
Coal transformation ³	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	0.0	0.0	-	-
<i>BKB plants</i>	-	-	-0.0	-0.0	-0.0	-0.0	0.0	0.0	-	-
<i>Blast furnaces</i>	-0.0	-0.0	-	-	-	-	-	-	-	-
<i>Coke ovens</i>	-	-	-	-	-	-	-	-	-	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	-	-	-
Other transformation ⁴	-	-	-	-	-	-	-	-	-	-
Energy ind. own use	-0.1	-	-	-	-	-	-	-	-	-
Losses	-	-	-	-	-	-	-	-	-	-
Final consumption ⁵	0.1	3.1	4.5	6.6	11.9	11.4	10.9	13.7	37.6	6.1
Industry ⁶	0.1	3.1	4.5	6.6	11.9	11.4	10.9	13.7	39.9	6.1
<i>Iron and steel</i>	0.0	0.0	-	0.0	0.2	0.3	0.3	0.4	-	11.6
<i>Chemical</i>	0.1	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	1.7	3.9	4.7	4.6	4.6	-	-
<i>Paper, pulp and print</i>	-	-	-	0.6	0.9	1.3	0.9	2.8	-	-
<i>Other industry</i> ⁷	0.0	3.1	4.5	4.4	7.0	5.0	5.1	6.0	57.8	2.7
Transport ⁸	0.0	-	-	-	-	-	-	-	-	-
Other	-	-	0.0	0.0	0.0	-	-	-	-	-
<i>Comm. and pub. services</i>	-	-	-	-	-	-	-	-	-	-
<i>Residential</i>	-	-	0.0	0.0	0.0	-	-	-	-	-
<i>Other sectors</i> ⁹	-	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-	-
Electricity gen. - TWh	-	9.8	14.4	34.0	51.8	68.4	119.5	130.5	-	10.9

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

INDONESIA

Steam coal¹ exports by destination
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	32	4574	54480	118396	265000	424325	408183	365723	368889
OECD	-	961	27791	45977	94212	83844	80796	75759	76120
Austria	-	-	-	-	-	165	-	-	-
Belgium	-	6	-	6	-	-	-	-	-
Canada	-	-	-	-	-	18	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-
France	-	-	-	306	-	-	-	-	50
Germany	-	38	105	109	-	-	-	-	-
Greece	-	-	133	80	36	-	-	-	23
Hungary	-	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-	-
Italy	-	-	1637	2422	6835	2923	3518	3106	1686
Japan	-	663	13101	19511	35746	38181	35584	32413	33037
Korea	-	33	4825	12885	43102	36115	35607	34005	35019
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	-	133	2700	1076	2804	172	-	83	-
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	7	-	-	-	-	-	-
Portugal	-	-	70	119	-	-	-	-	-
Spain	-	-	2793	3146	2616	4078	4071	4503	4944
Sweden	-	-	-	-	-	-	-	-	-
Turkey	-	-	-	-	46	147	-	253	161
United Kingdom	-	-	-	1772	165	-	-	-	-
United States	-	-	627	1884	1583	1177	1312	732	561
Other OECD ³	-	88	1793	2661	1279	868	704	664	639
Non-OECD	32	3613	26689	58073	170724	340442	327387	289956	292769
Brazil	-	-	468	146	-	-	-	33	-
Bulgaria	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	105	142	1008	57430	130338	100248	72716	98733
Hong Kong, China	-	660	2816	9826	8725	12963	12582	9685	9424
India	-	110	3373	11657	44990	118287	135380	124037	100252
Morocco	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	-
Russian Federation	-	-	-	-	-	-	-	-	-
Chinese Taipei	-	546	11786	19132	21280	28165	27241	24320	24423
Ukraine	-	-	-	-	-	-	-	-	77
Other Africa	-	-	-	155	158	21	147	104	-
Other Asia	32	2192	8032	16004	37194	50554	51190	58761	59550
Other Eastern Europe	-	-	-	65	770	-	33	-	-
Other FSU	-	-	-	53	-	-	-	-	-
Other non-OECD Americas	-	-	72	15	76	-	-	-	-
Other Middle East	-	-	-	12	101	114	566	300	310
Non-specified/other	-	-	-	14346	64	39	-	8	-

1. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. Australia, Chile, Estonia, Iceland, Ireland, Latvia, Luxembourg, New Zealand, Slovak Republic, Slovenia and Switzerland.

KAZAKHSTAN

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	x	82.9	53.1	48.8	54.7	69.4	71.3	67.3	-	-0.8
Imports	x	6.8	1.5	1.0	1.4	0.8	1.1	0.8	-	-8.0
Exports	x	-32.6	-13.3	-21.8	-15.6	-19.7	-19.3	-19.5	-	-2.0
Stock changes	x	-	-	0.3	0.2	-1.2	-0.2	0.3		
Primary supply	x	57.1	41.3	28.2	40.7	49.3	52.9	48.9	-	-0.6
Statistical differences	x	-	-	1.6	-0.0	2.9	0.2	-0.0		
Total transformation	x	-34.5	-24.3	-23.5	-28.2	-28.4	-34.8	-30.6	-	-0.5
Electricity and heat gen.	x	-34.4	-23.9	-20.9	-25.8	-25.7	-30.0	-26.8	-	-1.0
<i>Main activity producers</i> ²	x	-34.4	-23.9	-20.9	-25.8	-25.7	-30.0	-26.8	-	-1.0
<i>Autoproducers</i>	x	-	-	-	-	-	-	-	-	-
Gas works	x	-	-	-	-	-	-	-	-	-
Coal transformation ³	x	-0.1	-0.3	-2.6	-2.4	-2.6	-4.9	-3.9	-	15.1
<i>BKB plants</i>	x	-	-	-	-	-	-	-	-	-
<i>Blast furnaces</i>	x	-	-	-0.9	-0.9	-1.1	-1.0	-1.1	-	-
<i>Coke ovens</i>	x	-0.1	-0.3	-1.7	-1.5	-1.5	-3.8	-2.8	-	13.6
<i>Patent fuel plants</i>	x	-	-	0.0	0.0	-	-	-	-	-
Other transformation ⁴	x	-	-	-	-	-	-	-	-	-
Energy ind. own use	x	-	-0.4	-0.7	-0.7	-1.2	-0.5	-0.7	-	-
Losses	x	-	-	-0.1	-1.3	-1.3	-0.4	-2.5		
Final consumption ⁵	x	22.5	16.7	5.5	10.5	21.4	17.4	15.1	-	-1.6
Industry ⁶	x	22.5	16.7	4.5	9.6	15.6	12.2	11.1	-	-2.8
<i>Iron and steel</i>	x	1.2	2.3	1.3	1.4	4.6	4.6	3.4	-	4.2
<i>Chemical</i>	x	-	-	-	-	0.0	0.0	0.0	-	-
<i>Non-metallic minerals</i>	x	-	-	-	-	-	0.0	0.0	-	-
<i>Paper, pulp and print</i>	x	-	-	-	-	-	-	0.0	-	-
<i>Other industry</i> ⁷	x	21.3	14.4	3.2	8.2	10.9	7.6	7.6	-	-4.0
Transport ⁸	x	-	-	-	-	-	0.0	0.1	-	-
Other	x	-	-	0.0	0.0	5.8	5.2	4.0	-	-
<i>Comm. and pub. services</i>	x	-	-	-	-	1.1	1.1	1.1	-	-
<i>Residential</i>	x	-	-	0.0	0.0	1.7	3.9	2.8	-	-
<i>Other sectors</i> ⁹	x	-	-	-	-	3.1	0.2	0.2	-	-
Non-energy use	x	-	-	1.0	0.9	-	-	-	-	-
Electricity gen. - TWh	x	62.1	48.0	35.6	50.1	66.7	75.6	76.2	-	0.8

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

KAZAKHSTAN

Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	x	3277	668	31	237	229	15	14	23
Coking coal	x	-	-	-	-	-	-	-	-
Australia	x	-	-	-	-	-	-	-	-
Canada	x	-	-	-	-	-	-	-	-
Czech Republic	x	-	-	-	-	-	-	-	-
Germany	x	-	-	-	-	-	-	-	-
Poland	x	-	-	-	-	-	-	-	-
United Kingdom	x	-	-	-	-	-	-	-	-
United States	x	-	-	-	-	-	-	-	-
Other OECD	x	-	-	-	-	-	-	-	-
China, People's Rep.	x	-	-	-	-	-	-	-	-
Colombia	x	-	-	-	-	-	-	-	-
Indonesia	x	-	-	-	-	-	-	-	-
South Africa	x	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	x	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	x	-	-	-	-	-	-	-	-
Viet Nam	x	-	-	-	-	-	-	-	-
Non-specified/other	x	-	-	-	-	-	-	-	-
Steam coal⁵	x	3277	668	31	234	228	15	14	23
Australia	x	-	-	-	-	-	-	-	-
Canada	x	-	-	-	-	-	-	-	-
Czech Republic	x	-	-	-	-	-	-	-	-
Germany	x	-	-	-	-	-	-	-	-
Poland	x	-	-	-	-	-	-	-	-
United Kingdom	x	-	-	-	-	-	-	-	-
United States	x	-	-	-	-	-	-	-	-
Other OECD	x	-	-	-	-	-	-	-	-
China, People's Rep.	x	-	2	-	-	-	-	-	-
Colombia	x	-	-	-	-	-	-	-	-
Indonesia	x	-	-	-	-	-	-	-	-
South Africa	x	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	x	3277	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	480	31	234	228	15	12	23
<i>Other FSU</i>	x	x	-	-	-	-	-	2	-
Venezuela	x	-	-	-	-	-	-	-	-
Viet Nam	x	-	-	-	-	-	-	-	-
Non-specified/other	x	-	186	-	-	-	-	-	-
Lignite	x	-	-	-	3	1	-	-	-

1. In these tables coal used for PCI and for blending has been classified by the IEA as steam coal. Accordingly, trade data reported here may differ from those reported in Part III where this coal may be shown as coking coal to be consistent with data reported by importing countries and with industry terminology and practice.

2. Earliest year for which split by coal type is available.

3. Total coal does not include peat or oil shale and oil sands.

4. For years prior to 1990.

5. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

KAZAKHSTAN

Steam coal¹ exports by destination
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	x	53210	25300	21308	29078	31444	26570	27398	22521
OECD	x	-	-	116	298	2937	3317	3902	1249
Austria	x	-	-	-	-	-	-	-	-
Belgium	x	-	-	-	-	-	-	-	-
Canada	x	-	-	-	-	-	-	-	-
Czech Republic	x	-	-	-	-	-	-	-	-
Denmark	x	-	-	-	-	-	-	-	-
Finland	x	-	-	-	49	2359	2826	3280	233
France	x	-	-	-	-	-	-	-	-
Germany	x	-	-	-	2	-	-	-	-
Greece	x	-	-	-	-	163	123	-	-
Hungary	x	-	-	39	9	-	-	-	-
Israel	x	-	-	-	-	-	-	-	-
Italy	x	-	-	4	-	-	121	2	632
Japan	x	-	-	-	-	162	-	409	-
Korea	x	-	-	-	-	-	-	-	-
Mexico	x	-	-	-	-	-	-	-	-
Netherlands	x	-	-	-	-	50	-	-	-
Norway	x	-	-	-	-	-	-	-	-
Poland	x	-	-	73	238	181	18	-	6
Portugal	x	-	-	-	-	-	-	-	-
Spain	x	-	-	-	-	6	-	-	-
Sweden	x	-	-	-	-	-	-	-	-
Turkey	x	-	-	-	-	-	-	-	44
United Kingdom	x	-	-	-	-	16	157	192	334
United States	x	-	-	-	-	-	-	-	-
Other OECD ³	x	-	-	-	-	-	72	19	-
Non-OECD	x	53210	25300	21192	28780	28507	23253	23496	21272
Brazil	x	-	-	-	-	-	-	-	77
Bulgaria	x	-	-	-	-	-	-	-	-
China, People's Rep.	x	-	-	-	-	197	-	2	5
Hong Kong, China	x	-	-	-	-	-	-	-	-
India	x	-	-	-	-	-	-	-	-
Morocco	x	-	-	-	-	-	-	-	-
Romania	x	-	-	-	-	12	29	25	-
Russian Federation	x	53210	24080	21192	28780	26640	22016	21226	19954
Chinese Taipei	x	-	-	-	-	-	-	-	-
Ukraine	x	-	1220	-	-	575	3	671	-
Other Africa	x	-	-	-	-	-	-	-	-
Other Asia	x	-	-	-	-	-	-	-	-
Other Eastern Europe	x	-	-	-	-	-	13	-	-
Other FSU	x	-	-	-	-	1083	1192	1572	1236
Other non-OECD Americas	x	-	-	-	-	-	-	-	-
Other Middle East	x	-	-	-	-	-	-	-	-
Non-specified/other	x	-	-	-	-	-	-	-	-

1. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. Australia, Chile, Estonia, Iceland, Ireland, Latvia, Luxembourg, New Zealand, Slovak Republic, Slovenia and Switzerland.

PEOPLE'S DEMOCRATIC REPUBLIC OF KOREA

	Coal balance ¹ (Mtce)								Average annual percent change	
	1980	1990	1995	2000	2005	2010	2014	2015	80-90	90-15
Production	36.3	38.0	25.4	24.2	28.4	20.7	23.3	24.1	0.5	-1.8
Imports	0.7	2.8	1.3	0.2	0.2	0.3	0.3	1.0	14.5	-4.0
Exports	-0.1	-0.4	-0.4	-0.3	-2.6	-4.2	-14.2	-18.1	17.5	16.0
Stock changes	-	-	-	-	-	-	-	-	-	-
Primary supply	37.0	40.4	26.3	24.0	26.0	16.8	9.3	7.0	0.9	-6.8
Statistical differences	-	-	-	-	-	-	-	-0.0		
Total transformation	-7.8	-8.6	-4.8	-3.8	-4.1	-2.6	-1.4	-1.0	1.0	-8.3
Electricity and heat gen.	-5.0	-5.3	-3.9	-3.8	-4.0	-2.5	-1.3	-0.9	0.6	-6.9
<i>Main activity producers</i> ²	-5.0	-5.3	-3.9	-3.8	-4.0	-2.5	-1.3	-0.9	0.6	-6.9
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-
Coal transformation ³	-2.8	-3.3	-0.9	-0.1	-0.1	-0.1	-0.1	-0.1	1.8	-13.5
<i>BKB plants</i>	-	-	-	-	-	-	-	-	-	-
<i>Blast furnaces</i>	-1.6	-1.8	-0.6	-0.1	-0.1	-0.1	-0.1	-0.1	1.7	-11.5
<i>Coke ovens</i>	-1.2	-1.5	-0.3	-	-	-	-	-	1.8	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	-	-	-
Other transformation ⁴	-	-	-	-	-	-	-	-	-	-
Energy ind. own use	-	-	-	-	-	-	-	-	-	-
Losses	-	-	-	-	-	-	-	-	-	-
Final consumption ⁵	29.2	31.8	21.6	20.2	22.0	14.2	7.9	6.0	0.8	-6.4
Industry ⁶	23.2	25.8	16.6	15.3	16.8	10.7	6.0	4.6	1.1	-6.7
<i>Iron and steel</i>	1.6	1.9	0.4	0.1	0.1	0.1	0.1	0.1	1.7	-11.9
<i>Chemical</i>	-	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-	-
<i>Other industry</i> ⁷	21.6	23.9	16.2	15.2	16.7	10.6	5.9	4.5	1.0	-6.5
Transport ⁸	-	-	-	-	-	-	-	-	-	-
Other	6.0	5.9	5.0	4.9	5.2	3.5	1.9	1.5	-0.2	-5.5
<i>Comm. and pub. services</i>	-	-	-	-	-	-	-	-	-	-
<i>Residential</i>	-	-	-	-	-	-	-	-	-	-
<i>Other sectors</i> ⁹	6.0	5.9	5.0	4.9	5.2	3.5	1.9	1.5	-0.2	-5.5
Non-energy use	-	-	-	-	-	-	-	-	-	-
Electricity gen. - TWh	10.2	11.1	8.5	8.4	8.9	7.7	4.3	2.9	0.9	-5.2

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

MALAYSIA

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	-	0.1	0.1	0.3	0.7	2.2	2.4	2.3	-	13.4
Imports	0.1	2.0	2.3	2.8	9.4	18.7	19.6	22.9	39.0	10.2
Exports	-	-0.0	-0.1	-0.0	-0.1	-0.1	-0.2	-0.2	-	7.2
Stock changes	-	-0.2	-0.0	0.2	-0.3	0.1	-0.0	0.0		
Primary supply	0.1	1.9	2.3	3.3	9.8	20.9	21.8	25.0	38.3	10.8
Statistical differences	-	-0.0	0.1	0.3	-0.0	0.3	0.1	-0.2		
Total transformation	-	-1.2	-1.4	-2.1	-7.9	-18.5	-19.5	-22.3	-	12.6
Electricity and heat gen.	-	-1.2	-1.4	-2.1	-7.9	-18.5	-19.5	-22.3	-	12.6
<i>Main activity producers</i> ²	-	-1.2	-1.4	-2.1	-7.9	-18.5	-19.5	-22.3	-	12.6
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-
Coal transformation ³	-	-	-	-	-	-	-	-	-	-
<i>BKB plants</i>	-	-	-	-	-	-	-	-	-	-
<i>Blast furnaces</i>	-	-	-	-	-	-	-	-	-	-
<i>Coke ovens</i>	-	-	-	-	-	-	-	-	-	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	-	-	-
Other transformation ⁴	-	-	-	-	-	-	-	-	-	-
Energy ind. own use	-	-	-	-	-	-	-	-	-	-
Losses	-	-	-	-	-	-	-	-		
Final consumption ⁵	0.1	0.7	1.0	1.4	1.9	2.6	2.4	2.5	25.5	5.1
Industry ⁶	0.1	0.7	1.0	1.4	1.9	2.6	2.4	2.5	25.5	5.1
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-	-
<i>Other industry</i> ⁷	0.1	0.7	1.0	1.4	1.9	2.6	2.4	2.5	25.5	5.1
Transport ⁸	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
<i>Comm. and pub. services</i>	-	-	-	-	-	-	-	-	-	-
<i>Residential</i>	-	-	-	-	-	-	-	-	-	-
<i>Other sectors</i> ⁹	-	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-	-
Electricity gen. - TWh	-	2.9	3.5	7.7	20.0	42.8	55.8	63.5	-	13.1

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

MALAYSIA

Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	33	972	802	12337	26131	22064	21738	25461	28544
Coking coal	-	-	-	-	-	-	-	-	-
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Steam coal⁵	33	972	802	12337	26131	22064	21738	25461	28544
Australia	33	697	210	1270	3149	3974	6003	6080	6757
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	-	66	169	-	1	14	-
China, People's Rep.	-	-	236	58	74	-	4	15	18
Colombia	-	-	-	-	1	-	-	-	-
Indonesia	-	275	144	10739	19984	16116	12621	15977	17419
South Africa	-	-	200	-	2754	1893	1610	995	1062
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	81	1499	2332	3185
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	12	125	-	-	-	48	103
Non-specified/other	-	-	-	79	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-

1. In these tables coal used for PCI and for blending has been classified by the IEA as steam coal. Accordingly, trade data reported here may differ from those reported in Part III where this coal may be shown as coking coal to be consistent with data reported by importing countries and with industry terminology and practice.

2. Earliest year for which split by coal type is available.

3. Total coal does not include peat or oil shale and oil sands.

4. For years prior to 1990.

5. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

MONGOLIA

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	..	3.8	3.1	2.6	5.2	21.7	22.7	19.3	-	6.7
Imports	..	0.0	0.1	0.0	-	-	0.0	0.0	-	-
Exports	..	-0.2	-0.0	-	-2.0	-16.2	-19.1	-13.9	-	17.6
Stock changes	..	-0.0	-0.0	-0.0	0.1	-1.4	1.8	-0.5		
Primary supply	..	3.6	3.2	2.6	3.2	4.2	5.4	4.9	-	1.3
Statistical differences	..	-	-	-	0.0	0.0	0.0	0.0		
Total transformation	..	-2.1	-2.2	-2.2	-2.6	-3.0	-4.0	-4.0	-	2.6
Electricity and heat gen.	..	-2.1	-2.2	-2.2	-2.6	-3.0	-3.9	-4.0	-	2.5
<i>Main activity producers</i> ²	..	-2.1	-2.2	-2.2	-2.6	-3.0	-3.9	-4.0	-	2.5
<i>Autoproducers</i>	..	-	-	-	-	-	-	-	-	-
Gas works	..	-	-	-	-	-	-	-	-	-
Coal transformation ³	..	-	-	-	-	-0.0	-0.0	-0.0	-	-
<i>BKB plants</i>	..	-	-	-	-	-	-	-	-	-
<i>Blast furnaces</i>	..	-	-	-	-	-	-	-	-	-
<i>Coke ovens</i>	..	-	-	-	-	-0.0	-0.0	-0.0	-	-
<i>Patent fuel plants</i>	..	-	-	-	-	-	-	-	-	-
Other transformation ⁴	..	-	-	-	-	-	-	-	-	-
Energy ind. own use	..	-	-	-	-	-0.0	-0.0	-0.0	-	-
Losses	..	-	-	-	-0.0	-0.1	-0.4	-0.1		
Final consumption ⁵	..	1.4	1.0	0.4	0.6	1.0	1.0	0.8	-	-2.5
Industry ⁶	..	0.8	0.6	0.1	0.1	0.3	0.2	0.1	-	-7.6
<i>Iron and steel</i>	..	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	..	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	..	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	..	-	-	-	-	-	-	-	-	-
<i>Other industry</i> ⁷	..	0.8	0.6	0.1	0.1	0.3	0.2	0.1	-	-7.6
Transport ⁸	..	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-	-3.2
Other	..	0.6	0.3	0.3	0.5	0.7	0.8	0.6	-	0.1
<i>Comm. and pub. services</i>	..	0.0	0.0	0.1	-	0.0	0.0	0.0	-	-
<i>Residential</i>	..	0.3	0.1	0.1	0.4	0.5	0.4	0.4	-	1.2
<i>Other sectors</i> ⁹	..	0.3	0.2	0.1	0.1	0.2	0.3	0.2	-	-1.2
Non-energy use	..	-	-	-	-	-	-	-	-	-
Electricity gen. - TWh	..	3.1	2.5	2.9	3.3	4.1	5.0	5.1	-	2.0

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

MONGOLIA

Coking coal exports by destination
(thousand tonnes)

	1978 ¹	1990	2000	2005	2010	2013	2014	2015	2016p
World	..	-	-	-	16050	15441	7716	12509	23573
OECD	..	-	-	-	147	-	-	-	-
Austria	..	-	-	-	-	-	-	-	-
Belgium	..	-	-	-	-	-	-	-	-
Canada	..	-	-	-	-	-	-	-	-
Czech Republic	..	-	-	-	-	-	-	-	-
Denmark	..	-	-	-	-	-	-	-	-
Finland	..	-	-	-	-	-	-	-	-
France	..	-	-	-	-	-	-	-	-
Germany	..	-	-	-	-	-	-	-	-
Greece	..	-	-	-	-	-	-	-	-
Hungary	..	-	-	-	-	-	-	-	-
Israel	..	-	-	-	-	-	-	-	-
Italy	..	-	-	-	-	-	-	-	-
Japan	..	-	-	-	-	-	-	-	-
Korea	..	-	-	-	-	-	-	-	-
Mexico	..	-	-	-	-	-	-	-	-
Netherlands	..	-	-	-	-	-	-	-	-
Norway	..	-	-	-	-	-	-	-	-
Poland	..	-	-	-	-	-	-	-	-
Portugal	..	-	-	-	-	-	-	-	-
Spain	..	-	-	-	-	-	-	-	-
Sweden	..	-	-	-	-	-	-	-	-
Turkey	..	-	-	-	-	-	-	-	-
United Kingdom	..	-	-	-	147	-	-	-	-
United States	..	-	-	-	-	-	-	-	-
Other OECD ²	..	-	-	-	-	-	-	-	-
Non-OECD	..	-	-	-	15903	15441	7716	12509	23573
Brazil	..	-	-	-	-	-	-	-	-
Bulgaria	..	-	-	-	-	-	-	-	-
China, People's Rep.	..	-	-	-	15898	15441	7716	12509	23573
Hong Kong, China	..	-	-	-	-	-	-	-	-
India	..	-	-	-	-	-	-	-	-
Morocco	..	-	-	-	-	-	-	-	-
Romania	..	-	-	-	-	-	-	-	-
Russian Federation	..	-	-	-	5	-	-	-	-
Chinese Taipei	..	-	-	-	-	-	-	-	-
Ukraine	..	-	-	-	-	-	-	-	-
Other Africa	..	-	-	-	-	-	-	-	-
Other Asia	..	-	-	-	-	-	-	-	-
Other Eastern Europe	..	-	-	-	-	-	-	-	-
Other FSU	..	-	-	-	-	-	-	-	-
Other non-OECD Americas	..	-	-	-	-	-	-	-	-
Other Middle East	..	-	-	-	-	-	-	-	-
Non-specified/other	..	-	-	-	-	-	-	-	-

1. Earliest year for which split by coal type is available.

2. Australia, Chile, Estonia, Iceland, Ireland, Latvia, Luxembourg, New Zealand, Slovak Republic, Slovenia and Switzerland.

MOZAMBIQUE

	Coal balance ¹ (Mtce)								Average annual percent change	
	1980	1990	1995	2000	2005	2010	2014	2015	80-90	90-15
Production	0.2	0.0	0.0	0.0	0.0	0.0	5.8	6.2	-15.2	23.1
Imports	0.2	0.0	0.0	-	-	-	-	-	-20.6	-
Exports	-0.1	-	-	-0.0	-0.0	-0.0	-4.4	-4.5	-	-
Stock changes	-	-	-	-	-	-	-1.3	-0.9	-	-
Primary supply	0.2	0.0	0.0	-	-	0.0	0.2	0.7	-14.8	11.3
Statistical differences	-	-	-	-	-	-	-0.1	-0.7		
Total transformation	-0.0	-0.0	-	-	-	-	-	-	-	-
Electricity and heat gen.	-0.0	-0.0	-	-	-	-	-	-	-	-
<i>Main activity producers</i> ²	-0.0	-0.0	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-
Coal transformation ³	-	-	-	-	-	-	-	-	-	-
<i>BKB plants</i>	-	-	-	-	-	-	-	-	-	-
<i>Blast furnaces</i>	-	-	-	-	-	-	-	-	-	-
<i>Coke ovens</i>	-	-	-	-	-	-	-	-	-	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	-	-	-
Other transformation ⁴	-	-	-	-	-	-	-	-	-	-
Energy ind. own use	-	-	-	-	-	-0.0	-0.0	-0.0	-	-
Losses	-	-	-	-	-	-	-	-		
Final consumption ⁵	0.2	0.0	0.0	-	-	0.0	-	-	-18.3	-
Industry ⁶	0.2	0.0	0.0	-	-	0.0	-	-	-18.3	-
<i>Iron and steel</i>	-	-	-	-	-	-	-	-	-	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	-	-	-	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-	-
<i>Other industry</i> ⁷	0.2	0.0	0.0	-	-	0.0	-	-	-18.3	-
Transport ⁸	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
<i>Comm. and pub. services</i>	-	-	-	-	-	-	-	-	-	-
<i>Residential</i>	-	-	-	-	-	-	-	-	-	-
<i>Other sectors</i> ⁹	-	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-	-
Electricity gen. - TWh	0.1	0.1	-	-	-	-	-	-	-2.5	-

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

MOZAMBIQUE

Coking coal exports by destination
(thousand tonnes)

	1978 ¹	1990	2000	2005	2010	2013	2014	2015	2016p
World	-	-	-	-	-	3127	3633	4060	3697
OECD	-	-	-	-	-	814	1470	1644	1442
Austria	-	-	-	-	-	-	24	51	-
Belgium	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-
France	-	-	-	-	-	150	119	77	-
Germany	-	-	-	-	-	38	-	-	-
Greece	-	-	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-	-
Italy	-	-	-	-	-	-	-	-	-
Japan	-	-	-	-	-	-	169	254	843
Korea	-	-	-	-	-	-	197	77	229
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	-	-	-	-	-	201	505	1072	145
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	13	-	-
Portugal	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	108	21	-	-
Sweden	-	-	-	-	-	-	-	-	-
Turkey	-	-	-	-	-	88	77	-	-
United Kingdom	-	-	-	-	-	229	214	93	101
United States	-	-	-	-	-	-	-	-	-
Other OECD ²	-	-	-	-	-	-	131	20	124
Non-OECD	-	-	-	-	-	2313	1564	1635	1635
Brazil	-	-	-	-	-	161	-	-	-
Bulgaria	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	456	-	-	-
Hong Kong, China	-	-	-	-	-	-	-	-	-
India	-	-	-	-	-	1696	1564	1635	1635
Morocco	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	-
Russian Federation	-	-	-	-	-	-	-	-	-
Chinese Taipei	-	-	-	-	-	-	-	-	-
Ukraine	-	-	-	-	-	-	-	-	-
Other Africa	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-
Other Eastern Europe	-	-	-	-	-	-	-	-	-
Other FSU	-	-	-	-	-	-	-	-	-
Other non-OECD Americas	-	-	-	-	-	-	-	-	-
Other Middle East	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	599	781	620

1. Earliest year for which split by coal type is available.

2. Australia, Chile, Estonia, Iceland, Ireland, Latvia, Luxembourg, New Zealand, Slovak Republic, Slovenia and Switzerland.

PHILIPPINES

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	0.2	0.9	1.0	1.0	2.2	5.0	5.7	5.6	14.2	7.4
Imports	0.5	1.3	1.8	6.4	6.2	9.1	12.9	14.5	9.6	10.3
Exports	-	-	-	-	-	-3.1	-4.3	-2.3	-	-
Stock changes	-0.0	-	-	-	-	-0.1	2.4	0.3		
Primary supply	0.7	2.2	2.7	7.4	8.3	10.9	16.6	18.1	11.6	8.8
Statistical differences	-0.2	-0.4	-0.3	-0.2	-0.2	-0.2	-0.4	-0.4		
Total transformation	-0.2	-0.9	-1.3	-6.0	-6.5	-8.0	-12.9	-14.4	14.9	11.7
Electricity and heat gen.	-0.1	-0.7	-1.1	-5.9	-6.4	-7.9	-12.8	-14.3	26.4	12.7
<i>Main activity producers</i> ²	-0.1	-0.7	-1.1	-5.9	-6.4	-7.9	-12.8	-14.3	26.4	12.7
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-
Coal transformation ³	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.2	-0.1	1.7	-1.0
<i>BKB plants</i>	-	-	-	-	-	-	-	-	-	-
<i>Blast furnaces</i>	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.2	-0.1	1.7	-1.0
<i>Coke ovens</i>	-	-	-	-	-	-	-	-	-	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	-	-	-
Other transformation ⁴	-	-	-	-	-	-	-	-	-	-
Energy ind. own use	-	-	-	-	-	-	-	-	-	-
Losses	-	-	-	-	-	-	-	-		
Final consumption ⁵	0.3	0.9	1.2	1.1	1.6	2.7	3.3	3.3	10.9	5.4
Industry ⁶	0.3	0.9	1.2	1.1	1.6	2.7	3.3	3.3	11.1	5.4
<i>Iron and steel</i>	0.2	0.1	0.1	0.1	0.1	0.2	0.4	0.4	-2.0	4.6
<i>Chemical</i>	-	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-	-5.0
<i>Non-metallic minerals</i>	0.1	0.7	1.0	1.0	1.5	2.3	2.4	2.5	18.7	5.6
<i>Paper, pulp and print</i>	-	-	-	-	0.0	0.1	0.1	0.1	-	-
<i>Other industry</i> ⁷	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.2	-	7.4
Transport ⁸	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
<i>Comm. and pub. services</i>	-	-	-	-	-	-	-	-	-	-
<i>Residential</i>	-	-	-	-	-	-	-	-	-	-
<i>Other sectors</i> ⁹	-	-	-	-	-	-	-	-	-	-
Non-energy use	0.0	-	-	-	-	-	-	-	-	-
Electricity gen. - TWh	0.2	1.9	2.1	16.7	15.3	23.3	33.1	36.7	26.7	12.5

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

PHILIPPINES

Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	20	1364	7245	7766	11181	14199	14890	17041	19425
Coking coal	-	-	-	-	-	-	-	-	-
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Steam coal⁵	20	1364	7245	7766	11181	14199	14890	17029	19425
Australia	20	550	1911	646	68	426	-	892	1379
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	1	-	-	-	-	-	-	-
Other OECD	-	14	-	-	1	-	-	-	-
China, People's Rep.	-	358	1798	1332	1	-	-	22	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	238	3536	5193	11111	13773	14688	15819	17752
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	202	108	186
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	203	-	583	-	-	-	148	108
Non-specified/other	-	-	-	12	-	-	-	40	-
Lignite	-	-	-	-	-	-	-	12	-

1. In these tables coal used for PCI and for blending has been classified by the IEA as steam coal. Accordingly, trade data reported here may differ from those reported in Part III where this coal may be shown as coking coal to be consistent with data reported by importing countries and with industry terminology and practice.

2. Earliest year for which split by coal type is available.

3. Total coal does not include peat or oil shale and oil sands.

4. For years prior to 1990.

5. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

ROMANIA

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	11.6	12.4	11.3	8.0	8.3	8.4	6.4	6.8	0.7	-2.3
Imports	6.4	6.4	4.4	2.7	4.2	1.8	1.4	1.5	0.1	-5.6
Exports	-	-	-0.3	-0.0	-0.0	-0.1	-0.0	-0.1	-	-
Stock changes	-	-0.3	0.1	-0.1	0.1	-0.2	0.4	0.2		
Primary supply	17.9	18.5	15.4	10.6	12.5	9.9	8.2	8.5	0.3	-3.1
Statistical differences	-0.3	-0.1	-0.3	-0.1	0.3	0.1	0.0	0.1		
Total transformation	-9.6	-13.8	-12.9	-9.2	-10.6	-8.9	-7.1	-7.5	3.7	-2.4
Electricity and heat gen.	-6.7	-11.3	-10.9	-8.0	-9.1	-8.4	-6.8	-7.1	5.3	-1.8
<i>Main activity producers</i> ²	-6.7	-9.2	-10.7	-7.7	-8.5	-7.7	-6.4	-6.8	3.2	-1.2
<i>Autoproducers</i>	-	-2.0	-0.2	-0.3	-0.6	-0.6	-0.5	-0.3	-	-7.4
Gas works	-	-	-	-	-	-	-	-	-	-
Coal transformation ³	-2.9	-2.6	-1.9	-1.2	-1.5	-0.5	-0.3	-0.4	-1.2	-7.5
<i>BKB plants</i>	-0.5	-0.2	-	-	-	-	-	-	-6.9	-
<i>Blast furnaces</i>	-2.6	-2.1	-1.4	-0.9	-1.3	-0.5	-0.3	-0.4	-2.2	-6.8
<i>Coke ovens</i>	-0.1	-0.3	-0.5	-0.4	-0.2	-0.0	-	-	9.2	-
<i>Patent fuel plants</i>	0.4	0.1	-	-	-	-	-	-	-9.5	-
Other transformation ⁴	-	-	-	-	-	-	-	-	-	-
Energy ind. own use	-	-	-0.1	-0.2	-0.4	-0.1	-0.1	-0.1	-	-
Losses	-	-0.2	-0.2	-0.0	-0.1	-0.0	-0.0	-0.0		
Final consumption ⁵	8.1	4.3	1.9	1.1	1.7	1.0	0.9	1.0	-6.1	-5.6
Industry ⁶	4.9	3.0	1.8	1.0	1.6	1.0	0.8	0.9	-4.9	-4.8
<i>Iron and steel</i>	3.8	2.3	1.7	0.8	1.4	0.7	0.6	0.7	-4.8	-4.9
<i>Chemical</i>	-	0.2	0.0	0.2	0.2	0.2	0.1	0.1	-	-2.7
<i>Non-metallic minerals</i>	-	0.1	0.0	0.0	0.1	0.1	0.1	0.1	-	0.1
<i>Paper, pulp and print</i>	-	-	0.0	0.0	-	-	-	-	-	-
<i>Other industry</i> ⁷	1.1	0.4	0.1	0.0	0.0	0.0	0.0	0.0	-10.9	-11.9
Transport ⁸	-	0.0	0.0	-	-	-	-	-	-	-
Other	3.2	1.3	0.1	0.1	0.0	0.0	0.1	0.1	-8.4	-9.1
<i>Comm. and pub. services</i>	-	-	-	0.0	0.0	0.0	0.0	0.0	-	-
<i>Residential</i>	0.5	0.9	0.1	0.1	0.0	0.0	0.1	0.1	5.2	-8.0
<i>Other sectors</i> ⁹	2.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	-16.4	-13.5
Non-energy use	-	-	0.0	-	-	-	0.0	0.0	-	-
Electricity gen. - TWh	21.2	18.5	20.8	19.3	22.1	20.7	17.8	18.2	-1.4	-0.1

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

ROMANIA

Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	4669	4981	2522	2980	1150	1104	1084	1143	1019
Coking coal	3600	3600	2370	1577	233	93	21	14	11
Australia	675	1200	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	12	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	100	62	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	673	1188	678	547	233	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	400	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	3	-	-
Former Soviet Union ⁴	2252	700	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	1630	1030	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	4	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	93	14	14	11
Steam coal⁵	1069	1381	152	1140	764	837	675	775	796
Australia	-	33	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	4	-	-	8
Germany	-	-	-	-	-	-	-	-	-
Poland	-	16	-	-	-	30	36	67	51
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	11	-	230	-	8	-	18	-
Other OECD	-	-	-	-	-	29	4	4	4
China, People's Rep.	-	-	-	-	-	-	2	1	-
Colombia	-	-	69	-	16	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	37	238	108	90	109
Former Soviet Union ⁴	1069	1321	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	32	832	448	358	365	571	601
<i>Other FSU</i>	x	x	-	78	194	170	159	23	2
Venezuela	-	-	51	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	69	-	1	1	21
Lignite	-	-	-	263	153	174	388	354	212

1. In these tables coal used for PCI and for blending has been classified by the IEA as steam coal. Accordingly, trade data reported here may differ from those reported in Part III where this coal may be shown as coking coal to be consistent with data reported by importing countries and with industry terminology and practice.

2. Earliest year for which split by coal type is available.

3. Total coal does not include peat or oil shale and oil sands.

4. For years prior to 1990.

5. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

RUSSIAN FEDERATION

	Coal balance ¹ (Mtce)								Average annual percent change	
	1980	1990	1995	2000	2005	2010	2014	2015	80-90	90-15
Production	x	274.8	186.7	183.6	224.9	237.7 e	271.1 e	286.1 e	-	0.2
Imports	x	50.1	20.0	22.0	19.5	21.9 e	22.7 e	20.4	-	-3.5
Exports	x	-57.7	-26.8	-36.4	-79.7	-122.8	-143.1	-142.5	-	3.7
Stock changes	x	5.7	4.6	2.2	-3.8	7.4 e	-2.2 e	2.3		
Primary supply	x	272.9	184.5	171.4	160.9	144.2	148.5	166.3	-	-2.0
Statistical differences	x	6.0	5.7	-4.0	-3.8	7.7	-4.8	-4.7		
Total transformation	x	-181.8	-145.4	-139.3 e	-137.3 e	-128.3 e	-125.2 e	-141.3 e	-	-1.0
Electricity and heat gen.	x	-149.9	-115.6	-114.1	-109.8	-101.2	-85.3 e	-92.3 e	-	-1.9
<i>Main activity producers</i> ²	x	-124.2	-88.1	-80.6	-74.6	-71.3	-62.2	-68.5 e	-	-2.4
<i>Autoproducers</i>	x	-25.7	-27.5	-33.5	-35.2	-29.9	-23.2 e	-23.9 e	-	-0.3
Gas works	x	-	-	-	-	-	-	-	-	-
Coal transformation ³	x	-31.9	-29.9	-25.1 e	-27.5 e	-27.1 e	-39.8	-48.9 e	-	1.7
<i>BKB plants</i>	x	-1.5	-0.6	-0.0	-0.0	-0.0	-0.0	-0.0	-	-21.2
<i>Blast furnaces</i>	x	-19.4	-18.9	-15.3 e	-16.7 e	-20.3 e	-32.1	-33.5 e	-	2.2
<i>Coke ovens</i>	x	-10.9	-10.3	-9.8	-10.8	-6.8 e	-7.7	-15.5 e	-	1.4
<i>Patent fuel plants</i>	x	-	-	-	-	0.0	-	-	-	-
Other transformation ⁴	x	-	-	-	-	-	-	-	-	-
Energy ind. own use	x	-0.8	-0.7	-0.8	-0.8	-3.2	-2.7	-2.8 e	-	5.3
Losses	x	-18.3	-9.4	-1.6	-	-	-	-		
Final consumption ⁵	x	78.2	34.7	25.7	18.9	20.3	15.8	17.5	-	-5.8
Industry ⁶	x	20.8	17.5	10.4	9.8	14.1	11.8	12.1	-	-2.1
<i>Iron and steel</i>	x	15.1	13.0	6.6 e	7.6 e	11.6 e	9.7	9.7	-	-1.8
<i>Chemical</i>	x	0.6	0.5	0.1	0.0	0.3	0.2	0.6	-	-0.1
<i>Non-metallic minerals</i>	x	0.5	0.9	0.8	1.0	1.6	1.5	1.4	-	4.4
<i>Paper, pulp and print</i>	x	-	-	-	0.0	0.1	0.0	0.0	-	-
<i>Other industry</i> ⁷	x	4.6	3.1	2.9	1.2	0.5	0.5	0.5	-	-8.8
Transport ⁸	x	0.0	0.0	-	-	-	-	-	-	-
Other	x	57.4	17.2	14.2	8.1	5.9	3.7	5.1	-	-9.2
<i>Comm. and pub. services</i>	x	29.4	1.2	0.6	3.8	3.5	1.5	2.0 e	-	-10.2
<i>Residential</i>	x	17.0	11.7	12.8	4.0	2.2	2.1	3.0 e	-	-6.7
<i>Other sectors</i> ⁹	x	11.0	4.3	0.9	0.2	0.1	0.1	0.1 e	-	-16.2
Non-energy use	x	-	-	1.1	1.0	0.4	0.3	0.3	-	-
Electricity gen. - TWh	x	157.0	160.5	175.6	165.5	166.1	158.3	158.6	-	0.0

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

RUSSIAN FEDERATION

Coking coal exports by destination
(thousand tonnes)

	1978 ¹	1990	2000	2005	2010	2013	2014	2015	2016p
World	x	31573	6704	9981	16338	21528	21082	18480	21625
OECD	x	10503	1504	4189	7534	6928	6873	8083	9611
Austria	x	608	-	31	-	-	-	-	-
Belgium	x	-	-	-	315	396	49	35	72
Canada	x	-	-	-	-	-	-	-	-
Czech Republic	x	1532	-	-	-	-	-	2	-
Denmark	x	-	-	-	7	14	33	84	69
Finland	x	463	91	94	59	278	125	355	145
France	x	-	-	-	143	66	34	42	127
Germany	x	177	-	157	793	402	67	144	362
Greece	x	-	-	-	31	-	-	-	16
Hungary	x	480	132	219	47	-	-	-	9
Israel	x	-	-	-	42	98	-	47	-
Italy	x	131	-	234	414	78	103	114	91
Japan	x	5482	462	2454	2094	1788	1983	2451	3038
Korea	x	1200	-	626	1258	1978	2374	3219	4293
Mexico	x	-	-	-	-	-	-	-	4
Netherlands	x	-	-	223	494	471	212	448	450
Norway	x	-	-	-	-	-	-	-	-
Poland	x	-	736	-	98	178	193	47	52
Portugal	x	-	-	-	-	-	-	-	-
Spain	x	-	72	-	-	21	27	52	89
Sweden	x	-	-	-	19	10	14	1	20
Turkey	x	337	-	35	107	477	906	612	460
United Kingdom	x	93	11	-	512	490	448	132	188
United States	x	-	-	-	-	5	-	-	-
Other OECD ²	x	-	-	116	1101	178	305	298	126
Non-OECD	x	21070	5200	5792	8804	14600	14129	10397	11916
Brazil	x	-	-	-	77	15	87	9	94
Bulgaria	x	156	174	72	23	1	1	16	-
China, People's Rep.	x	-	-	-	2528	6497	5327	3780	2757
Hong Kong, China	x	-	-	-	-	-	75	20	6
India	x	-	-	-	9	25	21	36	238
Morocco	x	-	-	-	47	-	51	17	62
Romania	x	500	1525	729	13	174	163	246	190
Russian Federation	x	-	-	-	-	-	-	-	-
Chinese Taipei	x	-	1337	160	116	170	509	366	120
Ukraine	x	19964	2164	4606	5579	6685	6725	4927	7219
Other Africa	x	150	-	16	-	-	-	-	-
Other Asia	x	300	-	7	93	147	197	510	808
Other Eastern Europe	x	-	-	48	-	14	59	133	67
Other FSU	x	-	-	1	319	872	885	337	355
Other non-OECD Americas	x	-	-	-	-	-	18	-	-
Other Middle East	x	-	-	153	-	-	11	-	-
Non-specified/other	x	-	-	-	-	-	80	-	98

1. Earliest year for which split by coal type is available.

2. Australia, Chile, Estonia, Iceland, Ireland, Latvia, Luxembourg, New Zealand, Slovak Republic, Slovenia and Switzerland.

RUSSIAN FEDERATION

Steam coal¹ exports by destination
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	x	24478	29738	76020	114244	117451	132018	133390	144508
OECD	x	10225	25771	56879	88045	83304	91013	92221	96856
Austria	x	-	-	9	60	-	-	10	9
Belgium	x	234	788	2739	4452	1847	2209	2204	1226
Canada	x	-	-	453	286	-	-	63	93
Czech Republic	x	-	-	117	431	42	49	99	92
Denmark	x	1142	1295	827	1287	806	1225	776	1238
Finland	x	1905	2449	4790	3988	2881	3436	2143	1782
France	x	777	282	367	2404	1506	1117	1281	2721
Germany	x	157	928	7333	6875	3881	4604	6283	8160
Greece	x	324	320	125	412	7	64	266	179
Hungary	x	-	87	132	407	7	1	3	2
Israel	x	-	-	-	962	1935	2477	2155	2492
Italy	x	609	1092	799	1109	769	1338	2106	1769
Japan	x	2845	7041	8119	11839	10724	12674	13378	15506
Korea	x	-	2565	2446	9970	12567	13781	15958	20464
Mexico	x	-	-	-	-	-	-	-	137
Netherlands	x	32	209	1400	8773	5436	7415	9749	8743
Norway	x	97	13	-	173	110	87	84	22
Poland	x	-	14	2042	9610	5876	6247	4608	5216
Portugal	x	54	-	-	45	-	-	-	-
Spain	x	285	1340	3657	698	1719	1519	3423	2374
Sweden	x	573	271	453	871	249	288	413	386
Turkey	x	530	5063	6509	12079	8488	7711	9146	11034
United Kingdom	x	499	480	12412	10360	22953	23579	16735	10997
United States	x	-	-	52	-	50	43	-	54
Other OECD ³	x	162	1534	2098	954	1451	1149	1338	2160
Non-OECD	x	14253	3967	18845	26130	34147	40800	41074	46833
Brazil	x	-	-	538	379	192	153	324	1058
Bulgaria	x	-	364	1765	888	560	484	965	645
China, People's Rep.	x	-	72	1002	10197	18578	20183	12543	13235
Hong Kong, China	x	-	61	-	10	116	338	733	939
India	x	-	36	49	314	598	1616	2990	2952
Morocco	x	-	-	56	1448	127	1351	1579	2578
Romania	x	-	5	806	476	112	97	344	274
Russian Federation	x	-	-	-	-	-	-	-	-
Chinese Taipei	x	-	-	1286	1519	2953	4994	6151	7510
Ukraine	x	6722	2175	2235	9042	3914	3087	4080	2709
Other Africa	x	-	-	-	61	41	113	244	497
Other Asia	x	-	-	30	98	758	2589	5210	9038
Other Eastern Europe	x	-	-	8828	46	152	918	446	836
Other FSU	x	7531	1254	2204	1311	5802	4477	5344	4463
Other non-OECD Americas	x	-	-	-	-	-	39	113	-
Other Middle East	x	-	-	46	341	244	361	8	99
Non-specified/other	x	-	-	296	69	-	205	95	819

1. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. Australia, Chile, Estonia, Iceland, Ireland, Latvia, Luxembourg, New Zealand, Slovak Republic, Slovenia and Switzerland.

SERBIA

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	x	14.5	12.6	11.9	10.7	10.3	8.2	10.3	-	-1.4
Imports	x	-	0.1	0.4	1.0	1.1	0.7	0.9	-	-
Exports	x	-	-0.1	-0.0	-0.1	-0.1	-0.0	-0.0	-	-
Stock changes	x	-	-	-	-0.1	-0.2	0.1	-0.1	-	-
Primary supply	x	14.5	12.6	12.3	11.5	11.2	8.9	11.1	-	-1.1
Statistical differences	x	-0.0	-0.0	-0.1	0.1	-0.1	0.0	-0.1		
Total transformation	x	-13.2	-11.9	-10.5	-10.2	-9.7	-8.2	-10.1	-	-1.1
Electricity and heat gen.	x	-12.9	-11.7	-10.3	-9.9	-9.3	-8.0	-9.8	-	-1.1
<i>Main activity producers</i> ²	x	-12.9	-11.7	-10.3	-9.6	-9.1	-7.9	-9.6	-	-1.2
<i>Autoproducers</i>	x	-	-	-	-0.3	-0.3	-0.2	-0.2	-	-
Gas works	x	-	-	-	-	-	-	-	-	-
Coal transformation ³	x	-0.3	-0.1	-0.2	-0.3	-0.4	-0.1	-0.3	-	0.2
<i>BKB plants</i>	x	-0.3	-0.1	-0.2	-0.2	-0.1	-0.0	-0.0	-	-6.7
<i>Blast furnaces</i>	x	-	-	-	-0.2	-0.3	-0.1	-0.2	-	-
<i>Coke ovens</i>	x	-	-	-	-	-	-	-	-	-
<i>Patent fuel plants</i>	x	-	-	-	-	-	-	-	-	-
Other transformation ⁴	x	-	-	-	-	-	-	-	-	-
Energy ind. own use	x	-	-	-	-	-	-	-	-	-
Losses	x	-	-	-	-0.0	-0.1	-0.0	-0.1		
Final consumption ⁵	x	1.4	0.7	1.8	1.4	1.3	0.7	0.8	-	-1.9
Industry ⁶	x	0.5	0.3	1.0	0.6	0.6	0.4	0.5	-	-0.4
<i>Iron and steel</i>	x	0.1	0.0	0.3	0.4	0.3	0.1	0.1	-	3.8
<i>Chemical</i>	x	-	-	-	0.0	0.0	0.0	0.0	-	-
<i>Non-metallic minerals</i>	x	-	-	-	0.1	0.2	0.1	0.1	-	-
<i>Paper, pulp and print</i>	x	-	-	-	-	0.0	-	0.0	-	-
<i>Other industry</i> ⁷	x	0.5	0.3	0.7	0.1	0.1	0.2	0.2	-	-4.4
Transport ⁸	x	-	-	-	0.0	-	-	-	-	-
Other	x	0.8	0.4	0.8	0.8	0.6	0.3	0.3	-	-3.7
<i>Comm. and pub. services</i>	x	-	-	-	0.1	0.3	0.1	0.1	-	-
<i>Residential</i>	x	0.7	0.4	0.6	0.6	0.3	0.2	0.2	-	-4.3
<i>Other sectors</i> ⁹	x	0.1	0.1	0.2	-	0.0	-	-	-	-
Non-energy use	x	-	-	-	-	0.0	0.0	0.0	-	-
Electricity gen. - TWh	x	28.3	21.7	21.4	23.4	25.1	22.2	27.2	-	-0.2

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

SOUTH AFRICA

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	95.4	143.1	168.6	181.3	197.7	205.6	210.6	208.9	4.1	1.5
Imports	-	-	0.4	1.2	2.0	2.2	0.9	0.8	-	-
Exports	-27.2	-48.0	-57.6	-67.0	-68.3	-64.3	-66.0	-72.2	5.8	1.6
Stock changes	-	-	0.2	1.3	-	-0.0	0.3	0.0		
Primary supply	68.1	95.1	111.6	116.8	131.3	143.5	145.8	137.6	3.4	1.5
Statistical differences	3.6	6.7	-3.4	-0.0	2.4	-1.0	2.0	6.9		
Total transformation	-44.7	-78.3	-85.7	-94.1	-93.4	-104.5	-105.4	-103.5	5.8	1.1
Electricity and heat gen.	-35.0	-51.7	-60.2	-68.3	-75.8	-87.5	-90.1	-88.1	4.0	2.2
<i>Main activity producers</i> ²	-32.1	-48.6	-56.6	-64.4	-72.1	-84.0	-86.6	-84.0	4.2	2.2
<i>Autoproducers</i>	-2.9	-3.2	-3.5	-4.0	-3.7	-3.4	-3.4	-4.1	0.9	1.0
Gas works	-2.8	-3.2	-3.7	-3.3	-7.3	-6.9	-5.9	-5.9	1.4	2.5
Coal transformation ³	-3.8	-3.3	-2.0	-1.2	-2.0	-2.6	-2.1	-2.2	-1.4	-1.7
<i>BKB plants</i>	-	-	-	-	-	-	-	-	-	-
<i>Blast furnaces</i>	-2.5	-1.7	-1.0	-0.7	-0.8	-1.3	-1.1	-1.1	-3.8	-1.8
<i>Coke ovens</i>	-1.3	-1.6	-1.0	-0.6	-1.1	-1.3	-1.0	-1.1	2.0	-1.7
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	-	-	-
Other transformation ⁴	-3.1	-20.1	-19.9	-21.2	-8.3	-7.4	-7.3	-7.4	20.6	-3.9
Energy ind. own use	-0.0	-0.0	-	-0.0	-13.4	-14.6	-14.7	-14.9	-	32.6
Losses	-	-	-	-	-	-	-	-		
Final consumption ⁵	27.0	23.4	22.4	22.8	26.9	23.5	27.7	26.1	-1.4	0.4
Industry ⁶	20.7	15.8	11.6	13.0	18.1	16.8	16.1	16.2	-2.7	0.1
<i>Iron and steel</i>	10.1	9.0	6.0	5.8	6.1	5.5	4.8	4.0	-1.1	-3.2
<i>Chemical</i>	0.1	0.1	1.5	1.5	1.4	1.4	1.2	1.2	0.3	11.8
<i>Non-metallic minerals</i>	2.2	2.0	1.7	1.3	2.0	1.7	1.3	1.6	-1.2	-1.0
<i>Paper, pulp and print</i>	-	-	0.0	0.1	0.1	0.1	0.1	0.1	-	-
<i>Other industry</i> ⁷	8.3	4.7	2.4	4.3	8.5	8.1	8.7	9.4	-5.5	2.8
Transport ⁸	1.8	0.1	0.0	-	-	0.0	0.0	-	-28.0	-
Other	3.3	3.5	4.1	2.2	6.8	4.8	9.6	8.0	0.5	3.4
<i>Comm. and pub. services</i>	1.1	1.3	1.4	0.7	2.3	1.4	3.0	2.5	1.8	2.6
<i>Residential</i>	2.1	2.1	2.4	1.4	4.5	2.8	5.9	4.9	-0.1	3.4
<i>Other sectors</i> ⁹	0.1	0.0	0.3	0.1	0.0	0.6	0.7	0.6	-6.0	10.8
Non-energy use	1.2	4.0	6.8	7.5	2.0	1.9	2.1	1.8	13.1	-3.0
Electricity gen. - TWh	97.9	155.9	173.2	193.4	229.1	241.9	232.3	228.8	4.8	1.5

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

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3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

SOUTH AFRICA

Steam coal¹ exports by destination
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	12689	45867	67001	70917	65562	73993	68246	75080	75434
OECD	12689	36477	54371	60360	23056	21907	20501	19391	14283
Austria	-	6	-	-	-	-	-	-	-
Belgium	606	4365	2504	1757	527	318	-	93	-
Canada	-	-	46	-	-	29	-	571	50
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	868	-	1721	2070	906	300	-	326	433
Finland	-	-	-	-	-	-	-	-	-
France	6643	863	5872	5340	1323	1322	838	386	650
Germany	1108	4512	3979	8812	1149	3337	304	179	205
Greece	-	1017	269	75	70	-	-	40	-
Hungary	-	-	-	-	-	-	-	-	-
Israel	-	2583	5523	5329	2826	3305	2504	2558	1003
Italy	960	4884	4173	4939	3236	2434	1516	3883	2799
Japan	157	1427	1661	155	420	549	145	150	-
Korea	1861	5733	2385	139	1956	150	305	318	2739
Mexico	-	-	41	-	1368	-	-	-	137
Netherlands	309	1304	7564	6527	2723	4074	9296	2643	2997
Norway	-	-	-	-	5	-	-	-	-
Poland	-	-	265	-	-	-	-	-	-
Portugal	3	2112	2112	1926	321	377	155	332	160
Spain	114	4667	8403	8642	2724	1699	1555	2401	1092
Sweden	-	-	-	-	-	-	-	-	-
Turkey	-	1252	2547	1324	2080	2835	3668	4548	1571
United Kingdom	26	356	4503	12144	744	441	151	299	117
United States	-	-	50	135	-	511	-	504	250
Other OECD ³	34	1396	753	1046	678	226	64	160	80
Non-OECD	-	9085	12283	10050	42506	52086	47685	55419	61084
Brazil	-	-	1919	673	1122	631	1015	907	879
Bulgaria	-	-	107	-	-	-	-	-	95
China, People's Rep.	-	-	522	-	4226	13127	3261	-	60
Hong Kong, China	-	3217	486	-	162	-	-	-	-
India	-	-	3636	3587	23440	22271	30579	33884	37568
Morocco	-	-	1978	2993	810	300	935	4151	2244
Romania	-	-	-	-	189	358	43	32	163
Russian Federation	-	-	-	-	-	-	-	32	-
Chinese Taipei	-	5685	2488	522	2566	5804	1344	1238	765
Ukraine	-	-	-	61	-	-	566	584	228
Other Africa	-	-	356	970	2067	1665	2248	5792	6564
Other Asia	-	183	201	244	4727	4507	5031	6512	9452
Other Eastern Europe	-	-	-	367	-	5	135	-	38
Other FSU	-	-	-	-	-	-	-	-	-
Other non-OECD Americas	-	-	554	397	1203	413	331	211	392
Other Middle East	-	-	36	236	1994	3005	2197	2076	2636
Non-specified/other	-	305	347	507	-	-	60	270	67

1. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. Australia, Chile, Estonia, Iceland, Ireland, Latvia, Luxembourg, New Zealand, Slovak Republic, Slovenia and Switzerland.

CHINESE TAIPEI

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	2.3	0.4	0.2	0.1	-	-	-	-	-15.6	-
Imports	4.5	17.5	27.2	41.4	55.2	59.2	57.9	57.5	14.7	4.9
Exports	-0.0	-0.0	-	-0.0	-0.0	-0.1	-0.1	-	-	-
Stock changes	-1.2	-1.7	-2.6	1.2	-0.7	0.1	0.6	-0.8		
Primary supply	5.5	16.2	24.7	42.7	54.5	59.2	58.4	56.7	11.3	5.1
Statistical differences	0.0	-0.1	-0.8	-1.7	-0.4	-1.3	-2.3	-2.7		
Total transformation	-2.4	-10.2	-17.5	-32.8	-44.4	-45.0	-43.5	-41.3	15.6	5.7
Electricity and heat gen.	-2.2	-8.4	-15.5	-29.8	-41.4	-41.8	-39.1	-37.3	14.3	6.1
<i>Main activity producers</i> ²	-2.2	-7.3	-12.6	-22.7	-31.5	-32.1	-29.3	-28.2	12.6	5.6
<i>Autoproducers</i>	-	-1.2	-2.9	-7.1	-9.9	-9.7	-9.9	-9.1	-	8.6
Gas works	-	-	-	-	-	-	-	-	-	-
Coal transformation ³	-0.2	-1.8	-1.9	-3.0	-3.0	-3.2	-4.4	-4.0	25.9	3.2
<i>BKB plants</i>	-	-	-	-	-	-	-	-	-	-
<i>Blast furnaces</i>	-	-1.6	-1.8	-2.7	-2.9	-3.2	-4.2	-3.5	-	3.2
<i>Coke ovens</i>	-0.2	-0.2	-0.1	-0.2	-0.1	-0.0	-0.2	-0.5	2.4	3.2
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	-	-	-
Other transformation ⁴	-	-	-	-	-	-	-	-	-	-
Energy ind. own use	-0.0	-0.7	-0.8	-1.1	-1.1	-1.3	-1.6	-1.6	37.5	3.3
Losses	-	-0.0	-0.0	-0.0	-0.1	-0.1	-0.2	-0.2		
Final consumption ⁵	3.1	5.1	5.7	7.1	8.5	11.5	10.8	10.9	5.0	3.1
Industry ⁶	3.0	4.9	5.4	6.8	8.2	10.1	10.6	10.6	5.0	3.1
<i>Iron and steel</i>	1.2	1.0	1.1	1.8	1.8	2.2	2.2	2.1	-1.8	2.9
<i>Chemical</i>	0.2	1.0	1.4	2.7	3.4	5.4	5.8	6.0	16.1	7.6
<i>Non-metallic minerals</i>	1.2	2.5	2.4	2.0	2.3	2.0	1.9	1.9	7.4	-1.1
<i>Paper, pulp and print</i>	0.1	0.3	0.4	0.3	0.4	0.4	0.6	0.5	11.4	2.5
<i>Other industry</i> ⁷	0.2	0.1	0.2	0.2	0.3	0.2	0.1	0.1	-8.8	0.4
Transport ⁸	0.0	-	-	-	-	-	-	-	-	-
Other	0.1	0.0	-	0.0	-	-	-	-	-23.3	-
<i>Comm. and pub. services</i>	-	-	-	-	-	-	-	-	-	-
<i>Residential</i>	0.0	-	-	-	-	-	-	-	-	-
<i>Other sectors</i> ⁹	0.1	0.0	-	0.0	-	-	-	-	-22.5	-
Non-energy use	-	0.2	0.3	0.2	0.3	1.3	0.2	0.3	-	1.1
Electricity gen. - TWh	6.0	24.5	51.0	88.3	123.9	125.3	125.4	119.1	15.2	6.5

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

CHINESE TAIPEI

Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	1386	18468	45503	60370	63951	65951	65781	64759	65627
Coking coal	1386	4237	6093	5211	8490	6727	6870	6405	6581
Australia	918	2749	3524	4778	7390	6727	6128	5731	5698
Canada	263	1050	1232	136	831	-	742	674	883
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	205	438	-	47	227	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	3	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	112	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	1337	-	42	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	17	-	-	-	-	-
Non-specified/other	-	-	-	118	-	-	-	-	-
Steam coal⁵	-	14231	39410	55159	55461	59224	58911	58354	59046
Australia	-	3800	12474	15342	21441	18742	18769	20730	24912
Canada	-	-	-	261	-	1323	511	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	3677	514	-	-	339	-	-	-
Other OECD	-	-	1290	21	9	-	-	-	-
China, People's Rep.	-	529	8371	18942	4181	869	586	380	1046
Colombia	-	-	-	-	2099	-	-	-	82
Indonesia	-	625	13740	18430	23361	28165	30738	28035	24423
South Africa	-	5600	2873	329	2748	5850	1822	1479	1151
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	1226	1530	3016	5638	6880	7064
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	78	133	50	26	27	26	57
Non-specified/other	-	-	70	475	42	894	820	824	311
Lignite	-	-	-	-	-	-	-	-	-

1. In these tables coal used for PCI and for blending has been classified by the IEA as steam coal. Accordingly, trade data reported here may differ from those reported in Part III where this coal may be shown as coking coal to be consistent with data reported by importing countries and with industry terminology and practice.

2. Earliest year for which split by coal type is available.

3. Total coal does not include peat or oil shale and oil sands.

4. For years prior to 1990.

5. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

THAILAND

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	0.6	5.1	7.6	7.3	8.6	7.6	6.6	5.5	24.2	0.3
Imports	0.1	0.3	2.2	3.7	7.7	15.3	19.2	21.6	13.2	18.7
Exports	-0.0	-	-	-	-	-0.0	-0.0	-0.0	-	-
Stock changes	-	0.0	0.0	-0.1	0.1	0.5	-3.1	-3.0		
Primary supply	0.7	5.5	9.8	11.0	16.4	23.4	22.7	24.1	23.3	6.1
Statistical differences	-0.0	0.1	0.4	0.1	0.2	-0.3	0.2	0.1		
Total transformation	-0.5	-3.7	-5.1	-6.0	-7.0	-9.9	-13.7	-12.5	21.8	5.0
Electricity and heat gen.	-0.5	-3.6	-5.0	-5.9	-6.9	-9.9	-13.7	-12.5	21.7	5.1
<i>Main activity producers</i> ²	-0.5	-3.6	-5.0	-5.2	-6.1	-9.2	-11.6	-10.4	21.7	4.3
<i>Autoproducers</i>	-	-	-	-0.7	-0.8	-0.7	-2.1	-2.1	-	-
Gas works	-	-	-	-	-	-	-	-	-	-
Coal transformation ³	-	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-	-
<i>BKB plants</i>	-	-	-	-	-	-	-	-	-	-
<i>Blast furnaces</i>	-	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-	-
<i>Coke ovens</i>	-	-	-	-	-	-	-	-	-	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	-	-	-
Other transformation ⁴	-	-	-	-	-	-	-	-	-	-
Energy ind. own use	-	-	-	-	-	-	-	-	-	-
Losses	-	-	-	-	-	-	-	-	-	-
Final consumption ⁵	0.1	1.9	5.2	5.1	9.6	13.2	9.1	11.7	30.2	7.6
Industry ⁶	0.1	1.9	5.2	5.1	9.6	13.2	9.1	11.7	30.2	7.6
<i>Iron and steel</i>	-	0.0	0.1	0.0	0.0	0.2	0.2	0.1	-	3.5
<i>Chemical</i>	-	-	-	-	-	-	0.0	0.0	-	-
<i>Non-metallic minerals</i>	0.0	1.2	3.8	4.0	7.7	10.9	7.6	9.8	94.7	8.7
<i>Paper, pulp and print</i>	-	-	-	-	-	-	0.1	0.0	-	-
<i>Other industry</i> ⁷	0.1	0.6	1.3	1.0	1.9	2.0	1.3	1.7	16.9	4.2
Transport ⁸	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
<i>Comm. and pub. services</i>	-	-	-	-	-	-	-	-	-	-
<i>Residential</i>	-	-	-	-	-	-	-	-	-	-
<i>Other sectors</i> ⁹	-	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-	-
Electricity gen. - TWh	1.4	11.1	14.8	17.8	20.5	30.0	37.6	34.6	22.9	4.7

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

THAILAND

Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	52	250	2558	7989	16758	18726	21243	23964	22650
Coking coal	-	-	-	-	-	-	-	-	-
Australia	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	-	-	-	-
<i>Other FSU</i>	x	x	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	-	-	-	-	-	-
Steam coal⁵	52	250	2558	7989	16758	18726	21243	23964	22650
Australia	52	-	136	-	2488	4080	3866	3650	3837
Canada	-	-	-	-	-	140	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	1	4	4	2	2
United States	-	-	-	-	-	-	1	-	2
Other OECD	-	-	-	1	3	8	8	1	7
China, People's Rep.	-	125	66	20	9	7	7	34	49
Colombia	-	-	-	-	144	-	-	-	164
Indonesia	-	125	2356	6344	12491	13685	16741	19609	17730
South Africa	-	-	-	-	436	-	-	-	-
Former Soviet Union ⁴	-	-	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	-	-	-	4	-	147	520
<i>Other FSU</i>	x	x	-	-	-	1	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	460	150	95	290	86	61
Non-specified/other	-	-	-	1164	1036	702	326	435	278
Lignite	-	-	-	-	-	-	-	-	-

1. In these tables coal used for PCI and for blending has been classified by the IEA as steam coal. Accordingly, trade data reported here may differ from those reported in Part III where this coal may be shown as coking coal to be consistent with data reported by importing countries and with industry terminology and practice.

2. Earliest year for which split by coal type is available.

3. Total coal does not include peat or oil shale and oil sands.

4. For years prior to 1990.

5. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

UKRAINE

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	x	124.0	61.1	51.9	49.6	48.2	46.1	24.9	-	-6.2
Imports	x	15.1	13.5	5.8	6.5	11.1	14.8	14.2	-	-0.3
Exports	x	-21.3	-1.8	-2.6	-2.7	-6.9	-7.0	-0.7	-	-12.8
Stock changes	x	0.8	-	-	-0.0	2.2	-3.1	0.7		
Primary supply	x	118.7	72.9	55.1	53.3	54.6	50.8	39.1	-	-4.3
Statistical differences	x	-4.3	-0.8	-0.3	0.4	-0.0	0.2	0.2		
Total transformation	x	-72.5	-50.4	-37.8	-33.6	-39.8	-36.0	-28.4	-	-3.7
Electricity and heat gen.	x	-50.7	-33.1	-20.8	-20.4	-29.0	-29.3	-24.2	-	-2.9
<i>Main activity producers</i> ²	x	-48.9	-31.7	-19.8	-17.9	-27.3	-27.8	-23.0	-	-3.0
<i>Autoproducers</i>	x	-1.8	-1.4	-1.1	-2.4	-1.7	-1.5	-1.2	-	-1.6
Gas works	x	-	-	-	0.1	-0.1	-0.0	-0.0	-	-
Coal transformation ³	x	-21.8	-17.3	-17.0	-13.2	-10.6	-6.2	-3.9	-	-6.7
<i>BKB plants</i>	x	2.9	0.7	0.3	0.0	-0.0	-0.0	-0.0	-	-
<i>Blast furnaces</i>	x	-12.6	-6.4	-6.4	-6.1	-6.0	-4.8	-5.0	-	-3.7
<i>Coke ovens</i>	x	-12.4	-11.3	-10.7	-7.1	-4.6	-1.4	1.1	-	-
<i>Patent fuel plants</i>	x	0.4	-0.3	-0.1	-0.1	-	-0.0	-0.0	-	-
Other transformation ⁴	x	-	-	-	-0.1	-0.1	-0.3	-0.3	-	-
Energy ind. own use	x	-5.3	-3.5	-2.7	-3.0	-2.6	-1.5	-1.3	-	-5.5
Losses	x	-	-	-	-0.0	-0.8	-0.5	-0.6		
Final consumption ⁵	x	36.6	18.2	14.2	17.1	11.4	13.1	9.0	-	-5.5
Industry ⁶	x	25.7	11.3	10.4	11.9	9.7	12.0	8.0	-	-4.6
<i>Iron and steel</i>	x	15.6	8.4	8.1	10.2	8.5	11.1	7.0	-	-3.1
<i>Chemical</i>	x	0.3	-	-	0.0	0.0	0.0	0.0	-	-16.5
<i>Non-metallic minerals</i>	x	0.0	0.0	0.0	0.2	0.9	0.7	0.7	-	12.6
<i>Paper, pulp and print</i>	x	-	-	-	0.0	0.0	-	-	-	-
<i>Other industry</i> ⁷	x	9.8	2.9	2.3	1.6	0.3	0.2	0.2	-	-14.6
Transport ⁸	x	0.1	-	-	0.1	0.0	0.0	0.0	-	-10.5
Other	x	10.8	6.9	3.8	3.2	1.0	0.5	0.5	-	-11.3
<i>Comm. and pub. services</i>	x	-	-	-	-	0.3	0.1	0.1	-	-
<i>Residential</i>	x	7.9	6.4	3.7	1.8	0.7	0.4	0.4	-	-11.0
<i>Other sectors</i> ⁹	x	2.9	0.5	0.1	1.4	0.0	0.0	0.0	-	-19.5
Non-energy use	x	-	-	-	1.8	0.7	0.6	0.5	-	-
Electricity gen. - TWh	x	114.0	70.2	51.5	50.0	69.8	70.5	56.1	-	-2.8

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

UKRAINE

Total coal imports by origin¹
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
Total coal³	x	26754	6606	7303	12181	14208	14695	14598	13830
Coking coal	x	19964	2759	6902	7777	6804	9706	5748	10512
Australia	x	-	-	-	-	-	593	952	314
Canada	x	-	-	-	-	327	412	587	878
Czech Republic	x	-	-	-	-	-	-	-	-
Germany	x	-	-	-	-	-	-	-	-
Poland	x	-	595	31	-	89	101	140	262
United Kingdom	x	-	-	-	-	-	-	-	-
United States	x	-	-	167	2151	2626	1561	2070	1839
Other OECD	x	-	-	-	-	-	-	-	-
China, People's Rep.	x	-	-	-	-	-	-	-	-
Colombia	x	-	-	-	-	-	-	-	-
Indonesia	x	-	-	-	-	-	-	-	-
South Africa	x	-	-	-	-	-	-	-	-
Former Soviet Union ⁴	x	19964	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	2164	6704	5579	3762	6382	1999	7219
<i>Other FSU</i>	x	x	-	-	-	-	657	-	-
Venezuela	x	-	-	-	-	-	-	-	-
Viet Nam	x	-	-	-	-	-	-	-	-
Non-specified/other	x	-	-	-	47	-	-	-	-
Steam coal⁵	x	6722	3847	401	4404	7404	4989	8850	3318
Australia	x	-	-	-	-	-	90	-	-
Canada	x	-	-	-	-	-	9	298	-
Czech Republic	x	-	-	-	-	-	-	-	-
Germany	x	-	-	-	-	-	-	-	-
Poland	x	-	452	-	33	41	18	90	275
United Kingdom	x	-	-	-	-	-	-	-	-
United States	x	-	-	-	-	-	426	735	29
Other OECD	x	-	-	-	-	-	-	31	-
China, People's Rep.	x	-	-	-	-	-	-	-	-
Colombia	x	-	-	-	-	-	61	-	-
Indonesia	x	-	-	-	-	-	-	-	77
South Africa	x	-	-	11	-	-	299	928	228
Former Soviet Union ⁴	x	6722	x	x	x	x	x	x	x
<i>Russian Federation</i>	x	x	2175	390	4371	7363	4086	5927	2709
<i>Other FSU</i>	x	x	1220	-	-	-	-	832	-
Venezuela	x	-	-	-	-	-	-	-	-
Viet Nam	x	-	-	-	-	-	-	-	-
Non-specified/other	x	-	-	-	-	-	-	9	-
Lignite	x	68	-	-	-	-	-	-	-

1. In these tables coal used for PCI and for blending has been classified by the IEA as steam coal. Accordingly, trade data reported here may differ from those reported in Part III where this coal may be shown as coking coal to be consistent with data reported by importing countries and with industry terminology and practice.

2. Earliest year for which split by coal type is available.

3. Total coal does not include peat or oil shale and oil sands.

4. For years prior to 1990.

5. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

UKRAINE

Coking coal exports by destination
(thousand tonnes)

	1978 ¹	1990	2000	2005	2010	2013	2014	2015	2016p
World	x	8114	200	509	162	1124	1448	494	521
OECD	x	-	-	229	113	823	1142	413	351
Austria	x	-	-	-	-	-	-	-	-
Belgium	x	-	-	-	-	-	-	-	-
Canada	x	-	-	-	-	-	-	-	-
Czech Republic	x	-	-	-	-	-	-	-	-
Denmark	x	-	-	-	-	-	-	-	-
Finland	x	-	-	-	-	-	-	-	-
France	x	-	-	-	-	-	-	-	-
Germany	x	-	-	-	-	-	-	-	-
Greece	x	-	-	-	-	-	6	-	-
Hungary	x	-	-	-	-	-	-	-	-
Israel	x	-	-	-	-	-	-	-	-
Italy	x	-	-	-	-	-	-	-	-
Japan	x	-	-	-	-	-	-	-	-
Korea	x	-	-	-	-	-	-	-	-
Mexico	x	-	-	-	-	-	-	-	-
Netherlands	x	-	-	-	-	-	-	-	-
Norway	x	-	-	-	-	-	-	-	-
Poland	x	-	-	-	-	-	1	-	-
Portugal	x	-	-	-	-	-	72	-	-
Spain	x	-	-	-	-	74	5	-	-
Sweden	x	-	-	-	-	-	-	-	-
Turkey	x	-	-	-	100	260	726	65	104
United Kingdom	x	-	-	-	13	69	71	-	-
United States	x	-	-	-	-	-	-	-	-
Other OECD ²	x	-	-	229	-	420	261	348	247
Non-OECD	x	8114	200	280	49	298	305	79	-
Brazil	x	-	-	-	49	-	-	-	-
Bulgaria	x	-	-	-	-	8	10	11	-
China, People's Rep.	x	-	-	-	-	-	-	-	-
Hong Kong, China	x	-	-	-	-	-	-	-	-
India	x	-	-	-	-	-	-	-	-
Morocco	x	-	-	-	-	184	52	33	-
Romania	x	-	-	-	-	-	45	6	-
Russian Federation	x	8114	200	280	-	48	176	23	-
Chinese Taipei	x	-	-	-	-	-	-	-	-
Ukraine	x	-	-	-	-	-	-	-	-
Other Africa	x	-	-	-	-	-	2	-	-
Other Asia	x	-	-	-	-	13	3	-	-
Other Eastern Europe	x	-	-	-	-	19	17	6	-
Other FSU	x	-	-	-	-	26	-	-	-
Other non-OECD Americas	x	-	-	-	-	-	-	-	-
Other Middle East	x	-	-	-	-	-	-	-	-
Non-specified/other	x	-	-	-	-	3	1	2	170

1. Earliest year for which split by coal type is available.

2. Australia, Chile, Estonia, Iceland, Ireland, Latvia, Luxembourg, New Zealand, Slovak Republic, Slovenia and Switzerland.

UKRAINE

Steam coal¹ exports by destination
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	x	16577	2297	3157	5918	7413	5628	-	-
OECD	x	-	845	552	2951	3439	2838	-	-
Austria	x	-	-	13	1	-	-	-	-
Belgium	x	-	63	11	598	319	174	-	-
Canada	x	-	-	154	181	118	110	-	-
Czech Republic	x	-	-	7	-	76	1	-	-
Denmark	x	-	-	-	-	-	-	-	-
Finland	x	-	-	-	-	-	-	-	-
France	x	-	-	-	36	50	155	-	-
Germany	x	-	-	5	12	17	10	-	-
Greece	x	-	-	2	30	13	87	-	-
Hungary	x	-	-	-	2	-	-	-	-
Israel	x	-	-	-	-	-	-	-	-
Italy	x	-	83	13	230	113	112	-	-
Japan	x	-	-	52	-	1	-	-	-
Korea	x	-	-	-	-	117	23	-	-
Mexico	x	-	-	-	-	-	8	-	-
Netherlands	x	-	-	82	-	294	36	-	-
Norway	x	-	-	-	-	2	-	-	-
Poland	x	-	-	8	399	2	234	-	-
Portugal	x	-	-	5	4	350	12	-	-
Spain	x	-	52	10	313	359	328	-	-
Sweden	x	-	-	5	3	-	-	-	-
Turkey	x	-	647	40	1083	987	1008	-	-
United Kingdom	x	-	-	-	-	225	260	-	-
United States	x	-	-	79	38	113	49	-	-
Other OECD ³	x	-	-	66	21	283	231	-	-
Non-OECD	x	16577	1452	2605	2967	3850	2788	-	-
Brazil	x	-	-	16	166	140	39	-	-
Bulgaria	x	-	-	2315	2592	902	617	-	-
China, People's Rep.	x	-	-	-	-	-	-	-	-
Hong Kong, China	x	-	-	-	-	180	-	-	-
India	x	-	-	-	-	207	261	-	-
Morocco	x	-	-	-	-	418	672	-	-
Romania	x	-	-	192	194	34	181	-	-
Russian Federation	x	16577	1452	10	15	210	453	-	-
Chinese Taipei	x	-	-	-	-	-	-	-	-
Ukraine	x	-	-	-	-	-	-	-	-
Other Africa	x	-	-	-	-	272	224	-	-
Other Asia	x	-	-	-	-	59	47	-	-
Other Eastern Europe	x	-	-	-	-	1322	133	-	-
Other FSU	x	-	-	72	-	106	160	-	-
Other non-OECD Americas	x	-	-	-	-	-	-	-	-
Other Middle East	x	-	-	-	-	-	1	-	-
Non-specified/other	x	-	-	-	-	124	2	-	-

1. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. Australia, Chile, Estonia, Iceland, Ireland, Latvia, Luxembourg, New Zealand, Slovak Republic, Slovenia and Switzerland.

BOLIVARIAN REPUBLIC OF VENEZUELA

	Coal balance ¹ (Mtce)								Average annual percent change	
	1980	1990	1995	2000	2005	2010	2014	2015	80-90	90-15
Production	0.0	2.3	4.2	8.2	7.5	2.8	1.3	0.9	48.5	-3.8
Imports	0.2	0.3	-	-	-	-	-	-	4.9	-
Exports	-	-1.9	-4.4	-8.3	-7.4	-2.6	-1.0	-0.7	-	-4.1
Stock changes	-	-	0.2	0.2	-	-	-	-	-	-
Primary supply	0.2	0.7	0.0	0.2	0.1	0.3	0.3	0.2	11.4	-4.8
Statistical differences	-	-	-	-	-0.0	-	-	-	-	-
Total transformation	-0.1	-0.2	-	-	-	-	-	-	6.1	-
Electricity and heat gen.	-	-	-	-	-	-	-	-	-	-
<i>Main activity producers</i> ²	-	-	-	-	-	-	-	-	-	-
<i>Autoproducers</i>	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-
Coal transformation ³	-0.1	-0.2	-	-	-	-	-	-	6.1	-
<i>BKB plants</i>	-	-	-	-	-	-	-	-	-	-
<i>Blast furnaces</i>	-0.1	-0.1	-	-	-	-	-	-	5.4	-
<i>Coke ovens</i>	-	-0.0	-	-	-	-	-	-	-	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	-	-	-
Other transformation ⁴	-	-	-	-	-	-	-	-	-	-
Energy ind. own use	-	-	-	-	-	-	-	-	-	-
Losses	-	-	-	-	-	-	-	-	-	-
Final consumption ⁵	0.1	0.5	0.0	0.2	0.1	0.3	0.3	0.2	13.9	-3.7
Industry ⁶	0.1	0.5	0.0	0.2	0.1	0.3	0.3	0.2	13.9	-3.7
<i>Iron and steel</i>	0.1	0.2	-	-	-	-	-	-	5.4	-
<i>Chemical</i>	-	-	-	-	-	-	-	-	-	-
<i>Non-metallic minerals</i>	0.0	0.3	0.0	0.2	0.1	0.3	0.3	0.2	23.0	-2.3
<i>Paper, pulp and print</i>	-	-	-	-	-	-	-	-	-	-
<i>Other industry</i> ⁷	-	-	-	-	-	-	-	-	-	-
Transport ⁸	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
<i>Comm. and pub. services</i>	-	-	-	-	-	-	-	-	-	-
<i>Residential</i>	-	-	-	-	-	-	-	-	-	-
<i>Other sectors</i> ⁹	-	-	-	-	-	-	-	-	-	-
Non-energy use	-	-	-	-	-	-	-	-	-	-
Electricity gen. - TWh	-	-	-	-	-	-	-	-	-	-

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

BOLIVARIAN REPUBLIC OF VENEZUELA

Steam coal¹ exports by destination
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	33	1834	7722	7141	3889	2027	930	643	545
OECD	-	1746	7227	6374	2413	856	678	255	123
Austria	-	-	-	-	3	-	-	-	-
Belgium	-	1	-	135	52	-	-	-	44
Canada	-	33	589	583	93	32	32	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-
Finland	-	148	-	-	-	-	-	-	-
France	-	560	441	441	227	161	-	-	-
Germany	-	-	476	-	86	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Israel	-	-	71	-	-	-	-	-	-
Italy	-	140	1067	391	210	92	132	88	36
Japan	-	-	-	-	-	-	-	-	-
Korea	-	-	-	-	-	-	-	-	-
Mexico	-	-	112	-	-	-	-	-	-
Netherlands	-	19	766	452	408	246	91	-	-
Norway	-	5	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-
Spain	-	53	378	88	55	55	-	100	-
Sweden	-	375	180	49	112	-	-	-	-
Turkey	-	-	35	48	299	-	-	-	-
United Kingdom	-	169	218	-	43	98	-	-	-
United States	-	238	2726	4139	825	136	360	67	-
Other OECD ³	-	5	168	48	-	36	63	-	43
Non-OECD	33	88	495	709	1476	1171	252	386	422
Brazil	33	-	79	460	972	526	96	170	229
Bulgaria	-	-	-	-	-	-	-	-	-
China, People's Rep.	-	-	-	-	-	-	-	-	-
Hong Kong, China	-	-	-	-	-	-	-	-	-
India	-	-	-	-	-	-	4	-	-
Morocco	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	4	-	-
Russian Federation	-	-	-	-	-	-	-	-	-
Chinese Taipei	-	-	-	-	-	-	-	-	-
Ukraine	-	-	-	-	-	-	-	-	-
Other Africa	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-
Other Eastern Europe	-	-	-	-	-	-	-	-	-
Other FSU	-	-	-	-	-	-	-	-	-
Other non-OECD Americas	-	88	416	249	504	645	148	216	193
Other Middle East	-	-	-	-	-	-	-	-	-
Non-specified/other	-	-	-	58	-	-	-	2	-

1. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. Australia, Chile, Estonia, Iceland, Ireland, Latvia, Luxembourg, New Zealand, Slovak Republic, Slovenia and Switzerland.

VIET NAM

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	4.2	3.7	6.7	9.3	27.1	35.9	32.9	33.2	-1.1	9.2
Imports	0.0	0.0	0.0	-	0.5	0.8	2.6	5.5	-	26.9
Exports	-0.5	-0.6	-2.3	-2.6	-14.4	-15.9	-6.0	-1.6	2.1	3.7
Stock changes	-0.4	0.1	0.3	-0.4	-1.5	0.1	-1.0	-1.5		
Primary supply	3.2	3.2	4.7	6.2	11.8	20.9	28.4	35.6	-0.2	10.2
Statistical differences	-	-	-	-	-	0.0	-0.0	-		
Total transformation	-1.1	-1.3	-1.0	-1.6	-4.3	-6.9	-12.1	-18.9	1.6	11.4
Electricity and heat gen.	-1.1	-1.3	-1.0	-1.6	-4.3	-6.9	-12.1	-18.9	1.6	11.4
<i>Main activity producers</i> ²	-1.1	-1.3	-1.0	-1.6	-3.8	-6.7	-11.7	-18.2	1.6	11.2
<i>Autoproducers</i>	-	-	-	-	-0.4	-0.2	-0.4	-0.7	-	-
Gas works	-	-	-	-	-	-	-	-	-	-
Coal transformation ³	-0.0	-0.0	-0.0	-	-	-	-	-	-	-
<i>BKB plants</i>	-	-	-	-	-	-	-	-	-	-
<i>Blast furnaces</i>	-0.0	-0.0	-0.0	-	-	-	-	-	-	-
<i>Coke ovens</i>	-	-	-	-	-	-	-	-	-	-
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	-	-	-
Other transformation ⁴	-	-	-	-	-	-	-	-	-	-
Energy ind. own use	-	-	-	-	-	-	-	-	-	-
Losses	-	-	-	-	-	-	-	-		
Final consumption ⁵	2.2	1.9	3.7	4.6	7.5	14.0	16.3	16.8	-1.3	9.1
Industry ⁶	1.3	1.5	2.8	3.3	5.7	11.8	14.1	14.7	0.9	9.7
<i>Iron and steel</i>	0.0	0.0	0.0	-	-	0.5	0.6	0.6	-	19.4
<i>Chemical</i>	-	-	-	-	-	0.3	0.3	0.3	-	-
<i>Non-metallic minerals</i>	-	-	-	-	-	6.5	7.7	7.7	-	-
<i>Paper, pulp and print</i>	-	-	-	-	-	0.5	0.5	0.5	-	-
<i>Other industry</i> ⁷	1.3	1.5	2.8	3.3	5.7	4.0	4.9	5.5	0.9	5.4
Transport ⁸	0.1	0.0	0.0	-	-	-	-	-	-13.9	-
Other	0.7	0.4	0.9	1.3	1.9	2.3	2.2	2.1	-5.6	6.8
<i>Comm. and pub. services</i>	-	0.0	0.2	0.4	0.5	0.5	0.5	0.5	-	12.6
<i>Residential</i>	0.5	0.3	0.6	0.8	1.4	1.7	1.6	1.6	-4.8	7.0
<i>Other sectors</i> ⁹	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	-9.6	-5.2
Non-energy use	-	-	-	-	-	-	-	-	-	-
Electricity gen. - TWh	1.4	2.0	2.0	3.1	12.2	19.7	32.4	45.3	3.5	13.3

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

VIET NAM

Steam coal¹ exports by destination
(thousand tonnes)

	1978 ²	1990	2000	2005	2010	2013	2014	2015	2016p
World	1430	745	3526	17987	19747	12802	7265	1748	1277
OECD	-	450	3203	6062	3401	2167	1552	721	514
Austria	-	-	-	-	-	-	-	-	-
Belgium	-	-	240	192	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-
France	-	-	100	155	52	-	-	-	-
Germany	-	-	52	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-	-
Italy	-	-	-	-	-	-	-	-	-
Japan	-	150	2227	4848	1604	1032	620	456	461
Korea	-	300	516	854	1745	1125	932	265	53
Mexico	-	-	-	-	-	-	-	-	-
Netherlands	-	-	20	-	-	10	-	-	-
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-
Spain	-	-	-	13	-	-	-	-	-
Sweden	-	-	-	-	-	-	-	-	-
Turkey	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	48	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-
Other OECD ³	-	-	-	-	-	-	-	-	-
Non-OECD	-	295	323	11925	15946	10635	5157	853	763
Brazil	-	-	88	388	-	394	-	-	-
Bulgaria	-	-	-	-	-	-	23	-	-
China, People's Rep.	-	100	27	10532	15626	10150	4767	519	426
Hong Kong, China	-	-	-	-	-	-	-	-	-
India	-	-	-	-	57	-	-	29	37
Morocco	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	-
Russian Federation	-	-	-	-	-	-	-	-	-
Chinese Taipei	-	-	52	118	35	20	18	15	50
Ukraine	-	-	-	-	-	-	-	-	-
Other Africa	-	-	-	-	-	-	-	-	-
Other Asia	-	195	156	887	228	71	349	290	250
Other Eastern Europe	-	-	-	-	-	-	-	-	-
Other FSU	-	-	-	-	-	-	-	-	-
Other non-OECD Americas	-	-	-	-	-	-	-	-	-
Other Middle East	-	-	-	-	-	-	-	-	-
Non-specified/other	1430	-	-	-	400	-	556	174	-

1. Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

2. Earliest year for which split by coal type is available.

3. Australia, Chile, Estonia, Iceland, Ireland, Latvia, Luxembourg, New Zealand, Slovak Republic, Slovenia and Switzerland.

AFRICA

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	99.9	149.9	174.7	187.0	202.5	209.7	223.9	221.5	4.1	1.6
Imports	1.5	4.1	4.5	8.2	10.3	9.5	10.8	10.6	10.1	3.9
Exports	-27.8	-48.4	-58.3	-68.0	-69.4	-65.2	-71.2	-77.6	5.7	1.9
Stock changes	0.1	0.1	0.8	1.3	0.1	-0.1	-3.5	-1.5		
Primary supply	73.9	105.7	121.7	128.4	143.4	153.9	159.9	153.0	3.6	1.5
Statistical differences	3.7	6.5	-3.6	0.0	2.5	-1.2	1.8	6.1		
Total transformation	-46.7	-83.9	-92.5	-101.7	-103.1	-112.3	-116.7	-115.5	6.0	1.3
Electricity and heat gen.	-36.2	-56.0	-65.9	-74.5	-84.0	-94.7	-100.9	-99.6	4.5	2.3
<i>Main activity producers</i> ²	-33.3	-52.7	-62.2	-70.2	-79.8	-90.7	-96.8	-94.9	4.7	2.4
<i>Autoproducers</i>	-2.9	-3.3	-3.7	-4.3	-4.2	-4.0	-4.1	-4.7	1.2	1.4
Gas works	-2.8	-3.2	-3.7	-3.3	-7.3	-7.0	-5.9	-5.9	1.5	2.5
Coal transformation ³	-4.6	-4.6	-3.0	-2.7	-3.5	-3.2	-2.6	-2.6	-0.2	-2.2
<i>BKB plants</i>	-	-	-	-0.0	-0.0	-0.0	-0.0	0.0	-	-
<i>Blast furnaces</i>	-3.0	-2.6	-1.8	-1.6	-1.8	-1.8	-1.4	-1.4	-1.6	-2.4
<i>Coke ovens</i>	-1.6	-2.0	-1.2	-1.0	-1.7	-1.4	-1.2	-1.2	2.0	-2.1
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	-	-	-
Other transformation ⁴	-3.1	-20.1	-19.9	-21.2	-8.3	-7.4	-7.3	-7.4	20.6	-3.9
Energy ind. own use	-0.1	-0.1	-0.0	-0.0	-13.5	-14.6	-14.7	-14.9	1.0	24.1
Losses	-0.0	-0.1	-0.1	-0.1	-0.2	-0.1	-0.0	-0.0		
Final consumption ⁵	30.7	28.1	25.5	26.6	29.3	25.7	30.3	28.7	-0.9	0.1
Industry ⁶	23.5	19.6	13.9	15.9	20.1	18.4	18.5	18.7	-1.8	-0.2
<i>Iron and steel</i>	10.7	10.6	7.4	6.9	7.2	6.0	5.2	4.4	-0.1	-3.4
<i>Chemical</i>	0.1	0.1	1.5	1.5	1.4	1.6	1.2	1.2	-5.8	11.8
<i>Non-metallic minerals</i>	2.5	2.2	1.8	1.5	2.3	2.4	2.6	2.9	-1.6	1.1
<i>Paper, pulp and print</i>	-	-	0.0	0.1	0.1	0.1	0.1	0.1	-	-
<i>Other industry</i> ⁷	10.2	6.8	3.1	5.9	9.1	8.4	9.4	10.1	-4.0	1.6
Transport ⁸	2.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	-18.4	-10.5
Other	4.0	4.3	4.7	3.2	7.1	5.4	9.7	8.2	0.7	2.6
<i>Comm. and pub. services</i>	1.3	1.6	1.7	1.0	2.4	1.6	3.0	2.5	2.0	1.9
<i>Residential</i>	2.3	2.3	2.4	1.5	4.5	2.8	5.9	5.0	-0.1	3.2
<i>Other sectors</i> ⁹	0.4	0.4	0.7	0.7	0.3	1.0	0.8	0.7	0.8	2.2
Non-energy use	1.2	4.0	6.8	7.5	2.0	1.9	2.1	1.8	13.1	-3.0
Electricity gen. - TWh	100.4	164.7	186.3	208.7	249.6	259.3	258.0	256.5	5.1	1.8

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

NON-OECD ASIA EXCLUDING CHINA

	Coal balance ¹ (Mtce)								Average annual percent change	
	1980	1990	1995	2000	2005	2010	2014	2015	80-90	90-15
Production	115.5	195.5	248.7	298.9	449.7	667.7	838.0	820.1	5.4	5.9
Imports	7.2	32.1	49.0	77.7	120.4	209.9	305.4	308.4	16.1	9.5
Exports	-0.8	-5.3	-29.3	-51.8	-129.3	-262.4	-371.4	-330.5	21.3	17.9
Stock changes	-7.1	-8.1	-5.4	2.5	-8.4	-5.2	-2.5	-9.6		
Primary supply	114.9	214.1	263.0	327.3	432.4	610.1	769.6	788.5	6.4	5.4
Statistical differences	-0.2	0.9	-0.2	-0.2	-0.9	-8.8	-2.4	-3.2		
Total transformation	-39.3	-107.1	-159.2	-224.8	-292.6	-389.6	-529.5	-548.2	10.6	6.7
Electricity and heat gen.	-31.8	-95.1	-146.7	-210.9	-275.5	-371.4	-503.2	-522.0	11.6	7.0
<i>Main activity producers</i> ²	-30.5	-89.3	-136.8	-189.7	-241.6	-319.3	-422.8	-452.0	11.4	6.7
<i>Autoproducers</i>	-1.3	-5.7	-9.8	-21.2	-33.8	-52.0	-80.4	-70.0	16.0	10.5
Gas works	-	-	-	-0.0	-0.0	-0.0	-0.0	-0.0	-	-
Coal transformation ³	-7.5	-12.0	-12.5	-13.9	-17.1	-18.2	-26.3	-26.2	4.8	3.2
<i>BKB plants</i>	-0.1	-0.3	-0.3	-0.2	-0.2	-0.3	-0.2	-0.1	7.9	-4.7
<i>Blast furnaces</i>	-6.9	-9.2	-8.7	-11.7	-11.7	-15.1	-21.4	-21.0	3.0	3.3
<i>Coke ovens</i>	-0.5	-2.6	-3.6	-1.9	-5.2	-2.8	-4.6	-5.1	17.7	2.8
<i>Patent fuel plants</i>	0.0	0.0	-	-	-	-	-	-	-	-
Other transformation ⁴	-	-	-	-	-	-	-	-	-	-
Energy ind. own use	-0.9	-2.9	-3.1	-2.8	-2.9	-2.9	-3.9	-3.7	12.4	0.9
Losses	-	-0.0	-0.0	-0.0	-0.1	-0.2	-0.5	-0.3		
Final consumption ⁵	74.5	105.0	100.5	99.5	136.0	208.7	233.3	233.1	3.5	3.2
Industry ⁶	51.3	80.3	77.7	80.2	113.9	178.6	207.4	208.5	4.6	3.9
<i>Iron and steel</i>	11.2	15.3	17.1	16.1	24.0	47.1	73.1	73.1	3.2	6.4
<i>Chemical</i>	2.0	4.6	5.9	6.3	5.9	8.6	8.4	8.5	8.8	2.5
<i>Non-metallic minerals</i>	6.9	15.4	19.3	24.2	34.4	49.8	60.2	60.5	8.3	5.6
<i>Paper, pulp and print</i>	1.3	2.1	2.6	2.8	3.3	4.8	3.7	5.0	4.7	3.5
<i>Other industry</i> ⁷	29.9	42.9	32.7	30.9	46.4	68.3	62.0	61.5	3.7	1.4
Transport ⁸	7.0	3.3	0.2	0.0	0.0	0.0	0.0	0.0	-7.2	-17.8
Other	16.1	21.2	22.2	19.0	21.8	28.7	25.7	24.3	2.8	0.5
<i>Comm. and pub. services</i>	3.9	4.9	5.8	4.9	4.9	6.4	7.9	8.0	2.3	1.9
<i>Residential</i>	3.4	4.6	4.8	5.2	5.8	6.9	6.9	6.6	3.2	1.4
<i>Other sectors</i> ⁹	8.8	11.7	11.6	8.9	11.0	15.5	10.9	9.8	2.8	-0.7
Non-energy use	0.0	0.2	0.3	0.2	0.3	1.3	0.2	0.3	42.7	1.1
Electricity gen. - TWh	80.7	258.1	395.5	569.5	735.7	981.2	1384.1	1488.9	12.3	7.3

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

EUROPEAN UNION - 28

	Coal balance ¹ (Mtce)								Average annual percent change	
	1980	1990	1995	2000	2005	2010	2014	2015	80-90	90-15
Production	..	528.3	399.7	306.6	280.3	235.8	214.5	207.8	-	-3.7
Imports	..	176.4	166.2	188.2	219.4	194.5	229.0	216.4	-	0.8
Exports	..	-61.7	-54.1	-47.8	-40.3	-35.3	-53.4	-56.0	-	-0.4
Stock changes	..	6.6	9.7	11.8	-4.7	9.5	-5.8	7.3		
Primary supply	..	649.7	521.6	458.8	454.7	404.5	384.2	375.5	-	-2.2
Statistical differences	..	-11.3	-2.3	0.6	0.4	-1.7	-1.6	-0.5		
Total transformation	..	-449.5	-395.8	-373.0	-379.6	-333.0	-320.2	-313.6	-	-1.4
Electricity and heat gen.	..	-409.2	-357.8	-336.8	-347.9	-302.8	-289.0	-282.1	-	-1.5
<i>Main activity producers</i> ²	..	-356.6	-326.2	-317.0	-329.3	-287.4	-278.1	-269.9	-	-1.1
<i>Autoproducers</i>	..	-52.6	-31.7	-19.8	-18.6	-15.5	-10.9	-12.2	-	-5.7
Gas works	..	2.4	0.5	0.1	-0.2	-0.4	-0.4	-0.3	-	-
Coal transformation ³	..	-42.4	-37.9	-35.5	-30.6	-28.4	-29.1	-29.1	-	-1.5
<i>BKB plants</i>	..	-1.8	-1.2	-0.2	-0.1	0.1	-0.3	-0.5	-	-5.2
<i>Blast furnaces</i>	..	-33.2	-29.2	-29.1	-27.0	-24.4	-25.5	-25.5	-	-1.0
<i>Coke ovens</i>	..	-8.3	-7.6	-6.3	-3.4	-4.1	-3.2	-3.1	-	-3.9
<i>Patent fuel plants</i>	..	0.8	0.2	0.2	0.0	0.1	-0.0	-0.0	-	-
Other transformation ⁴	..	-0.3	-0.6	-0.7	-0.9	-1.3	-1.8	-2.1	-	8.8
Energy ind. own use	..	-13.2	-11.9	-10.4	-9.6	-8.6	-9.0	-8.7	-	-1.6
Losses	..	-1.4	-1.5	-1.1	-1.7	-1.6	-1.5	-1.7		
Final consumption ⁵	..	174.4	110.0	75.0	64.2	59.5	51.9	51.0	-	-4.8
Industry ⁶	..	98.9	71.5	54.3	44.3	35.4	32.6	32.2	-	-4.4
<i>Iron and steel</i>	..	41.5	33.6	26.6	24.5	18.2	15.9	15.9	-	-3.8
<i>Chemical</i>	..	11.1	7.6	4.4	3.9	4.0	4.2	4.5	-	-3.5
<i>Non-metallic minerals</i>	..	17.9	14.0	11.2	8.2	7.4	7.2	6.5	-	-3.9
<i>Paper, pulp and print</i>	..	3.8	3.1	2.3	2.1	1.6	1.6	1.5	-	-3.6
<i>Other industry</i> ⁷	..	24.6	13.3	9.9	5.7	4.1	3.8	3.7	-	-7.3
Transport ⁸	..	0.3	0.0	0.0	0.0	0.0	0.0	0.0	-	-11.4
Other	..	72.6	36.9	18.8	17.6	21.7	16.4	16.2	-	-5.8
<i>Comm. and pub. services</i>	..	18.7	5.7	2.2	1.5	2.3	1.4	1.5	-	-9.5
<i>Residential</i>	..	49.2	27.6	14.7	14.4	17.4	13.4	13.2	-	-5.1
<i>Other sectors</i> ⁹	..	4.7	3.6	2.0	1.7	2.0	1.6	1.5	-	-4.5
Non-energy use	..	2.5	1.5	1.8	2.3	2.4	2.8	2.6	-	0.1
Electricity gen. - TWh	..	1050.3	972.1	967.8	996.1	863.7	840.9	826.0	-	-1.0

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

NON-OECD AMERICAS

	Coal balance ¹ (Mtce)								Average annual percent change	
	1980	1990	1995	2000	2005	2010	2014	2015	80-90	90-15
Production	7.8	25.2	31.3	47.7	66.0	75.0	88.1	84.9	12.4	5.0
Imports	6.8	13.2	15.9	16.9	19.1	21.6	26.3	27.8	6.9	3.0
Exports	-1.4	-14.6	-21.5	-41.6	-57.5	-67.2	-78.1	-74.6	26.7	6.7
Stock changes	-0.2	-3.1	-1.4	1.7	-1.1	0.5	0.6	-0.1		
Primary supply	13.0	20.7	24.2	24.7	26.4	29.9	36.9	38.1	4.8	2.5
Statistical differences	1.2	0.4	0.1	1.2	0.1	-0.1	-0.0	0.1		
Total transformation	-6.3	-9.8	-11.2	-11.1	-12.5	-13.7	-20.0	-21.0	4.6	3.1
Electricity and heat gen.	-2.5	-4.1	-5.3	-6.4	-7.1	-8.7	-14.4	-15.5	5.4	5.4
<i>Main activity producers</i> ²	-1.8	-2.5	-3.7	-4.7	-5.1	-6.1	-10.6	-12.1	3.3	6.5
<i>Autoproducers</i>	-0.6	-1.6	-1.6	-1.7	-2.0	-2.6	-3.7	-3.4	9.8	3.1
Gas works	0.0	0.0	0.0	0.0	-	-	-	-	-	-
Coal transformation ³	-3.8	-5.7	-6.0	-4.7	-5.4	-5.0	-5.7	-5.5	4.1	-0.1
<i>BKB plants</i>	-	-	-	-	-	-	-	-	-	-
<i>Blast furnaces</i>	-2.7	-4.0	-5.0	-4.8	-5.7	-5.5	-5.6	-5.3	4.3	1.1
<i>Coke ovens</i>	-1.2	-1.7	-1.0	0.1	0.3	0.5	-0.1	-0.2	3.5	-9.1
<i>Patent fuel plants</i>	-	-	-	-	-	-	-	-	-	-
Other transformation ⁴	-	-	-	-	-	-	-	-	-	-
Energy ind. own use	-1.0	-1.3	-1.4	-1.1	-1.1	-0.7	-0.6	-0.6	3.1	-3.3
Losses	-1.4	-1.3	-1.8	-0.6	-0.6	-0.5	-0.5	-0.5		
Final consumption ⁵	5.6	8.8	10.0	13.1	12.4	15.0	15.8	16.0	4.5	2.4
Industry ⁶	5.2	8.4	9.7	12.8	12.1	14.7	15.3	15.5	5.0	2.5
<i>Iron and steel</i>	2.8	4.1	5.7	7.8	7.3	9.5	9.2	9.6	4.1	3.4
<i>Chemical</i>	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	7.1	1.4
<i>Non-metallic minerals</i>	1.4	2.5	1.6	1.8	1.4	1.4	1.7	1.7	5.9	-1.4
<i>Paper, pulp and print</i>	0.3	0.5	0.5	0.6	0.5	0.4	0.4	0.3	4.7	-1.3
<i>Other industry</i> ⁷	0.6	1.1	1.5	2.3	2.7	3.1	3.7	3.5	6.2	4.8
Transport ⁸	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
Other	0.3	0.2	0.2	0.1	0.1	0.1	0.3	0.3	-2.7	1.5
<i>Comm. and pub. services</i>	0.0	0.0	0.0	0.0	-	-	-	0.0	-	-
<i>Residential</i>	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	-1.9	-2.3
<i>Other sectors</i> ⁹	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	-	23.2
Non-energy use	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	-1.0	0.8
Electricity gen. - TWh	5.9	9.2	11.9	15.9	18.6	22.3	42.3	44.5	4.6	6.5

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

NON-OECD EUROPE AND EURASIA

	Coal balance ¹ (Mtce)								Average annual percent change	
	1980	1990	1995	2000	2005	2010	2014	2015	80-90	90-15
Production	518.5	532.8	337.8	319.2	364.8	393.7	424.1	417.7	0.3	-1.0
Imports	21.6	104.2	45.9	37.9	39.2	43.2	47.0	43.7	17.1	-3.4
Exports	-21.4	-120.1	-42.5	-61.1	-98.8	-150.5	-170.3	-163.6	18.8	1.2
Stock changes	-1.4	6.7	4.5	2.5	-3.1	8.7	-4.4	3.2		
Primary supply	517.3	523.6	345.7	298.4	302.1	295.2	296.4	301.0	0.1	-2.2
Statistical differences	28.4	1.6	4.3	-3.0	-2.9	10.6	-4.5	-4.5		
Total transformation	-309.0	-338.1	-258.3	-236.7	-238.8	-236.7	-232.2	-239.5	0.9	-1.4
Electricity and heat gen.	-223.6	-281.4	-208.0	-189.9	-193.4	-194.8	-179.8	-181.3	2.3	-1.7
<i>Main activity producers</i> ²	-211.2	-250.3	-177.6	-154.4	-154.5	-161.8	-154.1	-155.2	1.7	-1.9
<i>Autoproducers</i>	-12.4	-31.2	-30.4	-35.5	-38.9	-33.0	-25.7	-26.1	9.6	-0.7
Gas works	-	0.0	0.0	0.0	0.1	-0.0	-0.0	-0.0	-	-
Coal transformation ³	-85.3	-56.7	-50.3	-46.8	-45.5	-41.7	-52.0	-57.9	-4.0	0.1
<i>BKB plants</i>	-0.5	0.8	-0.0	0.0	-0.1	-0.2	-0.2	-0.2	-	-
<i>Blast furnaces</i>	-61.5	-34.2	-27.3	-23.8	-25.5	-28.4	-38.6	-40.4	-5.7	0.7
<i>Coke ovens</i>	-23.8	-23.8	-22.7	-22.9	-19.8	-13.1	-13.2	-17.3	0.0	-1.3
<i>Patent fuel plants</i>	0.4	0.5	-0.3	-0.2	-0.1	0.0	-0.0	-0.0	3.2	-
Other transformation ⁴	-	-	-	-	-0.1	-0.1	-0.3	-0.3	-	-
Energy ind. own use	-12.9	-6.4	-5.0	-4.8	-5.4	-7.3	-5.1	-5.1	-6.8	-0.9
Losses	-6.3	-18.6	-9.6	-1.8	-1.5	-2.3	-1.0	-3.3		
Final consumption ⁵	217.5	162.0	77.1	52.1	53.5	59.4	53.6	48.6	-2.9	-4.7
Industry ⁶	97.0	80.2	49.3	29.3	35.5	42.6	40.2	35.4	-1.9	-3.2
<i>Iron and steel</i>	19.2	35.4	26.1	17.5	21.5	26.1	26.5	21.4	6.3	-2.0
<i>Chemical</i>	4.5	1.3	0.7	0.5	0.4	0.7	0.5	1.0	-11.4	-1.3
<i>Non-metallic minerals</i>	12.7	1.1	1.2	1.1	1.9	3.5	4.2	4.1	-22.0	5.6
<i>Paper, pulp and print</i>	-	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-	-
<i>Other industry</i> ⁷	60.6	42.3	21.4	10.3	11.8	12.2	9.0	8.9	-3.5	-6.0
Transport ⁸	8.7	0.1	0.0	0.0	0.1	0.1	0.0	0.1	-33.3	-3.2
Other	102.4	81.7	27.8	20.8	14.1	15.5	12.3	12.2	-2.2	-7.3
<i>Comm. and pub. services</i>	90.1	30.7	2.3	0.9	4.2	5.4	3.0	3.4	-10.2	-8.4
<i>Residential</i>	1.8	29.9	20.1	18.2	7.4	5.9	7.8	7.4	32.7	-5.4
<i>Other sectors</i> ⁹	10.6	21.1	5.4	1.7	2.5	4.2	1.5	1.4	7.2	-10.4
Non-energy use	9.4	-	0.0	2.0	3.7	1.2	1.1	0.9	-	-
Electricity gen. - TWh	471.0	429.3	349.4	338.4	352.8	396.1	392.1	386.2	-0.9	-0.4

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

NON-OECD TOTAL

	Coal balance ¹ (Mtce)								Average annual percent change	
	1980	1990	1995	2000	2005	2010	2014	2015	80-90	90-15
Production	1186.6	1644.8	1755.8	1873.2	2837.3	3808.0	4281.3	4214.1	3.3	3.8
Imports	39.4	163.1	125.1	149.4	221.1	437.0	626.6	559.5	15.3	5.1
Exports	-57.3	-205.7	-186.6	-287.8	-433.9	-566.2	-704.3	-660.1	13.6	4.8
Stock changes	-1.5	24.4	-4.3	1.2	11.8	-19.4	-41.7	12.9		
Primary supply	1167.3	1626.7	1690.1	1736.1	2636.3	3659.5	4161.9	4126.4	3.4	3.8
Statistical differences	8.1	-39.5	18.9	16.2	26.2	-81.2	-42.6	-15.5		
Total transformation	-514.0	-790.6	-926.6	-1105.9	-1639.4	-2185.7	-2643.9	-2669.0	4.4	5.0
Electricity and heat gen.	-382.8	-654.9	-782.3	-959.0	-1427.6	-1906.3	-2300.2	-2314.6	5.5	5.2
<i>Main activity producers</i> ²	-365.0	-612.0	-735.1	-893.6	-1338.6	-1787.3	-2141.2	-2165.8	5.3	5.2
<i>Autoproducers</i>	-17.8	-42.9	-47.2	-65.4	-89.0	-119.0	-159.0	-148.8	9.2	5.1
Gas works	-3.3	-4.8	-4.3	-5.5	-10.5	-8.8	-10.4	-12.8	3.8	4.0
Coal transformation ³	-124.8	-110.9	-120.1	-120.2	-192.9	-261.4	-320.7	-328.8	-1.2	4.4
<i>BKB plants</i>	-0.6	0.5	-0.3	-0.2	-0.3	-0.5	-0.4	-0.3	-	-
<i>Blast furnaces</i>	-88.6	-72.5	-78.8	-77.5	-138.9	-189.9	-221.2	-217.2	-2.0	4.5
<i>Coke ovens</i>	-36.0	-39.5	-40.6	-41.8	-50.2	-65.4	-91.4	-105.6	0.9	4.0
<i>Patent fuel plants</i>	0.4	0.6	-0.4	-0.6	-3.5	-5.7	-7.6	-5.8	3.0	-
Other transformation ⁴	-3.1	-20.1	-19.9	-21.2	-8.4	-9.2	-12.7	-12.9	20.6	-1.8
Energy ind. own use	-19.6	-32.1	-49.3	-59.4	-77.8	-133.6	-118.4	-104.6	5.0	4.8
Losses	-8.0	-20.2	-11.7	-2.9	-2.5	-3.3	-2.2	-4.2		
Final consumption ⁵	633.8	744.4	721.4	584.1	942.8	1255.7	1354.9	1333.0	1.6	2.4
Industry ⁶	365.8	432.9	493.8	403.5	715.6	1008.0	1076.6	1052.8	1.7	3.6
<i>Iron and steel</i>	91.5	98.3	119.7	116.2	191.5	322.1	395.0	382.7	0.7	5.6
<i>Chemical</i>	48.8	37.8	68.9	44.5	94.0	118.8	126.2	140.3	-2.5	5.4
<i>Non-metallic minerals</i>	56.1	91.5	119.8	102.5	213.9	281.7	315.6	301.6	5.0	4.9
<i>Paper, pulp and print</i>	7.1	12.6	17.2	14.0	21.4	28.3	18.5	17.9	5.9	1.4
<i>Other industry</i> ⁷	162.4	192.7	168.2	126.3	194.9	257.0	221.2	210.4	1.7	0.4
Transport ⁸	31.3	17.7	9.3	6.2	5.8	4.7	4.1	3.6	-5.5	-6.2
Other	225.9	261.9	191.5	141.8	176.1	186.3	195.3	193.6	1.5	-1.2
<i>Comm. and pub. services</i>	98.5	45.9	17.7	18.7	31.9	37.1	42.2	42.7	-7.4	-0.3
<i>Residential</i>	88.8	153.9	127.8	91.4	95.7	87.7	91.4	89.3	5.7	-2.2
<i>Other sectors</i> ⁹	38.6	62.2	46.0	31.8	48.6	61.4	61.7	61.6	4.9	-0.0
Non-energy use	10.8	31.8	26.8	32.6	45.3	56.7	79.0	83.0	11.4	3.9
Electricity gen. - TWh	817.4	1331.1	1713.7	2212.2	3364.6	4922.8	6222.8	6310.5	5.0	6.4

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

WORLD

Coal balance¹
(Mtce)

	1980	1990	1995	2000	2005	2010	2014	2015	Average annual percent change	
									80-90	90-15
Production	2570.9	3177.8	3171.0	3254.1	4281.9	5233.3	5677.6	5530.8	2.1	2.2
Imports	275.8	482.7	477.6	592.6	743.9	967.8	1206.3	1131.1	5.8	3.5
Exports	-272.3	-493.3	-487.2	-596.0	-761.3	-974.7	-1221.9	-1172.0	6.1	3.5
Stock changes	-27.7	3.6	-6.7	50.5	11.6	-5.8	-52.3	-9.8		
Primary supply	2546.7	3170.7	3154.6	3301.2	4276.0	5220.6	5609.7	5480.1	2.2	2.2
Statistical differences	-11.9	-38.3	43.9	46.9	9.0	-96.4	-57.1	-22.3		
Total transformation	-1473.5	-1977.7	-2168.9	-2481.4	-3052.0	-3523.1	-3887.1	-3829.3	3.0	2.7
Electricity and heat gen.	-1232.4	-1738.5	-1925.5	-2235.7	-2756.7	-3154.7	-3449.7	-3382.6	3.5	2.7
<i>Main activity producers</i> ²	-1151.0	-1627.5	-1817.6	-2116.3	-2621.9	-2992.5	-3252.0	-3192.8	3.5	2.7
<i>Autoproducers</i>	-81.4	-111.0	-107.9	-119.4	-134.9	-162.2	-197.7	-189.7	3.1	2.2
Gas works	4.5	-5.3	-6.7	-8.3	-13.1	-11.9	-13.5	-16.0	-	4.5
Coal transformation ³	-242.5	-213.6	-216.1	-215.4	-272.8	-346.0	-409.4	-415.8	-1.3	2.7
<i>BKB plants</i>	0.8	-1.0	-1.6	-0.4	-0.6	-0.4	-0.6	-0.6	-	-2.0
<i>Blast furnaces</i>	-168.6	-151.7	-155.4	-159.0	-213.6	-264.0	-300.0	-293.4	-1.0	2.7
<i>Coke ovens</i>	-75.2	-57.3	-58.4	-54.6	-62.3	-76.0	-101.2	-116.0	-2.7	2.9
<i>Patent fuel plants</i>	0.5	-3.6	-0.7	-1.4	3.6	-5.6	-7.6	-5.8	-	1.9
Other transformation ⁴	-3.1	-20.3	-20.6	-21.9	-9.3	-10.6	-14.4	-15.0	20.7	-1.2
Energy ind. own use	-47.4	-56.1	-70.7	-80.3	-97.5	-160.7	-146.4	-131.1	1.7	3.5
Losses	-10.4	-21.5	-13.3	-4.0	-4.3	-5.0	-3.6	-5.9		
Final consumption ⁵	1003.6	1077.1	945.6	782.3	1131.2	1435.4	1515.5	1491.6	0.7	1.3
Industry ⁶	594.8	659.6	668.4	572.4	874.0	1148.8	1206.1	1180.6	1.0	2.4
<i>Iron and steel</i>	197.7	186.3	192.7	182.3	254.6	378.7	449.2	436.4	-0.6	3.5
<i>Chemical</i>	73.7	67.9	88.6	63.5	110.4	135.4	142.1	156.1	-0.8	3.4
<i>Non-metallic minerals</i>	88.8	134.8	161.0	140.6	247.4	309.9	346.2	331.0	4.3	3.7
<i>Paper, pulp and print</i>	18.3	28.6	25.7	22.4	32.4	38.0	26.3	25.3	4.6	-0.5
<i>Other industry</i> ⁷	216.3	242.0	200.4	163.6	229.3	286.9	242.3	231.8	1.1	-0.2
Transport ⁸	35.0	18.2	9.5	6.3	6.1	4.9	4.1	3.6	-6.4	-6.3
Other	359.7	363.5	238.0	168.1	202.5	221.2	221.4	220.3	0.1	-2.0
<i>Comm. and pub. services</i>	127.2	69.1	25.6	22.9	36.9	42.2	49.9	51.2	-5.9	-1.2
<i>Residential</i>	180.0	219.8	162.8	111.3	114.7	115.3	108.1	105.9	2.0	-2.9
<i>Other sectors</i> ⁹	52.5	74.7	49.6	33.8	51.0	63.7	63.4	63.2	3.6	-0.7
Non-energy use	14.1	35.8	29.7	35.6	48.6	60.5	83.8	87.1	9.8	3.6
Electricity gen. - TWh	3136.8	4424.9	4992.2	6005.1	7335.4	8664.2	9698.0	9538.3	3.5	3.1

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite) and derived fuels (patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases), as well as peat, peat products and oil shale and oil sands. Quantities have been converted to Mtce using calorific values reported by the respective countries. Please refer to the explanatory notes and definitions in Part I.

2. Main activity electricity and heat generation includes district heating.

3. Coal transformation refers to the transformation of coal and peat to secondary and tertiary products (mainly cokes, briquettes, coal tar and off-gases). Gas works and Liquefaction are shown separately to match the *World Energy Balances*.

4. Other transformation includes Liquefaction and Non-specified transformations.

5. Final Consumption includes non-energy use and energy use (Industry, Transport and Other).

6. Please refer to the explanatory notes and definitions in Part I for detailed explanation.

7. Other industry includes Non-ferrous metals, Transport equipment, Machinery, Mining and quarrying, Food and tobacco, Wood and wood products, Construction, Textile and leather, and Non-specified industry.

8. Transport includes Rail and Inland waterways.

9. Other sectors includes Agriculture/Forestry, Fishing and Non-specified other.

Source: IEA/OECD *World Energy Balances*

COUNTRY NOTES AND SOURCES

NON-OECD COUNTRIES

In the references below, both the statistical year (2015) for which data are being published in this edition, as well as publication dates of the many documents which have been consulted during the development of this publication are mentioned. As a general rule, where specific documents or personal communications have been used, the date that is referenced is the date of publication of the document or the date of the communication, whereas, where data received through the completion of questionnaires are mentioned, the date that is referenced is the statistical year for which data are being published in this edition, namely 2015.

Data may not include all informal and/or illegal trade, production or consumption of energy products, although the IEA Secretariat makes efforts to estimate these where reliable information is available.

General references

- *Annual Bulletin of Coal Statistics for Europe*, Economic Commission for Europe (ECE), New York, 1994.
- *Annual Bulletin of Electric Energy Statistics for Europe*, Economic Commission for Europe (ECE), New York, 1994.
- *Annual Bulletin of Gas Statistics for Europe*, Economic Commission for Europe (ECE), New York, 1994.
- *Annual Bulletin of General Energy Statistics for Europe*, Economic Commission for Europe (ECE), New York, 1994.
- *Annual Crude Steel production*, World Steel Association, www.worldsteel.org.
- *Annual Report July 1991-June 1992*, South African Development Community (SADC), Gaborone, 1993.
- *Annual Statistical Bulletin*, Organization of Petroleum Exporting Countries (OPEC), Vienna, various editions up to 2016.
- *Annual Statistical Report*, Organization of Arab Petroleum Exporting Countries (OAPEC), Kuwait, various editions up to 2016.
- *APEC Energy Database*, Tokyo, 2016.
- *Arab Oil and Gas Directory*, Arab Petroleum Research Centre, Paris, various editions up to 2016.
- *ASEAN Energy Review 1995 Edition*, ASEAN-EC Energy Management Training and Research Centre (AEEMTRC), Jakarta, 1996.
- *Asia Pacific Databook*, FACTS Global Energy, Singapore, various editions up to 2016.
- *Banque de données Enerdata, Fiches d'expertise des données*, Enerdata, Grenoble, September 2016.
- *Base CHELEM-PIB*, Centre d'Etudes Prospectives et d'Informations Internationales (CEPII), Bureau van Dijk, Paris, 2008 to 2017.
- *Centroamérica: Estadísticas de Hidrocarburos*, Comisión Económica para América y el Caribe (CEPAL), United Nations, Mexico, various editions up to 2016.
- *CIS and East European Energy Databook*, Eastern Bloc Research Ltd, Tolsta Chaolais, various editions up to 2016.
- *Eastern Bloc Energy*, Tadcaster, various issues up to May 1999.
- *Energy Indicators of Developing Member Countries*, Asian Development Bank (ADB), Manila, 1994.

- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito: <http://sier.olade.org/>.
- *Energy Statistics Yearbook 1990*, South African Development Community (SADC), Luanda, 1992.
- *Energy Statistics Yearbook 2008*, United Nations, New York, 2011.
- *External Trade of the CIS countries*, The Interstate Statistical Committee of the Commonwealth of Independent States, Moscow, 2005.
- *Forestry Data*, Food and Agriculture Organisation of the United Nations, Rome, 2000.
- *Foreign Scouting Service, Commonwealth of Independent States*, IHS Energy Group – IEDS Petroconsultants, Geneva.
- *Forests and Biomass Sub-sector in Africa*, African Energy Programme of the African Development Bank, Abidjan, 1996.
- *Global E&P Service, Commonwealth of Independent States*, IHS Energy Group – IEDS Petroconsultants, Geneva.
- *International Energy Annual*, Energy Information Administration (EIA), Washington, D.C., 1991 to 1994.
- *International Energy Data Report 1992*, World Energy Council, London, 1993.
- *Les Centrales Nucléaires dans le Monde*, Commissariat à l'Énergie Atomique, Paris, various editions up to 2016.
- Lund et. al, *Direct Utilization of Geothermal Energy 2010 Worldwide Review*, World Geothermal Congress, Bali, 2010.
- *Middle East Economic Survey (MEES)*, Nicosia, various issues to June 1999.
- *Middle East Petroleum Databook*, FACTS Global Energy Group, Singapore, various editions up to 2016.
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2016.
- *Natural Gas Vehicles Statistics*, International Association for Natural Gas Vehicles, online database: www.iangv.org.
- *Notes d'Information et Statistiques*, Banque Centrale des Etats de l'Afrique de l'Ouest, Dakar, 1995.
- *Pétrole 1994*, Comité Professionnel du Pétrole (CPDP), Paris, 1995.
- Pirani et al, *Russian and CIS Gas Markets and Their Impact on Europe*, Oxford University Press, Oxford, 2009.
- *PIW's Global Oil Stocks & Balances*, New York, various issues to June 1995.
- *PlanEcon Energy Outlook for Eastern Europe and the Former Soviet Republics*, Washington, 2003.
- *PlanEcon Energy Outlook for the Former Soviet Republics*, Washington, June 1995 and 1996.
- *Prospects of Arab Petroleum Refining Industry*, Organization of Arab Petroleum Exporting Countries (OAPEC), Kuwait, 1990.
- *Review of Wood Energy Data in RWEDP Member Countries*, Regional Wood Energy Development Programme in Asia, Food and Agriculture Organisation of the United Nations, Bangkok, 1997.
- *SIE-Afrique (Systèmes d'Information Énergétique – Afrique)*, projet promu par ECONOTEC et Institut de l'Énergie et de l'Environnement de la Francophonie (IEPF), organe subsidiaire de l'Organisation Internationale de la Francophonie (OIF) up to 2009.
- *Solar Heat Worldwide*, AEE - Institute for Sustainable Technologies, Gleisdorf, various editions up to 2017.
- *Statistical Bulletin*, Arab Union of Producers, Transporters and Distributors of Electricity (AUPTDE), Amman, various editions up to 2015.
- *Statistical Bulletin*, The Interstate Statistical Committee of the Commonwealth of Independent States, Moscow, 1993 and 1994.
- *Statistiques économiques*, Banque des Etats de l'Afrique Centrale (BEAC), online database 2011.
- *Statistical Handbook 1993 - States of the Former USSR*, The World Bank, Washington, 1993.
- *Statistical Yearbook*, The Interstate Statistical Committee of the Commonwealth of Independent States, Moscow, various editions up to 2011.
- *Statistical Yearbook of the Member States of the CMEA*, Council of Mutual Economic Assistance (CMEA), Moscow, 1985 and 1990.
- *The LNG Industry*, International Group of Liquefied Natural Gas Importers (GIIGNL), Levallois, various editions up to 2016.
- *The United Nations Energy Statistics Database*, United Nations Statistical Office, New York, various editions up to 2017.
- *World Development Indicators*, The World Bank, Washington, various editions up to 2016.

Note:

- EU4Energy is a 4-year (2016-2020) EU-funded programme working to support evidence-based energy policy and decision making in the areas of energy security, energy markets and sustainable development in 11 focus countries - Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Turkmenistan, Uzbekistan and Ukraine. The IEA is responsible for the programme's energy-data management and data use in policy design.
- The OLADE database was used for several Non-OECD Americas countries.
- The UN database was the only source of information for time series of the countries not listed individually and included in the regions Other Africa, Other Non-OECD Americas and Other Asia. It was also used in a number of other countries as a complementary data source.

Brazil

General notes

Although IEA's balance is based on Brazil's national statistics, differences with the national energy balance can be observed due to the different methodologies adopted for reporting nuclear, chemical heat, natural gas, renewables, blast furnaces and coke ovens.

Brazil produces a large share of its pig iron in blast furnaces that are fuelled and fed with charcoal. The blast furnace gases produced when charcoal is used as a reagent in the blast furnaces are renewable products and they have been reported in this publication under the product "Biogases from thermal processes". Additionally, only the part of these gases consumed for power generation (i.e. energy purposes) has been accounted for in the transformation sector. The remaining charcoal consumed in or used to heat the blast furnaces is reported in final consumption under the iron and steel industry with no distinction between transformation and final consumption.

Prior to the year 2000 blast furnace gases data availability is limited to the input to auto producer electricity plants. Therefore, from 1971 to 1999, the other flows (e.g. production, consumption etc.) are IEA Secretariat estimates.

The Itaipu hydroelectric plant, operating since 1984 and located on the Paraná River (which forms the border of Brazil and Paraguay) was formed as a joint venture between Eletrobrás and the Paraguayan government. Production is shared equally between Brazil and Paraguay.

Sources 1971 to 2015:

- Direct communication with the Ministério de Minas e Energia, Brasília.

Bulgaria

Sources 1990 to 2015:

- Direct communication with the National Statistical Institute, Sofia.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- Energy Balances, National Statistical Institute, Sofia, 1995.

Sources up to 1991:

- *Energy Development of Bulgaria*, Government of Bulgaria, Sofia, 1980 and 1984.
- *Energy in Bulgaria*, Government of Bulgaria, Sofia, 1980 to 1983.
- *General Statistics in the Republic of Bulgaria 1989/1990*, Government of Bulgaria, Sofia, 1991.

People's Republic of China

Please see the explanatory notes in Part I.

Colombia

Sources 1992 to 2015:

- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed April 2017: <http://sier.olade.org/>.
- Unidad de Planeación Minero Energética (UPME) Online statistics, Ministerio de Minas y Energía, various editions up to 2015.
- Direct communication with the Ministry of Mines and Energy, Energy Information Department, Bogotá.

- *Statistics 1996-2015*, Sistema de Información Eléctrico Colombiano, Ministry of Mines and Energy, online statistics, various editions up to 2015.
- IEA Secretariat estimates.

Sources up to 1991:

- *Boletín Minero-Energético*, Ministerio de Minas y Energía, Bogotá, December 1991.
- *Estadísticas Minero-Energéticas 1940-1990*, Ministerio de Minas y Energía, Bogotá, 1990.
- *Estadísticas Básicas del Sector Carbón*, Carbolcol, Oficina de Planeación, Bogotá, various editions from 1980 to 1988.
- *Colombia Estadística 1985*, DANE, Bogotá, 1970 to 1983 and 1987.
- *Empresa Colombiana de Petróleos, Informe Anual*, Empresa Colombiana de Petróleos, Bogotá, 1979, 1980, 1981 and 1985.
- *Estadísticas de la Industria Petrolera Colombiana Bogotá 1979-1984*, Empresa Colombiana de Petróleos, Bogotá, 1985.
- *Informe Estadístico Sector Eléctrico Colombiano*, Government of Colombia, Bogotá, 1987 and 1988.
- *La Electrificación en Colombia 1984-1985*, Instituto Colombiano de Energía Eléctrica, Bogotá, 1986.
- *Balances Energéticos 1975-1986*, Ministerio de Minas y Energía, Bogotá, 1987.
- *Energía y Minas Para el Progreso Social 1982-1986*, Ministerio de Minas y Energía, Bogotá, 1987.

Democratic People's Republic of Korea

General notes

Time series data for 2011 for primary coals were revised in the 2014 edition based on new information received in 2014. This may lead to breaks in the time series between 2010 and 2011 and differences in trends compared to previous editions for some products.

Sources 1971 to 2015:

- Direct communication with Korea's National Statistical Office and Korea's Energy Economics Institute.
- *North Korea Statistics*, Korean Statistical Information Service website, www.kosis.kr, Seoul.

- *The UN Energy Statistics Database*.
- IEA Secretariat estimates.

Sources for Biofuels and waste:

- *The UN Energy Statistics Database*.
- *Forestry Statistics*, FAO, Rome, 2017.
- IEA Secretariat estimates.

Hong Kong, China

Sources up to 2015:

- *Hong Kong Energy Statistics - Annual Report*, Census and Statistics Department, Hong Kong Special Administrative Region, various editions up to 2016.
- *Hong Kong Merchandise Trade Statistics – Domestic Exports and Re-exports/ Imports*, Census and Statistics Department, Hong Kong Special Administrative Region, various editions up to December 2015.
- Direct communication with The Hongkong Electric Company, Ltd, Hong Kong.
- *China Light & Power - Annual Report*, China Light & Power Group, Hong Kong, several editions up to 2016.
- *China Light & Power – Facility Performance Statistics*, China Light & Power Group, Hong Kong, several editions up to 2016.
- *Hong Kong Monthly Digest of Statistics*, Census and Statistics Department, Hong Kong, various editions to 1994.
- *Towngas - Annual Report*, The Hong Kong and China Gas Company Ltd., Hong Kong, several editions up to 2013.

India

General notes

India joined the IEA as an Association country in March 2017.

Data are reported on a fiscal year basis. Data for 2015 correspond to 1 April 2015 – 30 March 2016.

In 2015, significant revisions of the net calorific values of the different types of coal were made for the whole time series, based on official data as well as

IEA and other expert estimates. As a result, there have been significant changes for the coal data when presented in energy units, as well as in the calculated efficiency of coal fired power generation. Data on the production and consumption of secondary coal products may have also been revised as a result.

From 2008, due to a notable discrepancy between official coal imports from India and coal exports to India as reported by trade partners, imports of coking coal and non-coking coal are estimated by the IEA Secretariat, based on trade partners' data. The breakdown of non-coking coal imports between bituminous coal and sub-bituminous coal is estimated from 2008. This could lead to breaks in time series between 2007 and 2008.

Coking coal figures for India do not align with IEA definitions as they include production of non-metallurgical coking coal reported by India. Figures may be revised in future editions to include only washed coking coal.

Due to data limitations, IEA Secretariat estimates are used for some products and flows, including supply and demand of coke oven gas and blast furnace gas. Coke oven coke production is estimated from 2006 based on growth of blast furnace iron production, as official production data do not include production from small private producers.

Sources 1992 to 2015:

- Direct communication with the Central Statistical Office, Ministry of Statistics and Programme Implementation, Government of India, New Delhi.
- *Energy Statistics*, Central Statistical Office, Ministry of Statistics and Programme Implementation, New Delhi, various editions up to 2015-16.
- *Monthly Abstract of Statistics*, Ministry of Planning, Central Statistics Organisation, Department of Statistics, New Delhi, various editions from 1984 to 2000.

Sources up to 1991:

- *Report 1986-87*, Ministry of Energy, Department of Coal, New Delhi, 1981 to 1987.
- *Annual Report 1986-1987*, Ministry of Energy, Department of Non-Conventional Energy, New Delhi, 1987.
- *Economic Survey*, Ministry of Finance, New Delhi, various editions from 1975 to 1986.
- *Statistical Outline of India*, Ministry of Finance, New Delhi, 1983, 1984, 1986, 1987.

- *Monthly Coal Bulletin*, vol xxxvi no.2., Ministry of Labour, Directorate General of Mines Safety, New Delhi, February 1986.
- *General Review*, Public Electricity Supply, India Statistics, Central Electricity Authority, New Delhi, 1982 to 1985.
- *Energy Data Directory*, Yearbook "TEDDY", and *Annual Report*, The Energy and Resources Institute "TERI", New Delhi, 1986-1988, 1990.

Indonesia

General notes

Indonesia joined the IEA as an Association country in November 2015.

For 2012-2015 coal exports data from BPS are used. This results in breaks in time series for 2011-2012.

Non-specified industry consumption is re-estimated by the IEA Secretariat.

The production and allocation of coal among the various coal types and products between 2000 and 2015 are estimated by the IEA Secretariat due to data collection limitations.

In 2015, data reported for coal consumption in pulp and paper industry might also include coal consumed in the textile and fertilizers sectors. This may create breaks in time series.

Sources 2008 to 2015:

- *PLN Statistics*, PT.PLN (Persero), Jakarta, various editions up to 2016.
- Direct communication with PT PLN (Persero), Jakarta.
- Direct communication with the Indonesia Coal Mining Association, Jakarta.
- IEA Secretariat estimates.
- Direct communication with the Data Centre and Information Technology (PUSDATIN), Ministry of Energy and Mineral Resources, Jakarta.
- *Handbook of Energy & Economic Statistics of Indonesia*, PUSDATIN, Ministry of Energy and Mineral Resources (ESDM), Jakarta, various editions up to 2016.
- *Trade data on coal, charcoal for 1999-2015*, website of the Central Bureau of Statistics of the Republic of Indonesia (BPS).

Sources 1992 to 2007:

- *Indonesia Mineral and Coal Statistics*, Directorate of Coal and Mineral Resources, Jakarta, 1998 to 2007.
- *Statistics on Electricity and Energy*, 1998 to 2004, Directorate General of Electricity and Energy Utilisation, Jakarta, 1999 to 2005.
- *Neraca energy 2000*, Energy Balance of Indonesia 2000, Asean Center for Energy.
- *Mining and Energy Yearbook*, 1998, Ministry of Mines and Energy, Jakarta, 1998.
- APEC annual energy statistics questionnaires.
- Direct communication with Directorate General of Coal and Mineral Resources, Directorate General Oil and Gas, and Directorate General of Electricity and Energy Utilisation of the Ministry of Energy and Mineral Resources.
- Direct communication with the Indonesian Institute for Energy Economics, 2004 and 2005.
- Direct communication with the ASEAN Centre for Energy, 2005.

Sources up to 1991:

- *Indonesian Financial Statistics*, Bank of Indonesia, Jakarta, 1982.
- *Indikator Ekonomi 1980-1985*, Biro Pusat Statistik, Jakarta, 1986.
- *Statistical Yearbook of Indonesia*, Biro Pusat Statistik, Jakarta, 1978 to 1984 and 1992.
- *Statistik Pertambangan Umum, 1973-1985*, Biro Pusat Statistik, Jakarta, 1986.
- *Energy Planning for Development in Indonesia*, Directorate General for Power, Ministry of Mines and Energy, Jakarta, 1981.
- *Commercial Information*, Electric Power Corporation, Perusahaan Umum Listrik Negara, Jakarta, 1984, 1985.

Kazakhstan

General notes

Data for Kazakhstan are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Kazakhstan is one of the 11 EU4Energy focus countries.

In 2016, the Committee on Statistics of Kazakhstan introduced changes in the forms used to collect energy data to align more closely with the International

Recommendations for Energy Statistics. In order to reduce burden on enterprises, questions on supply were removed and supply data are now taken from administrative sources. As a consequence, breaks in the time series appear for many product and flows, both for supply and demand between 2014 and 2015 data. Revisions are to be expected as data for additional years become available in the new format.

From 2012 onwards, as a result of important work carried out jointly by the Committee on Statistics and the Ministry of National Economy of the Republic of Kazakhstan, the IEA Secretariat was able to switch to the Joint IEA/Eurostat/UNECE questionnaires as a primary source for Kazakhstan's data. Breaks in time series appear between 2011 and 2012 as a result of this change.

In 2010, Kazakhstan became a member of a Customs Union with Russia and Belarus. Breaks in trade time series appear from 2009 to 2012 as the Customs shifted from one accounting system to another.

Kazakhstan's coal data are normally not disaggregated by coal type. The disaggregation presented in the IEA energy balances is achieved by considering the typical end uses for different types of coals. This may lead to large statistical differences for some types of coal.

Sources 2012 to 2015:

- Direct communication with the Committee on Statistics of the Ministry of National Economy (formerly: Agency on Statistics) of the Republic of Kazakhstan, Astana.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- IEA Secretariat estimates.

Sources 1993 to 2011:

- Direct communication with the Agency on Statistics of the Republic of Kazakhstan, Astana.
- *Fuel and Energy Balance of Kazakhstan Republic*, Agency on Statistics of the Republic of Kazakhstan, Astana, various editions up to 2010.
- Joint IEA/Eurostat/UNECE annual energy questionnaires, 1993, 1995, 1997 to 2009.
- *Statistical Yearbook "Kazakhstan in 2009"*, Agency on Statistics of the Republic of Kazakhstan, Astana, 2010.
- IEA Secretariat estimates.

Sources 1990 to 1992:

- IEA Secretariat estimates.

Malaysia

Sources 2000 to 2015:

- APEC annual energy questionnaires, 2009, 2011.
- *National Energy Balance Malaysia*, Ministry of Energy, Water and Communication, Kuala Lumpur, 2002 to 2008.
- Direct communication with the Energy Commission, Putrajaya.
- *National Energy Balance*, Malaysia, Energy Commission, Putrajaya, 2009 to 2015.
- Electricity Supply Industry in Malaysia, Performance and Statistical Information, Malaysia Energy Commission, Putrajaya, 2009 to 2015.
- *Electricity Supply Statistics, Malaysia Energy Information Hub*, website: meih.st.gov.my, 2017.

Sources up to 2000:

- Direct communication with Petroliaam Nasional Berhad, Kuala Lumpur, April 2001.

Sources 1990 to 1991:

- IEA Secretariat estimates.

Mongolia

General notes

Data for Mongolia are available starting in 1985. Prior to that, they are included in Other Asia.

Data allowing a disaggregation of coal by type became available in 2015. In addition time series were revised from 2005 forward. Breaks in time series between 2004 and 2005 may result as well as differences in trends from previous editions.

Sources 1985 to 2015:

- *Mongolian Statistical Yearbook*, National Statistical Office, Ulaanbaatar, various editions up to 2016.
- *Balance of Coal & Coal Exports*, Mongolian Statistical Information Service, National Statistical Office, Ulaanbaatar, online statistical service: www.1212.mn.
- *Mongolian Statistical Bulletin, December 2009*, National Statistical Office, Ulaanbaatar, 2009.
- Asian Development Bank online database.
- IEA Secretariat estimates.

Mozambique

Sources 1992 to 2015:

- Direct communication with Ministério da Energia, Maputo and the National Petroleum Institute.
- *Annual Statistical Yearbook 1993, 1994, 1995*, Eskom, Johannesburg, 1994, 1995, 1996, citing Electricidade de Mozambique, Maputo, as source.
- *The UN Energy Statistics Database*.
- IEA Secretariat estimates.

Sources up to 1991:

- IEA Secretariat estimates.

Philippines

Sources 1990 to 2015:

- Direct communication with the Department of Energy, Manila.
- *Energy Commodity Account (ECA) and Overall Energy Balance (OEB)*, 1990-2008, 2010-2015 submitted by the Department of Energy, Manila.
- APEC annual energy statistics questionnaires.
- *Annual Report*, Semirara Mining Corporation, 2006-2016.
- Annual steel production 1980-2016, World Steel Association, www.worldsteel.org/statistics/.
- Philippines Energy Bulletin 1996, 1997, 1998, 1999.
- IEA Secretariat estimates.

Sources up to 1989:

- Direct communication with the Office of Energy Affairs, Manila.
- *APEC Energy Statistics 1994*, Tokyo, October 1996.
- *1990 Power Development Program (1990-2005)*, National Power Corporation, Manila, 1990.
- *Philippine Medium-term Energy Plan 1988-1992*, Office of Energy Affairs, Manila, 1989.
- *Philippine Statistical Yearbook 1977-1983*, National Economic and Development Authority, Manila.
- *1985 and 1989 Annual Report*, National Power Corporation, Manila, 1986, 1990.

- *Philippine Economic Indicators*, National Economic and Development Authority, Manila, various editions of 1985.
- *Accomplishment Report: Energy Self-Reliance 1973-1983*, Ministry of Energy, Manila, 1984.
- *Industrial Energy Profiles 1972-1979, vol. 1-4*, Ministry of Energy, Manila, 1980.
- *National Energy Program*, Ministry of Energy, Manila, 1982-1987 and 1986-1990.
- *Philippine Statistics 1974-1981*, Ministry of Energy, Manila, 1982.
- *Energy Statistics*, National Economic and Development Authority, Manila, 1983.
- *Quarterly Review*, Office of Energy Affairs, Manila, various editions.
- *UN Energy Statistics Database*.
- IEA Secretariat estimates.

Romania

General notes

Data on quantities of coke oven coke used in blast furnaces do not correspond to the official submission of the national administration, as they have been estimated by the IEA Secretariat to ensure a carbon balance in the blast furnace transformation.

Sources 1992 to 2015:

- Direct communication with the National Institute of Statistics, Bucharest.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- *Buletin Statistic de Informare Publica*, Comisia Nationala Pentru Statistica, Bucharest, various editions up to June 1995.
- *Renel Information Bulletin*, Romanian Electricity Authority, Bucharest, 1990, 1991, 1992, 1993, 1994. *Anuarul Statistic al Republicii Socialiste Romania*, Comisia Nationala Pentru Statistica, Bucharest, 1984, 1985, 1986, 1990, 1991.
- IEA Secretariat estimates.

Russian Federation

General notes

Data for the Russian Federation are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Annual statistics are based on annual joint IEA/Eurostat/UNECE questionnaires submissions received from Rosstat, the official data provider to the IEA. Data may differ from secondary sources, and discrepancies are being investigated.

In 2007, the Federal State Statistics Service introduced a new classification, the Russian Classification of Economic Activities (OKVED), oriented towards harmonization with the Statistical Classification of Economic Activities in the European Community (NACE Rev.1). Data for the years prior to 2005 were submitted to the IEA Secretariat according to the Russian Classification of the Industries of the Economy (OKONKH). Therefore, breaks in time series for final consumption sectors may occur between 2004 and 2005.

Coal statistics provided by Rosstat may differ from those collected by Rosinformugol. Blast furnace gas values since 2012 utilise a different methodology to that of prior years (where heat from other sources than blast furnace gas had been attributed to blast furnace gas). Some coal trade from partners of the Customs Union has been estimated by the IEA Secretariat and additionally removed from indigenous production where it may be reported in data of other organisations.

Sources 1990 to 2015:

- Direct communication with the Department of Foreign Statistics and International Cooperation from the Federal State Statistics Service (Rosstat), Moscow, Russian Federation.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- Energy trade: direct communication with the Federal State Statistics Service, July 1994.
- *Statistical Yearbook of Russia 1994*. The State Committee of Statistics, Moscow, 1994.
- *The Russian Federation in 1992, Statistical Yearbook*, The Federal State Statistics Service, Moscow, 1993.
- *Russian Federation External Trade*, annual and quarterly various editions, the Federal State Statistics Service, Moscow.
- *Statistical Bulletin*, various editions, The State Committee of Statistics of the CIS, Moscow, 1993, 1994.
- *Statistical Bulletin N° 3*, The Federal State Statistics Service, Moscow, 1992.
- *Fuel and Energy Balance of Russia 1990*, The Federal State Statistics Service, Moscow, 1991.

- *Energetika*, Energo-Atomisdat, Moscow, 1981 to 1987.
- IEA Secretariat estimates.

Serbia

General notes

Data for Serbia are available starting in 1990. Prior to that, they are included in Former Yugoslavia.

Serbia energy data include Montenegro until 2004 and The United Nations Interim Administration Mission in Kosovo until 1999.

The Ministry of Mining and Energy of Republic of Serbia is currently in the process of revising time series for energy statistics. Important revisions were made in the past two years, in particular for renewables.

Sources 1990 to 2015:

- Direct communication with the Ministry of Mining and Energy, Belgrade.
- Direct communication with the Statistical Office of the Republic of Serbia, Belgrade.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- Direct communication with the Federal Ministry of Economy, Belgrade, 2001 and 2002.
- IEA Secretariat estimates.

South Africa

General notes

Outputs from gas-to-liquids and coal-to-liquids plants are presented in the “Transfers” flow.

New information became available in 2015 which allowed the separation of non-energy use of coal in Coal to Liquids (CTL) plants from the coal used for energy purposes in these same plants. Non-energy conversion efficiencies for CTL plants in South Africa are assumed to be 60%. This new methodology may lead to breaks in time series between 2010 and 2011 for these products and flows.

Breaks in time series may occur for anthracite and coking coal between 2009 and 2010 as new information became available. Prior to 2010, coking coal data may include anthracite.

Coking coal, coke oven coke, coke oven gas, gas works gas and blast furnace gas production and consumption have been estimated using reported crude steel production figures.

Sources 2010 to 2015:

- Direct communication with the Department of Energy, Pretoria, South Africa.
- *Energy statistics: Supply and demand of petroleum products*, Department of Energy, Pretoria, South Africa.
- *Statistical release on electricity generated and available for distribution*, Statistics South Africa, Pretoria.
- *South African Statistics*, Statistics South Africa, Pretoria, various editions up to 2016.
- *Integrated Annual Reports*, Electricity Supply Commission (ESKOM), South Africa.
- *Analyst Book*, SASOL Limited Group, Johannesburg, various editions up to 2016.
- World Steel Association online statistics database.
- IEA Secretariat estimates.

Sources 1992 to 2009:

- Energy balances submitted to the IEA Secretariat from the Department of Minerals and Energy, 2003 to 2009.
- *Electricity generated and available for distribution*, Statistics South Africa, Pretoria, various editions up to 2009.
- Direct submission from the Institute for Energy Studies, Rand Afrikaans University, Pretoria, 1998 to 2001.
- *Digest of South African Energy Statistics 1998*.
- Direct submissions from the Energy Research Institute, University of Cape Town.
- *ESKOM Annual Report*, Electricity Supply Commission (ESKOM), South Africa, 1989 to 1994.
- *Statistical Yearbook*, Electricity Supply Commission (ESKOM), South Africa, 1983 to 1994.
- *South Africa's Mineral Industry*, Department of Mineral and Energy Affairs, Braamfontein, 1995.
- *South African Energy Statistics, 1950-1993*, Department of Mineral and Energy Affairs, Pretoria, 1995.
- *South African Coal Statistics 1994*, South African Coal Report, Randburg, 1995.
- *Energy Balances in South Africa 1970-1993*, Energy Research Institute, Plumstead, 1995.

Sources up to 1991:

- *Statistical News Release 1981-1985*, Central Statistical Service, South Africa, various editions from 1986 to 1989.
- *Annual Report Energy Affairs 1985*, Department of Mineral and Energy Affairs, Pretoria, 1986.
- *Energy Projections for South Africa (1985 Balance)*, Institute for Energy Studies, Rand Afrikaans University, South Africa, 1986.

Former Soviet Union**General notes**

Data for individual countries of the Former Soviet Union are available starting in 1990, and most of the information on 1990 and 1991 was estimated by the IEA Secretariat. Because of large breaks in reporting occurring in the early 1990's, breaks in time series may occur in 1990 for all regional totals.

Coal production statistics refer to unwashed and un-screened coal up to 1990. IEA coal statistics normally refer to coal after washing and screening for the removal of inorganic matter. Also, see notes under 'Classification of Fuel Uses' and 'Heat', in section I.1, Issues of data quality.

The commodity balances presented for the Former Soviet Union include IEA Secretariat estimates of fuel consumption in the main categories of transformation. These estimates are based on secondary sources and on isolated references in FSU literature.

In older editions of this publication, intra-FSU trade was excluded.

Sources up to 1989:

- *Statistical Yearbook*, The State Committee for Statistics of the USSR, Moscow, various editions from 1980 to 1989.
- *External Trade of the Independent Republics and the Baltic States, 1990 and 1991*, the State Committee of Statistics of the CIS, Moscow, 1992.
- *External Trade of the USSR*, annual and quarterly, various editions, The State Committee of Statistics of the USSR, Moscow, 1986 to 1990.
- *CIR Staff Paper no. 14, 28, 29, 30, 32 and 36*, Center for International Research, U.S. Bureau of the Census, Washington, 1986, 1987 and 1988.
- *Yearbook on Foreign Trade*, The Ministry of Foreign Trade, Moscow, 1986.

Chinese Taipei**General notes**

Data for the period 1982-2009 were revised in 2012 based on new balances submitted by the Bureau of Energy. Breaks in time series may occur between 1981 and 1982.

Breaks in time series may also occur between 2010 and 2011 as more detailed information became available for refinery feedstocks and oil products.

Sources 1982 to 2015:

- *Energy Balances in Taiwan*, Bureau of Energy, Ministry of Economic Affairs, Taipei, various editions up to 2016.
- Direct communication with the electricity utilities.
- *Yearbook of Energy Statistics*, Ministry of Trade, Industry and Energy, Taipei, 1996.

Sources up to 1981:

- *The Energy Situation in Taiwan*, Ministry of Economic Affairs, Energy Committee, Taipei, 1986, 1987, 1988 and 1992.
- *Industry of Free China 1975-1985*, Council for Economic Planning and Development, Taipei, 1986.
- *Taiwan Statistical Data Book 1954-1985*, Council for Economic Planning and Development, Taipei, 1986.
- *Energy Policy for the Taiwan Area*, Ministry of Economic Affairs, Energy Committee, Taipei, 1984.
- *Energy Balances in Taiwan*, Ministry of Economic Affairs, Taipei, 1980 to 1981.

Sources for Biofuels and waste:

- *Energy Balances in Taiwan*, Bureau of Energy, Ministry of Economic Affairs, Taipei.
- The UN Energy Statistics Database.
- IEA Secretariat estimates.

Thailand**General notes**

Thailand joined the IEA as an Association country in November 2015.

Stock changes may include statistical difference for certain products.

In the 2014 edition, new information became available for the consumption of anthracite and lignite coal in industry. Breaks in time series may occur between 2011 and 2012.

Sources for 2012 up to 2015:

- Direct communication with the Ministry of Energy, Thailand, Bangkok.
- *Thailand Energy Statistics*, Ministry of Energy, Department of Alternative Energy Development and Efficiency, Bangkok, various editions up to 2016.
- *Thailand Energy Balance Table*, Ministry of Energy, Department of Alternative Energy Development and Efficiency, Bangkok, various editions up to 2016.
- *Thailand Energy Efficiency Situation*, Ministry of Energy, Department of Alternative Energy Development and Efficiency, Bangkok, various editions up to 2014.
- *Energy Statistics of Thailand*, Ministry of Energy, Energy Policy & Planning Office, Bangkok, various editions up to 2016.
- *Key Statistical Data*, Electricity Generation Authority of Thailand, online database: www.egat.co.th.
- IEA Secretariat estimates.

Sources for 2002 to 2012:

- Direct communication with the Petroleum Institute of Thailand, Bangkok, 2008 to 2012.
- *Thailand Energy Situation*, Ministry of Energy, Department of Alternative Energy Development and Efficiency, various editions up to 2012.
- *Key Statistical Data*, Electricity Generation Authority of Thailand, online database: www.egat.co.th.
- *Electric Power in Thailand*, Ministry of Energy, Department of Alternative Energy Development and Efficiency, various editions up to 2012.
- IEA Secretariat estimates.

Sources up to 2001:

- *Electric Power in Thailand*, Ministry of Science, Technology and Energy, National Energy Administration, Bangkok, 1985, 1986, 1988 to 2001.
- *Thailand Energy Situation*, Ministry of Science, Technology and Energy, National Energy Administration, Bangkok, 1978 to 2001.

Ukraine

General notes

Data for Ukraine are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Ukraine is one of the 11 EU4Energy focus countries.

Due to limited information being available to the State Statistics Service of Ukraine from part of the Donetsk and Luhansk regions of Ukraine and from the Autonomous Republic of Crimea, breaks in the time series may occur between 2013 and 2014.

The IEA Secretariat and State Statistics Committee of Ukraine are working closely and intensively on the improvement of data quality, and in particular revision of historical data. Therefore, breaks in time series may occur between 2006 and 2007.

For the period 2007 to 2015 the transparency of data may be reduced because of confidentiality issues.

Official Ukrainian coal statistics refer to unwashed and unscreened coal prior to 1995. IEA statistics normally refer to coal after washing and screening for the removal of inorganic matter. Therefore, the IEA Secretariat has revised Ukrainian coal supply and demand statistics downward to reflect levels of washed coal.

The breakdown of coal by type for 2016p has been estimated by the IEA Secretariat.

Bituminous coal “From other sources” refers to coal mined in informal sector.

Due to a plant closure in 2008, a stock of lignite/peat became available, without details about its consumption. This may lead to breaks in time series and high statistical difference for 2008.

In 2015, some inputs to oven coke production may be missing leading to high efficiency.

Sources 2007 to 2015:

- Direct communication with the State Statistics Committee of Ukraine, Kiev
- Joint IEA/Eurostat/UNECE annual energy questionnaires for Oil, Natural gas, Coal, Renewables, Electricity and heat.

Sources 1992 to 2006:

- Joint IEA/Eurostat/UNECE annual energy questionnaires.

- Direct communication with the Ministry of Statistics, the Coal Ministry, the National Dispatching Company, 1995.
- Coal: Direct communications with the State Mining University of Ukraine, 1995, 1996.
- Direct communication with the Ministry of Statistics of the Ukraine, July 1994.
- *Ukraine in 1992, Statistical Handbook*, Ministry of Statistics of the Ukraine, Kiev, 1993.
- *Ukraine Power Demand and Supply Options*, The World Bank, Washington, 1993.
- *Power Industry in Ukraine*, Ministry of Power and Electrification, Kiev, 1994.
- *Energy Issues Paper*, Ministry of Economy, March 1995.
- *Ukraine Energy Sector Statistical Review 1993, 1994, 1995, 1996, 1997*, The World Bank Regional Office, Kiev, 1994, 1995, 1996, 1997, 1998.
- *Global Energy Saving Strategy for Ukraine*, Commission of the European Communities, TACIS, Madrid, July 1995.
- IEA Secretariat estimates.

Sources 1990 to 1991:

- IEA Secretariat estimates.

Venezuela

General notes

In 2015, new information on the production and consumption of refinery gas since 2007 became available. For this reason, breaks in time series may occur between 2006 and 2007.

Revised data for the years 2005-2011 were provided by OLADE for Venezuela. These revisions may lead to breaks in time series between 2004 and 2005 and differences in trends in comparison to previous editions.

Sources up to 2015:

- Energy-Economic Information System (SIEE), Latin American Energy Organization (OLADE), Quito, accessed May 2017: <http://sier.olade.org/>.
- Estadísticas consolidadas, Cámara Venezolana de la Industria Eléctrica, 1996 to 2007.
- Oficina de operación de sistemas interconectados Venezuela, 2008.
- Petróleo y Otros Datos Estadísticos, Dirección General Sectorial de Hidrocarburos, Caracas, 1983 to 1991, 1993 to 2004, 2007 to 2008.
- Balance Energético de Venezuela, Dirección de Planificación Energética, Ministerio de Energía y Minas, Caracas, 1971 to 2005..
- Transformando la energía en desarrollo social, CVG EDELCA Informe Anual 2006.
- Compendio Estadístico del Sector Eléctrico, Ministerio de Energía y Minas, Dirección de Electricidad, Carbón y Otras Energías, Caracas, 1984, 1989, 1990, 1991.
- Memoria y Cuenta, Ministerio de Energía y Minas, Caracas, 1991.
- Energy-Economic Information System (SIEE), Latin American Energy Organization (OLADE), Quito, accessed May 2016, <http://sier.olade.org/>
- IEA Secretariat estimates.

Viet Nam

General notes

Data for stock changes may contain statistical differences for some energy products.

Sources 1992 to 2015:

- Direct communication with the Institute of Energy and the Ministry of Industry and Trade, Hanoi.
- *Vietnam Energy Balance Tables*, General Directorate of Energy, Ministry of Industry and Trade, Hanoi, various editions up to 2015.
- *Statistical Yearbook of Vietnam & Statistical Handbook*, General Statistics Office of Vietnam (GSO), Hanoi, various editions up to 2015.
- *Yearbook*, Vietnam Energy (N ăng Lượng Việt Nam), Hanoi, 2012.
- Direct communications with the Center for Energy-Environment Research and Development, Pathumthani, 1997 to 1999.
- *Sectoral Energy Demand in Vietnam*, UNDP Economic and Social Commission for Asia and the Pacific, Bangkok, 1992.
- *Energy Commodity Account of Vietnam 1992*, Asian Development Bank, Manila, 1994.
- *World Economic Problems (20)*, National Centre for Social Sciences of the S.R. Vietnam, Institute of World Economy, Hanoi, 1993.
- *Vietnam Energy Review*, Institute of Energy, Hanoi, 1995, 1997, 1998.
- APEC annual energy statistics questionnaires.
- IEA Secretariat estimates.

Former Yugoslavia

General notes

Data for individual countries of the Former Yugoslavia are available starting in 1990, and most of the information on 1990 and 1991 was estimated by the IEA Secretariat. Because of large breaks in reporting

which occurred in the early 1990's, breaks in time series may occur in 1990 for all regional totals.

Sources up to 1989:

- *Statisticki Godisnjak Yugoslavije*, Socijalisticka Federativna Rebublika Jugoslavija, Savezni Zavod Za Statistiku, Beograd, 1985 to 1991.
- *Indeks*, Socijalisticka Federativna Rebublika Jugoslavija, Beograd, 1990, 1991, 1992.

PART V

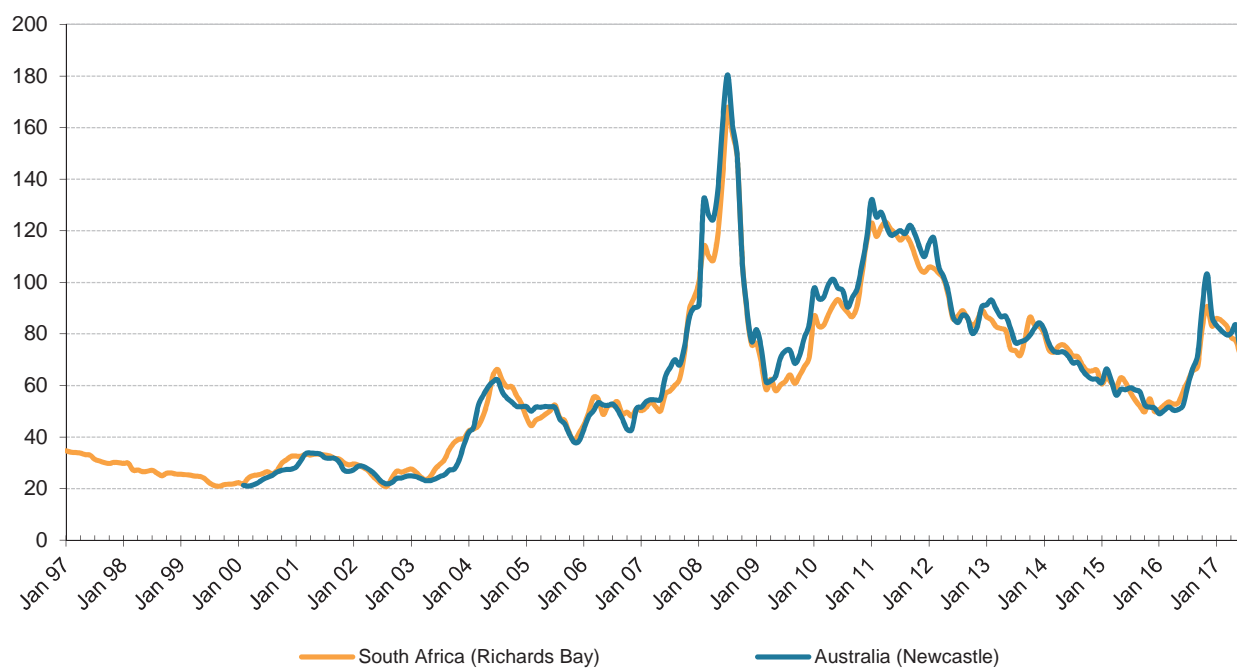
PRICES

**Figure 1: Delivered steam coal prices in Europe and Asia
(USD/t CIF)**



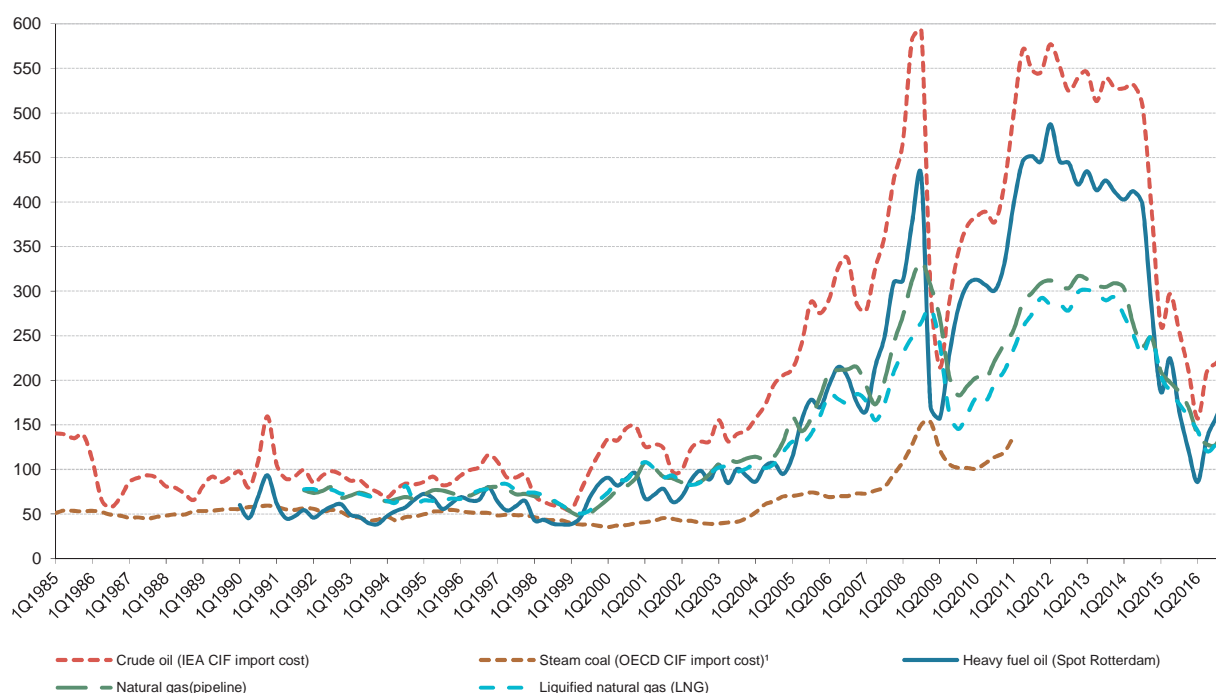
Source: IHS McCloskey, McCloskey's Coal Report

**Figure 2: FOB port steam coal prices in South Africa and Australia
(USD/t FOB)**



Source: IHS McCloskey, McCloskey's Coal Report.

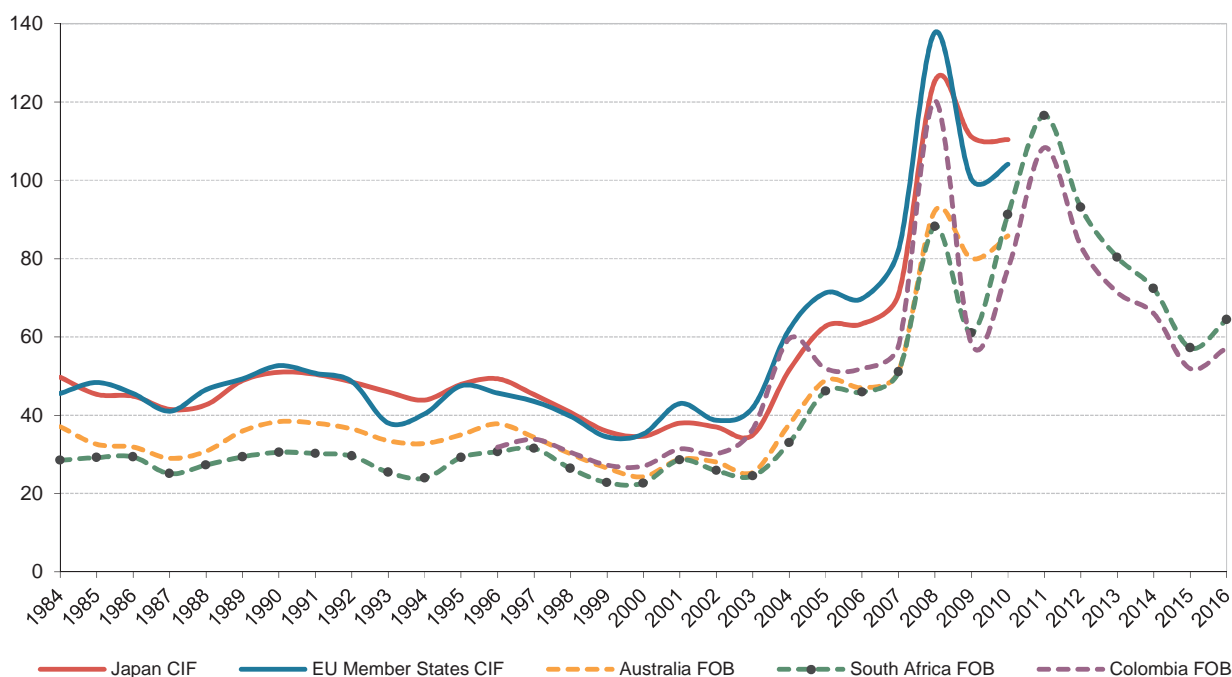
Figure 3: OECD international trade values for steam coal and oil (USD/tce)



Notes: Spot prices for heavy fuel oil are not directly comparable to customs unit values for steam coal. They are, however, closely correlated with average CIF crude oil prices, which are, by definition comparable to customs unit values for steam coal. As a consequence, it is not unreasonable to compare customs unit values for steam coal with spot prices of heavy fuel oil. Steam coal and crude oil are IEA average and CIF import values. Steam coal excludes intra-EU trade. Heavy fuel oil is Rotterdam spot market value, 3.5% sulphur.

Source: IEA/OECD Energy Prices and Taxes.

Figure 4: Steam coal import and export value comparison (USD/t)



Coal data for some countries and regions for Figure 3 and Figure 4 are currently unavailable for 2011 onwards due to resource constraints.

Source: IEA/OECD Energy Prices and Taxes.

Table 1: Japan coking coal import costs

(average unit value, CIF, USD/tonne)

	Total¹ (all sources)	Australia	Canada	USA	South Africa	Russian Federation	PR of China
1996	56.39	54.07	64.44	61.05	50.94	57.21	51.88
1997	55.19	52.73	64.84	61.24	49.64	57.09	49.98
1998	50.98	49.47	59.73	59.53	47.06	54.63	46.78
1999	42.95	41.83	51.05	55.79	39.74	45.17	40.01
2000	39.46	39.01	45.46	52.69	39.99	43.62	37.12
2001	41.13	40.96	47.30	47.81	47.09	45.52	39.35
2002	42.14	43.32	50.50	52.07	x	45.59	38.97
2003	41.73	43.56	51.64	42.93	x	46.05	39.09
2004	61.40	56.85	62.04	163.61	x	67.98	72.57
2005	88.80	96.44	106.05	159.01	x	114.96	100.45
2006	93.10	106.20	125.68	159.35	x	116.69	91.98
2007	88.43	96.03	112.61	516.32	x	105.45	100.91
2008	184.13	206.71	234.34	308.56	x	250.90	256.42
2009	163.82	191.58	220.94	241.65	x	190.54	138.99
2010	151.45	170.10	191.97	208.24	x	185.00	154.71
2011	214.16	248.43	274.44	267.90	x	249.74	247.90
2012 ²	..	..	..	..	..	..	..
2013 ²	..	..	..	..	..	..	..
2014 ²	..	..	..	..	..	..	..
2015 ²	..	..	..	..	..	..	..
2016 ²	..	..	..	..	..	..	..

Note: It should be noted that as a result of the import coal classification system used by Japanese customs authorities, some imports of Indonesian coal are recorded by customs as coking coal even though most of the coal is not used in the metallurgical industry. As this coal has a lower unit value than coking coal reported in other categories, the data presented in the Total column in this table, from 1991 onwards, tend to understate the total average unit value of coals imported into Japan for metallurgical use. Prior to 1991, the volume of imports reported by customs in this manner was not so large as to significantly affect the total averages.

Table 2: EU coking coal import costs from selected countries

(Average Unit Value, CIF, USD/tonne)

	Total¹ (all sources)	Australia	Canada	USA	South Africa	Russian Federation	Poland
1996	59.74	59.72	58.52	62.03	47.44	59.88	61.11
1997	57.99	57.97	57.61	60.08	43.31	54.93	61.02
1998	54.53	55.00	54.18	58.53	35.83	51.08	52.52
1999	48.97	47.33	45.58	54.14	36.21	57.96	47.48
2000	47.88	45.45	45.92	52.91	39.09	42.02	50.43
2001	53.56	51.24	54.59	58.54	42.10	58.89	51.58
2002	56.63	55.52	56.90	61.48	38.69	58.11	50.15
2003	59.61	58.03	61.31	64.18	39.20	47.45	62.24
2004	78.12	73.63	76.64	84.75	61.31	86.41	108.71
2005	109.61	114.89	113.81	110.91	71.77	86.05	138.92
2006	125.86	135.52	137.66	123.44	66.18	81.34	118.82
2007	125.73	127.74	129.45	126.95	96.82	92.15	139.47
2008	197.84	220.54	220.91	175.35	141.18	147.83	245.85
2009	187.29	243.76	223.39	160.22	81.99	108.78	137.24
2010	194.02	213.42	205.20	191.43	95.76	128.15	194.36
2011	264.74	290.70	285.81	255.81	131.56	154.79	274.08
2012 ²	..	..	..	..	..	..	..
2013 ²	..	..	..	..	..	..	..
2014 ²	..	..	..	..	..	..	..
2015 ²	..	..	..	..	..	..	..
2016 ²	..	..	..	..	..	..	..

1. Weighted average based only on imports for which prices are available. Calculated average prices may not be comparable from one year to the next due to differing components.

2. Coking coal import prices for 2012 through 2016 are unavailable due to resource constraints.

Source: IEA/OECD Energy Prices & Taxes [For editions prior to 2011]

Table 3: Japan steam coal import costs

(average unit value, CIF, USD/tonne)

	Total¹ (all sources)	Australia	USA	South Africa	Russian Federation	PR of China	Canada	Indonesia
1996	49.29	50.24	54.32	49.86	44.63	46.52	45.91	45.49
1997	45.26	45.59	49.86	46.58	42.57	44.73	42.01	41.63
1998	40.68	40.80	47.52	41.50	38.46	39.96	38.25	36.58
1999	35.87	36.12	45.37	37.34	30.24	34.89	33.50	32.40
2000	34.59	34.59	45.49	35.82	30.68	33.69	34.72	31.85
2001	37.95	38.32	45.99	38.05	37.61	36.95	36.94	35.17
2002	36.95	37.39	48.63	40.30	34.35	36.25	37.34	34.52
2003	34.93	35.13	x	35.21	34.28	35.28	33.82	32.72
2004	51.48	50.20	186.48	x	59.02	55.06	52.60	46.98
2005	62.73	61.90	x	80.64	66.10	65.65	63.79	59.65
2006	63.33	63.90	596.68	x	62.20	63.88	56.32	60.31
2007	70.92	71.03	553.99	77.46	72.28	73.60	66.04	66.45
2008	125.42	127.23	151.26	105.49	121.34	124.10	125.52	116.08
2009	111.12	111.87	47.12	87.62	101.62	118.18	103.84	112.99
2010	110.40	111.12	84.43	107.07	106.42	112.29	107.80	108.20
2011	141.26	142.75	123.01	146.91	137.21	146.66	140.99	134.62
2012 ²	..	..	..	..	..	..	..	..
2013 ²	..	..	..	..	..	..	..	..
2014 ²	..	..	..	..	..	..	..	..
2015 ²	..	..	..	..	..	..	..	..
2016 ²	..	..	..	..	..	..	..	..

Table 4: EU steam coal import costs from selected countries

(average unit value, CIF, USD/tonne)

	Total¹ (all sources)	Australia	USA	South Africa	Russian Federation	PR of China	Poland	Colombia
1996	45.62	48.25	48.03	42.23	42.48	46.18	46.50	41.93
1997	43.52	46.38	48.47	40.33	39.84	52.87	42.62	42.29
1998	39.72	40.03	46.99	36.30	37.23	52.85	39.61	37.56
1999	34.43	36.68	40.67	31.78	30.96	32.58	35.03	32.69
2000	35.22	39.04	41.07	33.83	33.59	31.45	35.30	34.22
2001	42.96	44.13	46.52	42.32	42.16	40.90	44.41	42.32
2002	38.69	43.28	43.48	36.65	36.79	44.30	40.75	36.99
2003	41.94	46.83	47.37	39.10	42.22	51.38	43.26	41.65
2004	61.91	69.05	61.50	58.00	65.14	60.61	68.95	61.54
2005	71.27	106.40	86.75	67.64	68.46	93.41	78.34	67.98
2006	69.80	109.71	82.08	66.24	67.93	150.20	75.65	66.07
2007	82.21	103.73	97.50	80.25	79.03	73.02	94.13	78.16
2008	137.79	184.75	138.40	142.07	131.62	161.12	156.01	138.32
2009	100.28	149.29	107.28	95.66	92.41	x	114.60	95.99
2010	104.10	197.74	117.46	98.50	97.66	x	104.06	95.84
2011	131.24	268.16	138.63	124.66	125.29	1344.85	134.57	118.88
2012 ²	..	..	..	..	..	..	..	..
2013 ²	..	..	..	..	..	..	..	..
2014 ²	..	..	..	..	..	..	..	..
2015 ²	..	..	..	..	..	..	..	..
2016 ²	..	..	..	..	..	..	..	..

1. Weighted average based only on imports for which prices are available. Calculated average prices may not be comparable from one year to the next due to differing components.

2. Steam coal import prices for 2012 through 2016 are unavailable due to resource constraints.

Source: IEA/OECD Energy Prices & Taxes [For editions prior to 2011]

Table 5: Steam coal export costs
(Average Unit Value, USD/tonne)

Exported from: To:	Australia (FOB)			Canada	United States (FAS)			Colombia	Indonesia	S. Africa
	Total	Japan	EU ¹		Total	Japan	EU ¹			
1996	37.77	38.89	33.19	35.67	36.94	40.02	36.80	31.81	42.71	30.63
1997	34.35	35.40	31.76	32.44	34.84	38.55	35.88	33.84	39.90	31.47
1998	30.10	31.50	24.54	30.24	32.24	37.00	33.05	30.51	35.82	26.37
1999	26.49	27.02	21.63	25.72	32.02	35.40	29.39	27.25	31.00	22.77
2000	24.27	24.72	20.86	24.99	31.84	34.90	28.26	26.99	29.60	22.63
2001	28.71	29.69	25.86	26.01	34.51	37.70	34.69	31.36	32.07	28.59
2002	28.01	29.20	24.42	28.11	37.70	40.41	33.09	30.09	29.98	25.82
2003	25.41	26.00	25.18	35.75	37.00	166.40	32.18	36.41	25.00	24.47
2004	37.65	38.45	34.44	44.75	53.93	91.47	42.06	59.55	38.00	32.77
2005	48.86	49.42	49.46	53.23	67.09	105.21	76.79	51.89	37.50	46.46
2006	47.05	50.59	49.29	45.24	55.66	166.53	64.17	51.92	32.75	45.90
2007	51.11	54.61	55.42	50.51	52.61	198.41	66.14	57.76	47.71	51.06
2008	92.23	103.23	102.85	97.37	62.76	143.02	82.07	120.27	87.74	88.19
2009	80.03	88.54	72.97	84.45	81.33	113.97	95.04	58.26	55.13	60.99
2010	85.82	89.03	120.56	95.97	71.63	83.85	82.21	77.31	71.01	91.26
2011	100.06	104.21	152.30	-	87.88	109.23	95.54	108.36	87.39	116.20
2012 ²	..	..	..	..	..	..	..	83.25	68.30	92.89
2013 ²	..	..	..	..	..	..	..	71.37	62.40	80.35
2014 ²	..	..	..	..	..	..	..	65.97	55.35	72.33
2015 ²	..	..	..	..	..	..	..	51.91	44.09	57.18
2016 ²	..	..	..	..	..	..	..	57.21	38.67	64.36

Table 6: Coking coal export costs
(Average Unit Value, USD/tonne)

Exported from: To:	Australia (FOB)			Canada	United States (FAS)			Colombia ³	Indonesia	S. Africa
	Total	Japan	EU ¹		Total	Japan	EU ¹			
1996	47.56	46.11	48.56	51.52	50.05	46.51	53.12	..	..	37.48
1997	47.37	45.52	47.73	50.04	49.99	45.94	52.87	..	..	39.66
1998	43.97	42.47	44.10	46.15	48.55	45.98	51.67	..	..	39.68
1999	35.99	34.60	37.59	38.19	46.19	44.46	49.27	..	..	37.72
2000	32.85	31.64	33.66	34.01	42.98	41.99	45.58	31.97	..	31.39
2001	36.93	34.46	39.99	43.03	45.88	x	50.10	31.26	..	34.38
2002	40.16	36.79	44.34	43.90	50.06	x	53.14	33.15	..	32.09
2003	39.75	36.18	43.14	44.59	49.11	56.01	52.19	..	..	37.81
2004	48.84	45.51	51.43	51.37	70.14	98.14	63.60	..	..	32.43
2005	88.94	83.74	100.84	96.26	89.91	100.61	89.53	..	..	27.91
2006	98.27	94.04	106.29	109.29	111.72	89.80	102.37	..	..	43.15
2007	84.16	79.50	93.67	98.44	98.10	x	100.58	..	..	53.00
2008	194.87	193.79	215.74	209.51	148.39	157.59	133.63	..	..	54.94
2009	143.83	165.07	168.88	194.92	129.77	181.25	124.78	..	..	67.93
2010	171.76	154.53	193.71	212.01	160.32	166.81	158.48	..	..	114.58
2011	198.47	180.64	221.65	-	205.02	203.02	207.08	..	..	95.04
2012 ²	..	..	..	..	..	..	..	..	..	..
2013 ²	..	..	..	..	..	..	..	..	..	..
2014 ²	..	..	..	..	..	..	..	..	..	..
2015 ²	..	..	..	..	..	..	..	..	..	..
2016 ²	..	..	..	..	..	..	..	..	..	..

1. Weighted average based only on imports for which prices are available. Calculated average prices may not be comparable from one year to the next due to differing components.
2. OECD steam and coking coal export values are unavailable for 2012 through 2016 due to resource constraints.
3. Low ash bituminous; injection grade to Japanese steel mills

Sources: IEA/OECD *Energy Prices & Taxes* (Tables 23 to 27) for Australia, Canada and the US, prior to 2011; *Latin America Coal & Power* for Colombia prior to 2003, *Indonesia Mineral and Coal Statistics* for Indonesia prior to 2003; *Coal Americas*, IHS Energy Publishing Inc. for Colombia and Indonesia 2003 till 2011, IHS McCloskey, *McCloskey's Coal Report* from 2011 onwards; Republic of S. Africa Minerals Bureau for South Africa prior to 2004, Xavier Provost, private consultant since 2004 and *South African Coal Report*, IHS Energy Publishing Inc

Table 7: Coking coal prices for industry

(USD/tce)

	1978	1985	1990	1995	2000	2002	2003	2004	2005	2006
Australia	29.69	24.85	..	..	..	..	..	..	..	..
Austria	..	..	..	..	..	..	..	..	..	..
Belgium	63.67	60.40	61.72	57.55	47.21	..	..	..	..	..
Canada	62.70	54.01	..	..	..	..	..	..	..	..
Chile	..	..	..	..	..	55.47	45.45	66.19	99.07	116.90
Czech Republic	..	44.30	52.62	64.92	50.73	65.73	..	..	..	..
Denmark	..	..	..	..	..	..	..	..	..	..
Estonia	..	..	..	..	..	..	..	..	..	..
Finland	..	..	..	101.01	99.78	109.88	126.04	158.63	196.65	203.29
France	51.84	50.31	62.62	59.55	45.43	58.03	59.67	72.00	106.19	127.95
Germany	62.91	63.40	63.02	60.34	..	..	..	..	..	..
Greece	..	..	..	..	..	..	..	..	..	..
Hungary	..	..	..	..	..	..	..	..	..	..
Ireland	..	..	..	..	..	..	..	..	..	..
Israel	..	..	..	..	..	..	..	..	..	..
Italy	69.79	62.38	64.88	60.70	53.26	60.99	63.48	81.00	108.96	117.95
Japan	72.47	66.24	68.03	61.13	45.29	48.88	48.81	69.33	103.99	112.09
Korea	..	..	..	..	..	..	..	72.66	116.53	119.87
Luxembourg	..	..	..	..	..	..	..	..	..	..
Mexico	..	..	..	..	..	..	..	..	..	..
Netherlands	105.55	97.88	154.34	..	..	..	..	..	..	..
New Zealand	..	..	..	..	..	..	..	..	..	..
Norway	..	72.51	93.32	89.69	..	..	..	..	..	..
Poland	..	..	..	60.05	39.10	47.46	51.92	95.31	114.57	94.24
Portugal	175.90	68.37	52.51	43.92	31.67	32.64	38.73	..	..	..
Slovak Republic	27.50	41.02	56.55	..	..	..	..	..	..	..
Slovenia	..	..	..	..	..	..	..	..	..	..
Spain	68.57	63.42	..	..	..	..	..	..	..	..
Sweden	64.11	64.56	..	..	..	..	..	..	..	..
Switzerland	..	102.86	..	..	..	..	..	..	..	..
Turkey	70.23	57.26	82.07	86.05	80.31	86.26	92.36	118.78	148.07	161.57
United Kingdom	..	..	..	..	..	..	..	..	..	..
United States	48.94	59.10	52.01	51.52	48.41	55.73	55.15	66.99	91.26	101.49
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Australia	..	..	..	..	..	..	..	..	..	..
Austria	..	..	..	..	..	..	..	..	..	..
Belgium	..	..	..	..	..	..	..	..	..	..
Canada	..	..	..	..	..	..	..	..	..	..
Chile	106.43	145.04	195.94	130.50	247.98	222.67	121.50	149.33	105.98	95.69
Czech Republic	..	..	..	..	..	..	..	..	..	..
Denmark	..	..	..	..	..	..	..	..	..	..
Estonia	..	..	..	..	..	..	..	..	..	..
Finland	225.89	382.62	287.47	288.81	479.66	398.61	352.52	338.36	299.05	323.50
France	119.55	207.93	197.67	209.31	278.19	..	..	..	..	..
Germany	..	..	..	..	..	..	..	..	..	..
Greece	..	..	..	..	..	..	..	..	..	..
Hungary	..	..	..	..	..	..	..	..	..	..
Ireland	..	..	..	..	..	..	..	..	..	..
Israel	..	..	..	..	..	..	..	..	..	..
Italy	124.19	199.90	152.00	185.72	254.62	..	..	..	..	..
Japan	108.07	220.66	203.29	186.84	252.06	212.40	157.83	134.08	113.61	110.82
Korea	110.12	247.02	169.43	..	..	..	..	..	..	..
Luxembourg	..	..	..	..	..	..	..	..	..	..
Mexico	..	..	..	..	..	..	..	..	..	..
Netherlands	..	..	..	..	..	..	..	..	..	..
New Zealand	..	..	..	..	..	..	..	..	..	..
Norway	..	..	..	..	..	..	..	..	..	..
Poland	111.17	221.50	129.55	187.88	253.30	184.16	149.15	132.93	105.46	102.50
Portugal	..	..	..	329.00	498.30	383.19	485.13	497.40	404.03	365.80
Slovak Republic	..	..	..	..	..	..	..	..	..	..
Slovenia	..	..	..	..	..	..	..	..	..	..
Spain	..	..	..	..	..	..	..	..	..	..
Sweden	..	..	..	..	..	..	..	..	..	..
Switzerland	..	..	..	..	..	..	..	..	..	..
Turkey	200.53	258.70	269.73	272.14	253.81	268.97	270.65	233.12	192.37	185.44
United Kingdom	..	..	..	..	..	..	..	..	..	..
United States	103.44	128.62	156.19	158.80	197.97	200.07	195.21	196.86	184.88	176.90

Source: IEA/OECD Energy Prices & Taxes

Table 8: Steam coal prices for industry

(USD/tce)

	1978	1985	1990	1995	2000	2002	2003	2004	2005	2006
Australia	..	27.23	..	..	..	..	..	..	..	..
Austria	90.20	65.63	78.84	82.29	54.73	75.33	87.64	171.25	178.69	181.33
Belgium	29.62	54.28	55.41	..	..	..	..	..	..	..
Canada	43.98	50.08	..	..	..	..	..	..	..	..
Chile	..	..	..	..	..	..	..	..	..	..
Czech Republic	..	19.06	24.44	31.30	26.96	33.87	..	..	..	..
Denmark	76.39	81.93	119.94	84.94	..	..	..	..	..	..
Estonia	..	..	..	..	..	..	..	..	..	..
Finland	51.74	57.34	72.35	96.93	89.47	96.68	113.53	140.81	146.63	149.81
France	61.82	89.61	128.20	145.13	105.48	109.32	130.49	..	..	..
Germany	98.52	98.18	185.76	..	..	..	..	..	..	..
Greece	93.42	..	..	..	..	..	..	..	..	..
Hungary	..	57.76	100.92	..	..	..	..	..	..	..
Ireland	..	..	..	..	..	..	..	..	..	..
Israel	..	..	..	..	..	..	..	..	..	..
Italy	70.05	56.50	58.84	57.35	43.46	47.01	48.09	72.13	83.23	78.59
Japan	71.23	66.49	70.53	62.00	45.68	48.29	45.29	67.16	81.23	87.10
Korea	..	40.62	61.03	56.01	58.36	52.96	58.42	57.88	66.77	60.93
Luxembourg	..	..	..	..	..	..	..	..	..	..
Mexico	..	..	..	..	..	..	..	..	..	..
Netherlands	57.76	60.33	62.74	..	..	..	..	..	..	..
New Zealand	36.23	..	..	..	..	..	..	..	..	..
Norway	39.79	45.67	53.13	..	..	..	..	..	..	..
Poland	..	..	..	51.77	48.83	50.23	56.63	65.40	71.39	81.68
Portugal	..	..	..	..	37.98	39.74	47.00	..	..	..
Slovak Republic	7.88	11.70	15.25	..	..	..	..	..	..	..
Slovenia	..	..	..	..	..	..	..	..	..	..
Spain	..	..	..	..	..	..	..	..	..	..
Sweden	77.55	69.90	92.56	..	..	..	..	..	..	..
Switzerland	68.81	70.26	72.45	71.06	60.13	61.64	75.26	110.08	110.03	111.25
Turkey	..	51.63	79.67	58.81	53.33	69.46	73.39	67.16	78.71	79.99
United Kingdom	49.74	72.98	88.51	65.61	59.32	65.09	70.29	86.78	99.65	99.17
United States	36.26	44.31	40.00	38.59	37.77	39.97	40.73	46.79	56.31	61.57
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Australia	..	..	..	..	..	..	..	..	..	..
Austria	203.12	249.48	243.64	208.76	246.66	251.81	227.30	209.06	172.50	169.44
Belgium	..	..	..	..	..	..	..	..	..	..
Canada	..	..	..	..	..	..	..	..	..	..
Chile	..	..	..	..	..	..	..	..	..	..
Czech Republic	..	..	..	..	..	..	..	..	..	..
Denmark	..	..	..	..	..	..	..	..	..	..
Estonia	..	..	..	..	..	..	..	..	..	..
Finland	166.59	249.09	192.19	193.76	362.13	322.66	311.54	310.85	282.56	310.14
France	..	..	..	..	..	..	..	..	..	..
Germany	..	..	..	..	..	..	..	..	..	..
Greece	..	..	..	..	..	..	..	..	..	..
Hungary	..	..	..	..	..	..	..	..	..	..
Ireland	..	..	..	..	..	..	..	..	..	..
Israel	..	..	..	..	..	..	..	..	..	..
Italy	97.48	163.22	129.51	127.19	159.23	..	..	..	..	..
Japan	97.98	167.62	152.90	151.91	193.42	189.16	158.58	144.38	121.27	115.52
Korea	75.29	124.80	94.12	..	..	..	..	..	..	..
Luxembourg	..	..	..	..	..	..	..	..	..	..
Mexico	..	..	..	..	..	..	..	..	..	..
Netherlands	..	..	..	..	..	..	..	..	..	..
New Zealand	..	..	..	..	..	..	..	..	..	..
Norway	..	..	..	..	..	..	..	..	..	..
Poland	96.83	135.19	122.71	125.20	142.27	142.18	130.46	120.31	91.08	77.96
Portugal	..	..	..	140.85	176.24	202.94	165.35	147.81	89.27	..
Slovak Republic	..	..	..	..	..	..	..	..	..	..
Slovenia	..	..	..	..	..	..	..	..	..	..
Spain	..	..	..	..	..	..	..	..	..	..
Sweden	..	..	..	..	..	..	..	..	..	..
Switzerland	145.85	252.48	160.86	181.26	234.07	177.96	144.10	131.01	115.18	106.00
Turkey	115.02	152.51	139.04	137.83	142.33	161.45	172.80	149.36	133.00	128.39
United Kingdom	113.43	130.65	111.10	130.90	166.78	165.81	176.75	185.27	154.32	112.13
United States	64.85	75.60	77.28	76.20	77.52	87.90	85.76	86.49	81.22	77.36

Source: IEA/OECD Energy Prices & Taxes

Table 9: Steam coal prices for electricity generation
(USD/tce)

	1978	1985	1990	1995	2000	2002	2003	2004	2005	2006
Australia	10.83	19.11	29.05	..	..	..	..	..	..	..
Austria	173.19	75.95	80.98	..	56.94	55.78	68.29	86.09	92.70	98.23
Belgium	53.08	65.42	59.60	57.28	42.95	45.21	47.13	95.02	105.36	82.93
Canada	37.88	..	61.02	..	20.54	22.02	24.15	23.34	28.16	30.02
Chile	..	..	..	..	32.41	33.56	34.56	51.39	58.27	57.37
Czech Republic	10.29	15.70	20.49	26.48	21.88	23.40	..	..	..	..
Denmark	..	56.88	..	..	..	..	..	..	..	..
Estonia	..	..	..	..	..	..	..	..	..	..
Finland	51.74	57.34	72.35	96.93	44.40	50.59	55.49	76.99	82.82	85.36
France	..	43.58	57.35	55.34	41.98	48.35	47.85	71.64	84.41	82.15
Germany	83.97	82.45	141.95	163.77	42.94	46.27	50.64	70.87	80.73	78.92
Greece	..	..	..	..	..	..	..	..	..	..
Hungary	..	38.53	90.60	..	..	..	..	..	..	..
Ireland	..	84.91	63.11	53.27	34.26	42.37	40.16	75.99	79.21	69.22
Israel	..	..	..	..	..	..	..	..	..	..
Italy	41.32	57.38	67.72	65.27	..	..	43.38	70.11	83.45	79.24
Japan	90.58	77.86	101.84	92.27	51.42	49.77	..	..	..	..
Korea	..	..	..	..	..	..	..	50.51	58.44	54.57
Luxembourg	..	..	..	..	..	..	..	..	..	..
Mexico	..	42.39	48.19	39.17	48.69	51.56	49.11	56.82	62.69	64.79
Netherlands	40.99	65.72	71.37	..	..	..	..	..	..	..
New Zealand	..	..	..	..	..	..	..	..	..	..
Norway	..	..	..	..	..	..	..	..	..	..
Poland	..	16.93	17.03	43.52	38.86	44.13	49.33	54.89	65.19	69.75
Portugal	31.26	65.23	58.90	50.80	34.67	37.06	44.00	65.92	77.51	66.84
Slovak Republic	4.30	6.55	8.61	..	..	..	..	..	..	..
Slovenia	..	..	..	..	..	..	..	..	..	..
Spain	42.60	50.82	..	..	..	..	..	..	..	..
Sweden	50.00	50.43	..	..	..	..	..	..	..	..
Switzerland	..	..	..	..	..	..	..	..	..	..
Turkey	..	33.65	31.85	62.46	50.52	53.19	66.45	90.65	88.29	86.87
United Kingdom	52.18	72.71	96.27	68.61	55.02	55.10	56.85	74.00	81.19	86.73
United States	29.96	43.67	38.52	34.58	31.51	32.91	33.33	35.48	40.50	44.47
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Australia	..	..	..	..	..	..	..	..	..	..
Austria	101.93	129.35	141.37	115.56	135.43	136.77	145.97	119.23	97.76	105.13
Belgium	99.07	171.19	100.77	..	..	..	..	..	..	..
Canada	32.70	33.19	28.67	35.65	33.14	37.72	37.80	..	..	..
Chile	69.82	116.90	95.10	83.58	106.80	96.24	89.82	83.18	71.99	65.55
Czech Republic	..	..	..	..	..	..	..	..	..	..
Denmark	..	..	..	..	..	..	..	..	..	..
Estonia	..	..	..	..	..	..	..	..	..	..
Finland	96.21	164.25	111.56	116.89	157.45	133.45	109.08	108.49	85.70	82.58
France	94.53	153.44	128.44	122.05	144.61	..	..	..	..	..
Germany	91.38	154.47	111.47	119.27	155.05	128.02	110.23	101.84	83.81	80.68
Greece	..	..	..	..	..	..	..	..	..	..
Hungary	..	..	..	..	..	..	..	..	..	..
Ireland	94.31	112.40	..	..	..	..	..	..	..	..
Israel	..	169.59	164.94	130.17	189.51	179.18	..	..	..	..
Italy	100.83	169.04	122.09	127.81	..	..	..	..	..	..
Japan	..	..	..	..	..	..	..	..	..	..
Korea	63.96	96.49	87.54	..	..	..	..	..	..	..
Luxembourg	..	..	..	..	..	..	..	..	..	..
Mexico	70.26	80.19	78.20	83.49	85.87	87.11	93.13	96.58	86.80	78.08
Netherlands	..	..	..	..	..	..	..	..	..	..
New Zealand	..	..	..	..	..	..	..	..	..	..
Norway	..	..	..	..	..	..	..	..	..	..
Poland	79.21	110.19	109.84	107.21	115.89	113.53	106.06	102.64	81.09	70.09
Portugal	87.61	162.01	93.32	101.20	129.85	103.39	89.61	82.69	64.28	63.30
Slovak Republic	..	..	..	..	..	..	..	..	..	..
Slovenia	..	..	..	..	..	..	..	..	..	..
Spain	..	..	..	..	..	..	..	..	..	..
Sweden	..	..	..	..	..	..	..	..	..	..
Switzerland	..	..	..	..	..	..	..	..	..	..
Turkey	97.12	113.22	112.43	127.32	130.86	135.91	159.57	152.34	111.71	99.64
United Kingdom	102.00	148.79	105.08	119.15	159.09	130.15	119.13	115.60	92.16	90.72
United States	46.45	54.32	57.91	59.42	62.80	62.55	61.51	62.06	58.45	55.51

Source: IEA/OECD Energy Prices & Taxes

Figure 5: Coking coal price
CIF Japan and CIF EU member states (USD/tonne)

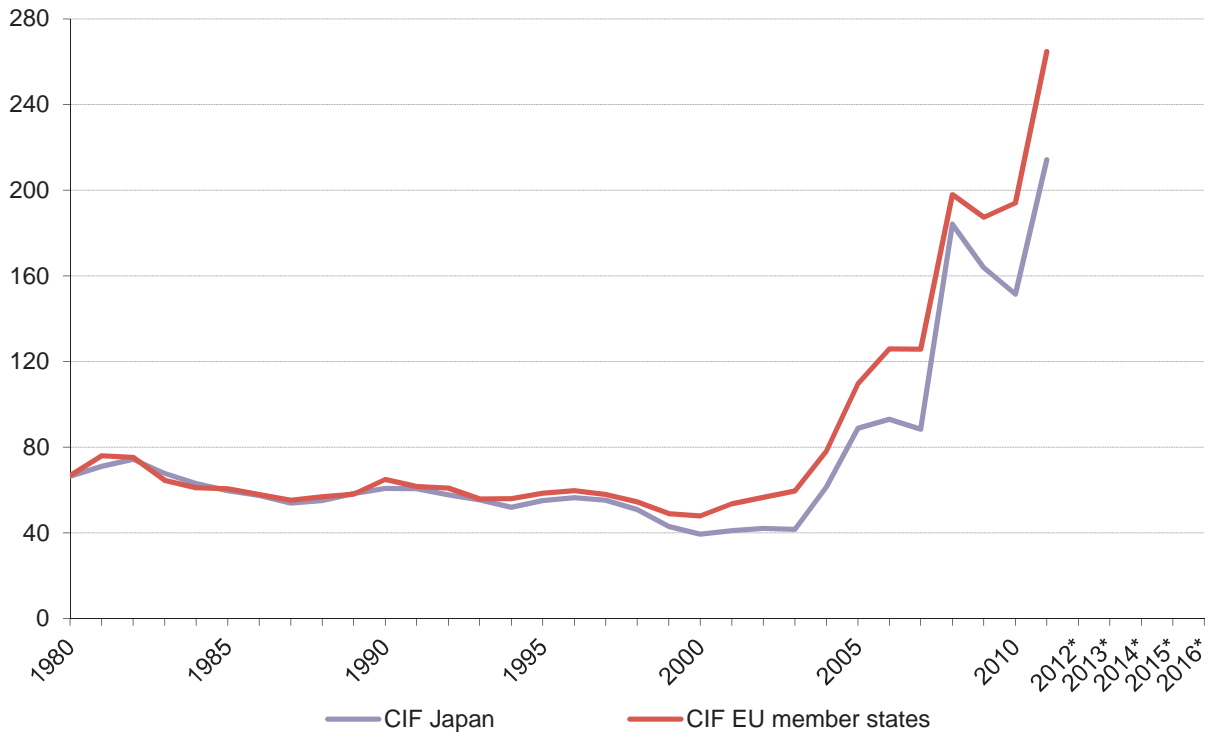
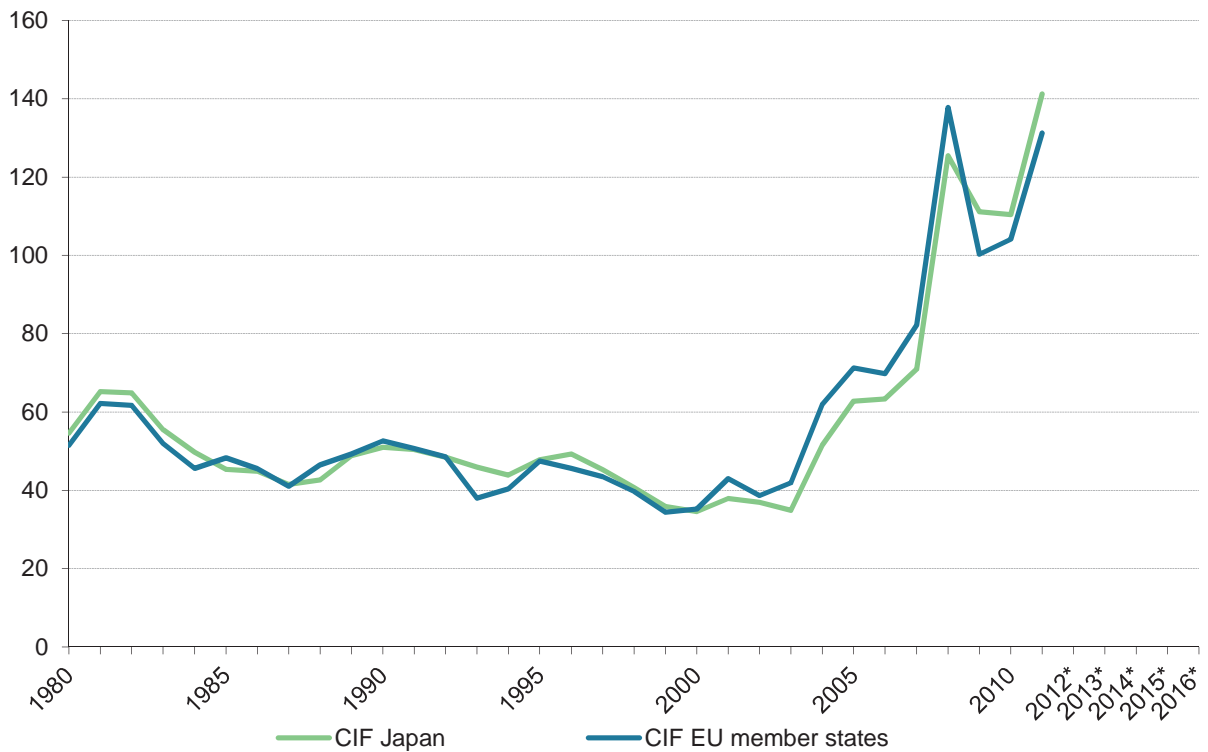
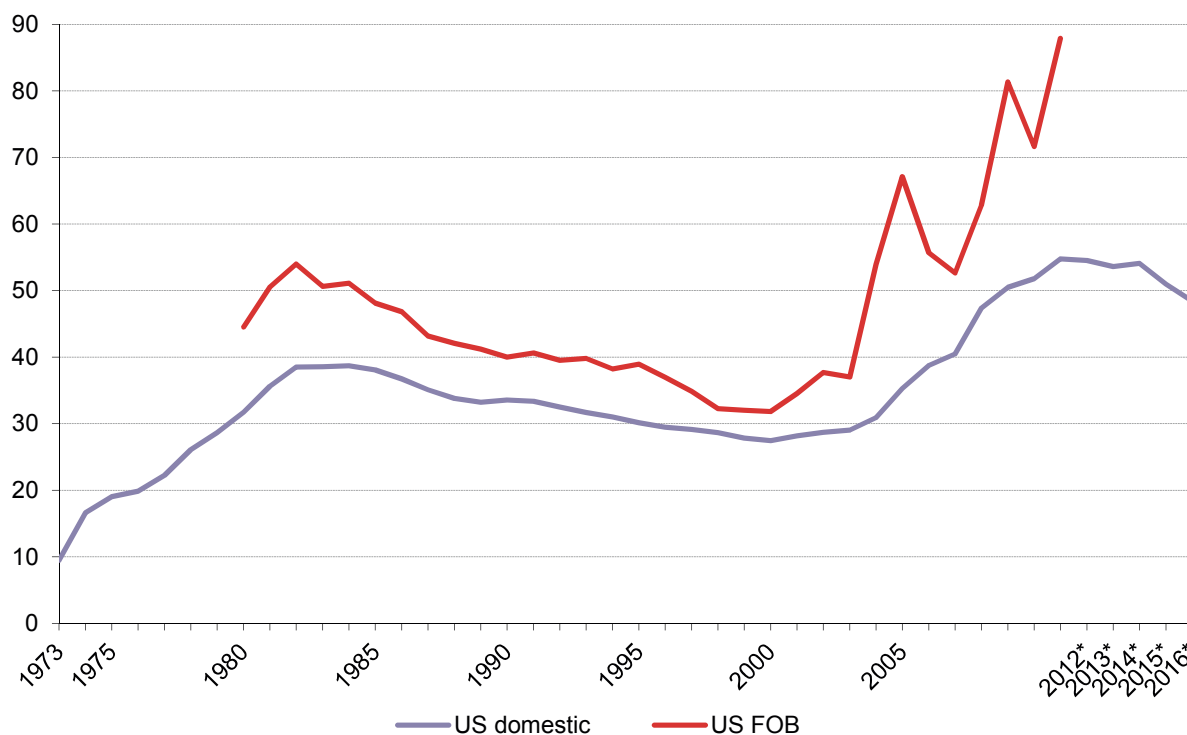


Figure 6: Steam coal price
CIF Japan and CIF EU member states (USD/tonne)

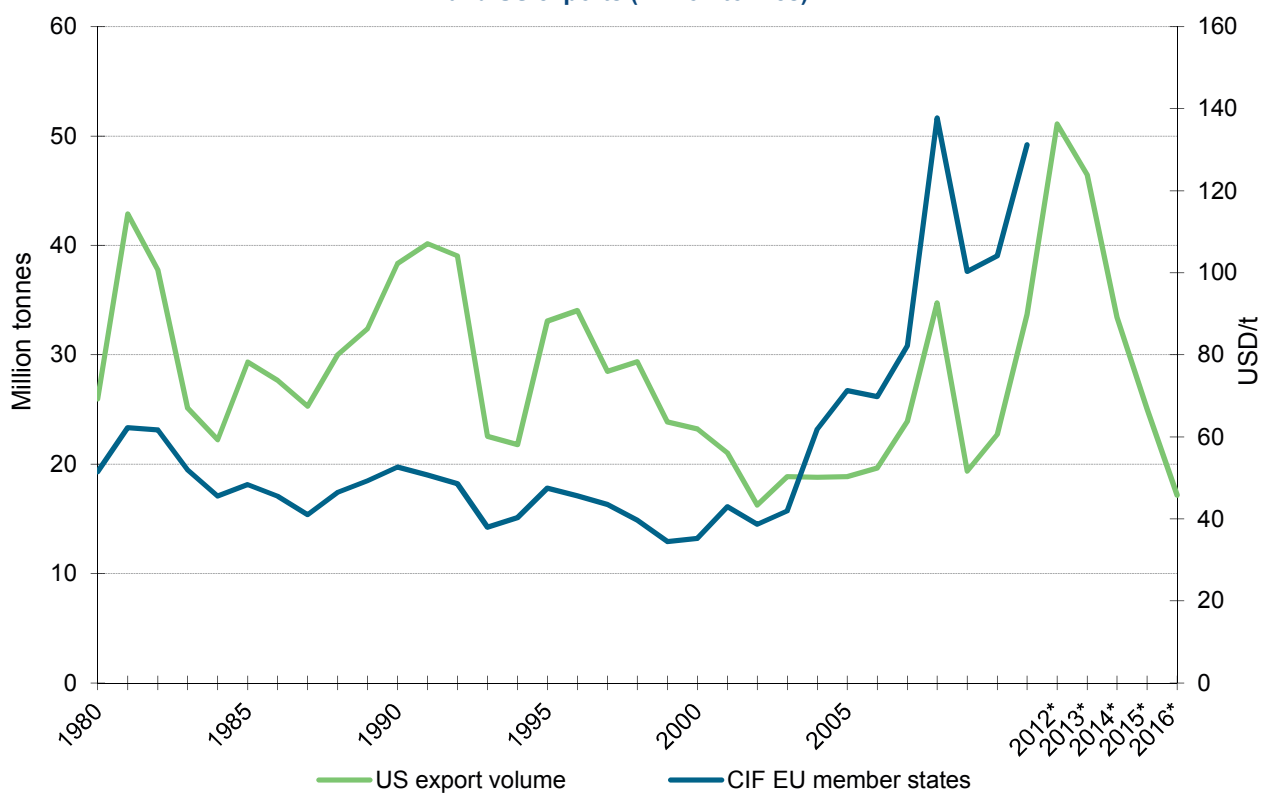


* Prices for 2012 through 2016 are unavailable due to resource constraints.

**Figure 7: Steam coal price
US FOB vs. US domestic (USD/tonne)**



**Figure 8: Steam coal price CIF EU member states (USD/tonne)
and US exports (million tonnes)**



* International trade prices for 2012 through 2015 are unavailable due to resource constraints.

PART VI

HISTORICAL TIME SERIES

1. PRODUCTION

Table 1.1: World coking coal production
(thousand tonnes)

	1978	1985	1990	1995	2000	2005	2010	2013	2014	2015	2016p
Australia	37668	54835	64631	79375	103750	128358	162929	159494	180295	191056	189302
Belgium	3805	3484	-	-	-	-	-	-	-	-	-
Canada	13780	24371	27660	28624	28164	30796	28153	34063	32500	26547	25960
Czech Republic	18553	16465	14383	10824	8136	7136	6023	4559	4590	4088	3384
France	4664	3388	1821	439	-	-	-	-	-	-	-
Germany	52239	51401	44577	31686	18862	15171	8145	4756	4739	3843	2164
Hungary	861	592	169	-	-	-	-	-	-	-	-
Japan	8659	3921	-	-	-	-	-	-	-	-	-
Mexico	3085	3713	2963	1645	2214	3520	4022	2057	1882	3113	2957
New Zealand	11	319	578	1474	1310	2446	2341	2152	1760	1333	1213
Norway	227	174	-	-	-	-	-	-	-	-	-
Poland	40845	31143	28793	28714	17222	14071	11658	12116	12288	12985	13082
Spain	1800	907	279	-	-	-	-	-	-	-	-
Turkey	2964	2247	1824	929	735	648	1088	817	861	767	732
United Kingdom	15110	2608	1600	599	255	274	270	179	99	72	53
United States	92201	89463	93259	77166	54287	46444	68645	77857	72717	57521	50645
IEA Total	293387	285318	279574	259830	232721	245344	289252	295993	309849	298212	286535
OECD Total	296472	289031	282537	261475	234935	248864	293274	298050	311731	301325	289492
Algeria	-	23	-	-	-	-	-	-	-	-	-
Mozambique	-	-	-	-	-	-	-	3281	3785	4787	5204
South Africa	9718	11142	9308	10165	3204	1640	2797	3354	3232	2978	3467
Tanzania	-	-	1	1	-	-	-	-	-	-	-
Zimbabwe	946	269	612	621	856	692	348	449	422	426	429
Brazil	1317	1407	499	106	15	210	-	-	-	-	-
Colombia	1313	1489	1721	1840	1818	1451	3837	4558	4687	4486	4130
India	13938	25847	36088	28803	22088	23584	41432	49638	50451	53014	54650
Indonesia	-	10	29	241	616	1222	1947	2244	1022	985	1013
DPR of Korea	3415	2500	2543	-	-	-	-	-	-	-	-
Mongolia	-	-	-	-	-	983	9465	6933	6165	13144	22842
Chinese Taipei	-	107	3	-	-	-	-	-	-	-	-
PR of China	52604	68370	85657	147206	124113	308648	488492	600694	619764	593047	591998
Georgia	x	x	574	-	-	-	-	-	-	-	-
Kazakhstan	x	x	29983	12756	10687	10981	11906	12968	17906	17020	10498
Romania	2134	3825	1482	349	13	-	-	-	-	-	-
Russian Federation	x	x	85458	55645	51035	55505	66884	73802	76318	82869	83447
Tajikistan	x	x	-	7	-	-	-	-	-	-	-
Ukraine	x	x	62283	25783	27844	23166	17688	19663	12297	6064	6088
Former Soviet Union	139250	134985	x	x	x	x	x	x	x	x	x
Islam. Rep. of Iran	678	1006	760	914	931	930	984	922	909	909	1018
Non-OECD Total	225313	250980	317001	284437	243220	429012	645780	778506	796958	779729	784784
World	521785	540011	599538	545912	478155	677876	939054	1076556	1108689	1081054	1074276

Source: IEA/OECD World Energy Statistics

Table 1.2: World steam coal¹ production
(thousand tonnes)

	1973 ²	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p
Australia ³	55483	31524	67511	93941	111680	135679	171699	200400	247956	256014	250401
Austria	-	-	-	-	1	-	-	-	-	-	-
Belgium ³	10362	3982	4182	2357	637	375	109	16	19	15	14
Canada	12337	16566	26810	31265	35618	29809	28215	29477	28966	26959	26039
Chile ³	1374	1125	1291	2183	1038	366	544	619	4164	3143	2525
Czech Republic	27780	10318	9936	8032	6914	6719	6118	5570	4307	4589	3516
France ³	26350	16076	13667	9378	8056	3804	617	261	300	-	-
Germany	104407	38456	37448	31976	27172	18514	12847	5963	3598	2806	1915
Hungary	1186	2498	2088	329	-	-	-	-	-	-	-
Ireland	64	60	57	25	1	-	-	-	-	-	-
Italy	-	-	-	58	-	-	95	101	86	81	54
Japan ³	25090	11084	12460	7985	6317	2964	-	-	-	-	-
Korea ³	13571	18625	22543	17217	5720	8300	2832	2084	1748	1764	1726
Mexico ³	2494	-	1480	3970	7675	9130	9203	10585	12904	11616	8660
Netherlands	1829	-	101	-	-	-	-	-	-	-	-
New Zealand	1276	1757	1960	1841	1860	1936	2575	2695	1900	1732	1359
Norway	415	128	333	303	292	632	1471	1935	1675	1106	818
Poland	156630	161626	160499	118943	108452	86109	83833	65070	60983	59701	57611
Portugal ³	221	177	237	281	-	-	-	-	-	-	-
Spain	9991	15544	21464	19030	17529	14947	11894	8430	3899	3064	1800
Sweden	12	18	13	11	-	-	-	-	-	-	-
Turkey	4642	1721	1881	1197	1386	1679	2410	2613	1815	1525	1817
United Kingdom	131985	120047	91503	91162	52438	30943	20224	18076	11548	8526	4125
United States ³	530064	592462	646472	760388	781461	839685	915996	856492	773371	691240	554691
IEA Total	1113695	1042669	1121165	1195719	1165534	1182095	1260935	1199183	1142171	1059122	905886
OECD Total	1117563	1043794	1123936	1201872	1174247	1191591	1270682	1210387	1159239	1073881	917071
Algeria	333	-	-	-	-	-	-	-	-	-	-
Botswana	..	..	437	794	898	947	985	988	1712	2085	1873
Dem. Rep. of Congo	130	138	121	126	-	-	-	-	-	-	-
Egypt	-	-	-	-	-	58	25	-	-	-	-
Ethiopia	-	-	-	-	-	-	-	36	-	-	-
Morocco	565	680	775	526	650	31	12	-	-	-	-
Mozambique	394	207	35	40	38	16	3	38	2547	1814	1559
Nigeria	327	176	140	90	20	3	8	38	46	47	44
South Africa	62352	104515	162358	165492	196046	220996	243346	251725	257308	255572	253452
Tanzania	-	1	15	3	43	79	31	-	246	257	276
Zambia	940	570	511	377	152	196	150	1	159	159	200
Zimbabwe	2806	1777	2835	4733	4072	3629	2930	2500	5361	3910	2273
Other Africa	160	567	317	314	342	427	496	543	279	285	312
Argentina	451	390	400	276	305	259	25	65	57	34	83
Brazil	1015	2570	4318	1935	2673	4061	3542	3320	4515	4469	3525
Colombia	2834	2781	7277	19654	23811	36424	57613	70513	83891	81062	86382
Peru	33	41	127	97	51	17	43	88	211	243	266
Venezuela	50	42	40	2189	4064	7885	7195	2730	1200	830	947

Table 1.2: World steam coal¹ production (continued)
(thousand tonnes)

	1973 ²	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p
Bangladesh	-	-	-	-	-	-	178	705	947	676	1022
India	76588	92945	124621	175096	239477	289340	383455	491262	558728	586216	607991
Indonesia ⁴	149	304	1898	10201	41587	78761	169319	323053	487284	452537	459469
DPR of Korea ⁴	23198	40270	49500	43810	31300	29743	34610	25500	27090	27490	35208
Malaysia	-	-	-	111	135	384	788	2397	2687	2559	2413
Mongolia	..	..	480	595	1290	70	2192	10025	14126	3926	4306
Myanmar	10	11	43	40	12	468	522	646	642	697	535
Nepal	-	-	-	-	-	17	12	15	18	19	5
Pakistan	1143	1098	1567	1922	2546	2166	2861	2350	2589	2711	2780
Philippines ⁴	-	326	1252	1229	1290	1354	2880	6650	7601	7378	10975
Chinese Taipei	3327	2574	1751	469	235	83	-	-	-	-	-
Thailand	-	-	-	-	5	-	-	-	-	-	-
Viet Nam	2990	5200	5594	4638	8350	11609	33771	44835	41068	41484	39361
Other Asia	235	511	151	108	97	243	420	1252	1743	1652	1777
PR of China ⁴	417000	551928	768902	954163	1191540	1230773	2008677	2827609	3020403	2970118	2650481
Albania	-	-	-	-	-	-	-	-	-	99	-
Bosnia and Herzegovina	x	x	x	-	-	4038	4643	5367	5947	6174	6293
Bulgaria	351	267	223	143	3381	118	9	45	35	51	52
Croatia	x	x	x	156	75	-	-	-	-	-	-
Kazakhstan	x	x	x	98017	67998	64199	71807	91740	89185	84773	82142
Kyrgyzstan	x	x	x	1495	183	104	43	75	298	345	244
Romania	7172	6232	4832	2964	799	268	32	4	80	10	47
Russian Federation	x	x	x	152056	106766	101503	153708	155693	187724	195164	208290
Serbia	x	x	x	137	55	176	24	-	-	-	-
Tajikistan	x	x	x	475	34	22	99	200	822	985	1308
Ukraine ⁴	x	x	x	81200	48219	33757	36841	39971	43705	24347	23435
Uzbekistan	x	x	x	200	74	69	73	65	408	367	366
Former Soviet Union	510600	409466	434015	x	x	x	x	x	x	x	x
Former Yugoslavia	576	388	400	x	x	x	x	x	x	x	x
Islam. Rep. of Iran	903	83	100	75	170	217	626	105	166	186	208
Non-OECD Total	1116632	1226058	1575035	1725946	1978783	2124510	3223994	4362149	4850828	4760731	4489900
World	2234195	2269852	2698971	2927818	3153030	3316101	4494676	5572536	6010067	5834612	5406971

1. Steam coal is also commonly known as thermal coal. From 1978 onwards it comprises anthracite, bituminous coal and sub-bituminous coal. For further information, see notes and definitions in Part I.

2. Data prior to 1978 are hard coal. Hard coal comprises anthracite, coking coal and other bituminous coal. Sub-bituminous coal data may exist in hard coal for select countries.

3. May include sub-bituminous coal prior to 1978.

4. Data includes lignite for at least some years.

Source: IEA/OECD World Energy Statistics

Table 1.3: World lignite¹ production
(thousand tonnes)

	1973 ²	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p
Australia ³	24121	32894	38380	45990	50752	67293	70533	72547	60543	65361	63571
Austria	3328	2865	3081	2448	1297	1249	-	-	-	-	-
Canada	8135	5971	9672	9407	10739	11190	11017	10264	8570	8425	8979
Chile ³	61	40	35	-	-	-	-	-	-	-	-
Czech Republic	75965	89086	94636	78983	57163	50307	48772	43774	38177	38105	38528
France ³	2764	2560	1839	2333	1401	296	-	-	-	-	-
Germany	366409	389726	434037	357468	192756	167691	177907	169403	178178	178065	171547
Greece	13301	23198	35888	51896	57662	63887	69398	56520	50845	46246	32255
Hungary	25925	22644	21412	17332	14772	14033	9570	9113	9551	9261	9215
Italy	1190	1286	1892	956	172	14	-	-	-	-	-
Japan ³	100	27	-	-	-	-	-	-	-	-	-
Mexico ^{3,4}	84	-	-	-	-	-	752	697	601	540	308
New Zealand	1192	208	247	159	243	213	246	295	317	324	313
Poland	39215	36866	57746	67584	63547	59484	61636	56510	63877	63128	60246
Slovak Republic	5804	5796	5731	4766	3759	3648	2511	2378	2188	1939	1847
Slovenia	x	x	x	5583	4884	4480	4540	4430	3108	3168	3349
Spain	3003	11415	17292	16373	10776	8524	7587	-	-	-	-
Turkey	7754	14469	35869	44407	52758	60854	55282	69698	62573	56122	56850
United States ³	12948	42783	65701	79914	78471	77619	76151	70970	72109	64929	66506
IEA Total	591154	681794	823423	780016	596268	586302	590610	561472	546928	531905	509857
OECD Total	591299	681834	823458	785599	601152	590782	595902	566599	550637	535613	513514

Table 1.3: World lignite¹ production (continued)
(thousand tonnes)

	1973 ²	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p
Niger	..	..	..	..	..	158	182	275	263	226	264
Brazil ⁴	1324	1127	1987	2161	2420	2730	2503	2095	3422	3560	3480
India	3320	5110	8040	14074	22146	24247	30228	37733	48270	43842	44976
DPR of Korea ⁴	7000	-	-	-	-	-	-	-	-	-	-
Mongolia	..	..	6043	6562	3729	5115	4341	5723	6073	5755	6332
Myanmar	-	27	43	38	23	112	70	40	50	54	42
Pakistan	-	471	671	824	1091	928	2010	1101	1122	1082	1209
Philippines ⁴	39	-	4	3	3	3	-	-	-	-	-
Thailand	361	1525	5188	12421	18416	17708	20878	18344	18042	15151	16978
Viet Nam	-	-	-	-	-	-	322	-	-	-	-
Other Asia	2206	3985	-	-	-	220	320	502	26	25	27
Albania	811	1420	2150	2071	80	30	45	10	-	-	-
Bosnia and Herzegovina	x	x	x	19670	1640	3401	4476	5618	5704	5999	7293
Bulgaria	26459	29946	30657	31532	27449	26314	24686	29379	31268	35859	31231
Croatia	x	x	x	18	7	-	-	-	-	-	-
F.Y.R. of Macedonia	x	x	x	6644	7249	7516	6881	6724	6482	5936	5139
Georgia	x	x	x	529	34	7	5	105	299	306	287
Kazakhstan	x	x	x	3443	3740	2558	4409	7283	6894	5526	5302
Kosovo	x	x	x	..	..	4989	6554	8649	7204	8241	8801
Kyrgyzstan	x	x	x	2140	280	321	292	500	1505	1584	2281
Montenegro	x	x	x	..	..	..	1297	1938	1655	1773	1397
Romania	17679	27104	37924	33737	39973	29004	31074	31123	23485	25483	22975
Russian Federation	x	x	x	134385	83317	87786	73668	76121	68893	73629	73727
Serbia	x	x	x	45800	40540	36918	35076	37976	30011	37826	38440
Tajikistan	x	x	x	450	-	-	-	-	56	57	76
Ukraine ⁴	x	x	x	9280	2296	802	354	-	-	-	-
Uzbekistan	x	x	x	6200	2980	2501	3003	3565	3989	3590	3534
Former Soviet Union	157000	163000	157000	x	x	x	x	x	x	x	x
Former Yugoslavia	31874	40913	68072	x	x	x	x	x	x	x	x
Non-OECD Total	248073	274628	317779	331982	257413	253368	252674	274804	264713	275504	273791
World	839372	956462	1141237	1117581	858565	844150	848576	841403	815350	811117	787305

1. Some countries, most notably the People's Republic of China and Indonesia, produce and consume lignite, however these data are reported under other coal types included in steam coal and are not shown here.

2. Data before 1978 are brown coal, which may include sub-bituminous coal.

3. Brown coal data excludes sub-bituminous coal.

4. Data are reported as other coal types for at least some years.

For further information, see the explanatory notes and definitions in Part I.

Source: IEA/OECD World Energy Statistics

Table 1.4: World peat production¹
(thousand tonnes)

	1978	1985	1990	1995	2000	2005	2010	2013	2014	2015	2016p
Austria	-	1	1	1	1	1	1	1	1	1	1
Czech Republic	595	500	-	-	-	-	-	-	-	-	-
Estonia	x	x	1733	583	353	378	361	263	261	118	85
Finland	2211	3749	7154	8026	4421	9135	7490	7388	6722	3489	3001
Germany	-	-	425	170	145	129	-	-	-	-	-
Ireland	5244	3752	6515	8051	4808	3957	4992	6657	4604	3546	3187
Latvia	-	-	253	325	68	12	10	10	5	-	1
Sweden	-	275	581	752	541	708	797	624	450	369	470
IEA Total	8050	8277	16409	17583	10269	14308	13641	14933	12038	7523	6744
OECD Total	8050	8277	16662	17908	10337	14320	13651	14943	12043	7523	6745
Other Africa	2	10	11	12	4	5	13	19	11	11	..
Oth. non-OECD Americas	12	15	15	15	12	13	13	13	13	13	..
Belarus	x	x	3457	3145	2002	2308	2352	2269	1433	1015	..
Lithuania	x	x	61	63	42	70	31	84	100	74	..
Romania	-	-	-	6	9	6	3	1	2	4	..
Russian Federation	x	x	4714	4041	1989	1645	1066	1522	1149	967	..
Ukraine	x	x	6450	1577	487	758	430	474	463	491	..
Former Soviet Union	31184	22762	x	x	x	x	x	x	x	x	x
Non-OECD Total	31198	22787	14708	8859	4545	4805	3908	4382	3171	2575	1098
World	39248	31064	31370	26767	14882	19125	17559	19325	15214	10098	..

Table 1.5: World oil shale and oil sands production¹
(thousand tonnes)

	1978	1985	1990	1995	2000	2005	2010	2013	2014	2015	2016p
Estonia	x	x	22486	13310	11727	14591	17933	20511	20995	19616	20352
Israel	-	-	303	470	390	429	432	421	396	420	423
IEA Total	-	-	22486	13310	11727	14591	17933	20511	20995	19616	20352
OECD Total	-	-	22789	13780	12117	15020	18365	20932	21391	20036	20775
World	-	-	22789	13780	12117	15020	18365	20932	21391	20036	..

1. For further information, see the explanatory notes and definitions in Part I.

Source: IEA/OECD World Energy Statistics

Table 1.6: OECD coke oven coke production¹
(thousand tonnes)

	1973	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p
Australia	4983	4991	3603	4495	4617	3739	3494	3166	2817	2924	2605
Austria	1719	1729	1751	1725	1448	1385	1385	1362	1349	1341	1352
Belgium	7774	6048	5964	5420	3696	3104	2856	1935	1443	1230	1205
Canada	5370	5250	4684	3708	3283	3242	3305	2720	2219	2151	1858
Chile	315	303	301	336	457	475	493	361	432	405	406
Czech Republic	9383	8725	8328	7125	4963	3411	3412	2548	2539	2332	2209
Denmark	-	-	-	-	-	-	-	-	-	-	-
Estonia	x	x	x	41	40	23	37	22	25	8	-
Finland	-	-	-	487	920	910	894	827	888	876	882
France	11881	11120	8691	7197	5566	5234	4445	3151	3237	3214	3127
Germany	41614	35492	30171	21926	11102	9115	8397	8150	8770	8800	8150
Greece	400	247	-	-	-	-	-	-	-	-	-
Hungary	1082	975	607	672	1033	937	614	1018	923	960	892
Iceland	-	-	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-	-	-	-
Italy	7665	8264	7410	6356	5185	4504	4574	4110	1920	1977	1994
Japan	52300	47463	48621	51444	45077	41795	42917	42212	39361	38626	38277
Korea	318	2965	5253	8800	10593	12288	8935	13549	18453	19025	19615
Latvia	..	..	..	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-	-	-
Mexico	2021	2447	2924	2384	2148	2100	2002	2209	2230	1796	1368
Netherlands	2655	2455	2958	2736	2895	2127	2249	2030	2011	2035	2034
New Zealand	20	13	5	373	369	349	418	458	503	504	502
Norway	282	349	313	-	-	-	-	-	-	-	-
Poland	16938	19598	15828	13516	11578	8972	8404	9844	9568	9792	9708
Portugal	269	216	275	230	331	371	-	-	-	-	-
Slovak Republic	1500	1598	1909	2340	1861	1706	1846	1658	1561	1636	1635
Slovenia	x	x	x	-	-	-	-	-	-	-	-
Spain	4475	3900	3440	3211	2438	2470	2662	2051	1543	1566	1978
Sweden	533	1188	1203	1084	1149	1146	1411	1197	1113	1187	1171
Switzerland	-	-	-	-	-	-	-	-	-	-	-
Turkey	1251	1937	2711	3158	3131	2925	2992	4274	4388	4523	4239
United Kingdom	17776	10060	9276	8350	6274	6206	4364	4023	3632	2734	1348
United States	62803	41850	25992	25053	21545	18876	15168	13628	13747	12478	10755
IEA Americas	68173	47100	30676	28761	24828	22118	18473	16348	15966	14629	12613
IEA Asia Oceania	57621	55432	57482	65112	60656	58171	55764	59385	61134	61079	60999
IEA Europe	127197	113901	100835	85574	63610	54546	50542	48200	44910	44211	41924
OECD Americas	70509	49850	33901	31481	27433	24693	20968	18918	18628	16830	14387
OECD Asia Oceania	57621	55432	57482	65112	60656	58171	55764	59385	61134	61079	60999
OECD Europe	127197	113901	100835	85574	63610	54546	50542	48200	44910	44211	41924
IEA Total	252991	216433	188993	179447	149094	134835	124779	123933	122010	119919	115536
OECD Total	255327	219183	192218	182167	151699	137410	127274	126503	124672	122120	117310

1. Solid product obtained from carbonization of coal, principally coking coal, used mainly in the iron and steel industry.

Also includes coke and semi-coke made from lignite.

For further information, see the explanatory notes and definitions in Part I.

Source: IEA/OECD World Energy Statistics

2. CONSUMPTION

Table 2.1: World coking coal consumption
(thousand tonnes)

	1978	1985	1990	1995	2000	2005	2010	2013	2014	2015	2016p ¹
Australia	7216	5476	5932	5874	4799	4462	5113	4267	3904	3947	3567
Austria	2006	2391	2337	1908	1877	1899	1838	1786	1767	1773	1816
Belgium	7524	8086	7157	4737	4045	3263	2627	2565	2211	1868	1858
Canada	6776	6483	5023	4417	4461	4859	4388	3380	3471	3090	2669
Chile	385	427	492	715	714	703	509	577	623	566	568
Czech Republic	12567	11365	9941	6648	4972	4334	3546	3401	3853	3704	3104
Denmark	-	6	-	-	-	-	-	-	-	-	-
Finland	-	-	711	1650	1284	1401	1206	1277	1280	1191	1222
France	12980	11332	9669	7739	6543	6222	4504	5627	5495	4007	4163
Germany	41881	47825	42216	33993	24462	22193	15973	12495	14286	11719	12635
Greece	213	-	-	-	-	-	-	-	-	-	-
Hungary	1740	1043	971	1402	1280	808	1415	1279	1294	1327	1224
Iceland	-	20	-	-	-	-	-	-	-	-	-
Ireland	-	7	14	-	-	-	-	-	-	-	-
Italy	9909	10165	8633	6966	6658	5630	5145	3098	2415	2246	2323
Japan	58724	73456	64935	59805	57849	56527	57679	53852	51060	50663	51140
Korea	2009	6959	11735	16305	19415	20883	27210	29373	34784	33291	35671
Mexico	4053	3837	3406	3069	3000	5403	5440	4231	3928	5052	3440
Netherlands	2953	4061	4435	4893	4054	4682	3953	4074	4311	4470	4158
New Zealand	-	6	243	140	1	115	67	12	-	27	116
Norway	414	394	-	-	-	-	-	-	-	-	-
Poland	25847	17745	18127	17405	13332	11157	12336	12638	12550	13457	12897
Portugal	423	370	313	455	497	-	-	-	-	-	-
Slovak Republic	2180	2790	3136	2745	2597	2738	2490	2560	2682	2739	2717
Slovenia	x	x	1	-	-	-	-	-	-	-	-
Spain	4863	4908	4456	3312	3556	3463	2498	2108	1856	1834	2317
Sweden	1227	1620	1515	1646	1772	1847	1868	1399	1456	1592	1542
Turkey	3429	4825	5335	4658	7042	5585	7515	6488	6327	6688	6545
United Kingdom	14988	11122	10517	8487	8824	6569	6372	6728	6166	4995	2775
United States	68885	37246	35269	29934	25963	20893	19152	19443	20069	17708	14893
IEA Americas	75661	43729	40292	34351	30424	25752	23540	22823	23540	20798	17562
IEA Asia Oceania	67949	85897	82845	82124	82064	81987	90069	87504	89748	87928	90494
IEA Europe	145144	140055	129483	108644	92795	81791	73286	67523	67949	63610	61296
OECD Americas	80099	47993	44190	38135	34138	31858	29489	27631	28091	26416	21570
OECD Asia Oceania	67949	85897	82845	82124	82064	81987	90069	87504	89748	87928	90494
OECD Europe excl Estonia	145144	140075	129484	108644	92795	81791	73286	67523	67949	63610	61296
IEA Total	288754	269681	252620	225119	205283	189530	186895	177850	181237	172336	169352
OECD Total	293192	273965	256519	228903	208997	195636	192844	182658	185788	177954	173360

Table 2.1: World coking coal consumption (continued)
(thousand tonnes)

	1978	1985	1990	1995	2000	2005	2010	2013	2014	2015	2016p ¹
Egypt	975	1192	1339	1540	1820	1810	987	305	436	341	256
Mozambique	-	-	-	-	-	-	-	-	152	727	1507
South Africa	7018	6000	5675	4220	2569	2975	4072	3697	3302	3348	3233
Tanzania	-	-	1	1	-	-	-	-	-	-	-
Zimbabwe	946	269	612	621	856	692	348	449	422	426	429
Argentina	990	826	1121	589	558	789	686	513	1120	1137	1163
Brazil	4869	9602	10489	11093	9936	9742	10993	10522	10890	10379	10398
Colombia	705	745	775	681	587	514	2621	3211	3249	3200	2925
Peru	40	50	37	51	44	-	-	-	-	-	-
India	15757	28149	39491	39409	35852	39041	74558	93165	101520	100628	104151
Indonesia	-	-	-	-	140	98	55	644	2539	3008	2814
DPR of Korea	3857	5000	5143	1040	-	-	-	-	-	-	-
Mongolia	-	-	-	-	-	-	153	134	154	105	106
Pakistan	16	716	1102	1085	950	565	429	110	385	403	448
Chinese Taipei	1386	2562	4150	4208	5236	4919	5642	6604	6652	6581	6581
PR of China	52304	62873	80140	139861	119123	310377	531049	667895	677776	646225	650102
Albania	25	33	62	-	-	-	-	-	-	-	-
Bosnia and Herzegovina	x	x	-	-	-	592	1264	1104	1339	1274	1287
Bulgaria	1921	1553	1854	1693	1325	1051	-	-	-	-	-
Croatia	x	x	747	-	-	-	-	-	-	-	-
F.Y.R. of Macedonia	x	x	117	70	67	-	-	-	-	-	-
Georgia	x	x	686	6	-	-	-	-	-	-	-
Kazakhstan	x	x	29983	10853	10343	10734	11612	12650	16005	15553	9372
Lithuania	x	x	-	-	-	-	-	-	2	-	-
Romania	5734	7825	5082	5047	2257	2963	131	93	21	14	11
Russian Federation	x	x	53885	50669	43938	44991	49701	52504	56417	65160	62315
Tajikistan	x	x	-	7	2	-	-	-	-	-	-
Ukraine	x	x	54508	31642	30581	29821	26369	24165	17020	11898	12975
Former Soviet Union	129250	123985	x	x	x	x	x	x	x	x	x
Former Yugoslavia	1447	4689	x	x	x	x	x	x	x	x	x
Islam. Rep. of Iran	1107	1344	986	1388	1626	1484	914	682	838	1106	1143
United Arab Emirates	-	-	-	-	-	-	946	2315	2803	2171	1962
Non-OECD Total	228397	258639	298990	306406	268499	464108	722530	880762	903063	873695	873198
World	521589	532604	555509	535309	477496	659744	915374	1063420	1088851	1051649	1046558

1. Consumption data for 2016p are supplied by OECD member countries. Non-OECD country data are calculated from production and net trade data from varied sources. Stock changes are generally not accounted for, for non-OECD countries, but may be provided or sourced on an ad hoc basis.

Source: IEA/OECD World Energy Statistics

Table 2.2: World steam coal¹ consumption
(thousand tonnes)

	1973 ²	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p ³
Australia ⁴	27292	27373	34504	43367	45865	56031	64606	56375	46948	47853	52752
Austria	2856	500	787	1822	1484	1885	2209	1967	1424	1978	1717
Belgium ⁴	17169	8994	7490	8996	7657	7001	4288	3057	2287	2274	1801
Canada	17556	24269	31904	34765	37318	47299	44955	34733	31176	28199	23175
Chile ⁴	1711	1224	1365	3228	2676	3876	3868	7842	10439	11627	12521
Czech Republic	27780	11771	10665	10119	7532	5745	4887	4419	3810	4428	4728
Denmark	3146	9662	11929	9992	11003	6641	6293	6496	4271	3137	3595
Estonia	x	x	x	382	85	87	56	60	78	29	9
Finland ⁴	3035	5692	5318	4937	4890	3909	3197	5774	3278	2802	3603
France ⁴	40289	33510	25175	19122	14872	15258	14920	12829	7913	9060	8574
Germany	105801	46092	45641	44749	40231	44501	41840	45702	47444	49830	45361
Greece	651	161	1750	1380	1480	1121	563	614	274	281	319
Hungary	2137	3249	3456	1435	287	390	1269	653	240	216	228
Iceland ⁴	1	12	49	65	65	101	117	106	100	116	125
Ireland	822	1066	1579	3184	2689	2938	2988	2001	2001	2315	2125
Israel	-	-	2927	3720	6568	10591	12124	12310	10921	11036	9185
Italy	11603	5787	11729	12694	10480	11355	18610	16616	17688	17210	14486
Japan ⁴	81690	17496	35935	50763	73606	95787	121140	128997	137007	138928	138273
Korea ⁴	16329	23803	35546	33041	28329	52384	61389	92838	100147	100599	101844
Latvia	x	x	x	917	252	97	120	167	102	81	72
Luxembourg	305	346	199	197	217	172	122	102	85	73	80
Mexico ⁴	2810	-	1480	3970	7550	9566	15004	17194	17981	18118	16144
Netherlands	4794	2452	6215	8393	9362	8658	8296	7913	10299	13528	12585
New Zealand ⁴	1268	1760	1804	1841	1755	1882	3925	2286	2554	2478	2020
Norway	772	519	724	749	1018	999	795	706	803	788	711
Poland	122097	138506	138825	102104	90418	70039	69281	72452	61009	58464	62800
Portugal ⁴	805	241	680	4084	5253	5657	5476	2702	4520	5419	4806
Slovak Republic	5834	3037	3019	2743	2585	2059	2245	1673	1166	1026	806
Slovenia	x	x	x	262	328	446	612	498	394	387	384
Spain	13260	14715	26058	25788	28696	33695	33471	12163	19529	22580	16989
Sweden	1060	484	2538	2194	1798	1089	1223	991	1216	1210	1127
Switzerland	258	315	640	481	245	173	179	168	93	77	48
Turkey	4595	1781	1887	3098	3956	8506	14574	18854	25908	29164	31820
United Kingdom	133527	111982	94858	96205	67429	51015	55210	45005	42308	32550	15129
United States ⁴	492567	546581	645362	701657	752854	866163	932692	862251	742492	633171	582897
IEA Americas	510123	570850	677266	736422	790172	913462	977647	896984	773668	661370	606072
IEA Asia Oceania	126579	70432	107789	129012	149555	206084	251060	280496	286656	289858	294889
IEA Europe	502596	400862	401162	364848	313667	282893	291992	262917	257644	258439	233447
OECD Americas	514644	572074	680111	743620	800398	926904	996519	922020	802088	691115	634737
OECD Asia Oceania	126579	70432	110716	132732	156123	216675	263184	292806	297577	300894	304074
OECD Europe	502597	400874	401211	366092	314312	283537	292841	263688	258240	259023	234028
IEA Total	1139298	1042144	1186217	1230282	1253394	1402439	1520699	1440397	1317968	1209667	1134408
OECD Total	1143820	1043380	1192038	1242444	1270833	1427116	1552544	1478514	1357905	1251032	1172839

Table 2.2: World steam coal¹ consumption (continued)
(thousand tonnes)

	1973 ²	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p ³
Algeria	63	-	-	-	-	-	-	-	-	-	-
Benin	-	-	-	-	-	-	-	-	70	41	120
Botswana	..	..	466	815	912	1040	1002	932	1799	1836	1694
Dem. Rep. of Congo	170	167	156	169	-	-	-	-	-	-	-
Egypt	487	-	-	1	-	-	-	-	-	-	-
Ethiopia	-	-	-	-	-	-	-	50	405	411	442
Kenya	70	16	90	151	156	107	145	268	533	566	557
Mauritius	-	-	34	56	63	253	364	668	742	720	701
Morocco	582	635	1110	1774	2665	4018	4762	4230	6116	6734	6491
Mozambique	587	288	106	58	56	-	-	10	19	14	12
Namibia	..	..	..	..	16	3	20	13	-	4	4
Nigeria	289	151	94	55	20	3	8	38	46	47	44
Senegal	-	-	-	-	-	-	152	287	365	389	416
South Africa	60408	79803	119870	119225	142985	154566	172428	185286	189554	180530	178018
Tanzania	-	1	15	3	43	79	31	-	246	257	276
Tunisia	33	21	21	15	-	-	-	-	-	-	-
Zambia	941	618	471	375	148	130	140	1	159	159	200
Zimbabwe	2758	1623	2757	4743	3873	3641	2982	2534	2892	3034	2999
Other Africa	233	648	361	351	373	597	638	896	889	907	804
Argentina	1072	624	421	246	850	500	594	818	939	908	694
Brazil	2842	2066	5212	2703	3375	7463	7686	9238	14116	14316	12381
Colombia	2859	2085	2397	4050	4927	3644	3659	3581	4139	4538	4262
Costa Rica	1	1	1	-	-	1	2	1	10	1	-
Cuba	63	95	126	153	77	22	22	23	3	3	3
Dominican Republic	-	-	224	17	80	-	542	648	1152	1087	1085
Guatemala	-	22	-	-	-	215	409	492	720	1528	1803
Haiti	-	-	61	12	-	-	-	-	-	-	-
Honduras	-	-	-	-	-	135	241	107	119	113	117
Jamaica	-	-	-	52	55	53	58	54	85	98	66
Panama	13	-	32	32	51	60	-	-	337	339	313
Peru	86	25	57	112	338	664	1075	1182	1116	1119	797
Uruguay	32	4	-	1	-	1	1	4	3	4	5
Venezuela	53	42	42	355	7	181	52	273	270	187	402
Oth. non-OECD Americas	1	1	-	-	-	-	-	-	200	203	243
Bangladesh	243	235	98	563	642	660	845	1622	1852	4524	4355
Cambodia	..	..	..	..	-	-	-	27	509	1235	1475
Hong Kong (China)	12	3	5523	8928	9109	6058	10824	10324	13789	11184	11161
India	73410	87296	120167	166231	233168	296333	394230	570781	740138	746615	763255
Indonesia ⁵	129	236	925	6320	11892	22580	41933	60000	79101	86814	90580
DPR of Korea ⁵	23580	40170	49200	43310	30900	29383	31806	20947	11593	8580	13929
Malaysia	13	84	574	2150	2558	3661	10926	23161	24219	27787	31031
Mongolia	..	..	480	595	1290	70	1093	1374	2361	2010	2167
Myanmar	74	221	223	80	15	468	522	646	642	697	788
Nepal	78	83	17	81	123	430	413	505	806	929	925
Pakistan	1270	1098	1567	2320	2546	2166	5139	6188	7208	7548	8948
Philippines ⁵	-	558	2415	2573	3001	8600	9909	13125	19871	21757	22964
Singapore	-	-	-	-	-	-	1	-	632	649	701
Sri Lanka	-	-	1	8	5	-	93	95	1462	1966	2340
Chinese Taipei	3572	4443	8523	13080	22021	41544	54797	57773	59652	57321	59046
Thailand	1	94	212	250	2305	3684	8479	17378	17487	20431	17713

Table 2.2: World steam coal¹ consumption (continued)
(thousand tonnes)

	1973 ²	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p ³
Viet Nam	2770	4052	4990	3951	5917	7808	14490	26146	35639	44763	51384
Other Asia	342	657	345	303	244	530	632	1793	2327	2205	2272
PR of China ⁵	414180	559188	741034	969492	1172771	1170486	1996908	2913747	3207316	3141375	2959481
Albania	89	135	187	240	-	-	-	167	133	201	81
Armenia	x	x	x	552	3	-	-	1	-	1	1
Azerbaijan	x	x	x	200	6	-	-	-	-	-	-
Belarus	x	x	x	2389	1125	504	168	79	744	680	618
Bosnia and Herzegovina	x	x	x	-	-	4057	4556	5224	6014	6277	6083
Bulgaria	6136	5073	6724	4192	4944	2054	3310	3153	1848	1115	948
Croatia	x	x	x	403	143	623	1057	1112	1028	951	1042
Cyprus ⁶	-	-	74	97	20	49	52	26	4	6	6
F.Y.R. of Macedonia	x	x	x	12	72	-	97	155	152	155	192
Georgia	x	x	x	546	4	12	13	8	126	121	105
Kazakhstan	x	x	x	55823	50342	31309	48836	61120	62569	58262	59644
Kosovo	x	x	x	..	..	9	12	34	14	12	4
Kyrgyzstan	x	x	x	4014	505	788	1009	1178	1395	1515	1487
Lithuania	x	x	x	1303	372	130	284	299	306	252	247
Malta	-	-	192	300	52	-	-	-	-	-	-
Republic of Moldova	x	x	x	4510	1315	181	183	186	158	171	122
Romania	8490	6781	6880	4269	843	392	715	645	779	815	860
Russian Federation	x	x	x	186148	112597	98284	96447	74840	77426	85805	83440
Serbia	x	x	x	137	55	306	227	147	168	206	172
Tajikistan	x	x	x	1044	34	27	103	207	833	998	1308
Turkmenistan	x	x	x	670	-	-	-	-	-	-	-
Ukraine ⁵	x	x	x	84932	55256	35306	33793	39726	43555	33387	33891
Uzbekistan	x	x	x	2740	81	69	73	65	408	367	366
Former Soviet Union	490220	397576	419445	x	x	x	x	x	x	x	x
Former Yugoslavia	2540	388	400	x	x	x	x	x	x	x	x
Islam. Rep. of Iran	948	83	100	75	158	155	590	111	172	204	208
Jordan	-	-	-	-	-	-	-	-	521	253	316
Lebanon	1	1	-	-	180	200	200	225	250	253	257
Syrian Arab Republic	1	1	-	-	-	-	-	-	-	-	-
United Arab Emirates	-	-	-	-	-	-	236	22	135	405	360
Yemen	-	-	-	-	-	-	-	170	185	133	140
Non-OECD Total	1101742	1197392	1504420	1710355	1887684	1946292	2972014	4126166	4652571	4601028	4451362
World	2245562	2240772	2696458	2952799	3158517	3373408	4524558	5604680	6010476	5852060	5624201

1. Steam coal is also commonly known as thermal coal. From 1978 onwards it comprises anthracite, bituminous coal and sub-bituminous coal. For further information, see the explanatory notes and definitions in Part I.
2. Data prior to 1978 are hard coal. Hard coal comprises anthracite, coking coal, other bituminous coal and for certain countries may still include sub-bituminous coal.
3. Consumption data for 2016p are supplied by OECD member countries. Non-OECD country data are calculated from production and net trade data from varied sources. Stock changes are generally not accounted for, for non-OECD countries, but may be provided or sourced on an ad hoc basis.
4. Includes sub-bituminous coal prior to 1978.
5. Data includes lignite for at least some years.
6. Please refer to the Geographical notes in Part I.

Source: IEA/OECD World Energy Statistics

Table 2.3: World lignite¹ consumption
(thousand tonnes)

	1973 ²	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p ³
Australia ⁴	24121	32894	38380	45990	50752	67293	70533	72547	60543	65361	63571
Austria	3328	3274	3868	2504	1743	1343	1211	35	12	11	11
Belgium ⁴	-	95	275	276	195	-	-	-	-	-	-
Canada	8058	5682	9788	9358	10899	11208	12020	10780	8363	8768	8903
Chile ⁴	61	40	35	-	-	-	-	-	-	-	-
Czech Republic	75965	79822	83854	71772	52300	50372	47622	44214	38350	37821	37809
France ⁴	2775	2570	2418	2094	1516	355	36	52	153	125	98
Germany	372497	391753	432521	364050	194811	169942	177885	169743	176956	176970	171919
Greece	13000	22692	36214	52053	56962	64564	70096	57704	51878	44267	33890
Hungary	26896	22600	21127	17899	15242	13503	9511	8921	9189	9162	9051
Italy	1299	1385	2041	1089	196	30	8	6	3	3	2
Japan ⁴	100	27	-	-	-	-	-	-	-	-	-
Latvia	x	x	x	3	-	-	-	-	-	-	-
Mexico ⁴	84	-	-	-	2	4	779	720	585	576	295
Netherlands	20	156	103	56	23	30	28	28	31	42	35
New Zealand	1192	208	264	159	243	213	246	292	315	327	319
Poland	34282	35308	57565	67391	63196	59488	61589	56593	63845	63047	60385
Slovak Republic	12784	16039	15784	12481	7221	4213	3307	3051	2451	2598	2407
Slovenia	x	x	x	5827	4911	4479	4580	4419	3186	3212	3376
Spain	3062	11100	17474	16579	10534	8403	7564	-	-	-	-
Switzerland	-	-	-	13	8	6	39	62	131	130	133
Turkey	7642	15243	34778	45891	52405	64384	56577	69239	64656	56661	56430
United States ⁴	12948	42129	62063	79023	80764	74265	76136	68299	76485	67915	67430
IEA Americas	21006	47811	71851	88381	91663	85473	88156	79079	84848	76683	76333
IEA Asia Oceania	25413	33129	38644	46149	50995	67506	70779	72839	60858	65688	63890
IEA Europe	553550	602065	708022	654148	456352	436633	435473	409648	407655	390837	372170
OECD Americas	21151	47851	71886	88381	91665	85477	88935	79799	85433	77259	76628
OECD Asia Oceania	25413	33129	38644	46149	50995	67506	70779	72839	60858	65688	63890
OECD Europe	553550	602065	708022	659978	461263	441112	440053	414067	410841	394049	375546
IEA Total	599969	683005	818517	788678	599010	589612	594408	561566	553361	533208	512393
OECD Total	600114	683045	818552	794508	603923	594095	599767	566705	557132	536996	516064

Table 2.3: World lignite¹ consumption (continued)
(thousand tonnes)

	1973 ²	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p ³
Niger	..	..	..	..	..	158	177	273	275	230	264
Brazil	1280	922	2047	2244	2652	2871	2575	1476	2822	2718	2868
Bangladesh	-	-	-	-	-	-	-	-	-	32	29
India	3762	5059	7913	14985	22298	24824	30239	37688	46951	42208	46457
DPR of Korea ⁵	7000	-	-	-	-	-	-	-	-	-	-
Mongolia	..	..	5687	6054	3914	5142	4380	5430	5997	5789	6235
Myanmar	-	27	43	38	23	112	70	40	50	54	42
Pakistan	-	471	671	824	1091	928	2010	1101	1122	1082	1209
Philippines ⁵	40	-	4	3	3	3	-	-	-	12	-
Singapore	1	1	2	2	-	-	-	-	-	-	-
Thailand	361	1525	5132	12457	18496	17586	21046	18041	18451	15390	16886
Viet Nam	-	-	-	-	-	-	322	-	-	-	-
Other Asia	2206	4200	-	-	-	45	95	93	26	24	26
Albania	810	1420	2150	1843	80	73	54	10	-	-	-
Bosnia and Herzegovina	x	x	x	19670	1640	3380	4309	5602	5624	5543	7281
Bulgaria	26311	29704	30657	31778	27679	25844	24870	29445	31440	35742	30949
Croatia	x	x	x	743	188	80	83	59	46	45	43
Cyprus ⁶	-	-	-	-	-	-	1	1	-	-	-
F.Y.R. of Macedonia	x	x	x	6808	7293	7702	7376	6784	6565	5898	5225
Georgia	x	x	x	91	34	15	5	105	296	303	285
Kazakhstan	x	x	x	3443	3630	2438	4197	5297	4215	2673	3293
Kosovo	x	x	x	..	..	5154	6607	8869	7232	8324	8793
Kyrgyzstan	x	x	x	2140	287	341	298	510	1367	1106	2281
Lithuania	x	x	x	-	-	1	3	1	-	-	-
Montenegro	x	x	x	..	..	..	1287	1908	1630	1720	1360
Romania	17690	27364	38404	36872	39810	29313	32324	30830	25435	26203	22977
Russian Federation	x	x	x	134047	82065	88257	73156	76276	67256	72224	69823
Serbia	x	x	x	45800	40550	37018	35164	37532	30690	38435	38677
Tajikistan	x	x	x	450	-	-	-	-	56	57	76
Ukraine ⁵	x	x	x	7983	3000	793	409	-	-	-	-
Uzbekistan	x	x	x	6200	2947	3474	3112	3648	3948	3553	3534
Former Soviet Union	157138	163030	157015	x	x	x	x	x	x	x	x
Former Yugoslavia	31356	40516	68217	x	x	x	x	x	x	x	x
United Arab Emirates	-	-	-	-	-	-	-	2	1	-	-
Non-OECD Total	247955	274239	317942	334475	257680	255552	254169	271021	261495	269365	268613
World	848069	957284	1136494	1128983	861603	849647	853936	837726	818627	806361	784677

1. Some countries, most notably the People's Republic of China and Indonesia, produce and consume lignite, however these data are reported under other coal types included in steam coal and not shown here.

2. Data before 1978 are brown coal, which may include sub-bituminous coal.

3. Consumption data for 2016p are supplied by OECD member countries. Non-OECD country data are calculated from production and net trade data from varied sources. Stock changes are generally not accounted for, for non-OECD countries, but may be provided or sourced on an ad hoc basis.

4. Brown coal data exclude sub-bituminous coal.

5. Data are reported as other coal types for at least some years.

6. Please refer to the Geographical notes in Part I.

For further information, see the explanatory notes and definitions in Part I.

Source: IEA/OECD World Energy Statistics

Table 2.4: OECD coke oven coke consumption¹
(thousand tonnes)

	1973	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p
Australia	4983	5077	3520	3300	3952	3456	2729	2801	2052	2110	2150
Austria	2681	2674	2993	2403	2354	2436	2732	2551	2551	2360	2315
Belgium	8429	6542	5789	5265	4287	3928	2951	1689	1384	1320	1422
Canada	5454	5519	5212	3412	3682	3429	3551	3088	3234	2535	2687
Chile	333	399	334	373	590	506	540	319	326	352	370
Czech Republic	5913	6244	6472	5713	3857	3144	2949	2668	2336	2236	2186
Denmark	96	116	68	40	43	40	34	23	20	17	12
Estonia	x	x	x	20	1	2	-	-	-	-	-
Finland	877	1224	1218	1272	1192	1429	1416	1270	1197	1161	1075
France	14783	13180	10353	7714	6219	6119	5043	4234	3658	3464	3333
Germany	37220	32691	29657	21127	14879	14982	12134	12299	11728	11369	9823
Greece	414	261	55	42	12	1	4	1	-	-	-
Hungary	2317	2243	2000	1183	990	804	751	754	509	699	481
Iceland	-	16	34	30	18	47	33	30	31	24	14
Ireland	13	8	22	29	6	-	-	-	-	-	-
Israel	2	1	1	-	-	-	-	-	-	-	-
Italy	7099	7379	7258	6413	5656	5041	5271	3938	2871	2412	2606
Japan	51800	45795	44859	49890	41939	41604	43191	42598	42054	40509	39025
Korea	356	3086	5359	8800	10593	12288	9276	14178	18858	19414	19955
Latvia	..	..	..	11	8	11	7	3	-	-	-
Luxembourg	3235	2282	1854	1447	521	1	1	1	1	1	1
Mexico	2173	2494	3022	2504	2584	2729	2390	2599	2731	2497	2476
Netherlands	2657	2363	2539	2339	2454	2027	2082	2144	2004	1962	1979
New Zealand	20	13	6	373	369	349	418	458	503	504	502
Norway	826	849	881	529	500	559	356	425	457	429	411
Poland	14212	17849	14671	9854	8294	5762	3399	3165	3237	3329	2916
Portugal	306	317	401	240	296	323	5	3	9	8	8
Slovak Republic	2422	1642	2126	2833	1964	1815	1984	2078	1747	1661	1765
Slovenia	x	x	x	70	57	72	60	33	37	29	27
Spain	5349	3917	3758	3365	3131	1923	2027	1841	1635	1793	1930
Sweden	1900	1618	1494	1422	1496	1495	1701	1424	1253	1258	1262
Switzerland	185	131	82	43	31	27	20	18	17	15	16
Turkey	1251	1954	2803	3256	3201	3592	3428	4454	4735	4984	4856
United Kingdom	17034	7296	9209	8244	6517	6114	5001	3424	4273	3817	2461
United States	64235	37446	26553	25230	22180	21085	16547	13469	13026	11275	10171
IEA Americas	69689	42965	31765	28642	25862	24514	20098	16557	16260	13810	12858
IEA Asia Oceania	57159	53971	53744	62363	56853	57697	55614	60035	63467	62537	61632
IEA Europe	129219	112780	105703	84793	67901	61564	53289	48404	45622	44295	40858
OECD Americas	72195	45858	35121	31519	29036	27749	23028	19475	19317	16659	15704
OECD Asia Oceania	57161	53972	53745	62363	56853	57697	55614	60035	63467	62537	61632
OECD Europe	129219	112796	105737	84904	67984	61694	53389	48470	45690	44348	40899
IEA Total	256067	209716	191212	175798	150616	143775	129001	124996	125349	120642	115348
OECD Total	258575	212626	194603	178786	153873	147140	132031	127980	128474	123544	118235

1. Solid product obtained from carbonization of coal, principally coking coal, used mainly in the iron and steel industry.

Also includes coke and semi-coke made from lignite.

For further information, see the explanatory notes and definitions in Part I.

Source: IEA/OECD World Energy Statistics

3. TRADE

Table 3.1: World and seaborne coal trade
(million tonnes)

	Steam coal		Coking coal		Total coal ¹	
	Total	Seaborne	Total	Seaborne	Total	Seaborne
1993	254.0	191.3	185.5	159.8	450.4	358.4
1994	253.8	200.9	195.5	174.4	456.7	379.3
1995	299.6	243.1	195.1	173.2	504.1	423.7
1996	323.1	270.7	193.5	173.4	525.1	449.5
1997	347.8	287.1	197.0	178.1	550.9	470.4
1998	367.6	293.8	184.4	169.7	557.9	467.6
1999	369.5	309.3	179.2	167.0	553.9	480.4
2000	432.5	362.7	187.0	171.1	624.4	536.6
2001	478.3	400.3	195.1	177.6	678.5	581.6
2002	481.0	418.6	182.4	167.6	667.0	589.6
2003	535.0	460.5	186.5	172.4	724.9	637.0
2004	569.2	496.1	190.8	174.0	762.6	672.5
2005	610.0	536.0	205.9	186.4	819.1	723.3
2006	688.1	600.5	200.8	184.2	892.3	787.4
2007	709.5	627.5	215.2	196.5	928.6	827.1
2008	694.3	604.7	234.8	212.2	933.5	819.3
2009	716.3	641.2	210.3	190.5	930.2	832.7
2010	791.1	705.1	275.3	241.9	1071.2	948.4
2011	906.1	819.7	270.4	232.8	1180.2	1053.8
2012	987.7	896.3	283.9	247.9	1278.5	1148.0
2013	1062.7	958.9	294.8	262.1	1364.1	1222.9
2014	1048.6	936.1	312.4	284.1	1369.3	1222.9
2015	995.3	881.1	303.9	274.3	1308.1	1158.6
2016	1010.4	891.0	314.1	271.7	1333.5	1167.6

1. Total coal is steam coal + coking coal + lignite.

Table 3.2: World total coal trade
(million tonnes)

	Japan		Other Asia		OECD Europe		Oth. Eur. + Eurasia		Africa + Mid. East		North America		Latin America		Balancing item		World	
	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
Exporters																		
Australia	125.1	120.7	225.3	229.4	22.2	21.5	1.1	0.5	1.1	1.3	3.8	3.5	9.6	10.7	4.1	1.7	392.3	389.3
Canada	8.7	8.2	14.2	15.1	3.9	4.2	1.3	1.0	0.2	0.2	1.2	1.0	1.5	1.6	-0.4	-0.9	30.5	30.3
Poland	-	-	-	-	9.3	8.4	0.4	0.6	0.4	0.9	-	-	-	-	-0.6	-0.6	9.4	9.3
United States	4.3	5.6	11.7	10.1	36.0	29.5	4.3	3.3	0.7	1.1	9.2	7.6	7.3	6.9	-6.3	-9.5	67.1	54.7
Other OECD	0.1	0.1	1.8	2.0	13.1	15.1	0.5	0.5	0.1	0.1	0.0	0.0	0.1	0.0	32.0	31.8	47.7	49.6
Total OECD	138.1	134.7	253.0	256.6	84.5	78.7	7.6	5.9	2.5	3.6	14.2	12.1	18.5	19.2	28.7	22.5	547.1	533.2
PR of China	1.6	2.6	4.9	6.2	0.1	0.1	0.0	-	0.1	0.0	0.0	0.0	0.0	0.0	-1.5	-0.3	5.2	8.6
Colombia	0.0	0.9	5.9	10.1	63.0	58.7	0.3	0.3	5.8	4.9	10.2	10.5	13.9	14.6	-21.4	-16.6	77.8	83.3
Indonesia	32.0	31.8	326.3	336.4	7.9	5.5	0.0	0.1	0.2	0.3	0.8	0.6	0.0	-	-0.5	-4.7	366.7	369.9
Kazakhstan	0.2	0.0	0.0	0.0	1.0	1.3	25.0	21.2	-	-	-	-	-	0.1	5.1	3.0	31.2	25.7
Russian Fed.	17.0	17.9	57.1	67.7	71.0	63.6	11.5	12.7	3.8	5.7	0.1	0.3	1.8	2.0	-7.2	1.1	155.2	171.1
South Africa	0.2	0.1	44.5	51.1	21.6	21.6	1.2	0.5	10.6	12.1	0.1	0.0	1.2	1.1	-3.7	-10.0	75.5	76.5
Oth. non-OECD	0.5	1.4	44.4	63.8	16.6	10.5	3.7	0.4	3.5	0.8	0.2	0.1	1.9	0.7	-21.4	-12.3	49.4	65.2
Tot. Imp./Exp.	189.6	189.4	731.4	779.6	265.3	239.0	47.3	39.5	25.7	26.3	25.5	23.5	36.6	37.3	-13.3	-1.1	1308.1	1333.5

Notes: The data in this table come from a variety of sources. The columns for OECD Europe, Japan and North America hold import statistics from those regions and countries. The data in the rows from Australia to Total OECD, except the data in the columns mentioned above, are export statistics from these countries and regions. The data in the World column are based on export statistics. Other data are based on national and international sources and estimates, with this itemised trade data stored in an independent database. Trade aggregates may differ from data reported elsewhere. There are additional uncertainties in the regional breakdown of the different types of coal. The Balancing item is used to account for this. In addition, the Balancing item accounts for regional differences in national methodologies countries use to classify their coal imports and exports, coal in-transit, coal that is unaccounted for, confidentiality, and reporting discrepancies by importing and exporting countries.

Source: IEA/OECD Coal Statistics and Secretariat sources.

Table 3.3: World steam coal trade
(million tonnes)

	Japan		Other Asia		OECD Europe		Oth. Eur. + Eurasia		Africa + Mid. East		North America		Latin America		Balancing Item		World	
Exporters	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
Australia	87.9	85.0	111.5	113.7	6.5	6.1	-	-	0.2	0.1	2.5	3.5	1.9	3.3	-5.8	-10.3	204.7	201.3
Canada	1.6	1.6	0.6	0.2	1.2	0.9	-	-	0.0	-	0.1	0.2	0.1	0.4	-1.4	-1.0	2.3	2.2
Poland	-	-	-	-	6.2	5.8	0.2	0.3	0.4	0.9	-	-	-	-	0.2	-0.4	6.9	6.6
United States	1.4	2.1	5.2	4.0	22.6	20.0	0.0	0.0	0.1	0.3	4.8	3.6	1.2	0.6	-10.0	-13.1	25.3	17.5
Other OECD	-	-	0.7	0.9	9.0	5.6	0.1	0.3	0.1	0.1	0.0	0.0	0.0	0.0	32.4	38.4	42.4	45.2
Total OECD	90.9	88.7	118.0	118.8	45.5	38.4	0.3	0.6	0.9	1.4	7.5	7.3	3.2	4.3	15.3	13.5	281.6	272.9
PR of China	1.5	2.4	3.9	5.1	0.1	0.1	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	-1.4	-0.2	4.2	7.4
Colombia	-	-	5.9	10.1	62.6	58.4	0.3	0.3	5.8	4.9	9.5	10.3	13.9	14.6	-21.5	-16.5	76.5	82.1
Indonesia	31.6	31.5	325.9	335.6	7.6	5.4	0.0	0.1	0.2	0.3	0.8	0.6	0.0	-	-0.4	-4.7	365.7	368.9
Kazakhstan	-	-	0.0	0.0	1.0	1.3	22.8	21.2	-	-	-	-	-	0.1	3.7	-0.0	27.4	22.5
Russian Fed.	14.3	15.1	50.3	59.6	66.7	59.6	9.5	5.4	3.8	5.7	0.1	0.3	1.8	2.0	-13.1	-3.7	133.4	144.1
South Africa	0.2	0.1	44.1	51.0	21.6	21.6	1.2	0.5	10.6	12.1	0.1	0.0	1.2	1.1	-3.7	-10.9	75.1	75.4
Oth. non-OECD	0.5	0.5	28.6	37.4	13.4	7.8	1.5	0.4	1.0	0.8	0.2	0.1	1.8	0.7	-15.6	-10.5	31.3	37.1
Tot. Imp./Exp.	138.9	138.3	589.5	625.1	218.1	191.7	36.6	28.5	22.0	25.2	18.1	18.7	24.6	25.2	-52.6	-42.2	995.3	1010.4

Notes: The data in this table come from a variety of sources. The columns for OECD Europe, Japan and North America hold import statistics from those regions and countries. The data in the rows from Australia to Total OECD, except the data in the columns mentioned above, are export statistics from these countries and regions. The data in the World column are based on export statistics. Other data are based on national and international sources and estimates, with this itemised trade data stored in an independent database. Trade aggregates may differ from data reported elsewhere. There are additional uncertainties in the regional breakdown of the different types of coal. The Balancing item is used to account for this. In addition, the Balancing item accounts for regional differences in national methodologies countries use to classify their coal imports and exports, coal in-transit, coal that is unaccounted for, confidentiality, and reporting discrepancies by importing and exporting countries.

Source: IEA/OECD Coal Statistics and Secretariat sources.

Table 3.4: World coking coal trade
(million tonnes)

	Japan		Other Asia		OECD Europe		Oth. Eur. + Eurasia		Africa + Mid. East		North America		Latin America		Balancing Item		World	
Exporters	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
Australia ¹	37.2	35.7	113.8	115.7	15.7	15.4	1.1	0.5	0.9	1.3	1.2	-	7.7	7.4	9.9	12.0	187.7	188.0
Canada	7.0	6.6	13.6	14.9	2.7	3.3	1.3	1.0	0.2	0.2	1.0	0.7	1.3	1.2	1.0	0.1	28.0	28.0
Poland	-	-	-	-	2.9	2.4	0.2	0.3	-	-	-	-	-	-	-0.8	-0.3	2.3	2.4
United States	2.9	3.6	6.4	6.1	13.4	9.5	4.3	3.3	0.6	0.8	4.4	3.9	6.1	6.3	3.7	3.6	41.7	37.1
Other OECD	0.1	0.1	1.1	1.1	2.2	8.6	0.0	0.0	-	-	-	0.0	0.1	-	-0.3	-6.5	3.2	3.3
Total OECD	47.3	46.0	134.9	137.8	36.9	39.3	6.9	5.0	1.7	2.2	6.6	4.6	15.3	14.9	13.4	9.0	263.0	258.9
PR of China	0.0	0.3	1.1	1.0	-	-	-	-	0.0	-	-	-	-	-	-0.2	-0.1	1.0	1.2
Colombia	0.0	0.9	0.0	0.0	0.4	0.3	-	-	-	-	0.7	0.2	0.0	-	0.1	-0.2	1.3	1.2
Indonesia	0.4	0.2	0.3	0.7	0.3	0.1	-	-	-	-	-	-	-	-	-0.0	0.0	1.0	1.0
Kazakhstan	0.2	0.0	-	0.0	0.0	-	0.7	-	-	-	-	-	-	-	0.6	1.1	1.5	1.1
Russian Fed.	2.8	2.8	6.8	8.1	4.3	3.9	2.0	7.3	-	0.1	-	-	0.0	-	2.7	-0.4	18.5	21.7
South Africa	-	-	0.4	0.1	0.0	-	-	-	-	-	-	-	-	-	0.0	0.9	0.4	1.0
Oth. non-OECD	-	0.8	15.8	26.4	3.2	2.6	1.4	0.0	2.5	-	-	-	0.1	-	-5.6	-2.0	17.3	27.9
Tot. Imp./Exp.	50.7	51.1	141.9	154.5	45.1	46.1	7.9	10.7	3.7	1.1	7.3	4.8	12.0	12.1	35.4	33.9	303.9	314.1

Notes: The data in this table come from a variety of sources. The columns for OECD Europe, Japan and North America hold import statistics from those regions and countries. The data in the rows from Australia to Total OECD, except the data in the columns mentioned above, are export statistics from these countries and regions. The data in the World column are based on export statistics. Other data are based on national and international sources and estimates, with this itemised trade data stored in an independent database. Trade aggregates may differ from data reported elsewhere. There are additional uncertainties in the regional breakdown of the different types of coal. The Balancing item is used to account for this. In addition, the Balancing item accounts for regional differences in national methodologies countries use to classify their coal imports and exports, coal in-transit, coal that is unaccounted for, confidentiality, and reporting discrepancies by importing and exporting countries.

1. Includes exports of soft and semi-soft coking coal used for pulverised coal injection (PCI).

Source: IEA/OECD Coal Statistics and Secretariat sources.

Table 3.5: World coal imports - regional aggregates
(thousand tonnes)

	World	OECD	Non OECD	OECD			Non-OECD			
				Americas	Asia Oceania	Europe	Africa M. East	Americas	Asia	Europe Eurasia
1993	454747	329505	125242	16270	155342	157893	4713	12645	53799	54085
1994	467976	345411	122565	18467	168384	158560	5181	13171	54715	49498
1995	501016	368184	132832	19297	180154	168733	5369	13467	61833	52163
1996	513304	380623	132681	23204	183317	174102	6607	14448	65862	45764
1997	540446	404234	136212	27064	196667	180503	6908	14348	72265	42691
1998	547145	410152	136993	32408	192884	184860	8207	14503	72125	42158
1999	549379	416633	132746	35561	202304	178768	7846	14412	80531	29957
2000	625766	467427	158339	41420	225615	200392	9386	15171	91115	42667
2001	668926	499545	169381	48655	232942	217948	10562	14914	99187	44718
2002	684646	502230	182416	47103	247211	207916	11614	15641	115799	39362
2003	729102	531080	198022	55451	254517	221112	11273	16338	121473	48938
2004	788233	568006	220227	52502	276227	239277	11375	17162	146494	45196
2005	805862	566617	239245	59936	268197	238484	11741	17284	166775	43445
2006	870309	601519	268790	65802	273066	262651	12290	16480	190949	49071
2007	925845	621628	304217	67267	290110	264251	11995	18402	221893	51927
2008	937377	616351	321026	62420	298480	255451	12167	18684	231454	58721
2009	956264	545091	411173	44742	280103	220246	10311	15957	344530	40375
2010	1095991	583031	512960	45455	317884	219692	10913	19801	435307	46939
2011	1180754	597852	582902	38745	317415	241692	10665	22222	494622	55393
2012	1302834	621631	681203	35277	322196	264158	13296	20641	592619	54647
2013	1389178	642586	746592	34423	335504	272659	11796	22619	659811	52366
2014	1412523	639416	773107	35175	330703	273538	15054	25399	682506	50148
2015	1311477	635870	675607	35438	335100	265332	14479	26674	587166	47288
2016p	1331309	607078	724231	34967	333143	238968	14620	25589	636910	47112

Table 3.6: World sub-bituminous and lignite imports - regional aggregates
(thousand tonnes)

	World	OECD	Non OECD	OECD			Non-OECD			
				Americas	Asia Oceania	Europe	Africa M. East	Americas	Asia	Europe/ Eurasia
1993	12928	12161	767	149	1511	10501	-	-	1	766
1994	10840	10453	387	317	1947	8189	-	-	1	386
1995	11864	10393	1471	431	2438	7524	-	-	271	1200
1996	14242	10976	3266	1277	2518	7181	-	-	779	2487
1997	13928	11292	2636	1749	3491	6052	-	-	1514	1122
1998	15332	12352	2980	3111	4600	4641	-	-	2284	696
1999	17385	14200	3185	5347	4150	4703	-	-	2796	389
2000	22011	14537	7474	5205	5469	3863	-	-	5832	1642
2001	26486	16733	9753	6927	5907	3899	-	-	7769	1984
2002	28691	20222	8469	13973	3751	2498	-	-	6860	1609
2003	23901	13948	9953	10053	2070	1825	-	-	7280	2673
2004	23402	13144	10258	7891	3432	1821	-	-	7984	2274
2005	23754	15425	8329	9316	3884	2225	-	-	5722	2607
2006	28512	17991	10521	10555	4888	2548	-	-	7383	3138
2007	30750	18834	11916	12308	4095	2431	-	-	7961	3955
2008	40580	19236	21344	12557	3669	3010	-	-	18306	3038
2009	42102	13158	28944	6214	4201	2743	1	-	26910	2033
2010	53223	12837	40386	5253	5289	2295	2	257	37695	2432
2011	81039	8545	72494	1767	4518	2260	1	378	68180	3935
2012	115304	7358	107946	1343	2988	3027	-	353	103860	3733
2013	116936	7749	109187	2604	2433	2712	2	323	105776	3086
2014	138241	11393	126848	2472	5306	3615	1	376	123163	3308
2015	115351	14620	100731	4194	7229	3197	-	354	96745	3632
2016p	111741	14050	97691	4986	6938	2126	-	212	93789	3690

Table 3.7: World coal imports - selected countries

(thousand tonnes)

	Belgium	France	Germany	Spain	UK	USA	Canada	Russian Fed.	India	PR of China	Chinese Taipei	Japan	Korea
1993	12120	14231	16081	12726	18400	6631	8468	28200	7330	1428	25345	112580	37381
1994	12871	12238	18106	11769	15088	6880	9366	27203	10556	1209	26721	121254	41009
1995	14294	13243	17184	13889	15896	6533	9735	22734	12512	1635	28757	127233	45831
1996	13041	15800	18298	12130	17799	6464	12207	20081	13175	3217	31148	130087	46074
1997	13015	13641	22182	11340	19757	6792	14469	20804	16440	2013	36219	135866	51997
1998	12830	18456	24193	14554	21244	7914	18657	21822	16535	1586	37093	129662	53586
1999	10995	17878	24731	20098	20293	8245	19759	16047	19700	1673	41104	138137	54569
2000	11347	19032	29744	21649	23446	11351	23231	25528	20930	2178	45409	150787	64895
2001	12681	16019	35508	18916	35542	18751	23627	28062	20548	2661	49091	155112	66381
2002	9906	18165	33455	24514	28687	16181	22061	20866	23260	11258	51814	162681	71708
2003	9390	16810	34774	21552	31891	22721	22568	25344	21683	11098	54670	168396	73405
2004	9790	19500	39553	24473	36153	24749	19223	22429	28950	18614	60483	183587	78963
2005	8804	19887	37114	24756	43968	27634	21004	22643	38586	26216	60252	177670	76758
2006	8056	20428	45329	23704	50528	32882	20270	26083	43081	38222	62311	179366	79707
2007	7415	19009	46314	24439	43364	32973	22186	23711	49794	51602	65232	187613	88285
2008	7431	21355	45455	20967	43876	31032	19733	31267	65201	43626	63840	185523	99584
2009	4806	15459	38485	17038	38167	20538	11943	24146	96161	131880	58635	164576	102982
2010	6275	17631	45725	12817	26540	17556	13104	25540	121849	184352	63155	186680	118591
2011	5937	15469	47845	16168	32528	11873	9800	32392	135750	222242	66589	175423	129150
2012	5374	16766	49034	22414	44816	8308	9817	30275	164228	288786	64629	183861	124268
2013	5284	17452	54337	13662	49402	8078	8552	29403	188794	327182	65951	195609	126507
2014	5226	13233	53753	16394	42225	10297	7819	26843	237592	291586	65781	188068	131032
2015	4058	12773	54548	18735	24198	10269	7568	24140	215560	204132	64759	189593	133904
2016p	3512	11822	53595	13829	8294	8935	6318	24033	200073	255604	65627	189415	134461

Table 3.8: World sub-bituminous and lignite imports - selected countries

(thousand tonnes)

	Belgium	France	Germany	Spain	UK	USA	Canada	Russian Fed.	India	PR of China	Chinese Taipei	Japan	Korea
1993	226	-	2991	-	-	147	-	-	-	-	-	-	1511
1994	212	48	2623	265	-	316	-	5	-	-	-	-	1947
1995	195	53	2132	481	-	429	-	-	-	-	59	-	2438
1996	227	42	1950	136	-	808	467	-	-	-	241	-	2518
1997	219	37	2151	-	-	782	965	89	-	-	442	-	3491
1998	196	32	1944	-	-	946	2163	22	-	-	2010	-	4600
1999	159	37	2053	-	-	580	3630	3	-	-	2435	-	4150
2000	-	52	1796	-	-	124	4441	10	-	-	4701	-	5469
2001	-	59	1997	-	-	880	3486	242	-	-	6017	-	5906
2002	-	23	848	-	-	994	8074	-	-	-	5244	-	3751
2003	-	42	35	-	-	932	9117	127	-	-	5141	-	1741
2004	-	40	17	-	-	1461	6426	170	-	-	5726	-	2610
2005	-	36	9	-	-	1625	7687	253	-	-	4797	-	2862
2006	-	37	53	-	-	2264	8288	341	-	-	5250	-	3706
2007	-	51	27	-	-	2483	9822	270	-	-	5888	-	3486
2008	-	67	28	-	-	3179	9375	275	10591	-	5821	-	3160
2009	-	51	10	-	-	1595	4615	338	20841	-	5800	-	3562
2010	-	52	-	-	-	1503	3746	681	30590	-	4244	-	5090
2011	-	83	-	-	-	524	1240	2048	52382	-	12945	-	4215
2012	-	76	-	-	-	386	954	1673	85155	-	16085	-	2834
2013	-	144	18	-	-	312	2289	1530	89764	-	13318	-	1803
2014	-	155	13	-	-	774	1695	1552	107287	-	13247	-	4865
2015	-	118	20	-	-	2214	1518	1531	79441	-	11429	-	6824
2016p	-	98	26	-	-	2090	1272	2296	72768	-	12532	-	6570

Table 3.9: World coking coal imports - regional aggregates
(thousand tonnes)

	World	OECD	Non OECD	OECD			Non-OECD			
				Americas	Asia Oceania	Europe	Africa M. East	Americas	Asia	Europe Eurasia
1993	164773	131196	33577	5436	75559	50201	3210	11366	14301	4700
1994	174348	133571	40777	5425	77201	50945	3421	11517	16646	9193
1995	180399	135334	45065	5662	76956	52716	2960	11572	15893	14640
1996	182195	138597	43598	6493	77882	54222	3305	11932	15559	12802
1997	185968	140239	45729	6167	77976	56096	3409	11401	19292	11627
1998	178396	137869	40527	7546	71823	58500	4116	11062	16798	8551
1999	170146	132484	37662	7196	72456	52832	3771	10336	17587	5968
2000	180842	141834	39008	8353	77424	56057	4217	10446	17650	6695
2001	172976	134825	38151	7673	75012	52140	4113	10363	17704	5971
2002	176284	135458	40826	8184	78437	48837	5071	10029	19616	6110
2003	177189	132156	45033	6720	78058	47378	4979	10338	21690	8026
2004	199323	142384	56939	7457	82692	52235	5102	10359	30202	11276
2005	195763	138332	57431	8251	77154	52927	5063	10184	29729	12455
2006	196942	141797	55145	7998	77754	56045	5119	9947	27848	12231
2007	209274	147393	61881	7752	80730	58911	4610	11059	33337	12875
2008	214295	147341	66954	6927	81434	58980	4912	11483	38844	11715
2009	207828	117269	90559	3733	72932	40604	3851	9902	70181	6625
2010	259056	145726	113330	6994	85854	52878	4084	11458	87816	9972
2011	261556	145865	115691	7165	86107	52593	3648	12450	85659	13934
2012	264742	139652	125090	6795	83793	49064	4574	11013	94764	14739
2013	289345	139943	149402	7099	84087	48757	3577	11105	124813	9907
2014	295274	142733	152541	8005	84317	50411	4246	12080	123897	12318
2015	267911	137645	130266	7870	84697	45078	3680	11441	107253	7892
2016p	282054	137389	144665	5345	85963	46081	3292	11861	117055	12457

Table 3.10: World steam coal imports - regional aggregates
(thousand tonnes)

	World	OECD	Non OECD	OECD			Non-OECD			
				Americas	Asia Oceania	Europe	Africa M. East	Americas	Asia	Europe Eurasia
1993	279383	188485	90898	10832	79783	97870	1503	1279	39497	48619
1994	285939	204538	81401	13041	91183	100314	1760	1654	38068	39919
1995	312876	226497	86379	13633	103198	109666	2409	1895	45728	36347
1996	322426	235854	86572	16709	105435	113710	3302	2516	50279	30475
1997	348148	258659	89489	20895	118691	119073	3499	2947	52873	30170
1998	364032	268299	95733	24814	121061	122424	4091	3441	55289	32912
1999	375012	280346	94666	28319	129848	122179	4075	4076	62914	23601
2000	440314	322549	117765	32983	148191	141375	5169	4725	73422	34449
2001	490806	361467	129339	40897	157930	162640	6449	4551	81473	36866
2002	505203	365007	140196	38794	168774	157439	6543	5612	96183	31858
2003	548506	397889	150617	48618	176459	172812	6294	6000	99783	38540
2004	586424	424717	161707	44926	193535	186256	6273	6803	116289	32342
2005	607605	427241	180364	51553	191043	184645	6678	7100	137046	29540
2006	670163	458287	211876	57610	195312	205365	7171	6533	163101	35071
2007	713517	472859	240658	59404	209380	204075	7385	7343	188553	37377
2008	720205	467398	252807	55370	217046	194982	7255	7201	192610	45741
2009	745865	426370	319495	40873	207171	178326	6459	6055	274349	32632
2010	834316	436094	398222	38318	232030	165746	6827	8343	347491	35561
2011	914781	450595	464186	31441	231308	187846	7016	9772	408930	38468
2012	1033721	480103	553618	28336	238403	213364	8722	9628	497840	37428
2013	1095910	501000	594910	27190	251417	222393	8217	11514	534968	40211
2014	1112060	494071	617989	27047	246386	220638	10807	13319	558609	35254
2015	1038454	495958	542496	27452	250403	218103	10799	15233	479869	36595
2016p	1045010	468366	576644	29522	247180	191664	11328	13728	519826	31762

Notes: Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

Table 3.11: World coking coal imports - selected countries

(thousand tonnes)

	Belgium	France	Germany	Spain	UK	USA	Canada	Russian Fed.	India	PR of China	Chinese Taipei	Japan	Korea
1993	4748	6904	987	4572	8602	-	4681	-	6936	-	3915	58238	17321
1994	4444	6747	1093	3893	8065	-	4467	3237	9874	-	4032	60299	16902
1995	5267	7300	1427	3244	7754	-	4129	2215	9378	-	4390	59805	17151
1996	5325	7387	2189	3318	8245	-	4833	1708	10617	-	3946	59656	18226
1997	4328	7235	2536	3745	8072	-	4301	1274	11745	398	6033	60581	17395
1998	4195	7052	4299	3905	8646	1050	4597	292	10023	103	5636	53844	17979
1999	3953	6950	3519	3548	8020	1065	4041	2	10992	263	5375	55229	17227
2000	3818	6543	4608	3755	8462	1547	4296	200	11063	339	5158	57849	19575
2001	4169	6942	3984	3424	7723	2091	3987	-	11107	277	5373	57113	17899
2002	3363	6405	5174	3425	6315	2207	4315	-	12947	256	5272	58434	20003
2003	3220	5577	5504	3321	6474	1556	3272	-	12992	2605	5274	57743	20315
2004	3577	6798	6875	4043	6345	1987	3429	-	16925	6830	5078	60884	21808
2005	3533	6255	7152	3571	6551	1603	4183	866	16891	7207	4968	56527	20627
2006	3490	5995	8692	3622	6774	1533	4150	167	17877	4677	4872	57672	20081
2007	3247	6191	9627	3682	7481	1515	4021	-	22029	6291	4483	58197	22532
2008	2993	7239	9255	3371	6349	1580	2775	1450	25364	7416	4757	57350	24083
2009	1666	3581	6448	2058	5264	947	1684	225	31145	34417	4119	52273	20659
2010	2801	4615	7793	2777	6634	1385	3628	847	34726	47082	5524	57679	28160
2011	2704	3946	8778	2505	5908	1446	3514	2485	34652	44654	6036	53816	32234
2012	2455	5143	9256	2260	5071	1015	4382	1903	35293	53610	5519	52210	31545
2013	2403	5634	7790	2527	6246	876	3378	1846	41911	75421	6727	53852	30194
2014	2234	5351	9710	1631	6344	1448	3907	1181	51663	62440	6870	51060	33176
2015	1849	3874	7845	1721	4750	1558	3872	771	49438	47999	6405	50663	33933
2016p	1679	4283	10471	1767	2781	870	3451	633	47905	59307	6581	51140	34803

Table 3.12: World steam coal imports - selected countries

(thousand tonnes)

	Belgium	France	Germany	Spain	UK	USA	Canada	Russian Fed.	India	PR of China	Chinese Taipei	Japan	Korea
1993	7146	7327	12103	8154	9798	6631	3787	28200	394	1428	21430	54342	20060
1994	8215	5443	14390	7876	7023	6880	4899	23961	682	1209	22689	60955	24107
1995	8832	5890	13625	10645	8142	6533	5606	20519	3134	1635	24367	67428	28680
1996	7489	8371	14159	8812	9554	6464	7374	18373	2558	3217	27202	70431	27848
1997	8468	6369	17495	7595	11685	6792	10168	19441	4695	1615	30186	75285	34602
1998	8439	11372	17950	10649	12598	6818	14060	21508	6512	1483	31457	75818	35607
1999	6883	10891	19159	16550	12273	7139	15718	16042	8708	1410	35729	82908	37342
2000	7529	12437	23340	17894	14984	9724	18935	25318	9867	1839	40251	92938	45320
2001	8512	9018	29527	15492	27819	16581	19636	27820	9441	2384	43718	97999	48482
2002	6543	11737	27433	21089	22372	13853	17744	20866	10313	11002	46542	104247	51705
2003	6170	11191	29235	18231	25417	21058	19294	25217	8691	8493	49396	110653	53090
2004	6213	12662	32661	20430	29808	22648	15793	22259	12025	11784	55405	122703	57155
2005	5271	13596	29953	21185	37417	25903	16820	21524	21695	19009	55284	121143	56131
2006	4566	14396	36584	20082	43754	31158	16120	25575	25204	33545	57439	121694	59626
2007	4168	12767	36660	20757	35883	31350	18165	23441	27765	45311	60749	129416	65753
2008	4438	14049	36172	17596	37527	29333	16957	29542	39837	36210	59083	128173	75501
2009	3140	11827	32027	14980	32903	19461	10257	23583	65016	97463	54516	112303	82323
2010	3474	12964	37932	10040	19906	16036	9472	24012	87123	137270	57631	129001	90431
2011	3233	11440	39067	13663	26620	10298	6279	27859	101098	177588	60553	121607	96916
2012	2919	11547	39778	20154	39745	7161	5424	26699	128935	235176	59110	131651	92723
2013	2881	11674	46529	11135	43156	7090	5155	26027	146883	251761	59224	141757	96313
2014	2992	7727	44030	14763	35881	8748	3893	24110	185929	229146	58911	137008	97856
2015	2209	8781	46683	17014	19448	8611	3684	21838	166122	156133	58354	138930	99971
2016p	1833	7441	43098	12062	5513	7978	2857	21104	152168	196297	59046	138275	99658

Notes: Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal for all countries.

Table 3.13: OECD coke oven coke¹ imports
(thousand tonnes)

	1973	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p
Australia	-	-	-	-	-	-	22	14	81	130	189
Austria	1055	986	1274	815	718	981	1402	1252	1186	959	830
Belgium	1110	1261	676	822	1259	1108	152	60	54	107	205
Canada	357	267	340	339	818	631	224	342	952	636	978
Chile	11	148	53	44	51	27	68	1	5	3	3
Czech Republic	-	-	-	-	320	602	510	885	295	396	493
Denmark	129	112	75	41	45	47	36	22	21	15	11
Estonia	x	x	x	12	-	1	-	-	-	-	-
Finland	832	1229	1231	786	274	505	505	441	398	446	323
France	3646	3000	2147	1109	885	1448	1525	1270	606	470	370
Germany	4497	4202	2693	2001	2601	5987	3793	4310	3520	2893	2388
Greece	45	35	53	32	11	1	4	1	-	-	-
Hungary	1207	1468	1486	478	351	5	205	10	44	34	25
Iceland	-	16	34	30	18	47	33	25	31	24	14
Ireland	13	8	22	29	6	-	-	-	-	-	-
Israel	2	1	1	-	-	-	-	-	-	-	-
Italy	82	101	134	115	745	506	848	18	1215	682	986
Japan	-	-	-	261	493	2467	2500	905	3218	2655	1987
Korea	38	121	106	-	-	-	341	629	405	389	340
Latvia	x	x	x	12	8	11	8	3	-	-	-
Luxembourg	3247	2292	1854	1447	521	1	1	1	1	1	1
Mexico	150	122	121	124	437	631	390	391	501	701	1108
Netherlands	677	832	405	360	722	515	341	242	468	322	550
New Zealand	-	-	-	-	-	-	-	-	-	-	-
Norway	577	531	700	534	522	543	382	434	455	427	426
Poland	-	-	-	-	34	16	117	137	192	94	125
Portugal	38	102	157	13	34	-	6	3	9	8	9
Slovak Republic	922	130	268	456	178	155	260	610	210	191	139
Slovenia	x	x	x	68	57	72	56	29	32	31	28
Spain	459	553	209	172	846	137	136	204	248	337	186
Sweden	1495	453	386	318	484	328	393	247	98	87	103
Switzerland	158	127	77	27	24	27	20	18	17	15	16
Turkey	-	-	40	-	182	722	414	173	352	568	557
United Kingdom	53	-	374	304	640	483	909	113	925	1112	1222
United States	978	598	524	694	1648	3430	3202	1101	69	127	207
IEA Americas	1335	865	864	1033	2466	4061	3426	1443	1021	763	1185
IEA Asia Oceania	38	121	106	261	493	2467	2863	1548	3704	3174	2516
IEA Europe	20242	17422	14261	9871	11402	14118	11959	10451	10314	9164	8965
OECD Americas	1496	1135	1038	1201	2954	4719	3884	1835	1527	1467	2296
OECD Asia Oceania	40	122	107	261	493	2467	2863	1548	3704	3174	2516
OECD Europe	20242	17438	14295	9981	11485	14248	12056	10508	10377	9219	9007
IEA Total	21615	18408	15231	11165	14361	20646	18248	13442	15039	13101	12666
OECD Total	21778	18695	15440	11443	14932	21434	18803	13891	15608	13860	13819

1. Solid product obtained from carbonization of coal, principally coking coal, used mainly in the iron and steel industry.
Also includes coke and semi-coke made from lignite.

For further information, see the explanatory notes and definitions in Part I.

Source: IEA/OECD World Energy Statistics

Table 3.14: World coal exports - regional aggregates
(thousand tonnes)

	World	OECD	Non OECD	OECD			Non-OECD			
				Americas	Asia Oceania	Europe	Africa M. East	Americas	Asia	Europe Eurasia
1993	450381	273239	177142	95910	132542	44787	51959	21441	38841	64901
1994	456706	277202	179504	96483	132247	48472	55115	22613	47710	54066
1995	504149	305601	198548	114322	138038	53241	59896	22553	63917	52182
1996	525126	307530	217596	116550	142448	48532	60410	28398	77419	51369
1997	550898	320005	230893	112320	158802	48883	64672	32685	81454	52082
1998	557940	324762	233178	106576	167899	50287	61833	35969	84367	51009
1999	553939	303545	250394	86656	173316	43573	66798	36760	98202	48634
2000	624395	318417	305978	85147	188516	44754	70446	43321	116996	75215
2001	678451	320575	357876	73853	193897	52825	69924	46428	163249	78275
2002	667044	313189	353855	62854	206267	44068	69896	43854	165303	74802
2003	724904	317345	407559	67405	210961	38979	72087	52392	190809	92271
2004	762575	331643	430932	69407	221253	40983	68608	57650	206675	97999
2005	819136	345496	473640	73027	234664	37805	71977	60834	225513	115316
2006	892306	346849	545457	73303	235187	38359	69284	68849	282601	124723
2007	928595	370200	558395	84544	246408	39248	67486	70977	290594	129338
2008	933463	391077	542386	104708	254753	31616	58441	72537	274865	136543
2009	930180	371106	559074	80463	263856	26787	52516	69764	295956	140838
2010	1071244	429751	641493	106415	295041	28295	67926	70726	331705	171136
2011	1180153	447808	732345	130331	286672	30805	69790	81366	418339	162850
2012	1278484	490970	787514	150112	303729	37129	79804	84411	451967	171332
2013	1364082	534119	829963	147108	338294	48717	78707	79267	488095	183894
2014	1369332	553275	816057	124921	376786	51568	74516	82402	464732	194407
2015	1308110	547052	761058	98426	393719	54907	81156	78720	412964	188218
2016p	1333492	533223	800269	85880	390490	56853	82026	83944	436606	197693

Table 3.15: World sub-bituminous and lignite exports - regional aggregates
(thousand tonnes)

	World	OECD	Non OECD	OECD			Non-OECD			
				Americas	Asia Oceania	Europe	Africa M. East	Americas	Asia	Europe/ Eurasia
1993	18747	11447	7300	1960	-	9487	-	-	5953	1347
1994	16732	9107	7625	2221	-	6886	-	-	7127	498
1995	23788	9944	13844	3086	-	6858	-	-	11273	2571
1996	25029	9134	15895	3334	-	5800	-	-	13094	2801
1997	22186	5962	16224	1100	-	4862	-	-	15017	1207
1998	24693	5690	19003	1881	-	3809	-	-	17226	1777
1999	28769	6773	21996	3484	-	3289	-	-	20266	1730
2000	22528	4009	18519	1134	-	2875	-	-	16646	1873
2001	33363	12196	21167	9155	-	3041	-	-	19443	1724
2002	33489	9407	24082	7373	-	2034	-	-	22853	1229
2003	40824	9762	31062	8567	-	1195	-	-	28905	2157
2004	37837	8084	29753	6819	-	1265	-	-	28588	1165
2005	44963	8817	36146	7177	-	1640	-	-	34949	1197
2006	57308	8186	49122	6250	-	1936	-	-	47852	1270
2007	67129	9499	57630	7947	-	1552	-	-	55989	1641
2008	84953	9492	75461	7848	-	1644	-	-	73262	2199
2009	95307	7221	88086	5817	73	1331	-	-	86427	1659
2010	114178	8370	105808	7166	-	1204	-	-	102634	3174
2011	143847	7526	136321	6229	9	1288	-	-	134408	1913
2012	241594	11103	230491	9359	-	1744	-	-	225946	4545
2013	271660	13231	258429	11483	-	1748	-	-	254006	4423
2014	280065	8773	271292	5988	22	2763	-	-	265786	5506
2015	246950	7860	239090	5460	43	2357	-	-	232406	6684
2016p	259505	4326	255179	2994	-	1332	-	-	247544	7635

Table 3.16: World coal exports - selected countries
(thousand tonnes)

	Poland	Canada	USA	Aus- tralia	Co- lombia	Vene- zuela	Russian Fed.	Kazakh- stan	Ukraine	PR of China	India	Indo- nesia	South Africa
1993	23877	28303	67602	131752	17616	3825	27202	33821	3101	19815	100	16878	51711
1994	28414	31746	64736	131201	18437	4135	23332	26266	4106	24194	673	20214	54838
1995	32236	33993	80329	136702	18274	4242	28434	20970	2400	28617	651	31308	59676
1996	28965	34459	82076	140856	24781	3617	27400	21072	2290	36485	478	36370	60224
1997	29503	36530	75790	157557	27580	5105	24376	25080	2374	35331	540	41714	64200
1998	28078	34183	72391	166796	30061	5908	25662	23403	1881	32297	823	47600	61300
1999	24115	33539	53048	171861	29932	6828	29313	17098	2138	37437	1156	55750	66235
2000	23254	32082	53061	186962	35391	7930	38329	34428	2329	55057	1292	56797	69910
2001	23044	29696	44149	192178	38868	7560	42798	31567	3729	90125	1903	66344	69210
2002	22664	26924	35927	204334	36510	7344	44280	27062	3095	83887	1517	72981	69231
2003	20155	28389	39016	208750	45644	6748	55942	32756	2914	93986	1627	87888	71531
2004	19711	25863	43543	219343	50902	6748	68931	24537	3885	86613	1374	105121	67946
2005	19377	27717	45306	232330	53607	7143	86558	24658	3666	71682	1989	128608	71442
2006	16735	28261	45039	232465	61968	6739	91930	28853	3457	63213	1554	183188	68747
2007	11900	30863	53673	244390	64575	6355	98638	26178	3621	53116	1627	194885	66963
2008	8462	30665	73953	252189	67761	4729	98119	32912	4794	45434	1655	199947	57891
2009	8464	26809	53612	261747	66756	2957	106445	28604	5290	22352	2450	233431	51977
2010	10080	32173	74132	292617	68148	2457	132801	31296	6194	19033	1875	265000	67230
2011	7152	32786	97303	284510	79273	1819	124593	30350	6991	14511	2014	353398	68807
2012	7204	34806	115089	301516	83295	911	131690	32661	6114	9138	2512	388138	76009
2013	11064	39100	106745	336196	78453	659	140754	33811	8537	7354	2190	426354	74565
2014	9259	34465	88229	375044	81190	930	155504	30945	7076	5604	1241	409205	69029
2015	9389	30486	67093	392348	77810	643	155241	31222	494	5197	1576	366708	75499
2016p	9278	30332	54676	389301	83325	545	171120	25657	521	8554	724	369902	76473

Table 3.17: World sub-bituminous and lignite exports - selected countries
(thousand tonnes)

	Poland	Canada	USA	Aus- tralia	Co- lombia	Vene- zuela	Russian Fed.	Kazakh- stan	Ukraine	PR of China	India	Indo- nesia	South Africa
1993	909	29	1931	-	-	-	1321	-	-	-	-	5953	-
1994	719	51	2170	-	-	-	232	266	-	-	-	7127	-
1995	368	-	3086	-	-	-	2171	202	-	-	-	11271	-
1996	45	11	3323	-	-	-	2059	232	1	-	-	13093	-
1997	37	-	1100	-	-	-	883	223	-	-	-	15017	-
1998	23	-	1881	-	-	-	1620	109	-	-	-	17136	-
1999	13	-	3484	-	-	-	1604	73	-	-	-	20070	-
2000	9	-	1134	-	-	-	1592	147	9	-	-	16471	-
2001	15	78	9077	-	-	-	1245	299	-	-	-	19240	-
2002	41	120	7253	-	-	-	783	87	3	-	-	22624	-
2003	36	109	8458	-	-	-	1317	184	2	-	-	28734	-
2004	27	117	6702	-	-	-	315	211	2	-	-	28383	-
2005	8	137	7040	-	-	-	552	212	-	-	-	34724	-
2006	-	256	5994	-	-	-	539	248	-	-	-	47629	-
2007	-	217	7730	-	-	-	584	225	-	-	-	54568	-
2008	1	187	7661	-	-	-	649	867	-	-	-	71981	-
2009	68	133	5647	-	-	-	893	309	-	-	-	84035	-
2010	115	139	7027	-	-	-	526	1924	-	-	-	98050	-
2011	145	176	6053	-	-	-	831	286	-	-	-	131111	-
2012	134	158	9201	-	-	-	1422	2339	-	-	69	221925	-
2013	218	111	11372	-	-	-	1775	2049	-	-	2	250038	-
2014	303	101	5887	-	-	-	2404	2474	-	-	3	259688	-
2015	198	116	5344	-	-	-	3371	2357	-	-	1	229253	-
2016p	212	101	2893	-	-	-	5272	2010	-	-	-	239896	-

Table 3.18: World coking coal exports - regional aggregates
(thousand tonnes)

	World	OECD	Non OECD	OECD			Non-OECD			
				Americas	Asia Oceania	Europe	Africa M. East	Americas	Asia	Europe Eurasia
1993	185535	161119	24416	68970	74729	17420	4843	1041	4453	14079
1994	195475	158391	37084	70008	72540	15843	5764	1102	5370	24848
1995	195133	169662	25471	75819	75625	18218	6305	1159	7314	10693
1996	193529	170157	23372	76773	78558	14826	6133	1183	7978	8078
1997	197040	175094	21946	77406	84706	12982	5650	1224	5207	9865
1998	184410	165764	18646	71077	84414	10273	5167	1231	5525	6723
1999	179219	162067	17152	58161	93450	10456	2517	1179	6855	6601
2000	186980	168629	18351	58170	100712	9747	1744	1231	7710	7666
2001	195070	164921	30149	49975	106645	8301	1086	1252	13064	14747
2002	182403	156607	25796	42506	106458	7643	759	1283	14284	9470
2003	186472	160526	25946	43755	110004	6767	584	1333	14207	9822
2004	190791	168593	22198	48196	113640	6757	917	1624	7056	12601
2005	205909	186165	19744	52256	127246	6663	524	937	7544	10739
2006	200808	181400	19408	50109	123199	8092	672	729	7181	10826
2007	215174	197245	17929	56032	133979	7234	910	688	5865	10466
2008	234844	211215	23629	65726	139482	6007	1266	762	7461	14140
2009	210312	188519	21793	55331	127272	5916	638	764	6363	14028
2010	275308	243317	31991	78260	159566	5491	946	1216	11196	18633
2011	270364	238315	32049	91361	142568	4386	917	1461	14864	14807
2012	283914	243670	40244	94326	144573	4771	3961	1555	16493	18235
2013	294846	255435	39411	94605	156289	4541	3985	1347	11107	22972
2014	312366	272293	40073	85558	182177	4558	4621	1438	9577	24437
2015	303926	262975	40951	69786	188990	4199	4661	1286	14527	20477
2016p	314133	258889	55244	65170	189185	4534	4860	1205	25789	23390

Table 3.19: World steam coal exports - regional aggregates
(thousand tonnes)

	World	OECD	Non OECD	OECD			Non-OECD			
				Americas	Asia Oceania	Europe	Africa M. East	Americas	Asia	Europe Eurasia
1993	253999	102620	151379	26911	57813	17896	47116	20400	34388	49475
1994	253804	111882	141922	26424	59707	25751	49351	21511	42340	28720
1995	299587	129083	170504	38503	62413	28167	53591	21394	56601	38918
1996	323083	131661	191422	39766	63890	28005	54277	27215	69440	40490
1997	347791	140051	207740	34912	74096	31043	59022	31461	76247	41010
1998	367565	154900	212665	35206	83485	36209	56666	34738	78752	42509
1999	369459	138143	231316	28448	79866	29829	64281	35581	91151	40303
2000	432510	146919	285591	26922	87804	32193	68702	42090	109111	65688
2001	478293	152490	325803	23717	87252	41521	68838	45176	149982	61807
2002	480988	154342	326646	20107	99809	34426	69137	42571	150790	64148
2003	535049	155443	379606	23423	100957	31063	71503	51059	176431	80613
2004	569179	161577	407602	20907	107613	33057	67691	56026	199414	84471
2005	609995	157400	452595	20435	107418	29547	71453	59897	217744	103501
2006	688120	163272	524848	22903	111988	28381	68612	68120	275197	112919
2007	709519	170981	538538	28088	112429	30464	66576	70289	284107	117566
2008	694347	177842	516505	38606	115271	23965	57175	71775	267016	120539
2009	716293	180894	535399	24770	136584	19540	51878	69000	289195	125326
2010	791091	184895	606196	27820	135475	21600	66980	69510	320024	149682
2011	906116	207908	698208	38673	144104	25131	68873	79905	402914	146516
2012	987706	245394	742312	55624	159156	30614	75843	82856	434628	148985
2013	1062677	276800	785877	52367	182005	42428	74722	77920	476421	156814
2014	1048593	278106	770487	39250	194609	44247	69895	80964	454824	164804
2015	995261	281599	713662	28519	204729	48351	76495	77434	398389	161344
2016p	1010393	272897	737496	20605	201305	50987	77166	82739	410719	166872

Notes: Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal.

Table 3.20: World coking coal exports - selected countries
(thousand tonnes)

	Poland	Canada	USA	Aus- tralia	Co- lombia	Vene- zuela	Russian Fed.	Kazakh- stan	Ukraine	PR of China	India	Indo- nesia	South Africa
1993	12829	23921	45044	73941	1041	-	6729	4247	3101	4283	-	170	4843
1994	10694	27066	42941	71496	1102	-	17367	3375	4106	4906	254	210	5764
1995	12296	28564	47255	74291	1159	-	8693	1999	-	6744	329	241	6305
1996	9886	28722	48036	76968	1183	-	6538	1509	31	7487	188	303	6133
1997	9138	30092	47314	83462	1224	-	8450	1371	44	4601	272	334	5650
1998	6506	28353	42722	83312	1231	-	6440	271	12	4855	385	285	5167
1999	6635	28946	29146	91996	1179	-	6400	184	17	5246	774	835	2517
2000	5290	28386	29780	99161	1231	-	7300	344	22	6470	624	616	1744
2001	3813	26914	23053	104935	1252	-	14431	316	-	11445	879	740	970
2002	3521	22964	19539	104526	1283	-	9196	271	3	13295	163	826	759
2003	2710	23716	20039	107794	1333	-	9470	328	24	13135	158	914	584
2004	3036	23847	24349	111732	1624	-	11935	245	417	5757	240	1059	917
2005	3151	26255	26001	124915	937	-	9983	247	509	5260	46	1222	524
2006	3601	25163	24946	120479	729	-	10007	289	530	4344	107	1550	672
2007	2363	26834	29198	131965	688	-	10019	262	118	2543	36	1736	910
2008	1683	27044	38599	136921	762	-	13614	329	197	3468	109	1922	1266
2009	1725	21528	33803	125238	764	-	13276	283	453	636	270	2049	616
2010	1815	27249	50906	157265	1216	-	18030	294	261	1139	111	1947	834
2011	1670	28050	63078	140455	1461	-	14182	301	286	3594	97	3258	456
2012	1587	30725	63390	142363	1555	-	17732	303	189	1308	56	4237	707
2013	2252	35020	59585	154193	1347	-	21528	318	1124	1111	8	2244	572
2014	2141	31063	54495	180458	1438	-	21082	1901	1448	797	42	1022	783
2015	2303	28049	41737	187664	1286	-	18480	1467	494	969	64	985	419
2016p	2438	28039	37131	187998	1205	-	21743	1126	521	1203	-	1013	1039

Table 3.21: World steam coal exports - selected countries
(thousand tonnes)

	Poland	Canada	USA	Aus- tralia	Co- lombia	Vene- zuela	Russian Fed.	Kazakh- stan	Ukraine	PR of China	India	Indo- nesia	South Africa
1993	10139	4353	22558	57811	16575	3825	19152	29574	-	15532	100	16708	46868
1994	17001	4629	21795	59705	17335	4135	5733	22625	-	19288	419	20004	49074
1995	19572	5429	33074	62411	17115	4242	17570	18769	2400	21873	322	31067	53371
1996	19034	5726	34040	63888	23598	3617	18803	19331	2258	28998	290	36067	54091
1997	20328	6438	28474	74095	26356	5105	15043	23486	2330	30730	268	41380	58550
1998	21549	5830	29376	83484	28830	5908	17602	23023	1869	27442	438	47315	56133
1999	17467	4593	23855	79865	28753	6828	21309	16841	2121	32191	382	54915	63718
2000	17955	3696	23226	87801	34160	7930	29437	33937	2298	48587	668	56181	68166
2001	19216	2704	21013	87243	37616	7560	27122	30952	3729	78680	1024	65604	68240
2002	19102	3841	16266	99808	35227	7344	34301	26704	3089	70592	1354	72155	68472
2003	17409	4566	18857	100956	44311	6748	45155	32244	2888	80851	1469	86974	70947
2004	16648	1904	19002	107611	49278	6748	56681	24081	3466	80856	1134	104062	67029
2005	16218	1337	19094	107415	52670	7143	76023	24199	3157	66422	1943	127386	70918
2006	13134	2986	19914	111986	61239	6739	81384	28316	2927	58869	1447	181638	68075
2007	9537	3919	24161	112425	63887	6355	88035	25691	3503	50573	1591	193149	66053
2008	6778	3510	35089	115268	66999	4729	83856	31716	4597	41966	1546	198025	56625
2009	6671	5152	19576	136509	65992	2957	92276	28012	4837	21716	2180	231382	51361
2010	8150	4792	23023	135352	66932	2457	114245	29078	5933	17894	1764	263053	66396
2011	5337	4607	34057	144055	77812	1819	109580	29763	6705	10917	1917	350140	68351
2012	5483	3971	51647	159153	81740	911	112536	30019	5925	7830	2387	383901	75302
2013	8594	3977	47127	182003	77106	659	117451	31444	7413	6243	2180	424110	73993
2014	6815	3310	33713	194586	79752	930	132018	26570	5628	4807	1196	408183	68246
2015	6888	2338	25334	204684	76524	643	133390	27398	-	4228	1511	365723	75080
2016p	6628	2207	17526	201303	82120	545	144105	22521	-	7351	724	368889	75434

Notes: Steam coal comprises anthracite, other bituminous coal and sub-bituminous coal for all countries.

Table 3.22: OECD coke oven coke¹ exports
(thousand tonnes)

	1973	1980	1985	1990	1995	2000	2005	2010	2014	2015	2016p
Australia	-	122	11	574	334	22	c	379	846	944	644
Austria	82	2	5	1	1	1	4	3	-	-	-
Belgium	469	768	847	915	557	293	20	441	176	5	7
Canada	368	80	22	193	334	300	154	47	61	77	44
Chile	-	45	34	-	19	41	39	-	149	39	39
Czech Republic	3467	2450	1927	1451	1409	948	913	888	525	516	543
Denmark	-	-	1	-	-	-	-	-	-	-	-
Estonia	x	x	x	35	39	20	37	21	26	8	-
Finland	24	5	13	1	2	-	-	5	73	83	53
France	1012	870	553	383	307	711	643	122	56	27	82
Germany	10197	7692	6038	2945	287	75	75	189	491	348	715
Greece	31	-	-	-	-	-	-	-	-	-	-
Hungary	103	-	-	-	420	183	53	300	467	298	424
Iceland	-	-	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-	-	-	-
Italy	628	747	451	201	130	123	229	303	341	307	374
Japan	600	2068	4055	1880	3428	2593	1674	652	483	787	1014
Korea	-	-	-	-	-	-	-	-	-	-	-
Latvia	x	x	x	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-	-	-
Mexico	-	79	95	4	1	2	2	1	-	-	-
Netherlands	680	702	880	829	1098	562	357	148	535	470	517
New Zealand	-	-	-	-	-	-	-	-	-	-	-
Norway	51	36	122	5	-	2	2	4	-	-	-
Poland	2780	1770	1639	3662	3331	3691	4624	6347	6687	6459	6963
Portugal	16	-	-	11	74	80	-	-	-	-	-
Slovak Republic	-	13	23	-	58	59	138	324	35	1	3
Slovenia	x	x	x	-	-	-	-	-	-	-	-
Spain	2	3	11	42	81	744	610	370	130	144	137
Sweden	11	114	77	41	67	29	35	33	30	81	28
Switzerland	-	-	-	4	-	-	-	-	-	-	-
Turkey	-	-	-	-	-	-	-	-	5	2	5
United Kingdom	665	1265	1163	435	264	381	119	483	88	90	-
United States	1266	1879	1018	519	680	1039	1585	1327	858	777	907
IEA Americas	1634	1959	1040	712	1014	1339	1739	1374	919	854	951
IEA Asia Oceania	600	2190	4066	2454	3762	2615	1674	1031	1329	1731	1658
IEA Europe	20218	16437	13750	10961	8125	7902	7859	9981	9665	8839	9851
OECD Americas	1634	2083	1169	716	1034	1382	1780	1375	1068	893	990
OECD Asia Oceania	600	2190	4066	2454	3762	2615	1674	1031	1329	1731	1658
OECD Europe	20218	16437	13750	10961	8125	7902	7859	9981	9665	8839	9851
IEA Total	22452	20586	18856	14127	12901	11856	11272	12386	11913	11424	12460
OECD Total	22452	20710	18985	14131	12921	11899	11313	12387	12062	11463	12499

1. Solid product obtained from carbonization of coal, principally coking coal, used mainly in the iron and steel industry.
Also includes coke and semi-coke made from lignite.

For further information, see the explanatory notes and definitions in Part I.

Source: IEA/OECD World Energy Statistics

4. USES OF COAL

Table 4.1: OECD coal-fired and total electricity generating capacity, 1990 to 2015
(GW)

	Coal					Total				
	1990	2000	2010	2014	2015	1990	2000	2010	2014	2015
Australia	24.92	28.65	30.32	29.61	28.57	38.45	46.20	61.29	67.23	67.03
Austria	2.10	2.24	2.02	2.02	2.07	16.69	17.80	21.19	24.05	24.44
Belgium	4.90	2.47	..	..	..	14.14	15.69	18.69	20.93	21.15
Canada	19.24	..	14.12	9.81	9.77	104.14	111.32	132.38	137.34	148.15
Chile	0.89	1.93	2.53	5.37	4.49	5.10	9.89	16.23	23.40	21.64
Czech Republic	12.11	11.47	12.04	13.03	12.96	15.28	15.32	20.07	21.92	21.87
Denmark	7.54	5.60	5.90	4.57	4.59	9.12	12.32	13.44	13.62	14.01
Estonia	..	2.79	2.63	2.48	2.27	..	2.80	2.75	3.03	2.86
Finland	5.79	7.71	6.27	6.09	5.58	13.22	16.26	15.54	16.25	15.88
France	14.23	..	..	5.12	3.01	103.34	114.67	124.55	128.94	129.31
Germany	42.73	51.59	..	..	..	99.08	118.88	162.70	198.42	204.05
Greece	3.89	4.49	4.79	4.30	4.30	8.51	10.90	15.31	18.90	18.94
Hungary	2.24	2.02	1.52	1.22	1.44	7.18	8.28	8.99	8.66	8.58
Iceland	..	..	..	..	..	0.94	1.38	2.58	2.77	2.77
Ireland	0.87	0.87	0.85	0.86	0.86	3.81	4.71	8.02	9.08	9.56
Israel	2.19	4.29	4.84	4.84	4.84	5.07	9.13	13.06	16.22	17.22
Italy	9.03	12.56	11.19	10.88	10.92	56.56	75.51	106.61	121.75	116.96
Japan	40.47	51.78	47.23	55.94	55.20	194.73	260.36	288.33	317.13	323.92
Korea	..	14.44	29.41	32.56	33.59	2.34	53.69	84.70	99.83	103.02
Latvia	0.13	0.13	..	..	0.01	2.09	2.09	2.56	2.92	2.93
Luxembourg	0.09	..	..	..	..	1.24	1.22	1.71	2.02	2.02
Mexico	1.61	5.11	5.87	6.05	6.05	27.38	40.35	61.39	66.26	67.50
Netherlands	3.77	4.18	..	..	..	17.60	21.06	26.69	31.76	33.87
New Zealand	1.09	1.11	1.16	0.66	0.66	7.18	8.39	9.46	9.77	9.45
Norway	0.05	0.08	0.01	..	..	27.13	28.42	31.69	33.70	33.84
Poland	25.99	27.80	28.40	27.44	27.46	27.88	30.56	33.36	35.99	37.32
Portugal	1.47	1.99	2.38	2.26	2.28	7.41	10.91	18.93	19.13	19.63
Slovak Republic	..	..	1.52	1.61	1.40	..	7.45	7.87	8.09	7.78
Slovenia	..	1.03	0.85	0.82	0.71	0.76	2.61	3.19	3.45	3.36
Spain	10.41	11.36	..	..	..	42.84	53.92	101.79	106.49	106.90
Sweden	..	..	1.46	1.52	1.53	34.19	33.72	36.45	38.74	39.71
Switzerland	0.13	0.20	0.14	0.26	0.26	15.39	17.26	18.09	19.17	19.62
Turkey	5.58	7.40	12.40	15.40	16.11	16.32	27.26	49.52	69.52	73.15
United Kingdom	41.17	33.37	30.83	20.95	19.86	73.21	78.39	93.75	94.71	95.21
United States	307.96	321.06	318.96	300.28	281.47	733.59	811.35	1041.01	1073.44	1072.47

Notes: Includes multi-fired units.

Includes autoproducers for all countries except Japan.

For further information, see the explanatory notes and definitions in Part I.

Source: IEA/OECD *Electricity Information*

Table 4.2: OECD coal, peat and oil shale use for electricity production and heat sold
(Mtce)

	1973	1980	1985	1990	1995	2000	2005	2010	2013	2014	2015
Australia	19.7	28.8	33.7	41.3	46.3	58.8	64.9	64.0	56.3	53.3	55.4
Austria	1.2	1.2	1.7	2.4	2.0	2.0	2.6	2.0	1.9	1.5	1.6
Belgium	3.9	5.5	5.3	6.5	6.3	4.6	3.4	1.9	1.6	1.3	1.3
Canada	11.9	21.5	28.3	28.5	29.7	38.5	33.3	27.3	22.3	22.0	21.9
Chile	0.4	0.7	0.7	2.4	2.0	3.0	2.4	5.5	9.5	8.1	9.4
Czech Republic	11.9	15.5	16.5	20.5	21.3	21.3	20.6	20.6	17.9	17.4	17.3
Denmark	2.3	8.0	9.7	8.1	8.7	5.2	4.9	5.4	4.4	3.5	2.4
Estonia	..	..	..	6.8	3.4	3.2	3.7	4.6	4.5	4.6	3.6
Finland	1.7	4.9	4.5	4.7	5.9	5.0	4.9	8.0	5.7	4.9	3.9
France	14.8	24.4	15.0	12.0	9.5	10.8	10.3	8.3	8.0	4.5	4.3
Germany	104.2	115.9	123.3	115.6	103.2	98.8	97.8	90.4	97.4	92.2	90.5
Greece	2.0	3.8	6.9	9.8	11.1	11.8	12.4	10.9	9.6	9.0	7.7
Hungary	5.8	6.9	6.0	4.5	4.0	4.1	3.0	2.6	2.5	2.4	2.3
Iceland	-	-	-	-	-	-	-	-	-	-	-
Ireland	0.9	0.8	1.2	2.6	3.0	2.7	2.7	1.9	2.1	2.1	2.4
Israel	-	-	2.6	3.4	5.9	9.2	10.6	10.6	10.1	9.4	9.2
Italy	1.9	6.0	9.9	11.4	8.8	9.6	16.5	14.5	15.7	15.0	14.9
Japan	17.1	15.0	30.0	36.0	50.8	69.3	89.9	88.1	100.5	100.5	99.4
Korea	0.5	1.2	6.9	8.5	16.9	38.7	51.9	74.9	76.5	77.4	80.5
Latvia	..	..	..	0.6	0.2	0.1	-	-	-	-	-
Luxembourg	0.4	0.2	0.2	0.2	0.1	-	-	-	-	-	-
Mexico	0.1	-	1.0	2.5	5.3	6.8	12.0	11.9	11.5	12.6	12.7
Netherlands	1.1	2.6	5.3	7.5	9.1	7.9	8.0	7.5	8.4	9.6	12.4
New Zealand	0.4	0.2	0.3	0.2	0.3	0.5	2.0	0.7	0.8	0.7	0.6
Norway	-	-	-	-	-	-	-	-	-	-	-
Poland	52.9	77.0	82.9	74.9	60.0	56.3	56.6	54.8	53.5	50.1	50.4
Portugal	0.3	0.1	0.3	2.9	4.2	4.6	4.8	2.3	3.8	3.8	4.6
Slovak Republic	2.7	4.1	4.1	3.3	3.1	2.4	2.5	1.8	1.6	1.5	1.5
Slovenia	..	..	..	1.9	1.8	1.8	2.0	2.0	1.8	1.4	1.5
Spain	4.3	11.2	17.2	20.3	21.9	26.7	25.7	8.7	13.3	14.7	17.0
Sweden	0.1	0.1	1.9	1.6	1.4	1.1	1.2	1.2	0.9	0.7	0.7
Switzerland	-	-	-	-	-	-	-	-	-	-	-
Turkey	1.8	2.6	6.0	7.8	10.5	14.1	13.5	19.8	22.0	27.0	26.6
United Kingdom	65.0	74.3	61.4	68.8	49.7	41.1	46.0	34.9	42.5	32.7	25.1
United States	309.9	417.2	501.8	565.7	636.7	716.5	718.7	661.1	567.2	565.7	486.8
IEA Americas	321.7	438.7	530.1	594.3	666.4	755.1	752.0	688.4	589.5	587.7	508.7
IEA Asia Oceania	37.7	45.2	70.9	86.1	114.3	167.3	208.7	227.8	234.1	231.8	235.9
IEA Europe	279.3	365.1	379.1	392.6	347.3	333.5	341.3	302.3	317.2	298.5	290.7
OECD Americas	322.2	439.3	531.7	599.1	673.7	764.8	766.5	705.8	610.5	608.4	530.8
OECD Asia Oceania	37.7	45.2	73.6	89.5	120.2	176.5	219.4	238.4	244.2	241.2	245.1
OECD Europe	279.3	365.1	379.1	395.0	349.3	335.4	343.3	304.3	319.0	300.0	292.1
IEA Total	638.8	849.0	980.1	1072.9	1128.0	1255.9	1302.0	1218.5	1140.8	1118.1	1035.3
OECD Total	639.2	849.6	984.4	1083.6	1143.2	1276.7	1329.1	1248.4	1173.7	1149.5	1068.0

Note: "Coal" refers to all coal types, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite), and derived fuels (including patent fuel, coke oven coke, gas coke, coal tar, BKB, coke oven gas, blast furnace gas and other recovered gases). Peat, peat briquettes, and oil shale and oil sands are included here for display purposes. Quantities have been converted to Mtce units using calorific values largely submitted in annual questionnaires to the IEA Secretariat by OECD member countries.

For further information, see the explanatory notes and definitions in Part I.

Source: IEA/OECD Energy Balances of OECD Countries

Table 4.3: World coal¹ use in coke ovens
(million tonnes)

	1973	1980	1985	1990	1995	2000	2005	2010	2013	2014	2015
Australia	9.5	7.0	5.5	5.9	5.9	4.8	4.5	5.1	4.3	3.9	3.9
Austria	2.3	2.4	2.4	2.3	1.9	1.9	1.9	1.8	1.8	1.8	1.8
Belgium	9.9	7.9	7.8	7.2	4.7	3.9	3.4	2.6	2.3	2.0	1.7
Canada	7.7	7.3	6.3	5.0	4.2	4.2	4.3	3.9	3.4	3.0	2.9
Chile	0.5	0.5	0.4	0.5	0.7	0.7	0.7	0.5	0.6	0.6	0.5
Czech Republic	18.6	12.2	10.6	8.5	6.6	4.6	4.3	3.2	3.2	3.3	3.0
Finland	-	-	-	0.7	1.7	1.3	1.3	1.2	1.2	1.2	1.2
France	15.3	14.6	11.3	9.5	7.7	6.5	5.8	4.3	4.6	4.5	4.5
Germany	46.3	38.7	31.5	24.1	13.7	11.4	10.7	11.2	11.3	11.8	12.0
Greece	0.5	0.4	-	-	-	-	-	-	-	-	-
Hungary	1.6	1.4	0.9	1.0	1.4	1.3	0.8	1.4	1.3	1.3	1.3
Italy	10.4	11.2	10.1	8.6	6.7	6.4	5.1	4.9	2.9	2.3	2.2
Japan	62.3	65.7	67.6	66.6	62.3	58.0	59.4	57.9	54.1	52.5	51.4
Korea	0.4	4.0	7.0	11.7	14.1	16.4	15.4	19.5	22.7	27.2	26.8
Mexico	2.8	4.0	3.8	3.4	3.1	3.0	2.9	3.2	3.2	3.2	2.6
Netherlands	3.4	3.7	4.1	3.8	4.0	3.0	3.2	2.9	2.8	2.9	3.0
New Zealand	-	-	-	0.6	0.7	0.7	0.8	0.8	0.9	0.9	0.9
Norway	0.4	0.4	0.4	-	-	-	-	-	-	-	-
Poland	21.6	25.3	20.5	18.2	15.4	12.4	11.3	13.0	12.5	12.7	13.0
Portugal	0.4	0.3	0.4	0.3	0.5	0.5	-	-	-	-	-
Slovak Republic	2.8	2.1	2.5	2.9	2.4	2.2	2.4	2.1	2.0	2.0	2.1
Spain	6.4	5.2	4.9	4.5	3.3	3.6	3.6	2.6	2.1	2.0	2.0
Sweden	0.7	1.7	1.6	1.5	1.6	1.8	1.8	1.8	1.4	1.5	1.6
Turkey	2.0	2.6	3.7	4.7	4.2	4.2	4.2	5.3	5.6	5.7	6.0
United Kingdom	24.0	13.5	9.7	10.1	8.1	8.2	5.6	5.4	5.3	5.0	3.7
United States	87.3	60.5	37.2	35.3	29.9	26.0	18.4	19.1	19.5	19.3	17.9
<i>IEA Americas</i>	<i>95.0</i>	<i>67.8</i>	<i>43.6</i>	<i>40.3</i>	<i>34.1</i>	<i>30.2</i>	<i>22.7</i>	<i>23.0</i>	<i>22.9</i>	<i>22.4</i>	<i>20.8</i>
<i>IEA Asia Oceania</i>	<i>72.2</i>	<i>76.7</i>	<i>80.0</i>	<i>84.9</i>	<i>83.0</i>	<i>79.8</i>	<i>80.1</i>	<i>83.3</i>	<i>81.9</i>	<i>84.6</i>	<i>83.0</i>
<i>IEA Europe</i>	<i>166.3</i>	<i>143.6</i>	<i>122.4</i>	<i>107.9</i>	<i>84.0</i>	<i>73.1</i>	<i>65.3</i>	<i>63.9</i>	<i>60.2</i>	<i>60.0</i>	<i>59.0</i>
<i>OECD Americas</i>	<i>98.3</i>	<i>72.2</i>	<i>47.8</i>	<i>44.2</i>	<i>37.9</i>	<i>33.9</i>	<i>26.3</i>	<i>26.7</i>	<i>26.6</i>	<i>26.2</i>	<i>23.9</i>
<i>OECD Asia Oceania</i>	<i>72.2</i>	<i>76.7</i>	<i>80.0</i>	<i>84.9</i>	<i>83.0</i>	<i>79.8</i>	<i>80.1</i>	<i>83.3</i>	<i>81.9</i>	<i>84.6</i>	<i>83.0</i>
<i>OECD Europe</i>	<i>166.3</i>	<i>143.6</i>	<i>122.4</i>	<i>107.9</i>	<i>84.0</i>	<i>73.1</i>	<i>65.3</i>	<i>63.9</i>	<i>60.2</i>	<i>60.0</i>	<i>59.0</i>
IEA Total	333.5	288.1	246.0	233.1	201.2	183.2	168.1	170.3	165.0	166.9	162.9
OECD Total	336.8	292.5	250.2	237.0	204.9	186.9	171.7	173.9	168.7	170.7	166.0
Algeria	0.1	0.1	1.2	1.0	0.6	0.7	1.0	-	-	-	-
Egypt	0.5	0.9	1.2	1.3	1.5	1.7	1.7	0.9	0.3	0.4	0.3
South Africa	5.5	7.2	6.0	5.7	4.2	2.6	3.0	4.1	3.7	3.3	3.3
Zimbabwe	0.8	0.9	0.3	0.6	0.6	0.8	0.7	0.3	0.4	0.4	0.4
Argentina	0.6	0.8	0.8	1.1	0.6	0.6	0.8	0.7	0.5	1.1	1.1
Brazil	2.5	5.7	9.5	10.3	11.0	9.9	9.7	11.0	10.5	10.9	10.4
Colombia	0.5	0.7	0.7	0.8	0.7	0.6	0.5	2.0	2.3	2.4	2.3
Peru	-	-	0.1	-	0.1	-	-	-	-	-	-
India	11.1	13.6	13.9	17.3	21.3	19.7	25.3	30.0	37.2	41.6	43.0
DPR of Korea	3.3	4.3	5.0	5.1	1.0	-	-	-	-	-	-
Mongolia	..	..	-	-	-	-	-	0.2	0.1	0.2	0.1
Pakistan	-	0.1	0.7	1.1	1.1	1.0	0.6	0.4	0.1	0.4	0.4
Chinese Taipei	0.3	1.5	2.6	4.1	4.2	5.8	5.8	7.0	7.8	8.0	8.0
Other Asia	-	-	-	-	-	-	-	0.1	0.1	0.1	0.1
PR of China	38.4	66.8	73.0	107.0	184.0	165.0	334.5	499.5	625.4	628.9	606.4

Table 4.3: World coal¹ use in coke ovens (continued)
(million tonnes)

	1973	1980	1985	1990	1995	2000	2005	2010	2013	2014	2015
Albania	-	-	-	0.1	-	-	-	-	-	-	-
Bosnia and Herzegovina	x	x	x	-	-	-	0.6	1.2	1.0	1.3	1.2
Bulgaria	1.6	1.9	1.6	1.9	1.7	1.3	1.1	-	-	-	-
Croatia	x	x	x	0.7	-	-	-	-	-	-	-
Kazakhstan	x	x	x	0.6	3.7	7.2	6.7	6.6	7.3	10.5	8.7
Romania	2.3	5.2	7.8	4.8	4.6	2.2	2.4	-	-	-	-
Russian Federation	x	x	x	53.9	42.0	42.1	45.0	49.7	52.5	56.4	65.2
Ukraine	x	x	x	54.5	31.6	30.6	29.8	26.4	24.2	17.0	11.8
Former Soviet Union	129.6	131.5	124.0	x	x	x	x	x	-	-	-
Former Yugoslavia	1.8	3.3	4.7	x	x	x	x	x	-	-	-
Islam. Rep. of Iran	0.9	1.7	1.3	1.0	1.4	1.6	1.4	1.2	1.4	1.6	1.6
<i>European Union - 28</i>	x	x	x	110.6	86.2	72.5	64.6	58.6	54.7	54.2	53.0
Non-OECD Total	200.0	246.4	254.4	272.9	315.8	293.3	470.5	641.2	774.7	784.4	764.5
World	536.8	538.9	504.6	509.8	520.8	480.2	642.2	815.1	943.5	955.1	930.5

1. Primary coal only. Coal products such as briquettes are not included. This only covers inputs to coke ovens. Fuels used in support for coke oven coke transformation are not included. For further information, see the explanatory notes and definitions in Part I.

Source: IEA/OECD World Energy Statistics

Table 4.4: World consumption of pulverised coal injection (PCI) coals
(thousand tonnes)

	1990	1995	2000	2005	2009	2010	2011	2012	2013	2014	2015
Australia	..	..	..	881	647	697	760	538	206	190	60
Austria	..	..	..	1	115	143	158	121	187	230	764
Belgium	513	859	1458	522	46	920	892	1066	1087	1080	1035
Czech Republic	..	..	..	..	..	..	..	..	..	276	300
Finland	..	..	..	..	..	..	..	..	..	..	53
France	1310	2305	2462	2936	1343	2410	2277	2278	2505	2840	3033
Germany	1730	1843	2530	2770	1833	3959	3772	4157	4460	4650	4881
Italy	170	1230	1198	1678	942	1459	1328	1421	815	1021	672
Japan	5237	8286	10936	10297	8625	11641	12671	13811	14681	14207	14005
Korea	..	2181	3031	5481	6381	7695	9414	9286	9092	8827	9592
Netherlands	665	845	1040	1522	938	1018	1284	1434	1299	1398	1496
Norway	..	..	..	..	..	..	..	112	113	106	74
Poland	..	..	..	..	..	32	80	194	141	184	270
Slovak Republic	219	313	390	388	383	356	421	605	576	655	608
Spain	..	..	681	717	269	681	708	617	759	780	879
Sweden	210	245	277	506	209	413	438	356	443	396	313
Turkey	..	..	..	..	462	553	459	676	744	651	690
United Kingdom	767	585	456	1039	852	978	995	987	1411	1513	1444
United States	200	2300	2924	1519	1501	1964	2046	1423	1461	1207	870
India	..	..	2111	2161	2789	2807	2860	3023	3037	3237	3390
Chinese Taipei	130	472	801	1156	678	1109	1379	1020	1111	1383	1381
Russian Federation	..	..	319	2683	3315	3821	4605	3885	3831	4020	5080
Serbia	..	..	..	..	..	..	..	40	25	37	56
Total World¹	11151	21464	30614	36257	31328	42656	46547	47050	47984	48888	50946

1. Note that PCI data are not available for all countries, most notably the People's Republic of China. Please see the explanatory notes and definitions in Part I. Data are as reported for OECD countries and have not undergone blast furnace normalisation unless submitted on that basis..

Source: IEA/OECD World Energy Statistics

Table 4.5: Coal-fired heat and electricity generation efficiency and share - 2015

	Coal ¹ (Mtce)	Electricity / Heat (TWh)	Efficiency (PJ)	Efficiency	Share of total generation from coal					
					1971	1980	1990	2000	2010	2015
Australia	55.37	158.61	-	35.2%	71.0%	73.7%	78.8%	83.0%	71.3%	62.9%
Austria	1.55	5.08	3.92	48.8%	13.1%	6.7%	14.7%	10.3%	8.3%	7.3%
Belgium	1.28	4.25	-	40.6%	26.9%	27.8%	27.8%	18.0%	5.7%	5.3%
Canada	21.88	65.98	0.01	37.0%	18.8%	15.5%	16.8%	19.1%	13.1%	9.7%
Chile	9.37	28.00	-	36.7%	16.1%	16.1%	35.5%	21.1%	27.9%	37.1%
Czech Republic	17.31	43.84	75.95	46.1%	84.8%	71.1%	77.1%	71.9%	61.2%	55.8%
Denmark	2.44	7.11	26.02	72.2%	18.6%	83.2%	74.1%	39.7%	33.4%	22.2%
Estonia	0.18	0.56	1.75	71.5%	x	x	3.8%	3.9%	4.7%	6.4%
Finland	2.28	5.70	28.42	73.3%	14.9%	31.6%	25.6%	15.8%	17.5%	11.5%
France	4.33	12.17	7.60	40.6%	28.9%	27.1%	8.4%	6.3%	4.9%	2.4%
Germany	90.51	283.71	151.35	44.2%	73.6%	62.8%	59.8%	53.1%	41.6%	42.4%
Greece	7.68	22.11	2.08	36.3%	43.2%	44.8%	72.4%	64.4%	54.1%	43.3%
Hungary	2.33	5.91	5.51	39.3%	60.3%	43.0%	31.1%	27.4%	15.9%	16.6%
Ireland	1.61	4.87	-	37.2%	1.2%	0.7%	41.6%	28.8%	12.6%	17.3%
Israel	9.10	29.16	-	39.4%	-	-	49.7%	68.5%	58.4%	45.4%
Italy	14.94	45.39	6.12	38.7%	4.7%	9.9%	16.8%	11.3%	12.7%	13.8%
Japan	99.38	343.22	-	42.4%	11.9%	9.6%	13.5%	21.4%	27.0%	33.0%
Korea	80.52	236.59	74.32	39.2%	6.9%	6.7%	16.8%	36.8%	42.6%	42.4%
Latvia	0.01	-	0.10	56.1%	-	-	6.7%	0.8%	0.7%	0.2%
Luxembourg	-	-	-	-	63.2%	51.6%	76.4%	-	-	-
Mexico	12.69	33.81	-	32.7%	0.5%	-	6.7%	9.2%	11.7%	10.9%
Netherlands	12.44	42.55	8.09	44.2%	12.4%	13.7%	34.1%	22.5%	19.2%	30.1%
New Zealand	0.65	1.88	-	35.8%	4.8%	1.9%	2.0%	3.9%	4.6%	4.2%
Norway	0.05	0.15	0.24	58.4%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%
Poland	50.36	132.96	242.95	48.9%	90.6%	91.2%	93.2%	95.3%	88.2%	82.7%
Portugal	4.64	14.73	-	39.0%	3.6%	2.3%	31.8%	32.7%	11.9%	26.0%
Slovak Republic	1.45	3.33	6.84	44.2%	37.2%	27.5%	37.9%	22.7%	17.9%	14.2%
Slovenia	1.46	4.39	4.95	48.3%	x	x	36.5%	37.8%	36.7%	33.4%
Spain	16.98	52.68	-	38.1%	21.7%	30.0%	40.1%	36.6%	8.8%	19.0%
Sweden	0.55	1.08	9.83	84.9%	0.3%	0.7%	5.3%	2.5%	2.5%	1.8%
Switzerland	-	-	-	-	-	0.1%	0.2%	-	-	-
Turkey	26.57	76.17	24.40	38.3%	30.5%	25.6%	35.1%	29.7%	24.5%	28.6%
United Kingdom	25.13	76.71	4.58	38.1%	63.9%	72.8%	65.0%	31.7%	28.2%	22.1%
United States	486.84	1471.00	40.17	37.4%	44.8%	51.2%	52.8%	52.3%	45.0%	33.6%
IEA Total	1029.25	3118.30	720.15	39.6%	42.1%	43.2%	42.1%	39.1%	34.0%	29.6%
<i>IEA Americas</i>	<i>508.72</i>	<i>1536.97</i>	<i>40.19</i>	<i>37.4%</i>	<i>41.8%</i>	<i>46.3%</i>	<i>48.0%</i>	<i>48.0%</i>	<i>41.2%</i>	<i>30.4%</i>
<i>IEA Asia Oceania</i>	<i>235.92</i>	<i>740.30</i>	<i>74.32</i>	<i>39.6%</i>	<i>18.3%</i>	<i>17.7%</i>	<i>22.1%</i>	<i>31.7%</i>	<i>36.4%</i>	<i>39.1%</i>
<i>IEA Europe</i>	<i>284.62</i>	<i>841.03</i>	<i>605.65</i>	<i>43.6%</i>	<i>49.1%</i>	<i>47.3%</i>	<i>42.5%</i>	<i>31.0%</i>	<i>24.4%</i>	<i>24.3%</i>
OECD Total	1061.87	3213.66	725.20	39.5%	41.6%	42.6%	41.4%	38.4%	33.5%	29.2%
<i>OECD Americas</i>	<i>530.77</i>	<i>1598.78</i>	<i>40.19</i>	<i>37.3%</i>	<i>41.0%</i>	<i>45.1%</i>	<i>46.7%</i>	<i>46.2%</i>	<i>39.5%</i>	<i>29.4%</i>
<i>OECD Asia Oceania</i>	<i>245.01</i>	<i>769.46</i>	<i>74.32</i>	<i>39.6%</i>	<i>18.0%</i>	<i>17.4%</i>	<i>22.6%</i>	<i>32.6%</i>	<i>37.0%</i>	<i>39.3%</i>
<i>OECD Europe</i>	<i>286.09</i>	<i>845.42</i>	<i>610.70</i>	<i>43.6%</i>	<i>49.1%</i>	<i>47.2%</i>	<i>42.0%</i>	<i>30.9%</i>	<i>24.3%</i>	<i>24.1%</i>

Table 4.5: Coal-fired heat and electricity generation efficiency and share - 2015 (continued)

	Coal ¹ (Mtce)	Electricity / Heat (TWh)	Efficiency (PJ)		Share of total generation from coal					
					1971	1980	1990	2000	2010	2015
Africa	99.62	256.52	-	31.6%	61.5%	54.6%	52.1%	47.2%	38.5%	32.8%
Botswana	1.33	2.86	-	26.3%	..	..	88.1%	97.6%	100.0%	96.4%
Mauritius	0.60	1.18	-	24.1%	-	-	6.2%	20.4%	38.7%	39.4%
Morocco	6.32	17.11	-	33.2%	13.4%	19.5%	23.0%	68.3%	45.9%	55.5%
Mozambique	-	-	-	-	-	17.5%	13.9%	-	-	-
Namibia	0.00	0.01	-	27.8%	-	-	-	0.8%	4.2%	0.5%
Niger	0.09	0.22	-	30.3%	..	..	..	65.5%	68.9%	41.6%
Nigeria	-	-	-	-	-	-	0.1%	-	-	-
South Africa	88.08	228.75	-	31.9%	99.8%	99.0%	94.3%	93.1%	94.3%	92.7%
United Rep. of Tanzania	-	-	-	-	-	-	-	2.7%	-	-
Zambia	-	-	-	-	20.3%	0.7%	0.5%	0.2%	-	-
Zimbabwe	2.53	4.54	-	22.0%	32.7%	11.7%	53.3%	53.4%	31.7%	46.8%
Other Africa	0.65	1.85	-	35.0%	0.5%	15.2%	9.8%	10.5%	12.5%	10.0%
Non-OECD Americas	15.53	44.54	-	35.2%	2.8%	2.0%	1.9%	2.1%	2.1%	3.7%
Argentina	1.04	2.94	-	34.8%	3.1%	2.1%	1.3%	2.0%	2.4%	2.0%
Brazil	8.96	27.47	-	37.7%	3.3%	2.5%	2.1%	3.1%	2.2%	4.7%
Colombia	2.79	8.18	-	36.0%	13.1%	7.9%	10.2%	5.1%	6.9%	11.9%
Dominican Republic	0.83	2.37	-	35.0%	-	-	1.2%	-	12.2%	12.9%
Guatemala	1.35	2.36	-	21.6%	-	-	-	8.9%	13.2%	21.4%
Honduras	0.03	0.09	-	36.0%	-	-	-	-	-	1.0%
Panama	0.30	0.71	-	29.3%	-	-	-	-	-	6.9%
Peru	0.24	0.41	-	21.1%	-	-	-	1.7%	2.4%	0.8%
Non-OECD Asia excl. China	521.98	1488.90	44.65	35.3%	31.0%	29.5%	42.2%	45.9%	47.1%	54.6%
Bangladesh	0.37	1.00	-	32.8%	-	-	-	-	1.9%	1.7%
Cambodia	0.82	2.13	-	31.9%	..	..	..	-	3.1%	48.4%
Hong Kong (China)	8.05	24.89	-	38.0%	-	-	98.2%	60.4%	62.0%	65.4%
India	362.85	1041.53	-	35.3%	49.1%	51.0%	65.5%	68.5%	67.2%	75.3%
Indonesia	44.91	130.51	-	35.7%	-	-	29.9%	36.4%	40.3%	55.8%
DPR of Korea	0.89	2.92	-	40.3%	36.0%	48.0%	40.1%	43.3%	35.5%	21.3%
Malaysia	22.32	63.47	-	34.9%	-	-	12.7%	11.1%	34.3%	42.3%
Mongolia	3.98	5.11	44.65	54.1%	..	..	95.5%	98.4%	98.5%	97.7%
Myanmar	0.10	0.29	-	35.2%	3.9%	2.0%	1.6%	-	8.9%	1.8%
Pakistan	0.13	0.15	-	14.2%	1.2%	0.2%	0.1%	0.4%	0.1%	0.1%
Philippines	14.27	36.69	-	31.6%	0.1%	1.0%	7.3%	36.8%	34.4%	44.5%
Singapore	0.37	0.60	-	20.3%	-	-	-	-	-	1.2%
Sri Lanka	1.88	4.44	-	29.0%	-	-	-	-	-	33.7%
Chinese Taipei	37.33	119.06	-	39.2%	12.3%	14.0%	27.7%	48.9%	51.4%	46.7%
Thailand	12.51	34.58	-	33.9%	6.1%	9.8%	25.0%	18.5%	18.8%	19.5%
Viet Nam	18.86	45.33	-	29.5%	73.3%	39.9%	23.1%	11.8%	20.7%	29.6%
Other Asia	0.39	1.08	-	34.0%	-	-	-	1.2%	1.5%	5.1%
PR of China	1487.87	4108.99	3605.29	42.2%	70.1%	63.5%	72.6%	80.0%	79.2%	73.4%

Table 4.5: Coal-fired heat and electricity generation efficiency and share - 2015 (continued)

	Coal ¹ (Mtce)	Electricity / Heat (TWh)	Efficiency (PJ)	Efficiency	Share of total generation from coal					
					1971	1980	1990	2000	2010	2015
Non-OECD Europe and Eurasia	180.79	65.98	1522.25	54.9%	43.4%	32.2%	22.6%	24.9%	23.3%	22.6%
Albania	-	28.00	-	-	-	-	-	0.5%	-	-
Belarus	0.00	43.84	0.04	72.9%	x	x	2.3%	1.8%	0.1%	0.0%
Bosnia and Herzegovina	5.09	7.11	3.17	26.2%	x	x	69.9%	49.1%	52.4%	63.3%
Bulgaria	8.71	0.56	19.17	39.3%	82.6%	51.7%	29.4%	43.6%	45.9%	44.4%
Croatia	0.75	5.70	-	37.9%	x	x	5.2%	10.8%	13.1%	16.1%
F.Y.R. of Macedonia	1.26	12.17	-	32.2%	x	x	75.7%	60.8%	59.5%	52.7%
Georgia	-	283.71	-	-	x	x	4.5%	-	-	-
Kazakhstan	26.76	22.11	400.52	86.1%	x	x	89.2%	83.9%	91.1%	85.3%
Kosovo	2.17	5.91	-	33.8%	x	x	..	95.0%	95.4%	95.0%
Kyrgyzstan	0.92	4.87	13.42	73.1%	x	x	17.4%	11.0%	22.7%	30.8%
Lithuania	0.00	29.16	0.06	61.7%	x	x	0.7%	0.3%	0.2%	0.1%
Malta	-	45.39	-	-	-	-	55.9%	-	-	-
Republic of Moldova	0.00	343.22	0.06	86.4%	x	x	24.8%	2.7%	0.2%	0.2%
Montenegro	0.52	236.59	-	35.4%	x	x	..	..	31.6%	50.3%
Romania	7.11	-	24.40	43.2%	30.5%	42.3%	37.9%	27.4%	31.5%	28.7%
Russian Federation	92.02	-	988.46	57.7%	x	x	20.6%	25.0%	18.7%	17.2%
Serbia	9.82	33.81	7.96	36.8%	x	x	73.8%	56.1%	57.8%	62.1%
Ukraine	24.10	42.55	58.30	36.8%	x	x	15.2%	14.2%	26.0%	27.0%
Uzbekistan	1.46	1.88	5.19	31.9%	x	x	8.1%	4.1%	4.4%	4.4%
Former Soviet Union	x	0.15	x	x	36.9%	34.2%	x	x	x	x
Former Yugoslavia	x	132.96	x	x	43.3%	42.8%	x	x	x	x
Middle East	0.23	14.73	-	25.1%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%
Islam. Rep. of Iran	0.23	3.33	-	25.1%	0.3%	0.5%	0.1%	0.4%	0.2%	0.2%
Non-OECD Total	2314.06	4.39	5172.19	41.1%	41.3%	31.3%	28.7%	37.6%	45.4%	47.3%
World	3375.93	52.68	5897.39	40.6%	39.9%	37.8%	35.2%	38.0%	39.9%	39.8%

1. "Coal" refers to all types of coal, primary (anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite), and derived fuels (including patent fuel, BKB, coke oven coke, gas coke, coal tar, coke oven gas, gas works gas, blast furnace gas and other recovered gases). For display reasons, peat, peat briquettes, and oil shale and oil sands are also incorporated here. Quantities have been converted to Mtce using calorific values reported by the respective countries.

Please refer to the explanatory notes and definitions in Part I.

Source: IEA/OECD World Energy Balances

Table 4.6: World braunkohlebrikett (BKB) inputs¹
(thousand tonnes of coal equivalent)

	1973	1980	1985	1990	1995	2000	2005	2010	2013	2014	2015
Australia (coal)	1033	1110	666	565	449	297	335	159	197	192	32.4
(all fuels)	1033	1117	674	570	456	305	365	177	203	197	34.5
Austria	134	-	-	-	-	-	-	-	-	-	-
	134	-	-	-	-	-	-	-	-	-	-
Czech Republic	985	860	857	833	452	196	250	151	-	-	-
	985	860	857	833	501	220	278	153	-	-	-
Estonia	x	x	x	-	-	-	-	-	-	-	-
	x	x	x	180	142	68.9	42.0	51.4	30.7	35.5	5.5
Finland	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	14.5	10.5	5.5	-
Germany	38681	39320	44434	32852	7684	4225	4276	4746	5300	5485	5470
	39203	39935	45697	33947	8575	4825	4902	5361	6059	6277	6446
Greece	175	118	61.6	100	73.7	87.8	133	-	-	-	-
	175	118	61.6	100	73.7	87.8	133	-	-	-	-
Hungary	396	528	708	-	-	-	-	-	-	-	-
	397	530	710	-	-	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	-	-	-	-
	-	190	451	290	244	199	176	195	202	182	130
Latvia	x	x	x	-	-	-	-	-	-	-	-
	x	x	x	40.8	28.8	2.2	-	-	0.7	-	-
Poland	136	79.0	75.3	66.7	54.2	12.8	-	-	-	-	-
	165	93.2	92.9	78.3	64.1	15.4	-	-	-	-	-
Turkey	4.0	23.6	28.6	15.0	0.9	0.9	68.6	-	-	-	-
	4.0	23.6	28.6	15.0	0.9	0.9	68.6	-	-	-	-
IEA Total	41543	42039	46830	34432	8715	4819	5062	5056	5496	5676	5502
	42097	42867	48572	36014	10056	5722	5963	5951	6505	6697	6615
OECD Total	41543	42039	46830	34432	8715	4819	5062	5056	5496	5676	5502
	42097	42867	48572	36055	10085	5724	5963	5951	6506	6697	6615
Niger	..	..	..	..	..	0.4	0.4	7.7	1.6	1.6	0.4
	..	..	..	..	..	0.4	0.4	7.7	1.6	1.6	0.4
India	116	392	753	836	819	619	519	658	928	520	203
	116	392	753	836	819	619	519	658	928	520	203
Indonesia	-	-	-	-	3.8	27.8	21.0	26.3	22.3	10.3	8.3
	-	-	-	-	3.8	27.8	21.0	26.3	22.3	10.3	8.3
Albania	-	-	-	216	4.7	-	-	-	-	-	-
	-	-	-	216	4.7	-	-	-	-	-	-
Belarus	x	x	x	-	-	-	-	-	-	-	-
	x	x	x	1347	973	780	750	794	649	481	386
Bulgaria	695	998	1030	930	649	617	678	626	665	725	545
	695	998	1030	1165	792	749	805	882	878	958	731
Lithuania	x	x	x	-	-	-	-	-	-	-	-
	x	x	x	12.9	8.9	6.9	7.6	4.2	5.0	4.8	3.4
Romania	700	638	678	389	-	-	-	-	-	-	-
	700	638	678	389	-	-	-	-	-	-	-
Russian Federation	x	x	x	2766	1002	2.7	-	-	-	-	-
	x	x	x	2938	1137	62.6	33.3	38.1	50.7	52.0	29.6
Serbia	x	x	x	939	662	625	549	459	381	179	250
	x	x	x	939	662	625	549	489	407	206	285
Ukraine	x	x	x	-	-	-	24.6	-	-	-	-
	x	x	x	12.4	6.4	2.6	150	173	143	137	142
Former Yugoslavia	x	x	649	x	x	x	x	x	x	x	x
	x	x	649	x	x	x	x	x	x	x	x
Non-OECD Total	1510	2029	3110	6076	3140	1892	1792	1777	1998	1436	1006
	1510	2029	3110	7856	4407	2873	2835	3072	3084	2370	1787
World	43053	44068	49941	40508	11855	6711	6855	6833	7494	7113	6509
	43606	44896	51682	43911	14492	8597	8798	9023	9590	9067	8403

1. Shows inputs of coal and all energy forms (barring unsold BKB and peat products) used as transformation feedstock or for providing energy support to the braunkohlebrikett transformation process. Inputs for peat briquettes are also included, but not under coal.

Source: IEA/OECD World Energy Balances

Table 4.7: Coal use in iron and steel production¹
(thousand tonnes of coal equivalent² / share of coal in the sector)

	1973	1980	1985	1990	1995	2000	2005	2010	2013	2014	2015
Australia	8278	6909	5379	4706	4970	4264	4144	5059	3323	3107	2971
	83.6%	81.2%	81.6%	76.0%	74.7%	71.6%	77.1%	83.4%	78.1%	78.0%	76.5%
Austria	2212	2442	2780	2364	2410	2590	3002	3012	3142	3099	3312
	63.9%	74.4%	79.3%	80.2%	77.2%	71.6%	71.2%	72.7%	71.0%	71.7%	77.7%
Belgium	10120	8246	7270	7371	5988	5987	3928	3087	3053	3010	2810
	77.0%	79.7%	81.6%	84.0%	80.3%	75.3%	70.9%	70.4%	76.6%	76.7%	75.7%
Canada	6560	6909	6178	4384	4358	4523	4317	4117	3556	3648	3336
	81.7%	60.9%	64.9%	58.2%	53.0%	52.3%	53.4%	55.6%	50.8%	48.8%	49.6%
Chile	396	440	454	439	567	622	702	397	508	512	448
	63.1%	63.3%	76.8%	82.1%	84.9%	78.9%	82.3%	74.7%	82.3%	81.8%	75.3%
Czech Republic	14626	9461	8884	8211	5464	4645	4167	2876	2917	2913	2772
	100.0%	100.0%	100.0%	95.8%	84.4%	83.7%	83.3%	81.6%	83.9%	85.1%	84.0%
Denmark	15.8	25.8	2.0	1.0	-	1.2	0.2	-	-	-	-
	5.5%	9.1%	1.5%	0.6%	-	0.5%	0.2%	-	-	-	-
Estonia	x	x	x	-	4.2	-	-	-	-	-	-
	x	x	x	-	14.3%	-	-	-	-	-	-
Finland	856	1115	1215	1473	1757	1605	1566	1422	1226	1280	1246
	65.1%	59.0%	65.5%	74.8%	76.9%	66.1%	59.9%	60.8%	61.0%	61.0%	57.0%
France	18085	16297	12759	11432	10502	8865	8787	7391	7253	7282	7368
	73.0%	75.3%	77.2%	79.9%	77.0%	77.0%	76.2%	78.2%	73.9%	75.8%	76.0%
Germany	32873	30732	27618	22614	16012	17098	14830	16494	16532	16346	17106
	65.6%	69.8%	71.8%	72.2%	64.2%	68.3%	67.7%	69.1%	71.7%	72.0%	74.5%
Greece	468	377	7.0	-	-	-	-	-	-	-	-
	52.7%	51.7%	2.4%	-	-	-	-	-	-	-	-
Hungary	2321	2317	2006	1369	1370	1149	921	1144	688	810	1003
	60.0%	56.2%	53.1%	51.3%	71.7%	83.5%	79.8%	94.7%	87.8%	93.0%	93.8%
Iceland	-	25.0	74.0	78.8	71.9	126	129	119	139	124	133
	-	42.9%	52.3%	53.1%	47.9%	51.0%	49.7%	50.7%	48.7%	44.2%	48.9%
Ireland	12.4	7.7	28.0	46.2	6.7	-	-	-	-	-	-
	51.9%	25.5%	34.2%	43.2%	9.7%	-	-	-	-	-	-
Israel	1.9	1.0	1.0	-	-	-	-	-	-	-	-
	100.0%	100.0%	100.0%	-	-	-	-	-	-	-	-
Italy	8225	9778	10008	8813	8211	8013	7736	6233	4310	4229	3166
	60.5%	58.7%	66.0%	64.9%	63.3%	62.3%	61.8%	61.6%	53.7%	53.1%	45.1%
Japan	62229	66271	64324	64235	60309	60933	63099	63441	62010	63101	61216
	70.5%	79.2%	81.5%	85.3%	85.3%	86.4%	86.0%	86.0%	85.8%	85.6%	86.1%
Korea	925	4320	6960	11206	15372	18872	20119	26465	29588	34648	34400
	85.2%	88.0%	81.2%	86.0%	83.8%	78.0%	76.5%	79.2%	80.3%	83.3%	83.8%
Latvia	x	x	x	1.8	5.4	9.0	5.5	3.6	2.8	-	-
	x	x	x	0.7%	4.6%	4.6%	2.8%	2.0%	7.1%	-	-
Luxembourg	3259	2387	1842	1404	572	39.3	30.1	24.7	11.9	11.0	11.0
	71.4%	79.8%	84.0%	69.6%	54.7%	8.1%	6.1%	4.3%	2.9%	2.8%	2.7%
Mexico	2431	3186	3093	3220	3219	3348	3010	3296	3236	3378	3011
	61.6%	58.3%	46.7%	40.8%	43.7%	42.4%	38.9%	41.6%	41.0%	40.9%	38.3%
Netherlands	2741	2977	3703	3511	3984	3610	4180	3763	3892	4033	4146
	60.9%	69.6%	82.8%	90.1%	90.5%	89.6%	93.5%	93.8%	93.5%	91.8%	92.2%
New Zealand	60.6	110	85.0	309	354	480	546	585	613	616	627
	19.1%	23.0%	13.3%	54.8%	57.3%	71.9%	74.7%	75.6%	77.5%	75.4%	77.9%
Norway	990	1002	1098	853	842	908	634	475	541	550	537
	48.9%	47.7%	47.2%	44.9%	47.7%	48.0%	47.4%	44.4%	46.1%	44.9%	45.6%
Poland	10428	13956	11306	10432	9950	8178	5511	4892	5466	5828	5926
	64.2%	66.1%	64.0%	71.3%	81.5%	81.2%	80.8%	82.9%	84.1%	85.0%	86.7%
Portugal	316	376	319	284	376	372	-	6.1	8.1	7.5	4.4
	80.4%	77.2%	73.6%	64.5%	73.1%	68.4%	-	3.0%	3.2%	3.0%	1.7%
Slovak Republic	2771	2477	2968	3409	2807	2719	2971	2926	2896	3056	2883
	100.0%	97.0%	96.7%	96.8%	86.1%	82.8%	86.2%	85.5%	82.0%	83.8%	84.3%

Table 4.7: Coal use in iron and steel production¹ (continued)
(thousand tonnes of coal equivalent² / share of coal in the sector)

	1973	1980	1985	1990	1995	2000	2005	2010	2013	2014	2015
Slovenia	x	x	x	58	31	38	8	8	8	9	8
	x	x	x	17.4%	12.3%	15.8%	3.5%	3.9%	3.9%	4.5%	4.0%
Spain	7118	5671	5346	4703	3858	3587	3630	2714	2608	2478	2411
	70.8%	63.7%	67.3%	69.0%	61.2%	50.8%	46.1%	50.8%	52.7%	53.6%	49.0%
Sweden	1620	1677	1625	1754	1993	2204	2471	2438	1762	1804	1866
	43.6%	52.4%	56.3%	66.1%	65.3%	68.6%	71.5%	75.7%	69.3%	70.2%	71.7%
Switzerland	26.4	-	-	-	22.0	15.1	14.5	13.9	12.2	14.8	14.8
	100.0%	-	-	-	100.0%	6.5%	5.0%	4.5%	4.4%	4.9%	4.9%
Turkey	1679	2069	2933	5016	4465	4656	4714	6820	6967	6837	7450
	88.1%	75.9%	78.4%	77.9%	68.4%	70.9%	66.9%	69.6%	63.8%	64.1%	66.1%
United Kingdom	17655	7623	8723	9378	8229	7870	6990	5615	7003	6860	6021
	65.6%	62.5%	70.9%	72.9%	64.3%	68.8%	79.0%	83.4%	88.1%	87.6%	85.7%
United States	95634	58536	40205	36577	34683	32579	23769	20083	19054	19019	18396
	86.9%	80.3%	84.8%	80.3%	59.3%	53.4%	53.1%	51.1%	47.3%	46.5%	48.5%
IEA Americas	102194	65445	46383	40960	39041	37102	28086	24200	22610	22667	21731
	86.6%	77.7%	81.5%	77.2%	58.6%	53.3%	53.1%	51.8%	47.8%	46.9%	48.7%
IEA Asia Oceania	71492	77610	76748	80456	81004	84548	87908	95550	95534	101472	99215
	71.8%	79.6%	81.0%	84.6%	84.1%	83.4%	83.1%	83.8%	83.7%	84.5%	84.9%
IEA Europe	138417	121015	112441	104399	88786	84089	76046	71325	70266	70424	70045
	69.5%	69.9%	72.7%	74.6%	70.9%	70.2%	69.6%	71.3%	71.3%	71.9%	72.1%
OECD Americas	105021	69071	49930	44618	42827	41071	31797	27894	26354	26557	25191
	85.7%	76.4%	77.8%	72.6%	57.3%	52.4%	51.8%	50.5%	47.2%	46.4%	47.4%
OECD Asia Oceania	71494	77611	76749	80456	81004	84548	87908	95550	95534	101472	99215
	71.8%	79.6%	81.0%	84.5%	84.0%	83.3%	83.0%	83.7%	83.6%	84.4%	84.9%
OECD Europe	138417	121040	112515	104537	88894	84262	76188	71456	70417	70558	70186
	69.5%	69.9%	72.7%	74.3%	70.7%	70.0%	69.3%	71.0%	71.1%	71.6%	71.9%
IEA Total	312104	264070	235572	225816	208830	205738	192040	191075	188410	194563	190991
	74.9%	74.4%	76.9%	78.4%	72.5%	70.8%	71.7%	73.3%	72.5%	73.0%	73.8%
OECD Total	314932	267722	239194	229612	212725	209881	195894	194900	192304	198586	194592
	74.7%	74.2%	76.3%	77.2%	71.7%	69.9%	70.6%	72.2%	71.4%	72.0%	72.7%
Algeria	260	144	983	770	780	612	924	364	217	168	162
	92.8%	28.5%	68.7%	61.7%	59.3%	54.7%	61.3%	37.3%	33.2%	27.2%	32.4%
Dem. Rep. of Congo	80.8	86.6	86.6	94.3	-	-	-	-	-	-	-
	100.0%	100.0%	100.0%	100.0%	-	-	-	-	-	-	-
Egypt	362	717	976	1069	973	1223	1195	651	547	558	503
	100.0%	75.6%	80.3%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Morocco	10.6	18.3	28.9	24.1	-	-	-	-	-	-	-
	100.0%	100.0%	100.0%	100.0%	-	-	-	-	-	-	-
Nigeria	1.9	3.9	1.9	7.7	-	-	-	-	-	-	-
	100.0%	100.0%	2.4%	9.7%	-	-	-	-	-	-	-
South Africa	10745	13930	13033	12383	7938	6968	8073	8103	8013	6908	6179
	98.3%	97.3%	96.5%	96.2%	92.5%	93.0%	93.3%	90.3%	90.8%	89.7%	89.0%
Tanzania	-	1.0	4.8	1.9	1.9	-	-	-	-	-	-
	-	100.0%	100.0%	100.0%	100.0%	-	-	-	-	-	-
Tunisia	76.0	72.2	78.9	104	102	113	-	-	-	-	-
	100.0%	84.2%	85.3%	84.5%	82.8%	81.9%	-	-	-	-	-
Zimbabwe	464	421	747	724	633	643	533	157	193	188	190
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	98.6%	98.6%	98.6%
Argentina	597	844	873	1116	682	267	649	637	499	1123	1143
	66.3%	69.9%	84.0%	61.6%	26.6%	9.8%	20.1%	21.3%	12.7%	24.6%	25.9%
Bolivia	-	-	86.6	-	-	-	-	-	-	-	-
	-	-	100.0%	-	-	-	-	-	-	-	-

Table 4.7: Coal use in iron and steel production¹ (continued)
(thousand tonnes of coal equivalent² / share of coal in the sector)

	1973	1980	1985	1990	1995	2000	2005	2010	2013	2014	2015
Brazil	2335	5517	8606	9467	11686	13120	13071	14707	14398	14916	15193
	36.8%	42.1%	49.0%	48.6%	55.3%	56.6%	50.0%	56.3%	57.5%	59.1%	60.8%
Colombia	460	1019	1135	1099	1369	1134	1032	1436	1758	1760	1761
	94.4%	89.5%	82.4%	80.0%	78.4%	75.5%	72.0%	75.5%	79.9%	79.7%	79.2%
Costa Rica	-	-	-	-	-	-	49.1	91.4	115	113	110
	-	-	-	-	-	-	100.0%	100.0%	100.0%	100.0%	100.0%
Cuba	56.8	51.0	61.6	61.6	20.2	18.3	7.7	6.7	1.0	1.0	1.0
	100.0%	100.0%	92.9%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
El Salvador	-	1.0	-	-	1.0	1.0	1.0	-	-	-	-
	-	100.0%	-	-	100.0%	100.0%	100.0%	-	-	-	-
Honduras	-	-	-	1.0	1.0	-	-	-	-	-	-
	-	-	-	100.0%	100.0%	-	-	-	-	-	-
Peru	201	203	155	135	178	397	385	145	134	210	176
	22.9%	17.0%	12.5%	13.4%	14.0%	21.6%	21.6%	8.1%	7.0%	9.9%	8.1%
Uruguay	-	-5.8	-1.0	-	-	-	-	-	-	-	-
	-	-308.7%	-748.9%	-	-	-	-	-	-	-	-
Venezuela	335	180	212	315	-	-	-	-	-	-	-
	44.9%	9.4%	7.0%	7.0%	-	-	-	-	-	-	-
Bangladesh	-	9.6	-	-	-	-	-	-	-	-	-
	-	100.0%	-	-	-	-	-	-	-	-	-
Hong Kong (China)	3.9	5.8	3.9	1.9	1.0	-	-	-	-	-	-
	13.0%	11.5%	7.0%	2.7%	100.0%	-	-	-	-	-	-
India	9692	12320	13646	18355	24644	24483	36749	59520	81182	93019	93739
	94.2%	90.8%	95.1%	95.9%	95.9%	95.7%	97.1%	88.0%	90.9%	91.5%	91.0%
Indonesia	4.8	31.8	28.9	45.2	-	27.3	195	295	264	262	351
	3.5%	14.4%	4.1%	2.4%	-	1.7%	14.1%	14.6%	19.1%	26.5%	39.7%
DPR of Korea	3110	4413	5100	5237	1265	182	220	201	191	192	169
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Mongolia	..	..	-	-	-	-	-	46.2	40.4	46.2	31.8
	..	..	-	-	-	-	-	100.0%	100.0%	100.0%	100.0%
Myanmar	1.9	12.5	9.6	9.6	-	-	-	-	-	-	-
	100.0%	100.0%	100.0%	100.0%	-	-	-	-	-	-	-
Pakistan	29.1	92.1	673	1036	1020	893	531	403	103	362	379
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	51.9%	51.5%	27.6%	59.9%	60.9%
Philippines	8.7	321	83.7	320	306	265	237	302	439	565	551
	2.7%	34.2%	16.9%	45.8%	36.4%	31.7%	37.9%	32.8%	40.3%	45.6%	43.2%
Sri Lanka	2.9	1.9	1.9	-	1.0	1.0	1.0	-	-	-	-
	100.0%	100.0%	100.0%	-	100.0%	100.0%	100.0%	-	-	-	-
Chinese Taipei	286	1444	2323	4099	4283	6463	6525	7455	8780	9496	8965
	36.7%	55.4%	68.6%	75.5%	69.7%	72.4%	72.9%	76.2%	79.8%	81.8%	82.5%
Thailand	17.3	-	46.2	70.2	96.2	77.9	66.4	260	36.6	177	104
	24.5%	-	21.6%	14.7%	11.3%	8.1%	3.7%	14.1%	2.0%	8.1%	5.0%
Viet Nam	1.0	7.7	14.4	14.4	16.4	-	-	517	557	618	616
	100.0%	100.0%	100.0%	100.0%	100.0%	-	-	48.0%	43.9%	43.9%	41.6%
Other Asia	-	-	-	-	-	-	-	10.2	11.6	11.9	11.3
	-	-	-	-	-	-	-	100.0%	100.0%	100.0%	100.0%
PR of China	22966	71356	53276	69079	119244	130833	276040	483353	578948	587035	581441
	88.0%	86.1%	86.2%	81.9%	85.1%	85.4%	88.4%	89.4%	89.4%	89.7%	90.5%

Table 4.7: Coal use in iron and steel production¹ (continued)(thousand tonnes of coal equivalent² / share of coal in the sector)

	1973	1980	1985	1990	1995	2000	2005	2010	2013	2014	2015
Albania	33.1	32.8	40.3	57.6	-	-	-	-	-	-	-
	100.0%	100.0%	100.0%	100.0%	-	-	-	-	-	-	-
Belarus	x	x	x	-	-	22.8	20.8	13.7	18.8	17.8	14.9
	x	x	x	-	-	7.0%	5.5%	3.2%	4.5%	4.1%	3.4%
Bosnia and Herzegovina	x	x	x	-	-	-	194	790	806	847	829
	x	x	x	-	-	-	100.0%	87.7%	85.6%	86.7%	86.2%
Bulgaria	1562	1453	1524	1140	1675	1339	1089	-	-	-	-
	100.0%	100.0%	81.3%	49.7%	68.8%	69.6%	65.8%	-	-	-	-
Croatia	x	x	x	412	19.2	12.0	4.9	4.0	3.9	3.9	3.8
	x	x	x	59.3%	15.1%	16.6%	9.1%	7.4%	11.0%	11.6%	11.2%
F.Y.R. of Macedonia	x	x	x	54.2	73.4	70.5	163	151	167	141	133
	x	x	x	14.9%	31.2%	29.6%	33.8%	32.4%	33.7%	31.0%	33.3%
Georgia	x	x	x	-	-	-	-	6.8	132	134	109
	x	x	x	-	-	-	-	4.4%	41.6%	41.5%	38.8%
Kazakhstan	x	x	x	1335	3035	4639	4481	7670	7799	9942	7758
	x	x	x	89.2%	71.5%	81.8%	88.8%	52.7%	56.5%	62.4%	65.2%
Kosovo	x	x	x	..	..	6.7	9.0	17.3	38.5	26.2	23.6
	x	x	x	..	..	65.9%	65.3%	23.0%	33.9%	25.9%	21.1%
Lithuania	x	x	x	-	-	1.0	2.0	1.0	1.0	1.0	1.0
	x	x	x	-	-	12.2%	27.5%	28.3%	27.7%	28.7%	29.2%
Montenegro	x	x	x	..	..	..	10.0	2.8	3.1	3.1	7.5
	x	x	x	..	..	..	23.4%	7.7%	11.0%	47.4%	48.1%
Romania	3162	6569	7440	4763	3955	2290	3157	1246	953	903	1066
	90.4%	89.7%	58.6%	48.8%	55.3%	50.0%	58.7%	45.3%	40.5%	37.9%	41.3%
Russian Federation	x	x	x	50909	45551	37500	42031	47931	51536	55352	64555
	x	x	x	58.5%	57.7%	55.1%	54.2%	59.3%	61.0%	62.2%	66.0%
Serbia	x	x	x	57.1	45.9	266	674	689	196	296	496
	x	x	x	100.0%	52.9%	86.3%	71.8%	94.5%	68.6%	75.9%	78.3%
Ukraine	x	x	x	46806	30847	28923	28420	23382	23660	19858	13102
	x	x	x	88.3%	91.8%	91.1%	71.2%	69.5%	77.4%	76.8%	71.7%
Former Soviet Union	94694	94047	76736	x	x	x	x	x	x	x	x
	66.5%	60.5%	55.0%	x	x	x	x	x	x	x	x
Former Yugoslavia	2161	3005	4547	x	x	x	x	x	x	x	x
	67.2%	77.8%	74.3%	x	x	x	x	x	x	x	x
Islam. Rep. of Iran	606	1188	940	689	975	1279	1265	1264	1329	1704	1486
	101.2%	101.2%	101.2%	101.2%	99.2%	84.4%	85.4%	82.5%	90.2%	93.5%	93.2%
Lebanon	0.9	0.9	-	-	-	-	-	-	-	-	-
	100.0%	100.0%	-	-	-	-	-	-	-	-	-
Syrian Arab Republic	3.8	3.8	1.9	-	1.9	3.8	3.8	3.8	1.0	1.0	1.0
	100.0%	100.0%	100.0%	-	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Non-OECD Total	154332	219519	193504	231864	261420	264073	428009	661832	783074	806956	801362
	72.2%	70.9%	66.7%	72.6%	74.7%	75.0%	77.8%	81.3%	83.2%	83.7%	84.5%
World	469264	487240	432697	461476	474144	473955	623903	856731	975379	1005542	995954
	73.9%	72.7%	71.7%	74.8%	73.3%	72.7%	75.4%	79.0%	80.6%	81.1%	81.9%

1. Coal covers all coal types and coal products, but excludes peat, peat products and oil shale and oil sands. Consumption in the iron and steel industry also includes transformation and energy support for coke ovens and blast furnaces. Electricity and heat generation from coke oven gas, blast furnace gas and coal tar is similarly included. The electricity and heat generated is excluded to avoid double counting. Please see the explanatory notes and definitions in Part I.

2. Some portions of data may be reported in non-specified industry for some countries for some years instead.

Source: IEA/OECD World Energy Statistics

Table 4.8: Coal use in non-metallic mineral industries¹
(thousand tonnes of coal equivalent² / share of coal in the sector)

	1973	1980	1985	1990	1995	2000	2005	2010	2013	2014	2015
Australia	896	778	925	794	751	691	929	724	638	612	570
	100.0%	26.6%	30.9%	26.0%	25.6%	23.8%	26.6%	20.1%	19.7%	19.9%	18.1%
Austria	63.9	34.3	224	217	162	199	152	112	91.4	96.1	98.7
	4.2%	3.6%	31.6%	22.1%	15.8%	18.8%	12.1%	8.8%	7.6%	7.8%	7.9%
Belgium	988	1478	899	837	523	479	246	387	337	492	504
	31.9%	43.6%	46.2%	39.1%	25.9%	22.7%	13.8%	23.0%	17.9%	24.1%	25.6%
Canada	666	341	711	543	641	819	945	712	535	660	672
	22.4%	14.4%	31.4%	26.9%	29.4%	37.6%	33.1%	26.8%	16.7%	20.8%	20.4%
Chile	184	173	128	184	305	228	181	74.5	-	-	0.9
	65.7%	68.7%	60.3%	81.0%	83.5%	70.3%	46.4%	17.7%	-	-	0.2%
Czech Republic	545	670	621	521	364	330	207	228	207	205	193
	100.0%	100.0%	100.0%	62.4%	19.4%	19.6%	12.4%	15.2%	15.3%	14.4%	12.9%
Denmark	140	360	157	208	295	239	217	85.1	69.5	82.1	81.3
	11.6%	35.6%	16.6%	29.9%	32.7%	27.2%	24.3%	14.9%	11.0%	13.0%	12.9%
Estonia	x	x	x	-	11.8	33.5	8.3	41.7	43.8	59.3	20.4
	x	x	x	-	4.5%	20.9%	4.5%	26.4%	18.0%	31.9%	19.3%
Finland	-	459	778	686	500	203	199	146	91.7	95.9	95.6
	-	53.1%	65.6%	61.8%	58.1%	36.8%	33.5%	31.6%	20.9%	22.7%	23.6%
France	494	588	1709	975	438	230	346	591	370	354	365
	10.4%	12.7%	27.2%	16.9%	8.3%	4.3%	5.7%	11.0%	6.2%	6.9%	7.9%
Germany	1844	2981	3544	3476	3555	2816	1883	1933	1946	2030	1972
	13.6%	24.5%	35.4%	34.1%	31.4%	27.6%	19.6%	20.9%	20.9%	21.6%	21.0%
Greece	6.0	5.0	1273	1205	1172	972	375	244	89.1	98.9	71.6
	0.8%	0.3%	69.9%	66.1%	60.0%	52.8%	23.4%	17.6%	8.6%	9.1%	6.8%
Hungary	460	289	211	79.1	70.3	99.2	168	57.2	26.8	40.0	49.0
	32.0%	16.6%	13.7%	5.4%	8.3%	12.1%	18.1%	9.1%	4.7%	6.2%	7.1%
Iceland	-	-	18.9	12.9	6.7	13.4	13.4	9.6	-	-	-
	-	-	100.0%	75.5%	52.7%	70.8%	70.8%	77.2%	-	-	-
Ireland	-	-	-	171	61.7	92.3	211	132	87.4	123	120
	-	-	-	40.4%	17.1%	17.2%	27.8%	32.3%	19.5%	23.1%	21.6%
Italy	214	547	2130	1327	702	531	507	89.7	344	444	198
	1.8%	4.4%	21.1%	12.5%	7.1%	4.6%	4.0%	1.1%	4.8%	6.9%	2.8%
Japan	-	4333	7801	8966	9129	7991	6796	5658	6767	5627	5483
	-	27.3%	53.0%	43.7%	45.0%	43.9%	43.8%	42.1%	42.7%	41.9%	41.4%
Korea	-	657	2190	2928	4541	4387	4037	3827	3910	4085	3913
	-	67.2%	60.4%	55.1%	57.0%	55.5%	53.1%	47.3%	48.7%	50.3%	48.2%
Latvia	x	x	x	6.4	3.9	1.0	23.3	60	44	43	33
	x	x	x	1.3%	2.6%	1.0%	13.8%	31.3%	21.4%	19.2%	17.0%
Luxembourg	-	106	117	132	102	107	74.9	63.3	52.5	61.6	51.6
	-	100.0%	100.0%	100.0%	87.6%	37.4%	31.0%	28.8%	27.1%	27.4%	24.0%
Mexico	-	-	-	-	-	-	132	147	205	210	224
	-	-	-	-	-	-	1.9%	2.2%	3.0%	2.9%	2.9%
Netherlands	20.8	152	146	114	71.5	77.5	49.5	51.9	41.1	48.5	49.5
	1.3%	10.1%	12.8%	8.6%	6.2%	6.3%	4.7%	5.0%	5.3%	6.2%	6.2%
New Zealand	-	98.8	164	-	-	-	-	114	151	118	111
	-	77.2%	81.3%	-	-	-	-	66.8%	63.0%	54.0%	55.0%
Norway	111	89.7	170	142	203	176	128	134	118	115	108
	53.4%	15.2%	43.1%	43.0%	50.2%	42.7%	34.1%	35.0%	25.3%	27.3%	25.6%
Poland	5598	5101	4394	3122	3140	2059	1195	1102	927	953	890
	78.0%	66.5%	67.3%	63.2%	65.5%	55.6%	33.3%	28.4%	25.5%	25.4%	24.2%

Table 4.8: Coal use in non-metallic mineral industries¹ (continued)
(thousand tonnes of coal equivalent² / share of coal in the sector)

	1973	1980	1985	1990	1995	2000	2005	2010	2013	2014	2015
Portugal	12.9	16.4	316	704	578	415	1.7	48.2	-	6.3	6.3
	1.1%	1.0%	20.5%	36.4%	28.8%	13.8%	0.1%	2.1%	-	0.4%	0.4%
Slovak Republic	-	184.7	197	187	256	203	182	175	75.7	78.6	78.5
	-	57.0%	52.1%	32.9%	31.0%	19.8%	25.6%	32.7%	13.7%	13.0%	12.6%
Slovenia	x	x	x	18.1	18.0	32.0	54.0	29.6	24.3	20.4	16.2
	x	x	x	11.4%	15.5%	10.2%	15.7%	10.5%	9.5%	7.9%	6.4%
Spain	-	321	2268	1637	401	421	145	32.3	12.3	11.5	9.8
	-	4.8%	43.7%	25.2%	6.7%	4.6%	1.3%	0.5%	0.3%	0.2%	0.2%
Sweden	256	242	334	409	309	264	248	228	213	206	245
	14.9%	21.9%	40.5%	45.4%	42.6%	37.1%	39.4%	37.3%	46.7%	46.5%	48.8%
Switzerland	19.1	177	422	381	194	132	127	182	157	170	154
	100.0%	57.1%	57.0%	47.7%	32.2%	18.5%	20.6%	25.3%	24.9%	24.4%	24.1%
Turkey	-	-	-	901	999	1261	2008	2425	4006	3856	4004
	-	-	-	54.0%	46.5%	47.7%	56.2%	43.1%	53.9%	49.1%	50.7%
United Kingdom	3492	2539	1716	1355	878	1075	1007	966	1065	1099	914
	41.1%	42.3%	34.8%	27.0%	23.0%	27.2%	23.4%	23.1%	28.1%	29.0%	25.1%
United States	5196	9976	12149	11053	10649	11438	10589	7316	8000	8472	8122
	60.7%	66.5%	75.1%	72.4%	33.7%	32.6%	30.0%	27.8%	31.1%	32.4%	30.8%
IEA Americas	5863	10318	12859	11596	11290	12257	11534	8028	8535	9132	8794
	50.8%	59.4%	69.7%	67.1%	33.4%	32.9%	30.2%	27.7%	29.5%	31.1%	29.6%
IEA Asia Oceania	896	5867	11080	12688	14421	13069	11762	10324	11466	10442	10077
	5.0%	29.4%	51.4%	43.9%	46.1%	44.9%	44.0%	40.8%	41.9%	42.0%	40.8%
IEA Europe	14265	16340	21626	18787	14987	12414	9687	9457	10372	10725	10279
	21.8%	24.8%	37.6%	31.1%	25.3%	19.6%	14.5%	16.5%	19.1%	19.8%	19.0%
OECD Americas	6047	10490	12987	11780	11595	12485	11846	8250	8741	9342	9019
	47.7%	55.2%	56.4%	54.4%	30.6%	28.9%	26.1%	22.9%	24.2%	25.3%	23.9%
OECD Asia Oceania	896	5867	11080	12688	14421	13069	11762	10324	11466	10442	10077
	5.0%	29.4%	51.4%	43.8%	46.0%	44.8%	43.9%	40.7%	41.9%	42.0%	40.8%
OECD Europe	14265	16340	21645	18824	15016	12460	9778	9556	10441	10788	10328
	21.8%	24.8%	37.6%	30.8%	25.2%	19.5%	14.6%	16.6%	19.0%	19.8%	19.0%
IEA Total	21024	32525	45566	43070	40698	37740	32983	27809	30374	30299	29149
	22.1%	31.5%	46.7%	40.4%	32.7%	29.1%	25.1%	24.9%	27.4%	28.0%	26.9%
OECD Total	21208	32697	45712	43292	41031	38014	33386	28129	30647	30572	29423
	22.1%	31.2%	44.7%	38.8%	31.9%	27.9%	24.0%	23.6%	25.9%	26.3%	25.2%
Botswana	..	..	-	-	-	-	9.7	-	-	-	-
	..	..	-	-	-	-	88.7%	-	-	-	-
Ethiopia	-	-	-	-	-	-	-	44.0	256	357	362
	-	-	-	-	-	-	-	28.1%	62.0%	52.4%	61.1%
Kenya	-	-	79.2	133	137	94.2	128	236	298	469	498
	-	-	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Morocco	71.8	-	-	-	-	-	-	-	2.8	1.9	1.9
	77.4%	-	-	-	-	-	-	-	0.1%	0.1%	0.1%
Nigeria	108	133	82.8	48.4	17.6	2.6	7.0	33.5	38.7	40.5	41.4
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Senegal	-	-	-	-	-	-	134	254	309	323	344
	-	-	-	-	-	-	86.9%	83.7%	80.3%	80.2%	80.3%
South Africa	2061	2250	2124	1987	1660	1324	1992	1743	1853	1321	1559
	93.9%	93.9%	93.3%	93.1%	86.9%	90.3%	86.2%	69.5%	70.8%	63.5%	66.8%
Tanzania	-	-	4.4	0.9	-	-	-	-	-	-	-
	-	-	100.0%	100.0%	-	-	-	-	-	-	-

Table 4.8: Coal use in non-metallic mineral industries¹ (continued)
(thousand tonnes of coal equivalent² / share of coal in the sector)

	1973	1980	1985	1990	1995	2000	2005	2010	2013	2014	2015
Zambia	84.3	61.5	46.4	-	-	-	-	-	-	-	-
	100.0%	100.0%	100.0%	-	-	-	-	-	-	-	-
Zimbabwe	170	104	111	-	-	123	41.5	39.6	71.8	74.6	75.5
	100.0%	100.0%	100.0%	-	-	100.0%	100.0%	89.9%	89.0%	89.3%	89.4%
Brazil	-	435	1397	871	610	254	163	139	350	351	289
	-	5.8%	21.6%	13.4%	8.9%	2.8%	1.9%	1.2%	2.4%	2.4%	2.2%
Colombia	-	910	890	1210	944	1209	901	552	513	518	523
	-	55.4%	54.8%	57.6%	47.7%	55.5%	40.1%	28.1%	26.7%	29.2%	24.8%
Costa Rica	-	-	-	-	-	-	-	0.9	7.0	8.8	0.9
	-	-	-	-	-	-	-	100.0%	100.0%	100.0%	100.0%
Dominican Republic	-	-	-	-	-	70.2	210	385	385	506	624
	-	-	-	-	-	23.9%	44.8%	50.7%	46.1%	62.3%	70.3%
Jamaica	-	-	-	45.8	48.4	46.7	51.9	47.5	78.3	73.9	85.4
	-	-	-	100.0%	100.0%	100.0%	100.0%	100.0%	92.4%	90.1%	92.6%
Venezuela	54.2	43.8	43.8	346	7.3	189	53.2	285	300	282	195
	100.0%	6.1%	5.6%	28.9%	0.7%	14.4%	4.0%	16.8%	25.8%	26.0%	19.3%
Bangladesh	171	168	70.0	402	458	471	603	799	954	918	2840
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cambodia	..	..	..	..	-	-	-	6.4	8.4	12.3	17.4
	..	..	..	..	-	-	-	100.0%	100.0%	100.0%	100.0%
India	2424	4517	5544	8746	9804	13368	13432	16657	26851	28184	23923
	76.8%	88.2%	87.8%	88.8%	87.8%	76.8%	68.8%	66.4%	63.1%	60.1%	49.6%
Indonesia	2.7	-	-	-	-	1673	3867	4735	4453	4605	4601
	100.0%	-	-	-	-	47.4%	68.5%	74.3%	80.5%	83.5%	86.1%
Malaysia	10.0	-	-	-	-	-	-	-	-	-	-
	100.0%	-	-	-	-	-	-	-	-	-	-
Myanmar	-	-	-	-	-	127	235	319	266	411	455
	-	-	-	-	-	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Pakistan	708	857	1233	1793	1820	1635	4686	5495	4735	6326	6587
	45.4%	47.6%	55.0%	52.8%	49.4%	46.2%	78.7%	85.9%	86.4%	89.4%	89.4%
Philippines	0.4	118	511	653	1012	979	1451	2346	2380	2415	2530
	0.5%	24.1%	71.0%	55.1%	53.9%	59.4%	70.7%	82.9%	84.2%	85.5%	83.5%
Sri Lanka	-	-	-	7.0	5.0	-	93.0	95.0	84.0	98.0	87.0
	-	-	-	100.0%	100.0%	-	100.0%	100.0%	100.0%	100.0%	100.0%
Chinese Taipei	993	1245	2191	2544	2412	1951	2300	1961	2303	1885	1909
	50.6%	32.7%	66.2%	61.6%	55.4%	55.2%	60.3%	59.7%	63.1%	58.9%	59.7%
Thailand	-	1.5	241	1205	3808	3970	7688	10875	8809	7625	9781
	-	0.1%	22.6%	48.5%	69.5%	77.6%	74.2%	84.3%	79.2%	75.1%	78.7%
Viet Nam	-	-	-	-	-	-	-	6471	6976	7739	7721
	-	-	-	-	-	-	-	100.0%	80.1%	79.9%	78.2%
PR of China	-	32530	59446	70433	95714	73788	173537	224270	234995	245854	231402
	-	90.6%	90.0%	87.4%	86.5%	78.5%	84.0%	82.3%	80.3%	80.3%	80.3%
Albania	-	-	-	-	-	8.7	9.1	155	90.1	116	132
	-	-	-	-	-	10.4%	17.5%	51.6%	66.0%	54.9%	67.5%
Belarus	x	x	x	52.1	27.9	19.7	15.0	20.2	442	623	567
	x	x	x	2.1%	2.7%	1.7%	1.0%	1.1%	23.9%	33.8%	40.0%
Bosnia and Herzegovina	x	x	x	-	-	-	21.1	57.9	102	109	95.2
	x	x	x	-	-	-	100.0%	61.8%	76.5%	75.8%	70.7%
Bulgaria	0	-	-	101	103	134	201	172	99.8	103	105
	0	-	-	6.3%	7.4%	18.6%	22.7%	19.8%	14.0%	13.7%	13.7%

Table 4.8: Coal use in non-metallic mineral industries¹ (continued)
(thousand tonnes of coal equivalent² / share of coal in the sector)

	1973	1980	1985	1990	1995	2000	2005	2010	2013	2014	2015
Croatia	x	x	x	145	53.6	56.2	156	176	136	118	90.0
	x	x	x	20.2%	12.9%	9.0%	20.9%	31.4%	28.1%	24.4%	18.9%
Cyprus ³	-	-	65.1	91.5	18.9	46.2	50.8	23.8	-	3.2	5.3
	-	-	79.5%	57.1%	6.1%	14.5%	16.8%	10.3%	-	1.4%	2.5%
F.Y.R. of Macedonia	x	x	x	-	-	-	-	-	-	-	0.8
	x	x	x	-	-	-	-	-	-	-	0.8%
Georgia	x	x	x	-	-	-	-	-	306	276	274
	x	x	x	-	-	-	-	-	84.9%	81.8%	75.2%
Kazakhstan	x	x	x	-	-	-	-	-	1.5	6.0	18.0
	x	x	x	-	-	-	-	-	1.2%	5.0%	3.1%
Kyrgyzstan	x	x	x	-	-	-	-	-	28.5	223	280
	x	x	x	-	-	-	-	-	16.5%	80.7%	83.0%
Lithuania	x	x	x	21.4	11.1	5.0	114	116	188	161	132
	x	x	x	1.3%	2.8%	2.3%	43.0%	61.5%	68.6%	64.8%	62.6%
Republic of Moldova	x	x	x	-	4.0	0.6	0.6	35.3	75.6	41.1	54.1
	x	x	x	-	2.1%	4.3%	0.3%	29.7%	48.1%	40.5%	45.6%
Montenegro	x	x	x	..	..	..	0.4	-	-	-	-
	x	x	x	..	..	..	11.4%	-	-	-	-
Romania	-	-	-	97.4	14.5	9.4	50.2	81.4	141	104	101
	-	-	-	67.1%	0.9%	0.6%	3.3%	9.6%	12.7%	8.8%	7.7%
Russian Federation	x	x	x	477	903	753	992	1609	1528	1456	1392
	x	x	x	13.9%	8.8%	5.8%	5.1%	7.3%	7.0%	6.3%	6.4%
Serbia	x	x	x	-	-	-	96.8	153	77.4	108	143
	x	x	x	-	-	-	53.5%	20.1%	22.6%	28.9%	29.9%
Ukraine	x	x	x	37.3	28.9	22.4	175	893	952	720	715
	x	x	x	3.6%	6.6%	6.5%	4.2%	35.2%	43.6%	40.4%	42.4%
Former Soviet Union	12522	12686	12948	x	x	x	x	x	x	x	x
	22.9%	18.4%	17.3%	x	x	x	x	x	x	x	x
Former Yugoslavia	x	x	348	x	x	x	x	x	x	x	x
	x	x	13.5%	x	x	x	x	x	x	x	x
Jordan	-	-	-	-	-	-	-	-	304	516	250
	-	-	-	-	-	-	-	-	59.8%	77.4%	47.3%
Lebanon	-	-	-	-	170	189	189	212	189	236	239
	-	-	-	-	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
United Arab Emirates	-	-	-	-	-	-	208	23.1	299	121	359
	-	-	-	-	-	-	100.0%	100.0%	100.0%	100.0%	100.0%
Yemen	-	-	-	-	-	-	-	150	163	163	117
	-	-	-	-	-	-	-	100.0%	100.0%	100.0%	100.0%
Non-OECD Total	19381	56057	87373	91448	119793	102518	213860	281669	302402	315600	301521
	27.1%	42.7%	51.3%	71.7%	70.6%	62.2%	70.2%	71.1%	69.1%	68.9%	67.9%
World	40589	88755	133086	134739	160824	140532	247246	309798	333049	346172	330944
	24.2%	37.6%	48.8%	56.3%	53.9%	46.7%	55.7%	60.1%	59.9%	60.3%	59.0%

1. Industries classified as using non-metallic mineral products include glass, bricks, ceramics and cement manufacture. Coal covers all coal types and derived coal products, but excludes peat, peat products and oil shale and oil sands. See the explanatory notes and definitions in Part I.

2. Some portions of data may be reported in non-specified industry for some countries for some years instead.

3. Please refer to the Geographical notes in Part I.

Source: IEA/OECD World Energy Statistics

Energy Data Officer/Statistician

Possible Staff Vacancies

International Energy Agency, Paris, France

The IEA

The International Energy Agency, based in Paris, acts as energy policy advisor to 29 member countries in their effort to ensure reliable, affordable and clean energy for their citizens. Founded during the oil crisis of 1973-74, the initial role of the IEA 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 Data Centre, 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 officers/statisticians compile, verify and disseminate information on all aspects of energy including production, transformation and consumption of all fuels, energy efficiency indicators, CO₂ emissions, and energy prices and taxes. The data officers are responsible for the production of data sets through receiving, reviewing and inputting data submissions from member countries and other sources. 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. The data officers/statisticians also design and implement computer macros used in the preparation of their energy statistics publication(s) alongside analysis of the data.

Principal qualifications

- University degree in a topic relevant to energy, or statistics. We currently have staff with degrees in mathematics, statistics, information technology, economics, engineering, physics, environmental studies, etc.
- Experience in the basic use of databases and computer software. Experience in Visual Basic is an advantage.
- 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; ability to understand, and communicate data.
- An excellent written and oral command of English; knowledge of other languages would be an asset.
- Some knowledge of energy industry operations and terminology would also be an advantage, but is not required.

Nationals of any IEA member country are eligible for appointment. Basic salaries start at 3 300 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 English, accompanied by a curriculum vitae, should be sent to:

Office of Management and Administration
International Energy Agency
31-35 rue de la Fédération
75739 Paris Cedex 15, France

Online 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 online, either through annual subscription or pay-per-view access. More information on this service can be found on our website: <http://data.iea.org>

Nine Annual Publications

■ World Energy Statistics 2017

World Energy Statistics presents comprehensive world energy statistics on all energy sources – coal, gas, oil, electricity, renewables and waste. It covers energy supply and consumption for 150 countries and regions, including all OECD countries, over 100 other key energy producing and consuming countries, as well as world totals. The book includes detailed tables by country in original units for the year 2015, and summary time series on production, trade, and final consumption by sector. It also presents provisional 2016 supply data for OECD countries, and initial 2016 estimates for non-OECD countries' production and trade of natural gas, primary coal and oil.

Published August 2017 - Price: Print €120; PDF €96

■ World Energy Balances 2017

World Energy Balances presents comprehensive energy balances for all the world's largest energy producing and consuming countries. It contains detailed data on the supply and consumption of energy for 150 countries and regions, including all OECD countries, over 100 other key energy producing and consuming countries, as well as world totals. The book includes graphs and detailed data by country for all energy sources – coal, gas, oil, electricity, renewables and waste - expressed in balance format, for the year 2015. Alongside this, there are summary time series on production, trade, final consumption by sector, as well as key energy and economic indicators. The volume also presents provisional 2016 supply data for OECD countries, and initial 2016 estimates for non-OECD countries' production and trade of natural gas, primary coal and oil.

Published August 2017 - Price: Print €120; PDF €96

■ Coal Information 2017

Coal Information provides a comprehensive review of historical and current market trends in the world coal sector, including 2016 provisional data. It provides a review of the world coal market in 2015, alongside a statistical overview of developments, which covers world coal production and coal reserves, coal demand by type, coal trade and coal prices. A detailed and comprehensive statistical picture of historical and current coal developments in the 35 OECD member countries, by region and individually is presented in tables and charts. Complete coal balances and coal trade data for selected years are presented on 22 major non-OECD coal-producing and -consuming countries, with summary statistics on coal supply and end-use statistics for about 40 countries and regions worldwide.

Published August 2017 - Price: Print €165; PDF €132

■ Electricity Information 2017

Electricity Information provides a comprehensive review of historical and current market trends in the OECD electricity sector, including 2016 provisional data. It provides an overview of the world electricity developments in 2015 covering world electricity and heat production, input fuel mix, supply and consumption, and electricity imports and exports. More detail is provided for the 35 OECD countries with information covering production, installed capacity, input energy mix to electricity and heat production, consumption, electricity trades, input fuel prices and end-user electricity prices. 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.

Published August 2017 - Price: Print €150; PDF €120

■ Natural Gas Information 2017

Natural Gas Information is a detailed reference work on gas supply and demand covering not only the OECD countries but also the rest of the world; this publication contains essential information on LNG and pipeline trade, gas reserves, storage capacity and prices. The main part of the book concentrates on OECD countries, showing a detailed supply and demand balance for each country and for the three OECD regions: Americas, Asia-Oceania and Europe, as well as a breakdown of gas consumption by end user. Import and export data are reported by source and destination.

Published August 2017 - Price: Print €165; PDF €132

■ Oil Information 2017

Oil Information is a comprehensive reference book on current developments in oil supply and demand. 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. Its core consists of a 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 2017 - Price: Print €165; PDF €132

■ Renewables Information 2017

Renewables Information provides a comprehensive review of historical and current market trends in OECD countries, including 2015 provisional data. It provides an overview of the development of renewables and waste in the world over the 1990 to 2015 period. A greater focus is given to the OECD countries with a review of electricity generation and capacity from renewable and waste energy sources, including detailed tables. However, an overview of developments in the world and OECD renewable and waste market is also presented. The publication encompasses energy indicators, generating capacity, electricity and heat production from renewable and waste sources, as well as production and consumption of renewables and waste.

Published August 2017 - Price: Print €110; PDF €88

■ CO₂ Emissions from Fuel Combustion 2017

In recognition of the fundamental importance of understanding energy related environmental issues, the IEA's *CO₂ Emissions from Fuel Combustion* provides a full analysis of emissions stemming from energy use. This annual publication has become an essential tool for analysts and policy makers in many international fora such as the Conference of the Parties, which will be meeting in Bonn, Germany, from 7 to 16 November 2017. The data in this book are designed to assist in understanding the evolution of the emissions of CO₂ from 1971 to 2015 for 150 countries and regions by sector and by fuel. Emissions were calculated using IEA energy databases and the default methods and emission factors from the *2006 IPCC Guidelines for National Greenhouse Gas Inventories*.

Published November 2017 - Price: Print €165; PDF €132

■ Energy Efficiency Indicators Highlights 2017

Energy Efficiency Indicators Highlights is designed to help understand what drives final energy use in IEA member countries in order to improve and track national energy efficiency policies. It provides the first comprehensive selection of data that the IEA has been collecting each year after its member states recognised in 2009 the need to better monitor energy efficiency policies. The report includes country-specific analysis of end uses across the largest sectors – residential, services, industry and transport. It answers questions such as:

- What are the largest drivers for energy use trends in each country?
- Was energy saved because of efficiency progress over time?
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