



**Asia-Pacific
Economic Cooperation**

APEC

ENERGY STATISTICS

2018

**ENERGY WORKING GROUP
JULY 2021**

**ENERGY STATISTICS AND TRAINING OFFICE
ASIA PACIFIC ENERGY RESEARCH CENTRE**



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PREFACE

The APEC Energy Statistics 2018 consists of the following chapters:

1. Background information on APEC energy statistics
2. Overview of APEC energy situation
3. Member economy tables

The statistics cover the 21 APEC member economies, i.e. Australia; Brunei Darussalam; Canada; Chile; People's Republic of China; Hong Kong, China; Indonesia; Japan; Republic of Korea; Malaysia; Mexico; New Zealand; Papua New Guinea; Peru; The Republic of the Philippines; Russia; Singapore; Chinese Taipei; Thailand; The United States and Viet Nam.

Chapter 1 describes the methodology for collecting and standardising the energy data and for producing the secondary data such as the energy balances and other tables. The preparation of socio-economic data is also explained.

Chapter 2 provides an analysis of energy demand and supply in the APEC region and contains figures and tables showing trends of energy demand and supply.

Chapter 3 consists of annual tables of each member economy. The annual tables contain energy balance tables for 2018 and 2017 and energy prices for 2018. The annual tables also include major energy indicators such as primary energy supply, final energy consumption, demand and supply by energy sources as well as major economic indicators such as population, GDP, balance of payments, foreign exchange rate, purchasing power parity, price indices and so on. These tables cover the data from 1990 to 2018. The objective is to report the most recently updated data.

APEC Energy Statistics 2018 is derived from the APEC energy database, the purpose of which is to establish a comprehensive and consistent energy database within the APEC region. This database will be used to assist in the identification of significant trends in energy supply and demand consistent with projects and priorities under the APEC Energy Working Group, which include final energy intensity and shares of renewable energy in total primary energy supply and total final energy consumption. It is prepared in close cooperation with member economies.

Inquiries about the data should be addressed to the Asia Pacific Energy Research Centre (APEREC).

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1

BACKGROUND

Data collection in APEC started in 1991 with the creation of the Expert Group on Energy Data and Analysis (EGEDA) under the Energy Working Group (EWG). This is in consideration of the importance of energy data collection for enhanced energy security and environmental sustainability in the APEC region. The expert group designated the Energy Data and Modeling Centre (EDMC) of the Institute of Energy Economics, Japan (IEEJ) as coordinating agency with the role of secretariat and implementer of data collection and maintenance of the APEC energy database. The role of secretariat was transferred to the Energy Statistics and Training Office (ESTO) of the Asia Pacific Energy Research Centre (APERC) in 2015.

The secretariat compiled energy data as far back as 1970 from the 21 member economies depending on data availability. The APEC Energy Statistics was published annually since 1993 and this year's publication is the 28th edition.

This publication consists of energy data submitted by each member economy as well as socio-economic data collected by the secretariat for this APEC activity. The energy balance tables, which give detailed description of all energy products and flows, and other tables (primary energy supply, final energy consumption, etc.) included in the statistics, are secondary data compiled by APERC.

APEC energy data and APEC energy goals

APEC energy data has become essential in tracking the APEC energy intensity reduction and doubling the share of renewable energy goals. The EWG, based on the suggestions of APERC, approved the use of APEC energy data in tracking these goals.

Energy intensity reduction goal

In the Honolulu Declaration in 2011, APEC leaders

aspired to reduce APEC's aggregate energy intensity by 45 percent by 2035 based on the 2005 levels. APERC has been reporting the progress since 2011 but it was only in 2016 that the Energy Working Group (EWG) decided to track the progress using APEC energy data and World Bank's GDP data. It was decided that energy intensity would be measured based on final energy consumption excluding non-energy uses and GDP values at constant purchasing power parities (PPP).

Doubling the share of renewables in the APEC energy mix, from 2010 levels by 2030

In 2014, during their 11th meeting, the APEC energy ministers set a goal of doubling the share of renewables in the APEC energy mix, including power generation, from 2010 levels by 2030. EGEDA proposed an indicator to track the progress of the doubling goal in October 2017 using APEC energy data. The indicator is the share of renewables in final energy consumption. Traditional biomass use in the commercial, residential and agriculture sectors are excluded in the calculation of the total renewables share.

Energy data

APEC member economies regularly submit energy demand and supply data to the secretariat. These data are called "original data". Details for collection of the data are given below:

Collection format for original energy data

Most of the items found in the APEC energy statistics are based on data submitted by the APEC member economies using a set of questionnaires for oil, coal, natural gas, electricity and heat, as well as new and renewable energy (NRE). These questionnaires were developed in 2005 for the collection of annual data for the year 2004. These are simplified forms of the

annual energy questionnaires of the International Energy Agency (IEA) through the harmonisation efforts of the secretariat with IEA. Slight revisions are made to the questionnaires from time to time to catch up with the developments in the energy sector. Tables 1-1a and 1-1b show the energy products and flows to be reported in the questionnaires. The definition of energy products and flows can be found in the Appendices.

Using the reporting format of the APEC annual energy questionnaires, the member economies submitted the following information:

- Supply and demand information for specific types of energy products
- Power generating capacity by type of power plants
- Demand and supply information of NRE

The data are reported in the following required units:

Coal and solid coal products	1000 Metric Tons
Gaseous coal products	10 ¹⁰ kcal (gross)
Oil and oil products	1000 Metric Tons
Natural gas	Million Cubic Meters
LNG	1000 Metric Tons
Solid and liquid bio-fuels	1000 Metric Tons
Biogas	10 ¹⁰ kcal (gross)
Electricity (including renewable)	GWh
Heat	10 ¹⁰ kcal (gross)

With regard to calorific values (both gross and net), the required units are the following:

Coal, oil, NRE	kcal/kg
Natural gas	kcal/cubic meter

Power generating capacity data are reported in megawatt (MW).

Table 1.1a • Energy products in the APEC energy database

Coal	Petroleum Products	Hydro
Coking coal	Gasoline	New and renewable energy
Other bituminous coal	Motor gasoline	Geothermal
Sub-bituminous coal	Aviation gasoline	Solar
Anthracite	Naphtha	Tide, wave and ocean
Lignite	Jet fuel	Wind
Coal products	Gasoline type jet fuel	Fuelwood
Coke oven coke	Kerosene type jet fuel	Wood waste
Coke oven gas	Other kerosene	Wood straw pellets/briquettes
Blast furnace gas	Gas/diesel oil	Bagasse
Other recovered gases	Fuel oil	Rise husks
Patent fuel	LPG	Straw
Coal tar	Refinery gas	Charcoal
BKB/PB	Ethane	Other vegetal and agricultural wastes
Gas works gas	White spirit SBP	Other primary solid biomass
Peat	Lubricants	Biogases
Crude Oil & NGL	Bitumen	Industrial wastes
Crude oil	Paraffin waxes	Municipal solid wastes
Natural gas liquids	Petroleum coke	Black liquor
Refinery feedstocks	Other petroleum products	Liquid biofuels
Additives / oxygenates	Gas	Electricity
Other hydrocarbons	Natural gas	Heat¹
	LNG	
	Nuclear	

¹ Heat data in China, Japan and Korea include chilled water from district cooling facilities.

Table 1.1b • Energy flows in the APEC energy database

<p>Indigenous production</p> <p>Imports</p> <p>Exports</p> <p>International marine bunkers</p> <p>International aviation bunkers</p> <p>Stock changes</p> <p>Total primary energy supply</p> <p>Transfers</p> <p>Recycled products</p> <p>Inter-product transfers</p> <p>Products transferred</p> <p>Gas separation</p>	<p>Total transformation sector</p> <p>Main activity producer</p> <p>Electricity plants</p> <p>CHP plants</p> <p>Heat plants</p> <p>District cooling plants</p> <p>Autoproducer</p> <p>Electricity plants</p> <p>CHP plants</p> <p>Heat plants</p> <p>District cooling plants</p> <p>Gas Processing</p> <p>Gas works</p> <p>Liquefaction</p> <p>Re-gasification</p> <p>Natural gas blending plants</p> <p>Gas-to-liquid plants</p> <p>Refineries</p> <p>Coal transformation</p> <p>Coke ovens</p> <p>Blast furnaces</p> <p>Patent fuel plants</p> <p>BKB/PB plants</p> <p>Liquefaction (coal to oil)</p> <p>Petrochemical industry</p> <p>Biofuel processing</p> <p>Charcoal processing</p> <p>Non-specified transformation</p> <p>Losses and own-use</p> <p>Own-use</p> <p>Transmission and distribution losses</p>	<p>Total final energy consumption</p> <p>Industry sector</p> <p>Iron and steel</p> <p>Chemical including petrochemicals</p> <p>Non-ferrous metals</p> <p>Non-metallic minerals</p> <p>Transportation equipment</p> <p>Machinery</p> <p>Mining and quarrying</p> <p>Food, beverages and tobacco</p> <p>Pulp, paper and printing</p> <p>Wood and wood products</p> <p>Construction</p> <p>Textiles and leather</p> <p>Non-specified Industry</p> <p>Transport sector</p> <p>Domestic air transport</p> <p>Road</p> <p>Rail</p> <p>Inland waterways</p> <p>Pipeline transport</p> <p>Non-specified transport</p> <p>Other sector</p> <p>Commerce and public services</p> <p>Residential</p> <p>Agriculture</p> <p>Fishing</p> <p>Non-specified others</p> <p>Non-energy use</p> <p>Transformation sector</p> <p>Industry sector</p> <p>Transport sector</p> <p>Other sector</p>
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However, in 2017, ESTO decided to allow member economies to report original data in the original units used by the respective economies. Primary and secondary oil products can be reported in litres, barrels and cubic meters or in any other volume or mass units. For example, gaseous products can be reported in joules, BTU, kilocalorie, etc. Calorific values can be reported in joules, BTU, kilocalorie per unit of volume or mass. The purpose of this flexibility is to minimise data errors resulting from conversion of original volume units to mass units. In order for ESTO to convert the original data to mass units, member economies were also requested to report the densities of each product.

For OECD member economies that also submit annual energy demand and supply data to IEA, ESTO accepts data submission using the IEA format and also downloads the revised questionnaires from IEA's Energy Validation Outlet (EVO). Computer programs were developed to transfer data from the IEA format to APEC format and to generate energy balance tables. This reduces the reporting burden of these economies to IEA, APEC and other international energy organisations.

Collection schedule and actual dates of submission

ESTO set the deadline for submission on 15 February 2020. In principle, all 21 APEC members are expected to submit annual data by this deadline. Two economies were able to submit the five energy questionnaires on time. These are the Philippines and Singapore. ESTO does not require OECD member economies to submit on the set deadline in consideration of the fact that these economies are submitting data to IEA to reduce their reporting burden.

Data collection was completed by December 2020

due to the late submission of China.

Method of data submission

ESTO developed an online data submission system for all the data collected from member economies. Several economies are now using the system but some economies still submit the data files as email attachments. Correspondence for the improvement of data consistency and accuracy were carried out through email communication.

Method of estimation

For economies that lack detailed data as well as those that did not submit the questionnaires, ESTO estimated the data, filled-out the questionnaires or adopted IEA estimates.

For instance, as Papua New Guinea was not able to submit its annual energy questionnaires, ESTO estimated its energy data using various references. The references include the JODI Oil and JODI Gas data, renewable energy data from the International Renewable Energy Agency (IRENA), Papua New Guinea Power Limited (PPL), and the annual report of Oil Search Limited, an oil company based in the economy, and information from the economy's privately-operated geothermal power plant. From those data and the economic indicators collected from the World Bank for the year 2018, ESTO estimated the final energy consumption, autoproducer electricity generation and inputs as well as imports of petroleum products. ESTO is hoping that Papua New Guinea would be able to produce its own energy statistics and balances in the future.

While Singapore submitted the questionnaires, Singapore was unable to provide a complete set of the energy balance due to data unavailability. Hence, ESTO referenced IEA's energy statistics and energy balance to bridge these data gaps.

Finally for Viet Nam, ESTO filled-out the questionnaires and produced the required energy balance table using the energy commodity balance and energy balance table submitted by the economy.

Standardisation

The APEC reporting format used in the collection of 2018 annual data, gives member economies the flexibility to report data in the original units used in their respective economies. The format also requires the submission of densities of each product to allow conversion of all data to a uniform mass unit. ESTO however, does not standardise the conversion factor from physical to energy units in view of the peculiarities in the thermal quantity of each energy product from the different economies. In this regard, calorific value data reported by each economy are used as opposed to using typical conversion factors.

Conversion factors for fossil energy from physical to thermal units

Between two calorific values, namely gross and net calorific values, APEC adopted the net calorific value agreed from the third experts meeting held in Singapore in 1993, to facilitate comparisons with international energy statistics such as those of the IEA and United Nations Statistics Division. Therefore, gross calorific values used by some members must be converted to net calorific values. If only gross calorific values are reported, these are converted to net calorific values:

Coal / Oil	multiplying the value by 95%
Gas	multiplying the value by 90%

Conversion factors for primary electricity

Table 1-2 shows the factors applied to convert primary electricity—power generated from non-fossil fuel sources such as hydro, nuclear, geothermal

and other power generation—to primary energy units. To allow comparisons of primary energy supplies, in the light of differences in conversion coefficients, standardisation is required. APEC adopted the following efficiency of primary electricity generation for compatibility with IEA and UN statistics.

Table 1.2 • Efficiency of primary electricity generation

Primary Electricity	Efficiency
Hydro power	100%
Nuclear power	33%
Geothermal power*	10%
Other new power	100%

**Excluding Mexico; New Zealand and the United States. These economies can provide the primary energy equivalent of geothermal electricity outputs.*

The original energy data contained in these statistics have been processed using the adjustments mentioned above.

Secondary data

Using the original data submitted by the member economies, the following tables are prepared through the standardisation process.

- (1) Energy balance table
- (2) Primary energy supply table
- (3) Final energy consumption table
- (4) Demand and supply by energy source table
- (5) Electricity table

The energy balance table gives a detailed description of energy sources and their flows.

APEC energy statistics contains the five tables

mentioned above. Tables 2 through 5 are collectively referred to as “other tables”, and are compiled from the energy balance table and data obtained from the original data tables after adjustment. Tables 2 through 5 allow comparisons among member economies.

Energy balance table

The structure of energy balance table, in principle, is the same as that of IEA’s but with some differences. These are as follows:

- APEC statistics are basically based on official data provided by national government agencies of the member economies, and thus, agencies exclude any data not reported to the government. It is assumed that IEA estimates these quantities.
- For this reason, some data for private power generations are missing in some member economies. Likewise, some economies have no consumption of biomass in the residential sector.
- The reporting period differs in APEC and IEA surveys.

Other tables

Other tables such as primary energy supply, final energy consumption, demand and supply by energy source, and electricity, are all designed to allow comparisons among member economies.

The primary energy supply table constitutes information on the primary energy supply, namely, indigenous production, imports, exports, stock change, and international marine and aviation bunkers in terms of calorific values (ktoe and PJ), for each of the four categories of coal, petroleum, gas, and primary electricity (hydro, nuclear, geothermal

power, etc.).

The final consumption table illustrates the consumption of coal (including coal products), petroleum, gas, electricity and other energy sources for each final consumption sector (agriculture, residential, commercial, industry and transport).

The demand and supply table for each energy source emphasises coal, petroleum and gas, and shows how the primary supply quantity is consumed in the transformation and final energy consumption sectors.

The electricity table illustrates the power generation and fossil fuel input for each of the five categories of thermal, hydro, nuclear, geothermal and other sources of power generation.

Notes on member economies

General notes

Most of the member economies’ annual data are tallied by calendar year (1 January - 31 December) except for Australia and Japan. These economies account their energy statistics by fiscal year (1 July - 30 June for Australia and 1 April to March 31 for Japan).

In view of harmonisation efforts with the IEA, ESTO accepts submission from OECD members using the IEA format. Likewise, to reduce the burden of member economies’ statisticians, ESTO decided to leave the verification of APEC OECD member economies data to IEA and just used the processed and updated data from IEA.

Specific notes

• **Papua New Guinea**

ESTO estimated the energy balance tables of Papua New Guinea from 2004 to 2018. Data were taken from the crude oil and natural gas production, refinery intake and output data as well as crude oil

exports that PNG submits monthly to Joint Organisations Data Initiative (JODI). Data on geothermal electricity production were obtained via online research. On biomass use especially in the household sector, ESTO used the data obtained from IRENA.

Socio-economic data

The socio-economic data of each member economy shown in the APEC Energy Statistics are not reported by the member economies. These were, obtained from the *World Development Indicators* of the World Bank and *The International Financial Statistics Yearbook* of the International Monetary Fund (IMF)

and summarised by ESTO. Meanwhile, as macroeconomic data of Chinese Taipei are not available in these international data providers, statistics were derived from Chinese Taipei's national statistics website (DGBAS).

In addition to downloading GDP in Chinese Taipei's local currency and constant dollar values, ESTO/APERC provides estimates of Chinese Taipei's GDP in PPP, constant 2017 USD.

APEC energy database

The online APEC energy database, which contains all the data in the APEC energy statistics can be accessed at: <https://www.egeda.ewg.apec.org/>.

2 OVERVIEW OF THE APEC ENERGY SITUATION

Background

This Overview gives a glimpse of the energy demand and supply situation in APEC in 2018. The first part provides a bird's eye view of the APEC situation as compared with the world. For a better understanding of the terms used in the Overview chapter, the readers may refer to the definitions of products and flows provided in the Appendices. China, Russia and the US, were considered as regions in the analyses in view of the big differences in scales with other APEC economies. Unless otherwise specified, analyses mostly referred to the above-mentioned APEC member economies were by region. Relatedly, for ease of comparison with other APERC publications, this Overview followed the regional groupings of APEC Energy Demand and Supply Outlook as follows:

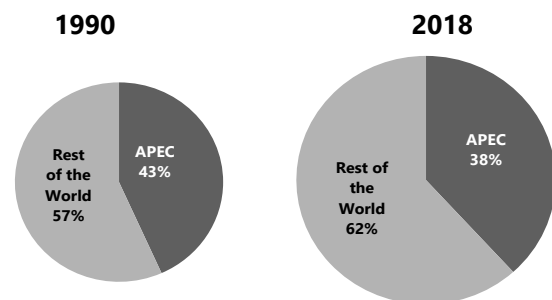
- **Other Americas**
Canada; Chile; Mexico; and Peru
- **South-East Asia**
Brunei Darussalam; Indonesia; Malaysia; the Philippines; Singapore; Thailand; and Viet Nam
- **Oceania**
Australia; New Zealand; and Papua New Guinea
- **Other north-east Asia**
Hong Kong, China; Japan; Korea; and Chinese Taipei
- **China**
- **Russia**, and
- **United States**

This chapter also included analyses on the APEC goals: i.e. energy intensity reduction goal and the RE doubling goal. For this edition, the analysis was based on 2005 against 2018 for the energy intensity goal and 2010 against 2018 for the RE doubling goal.

APEC and the rest of the world

The following briefly describes APEC in terms of population, GDP [purchasing power parity (PPP)¹] and total primary energy supply (TPES) as compared with the rest of the world in 2018 and over the period 1990 to 2018.

Figure 2.1 • World population, 1990 and 2018



Sources: World Bank, ESTO analysis

The world's population reached 7.6 billion inhabitants (1.1% increase from 2017) in 2018. APEC population increased 0.6% to 2.90 billion people in 2018 while the rest of the world surged higher at 1.4%. APEC share with the world's population in 2018 was 38%, five-percentage points lower than the 1990 level (*Figure 2.1*). The compound annual growth rate (CAGR) between 1990 to 2018 was 0.9%, the same CAGR recorded since 2009.

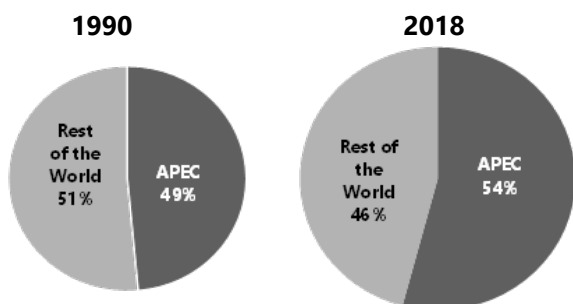
Oceania posted the highest growth rate in 2018 at 1.6%, although its share to APEC total population was the smallest (1%). Other north-

¹ A purchasing power parity (PPP) is defined as the number of units of B's currency that are needed in B to purchase the same quantity of individual good or service as one unit of A's currency will purchase in A.

east Asia and Russia's population dipped 0.02% and 0.01%, respectively in 2018.

APEC maintained its dominance in terms of GDP [purchasing power parity (PPP)] registering a significant 4.1% expansion to USD 68 387 billion (PPP constant 2017 USD) in 2018. This brought APEC share to the world's GDP PPP to 54% in 2018 compared with 49% in 1990 (Figure 2.2). The rest of the world grew by 2.9% from 2017 to 2018. During the period 1990 to 2018, APEC's CAGR was 3.7%, the same CAGR for the last 6 years.

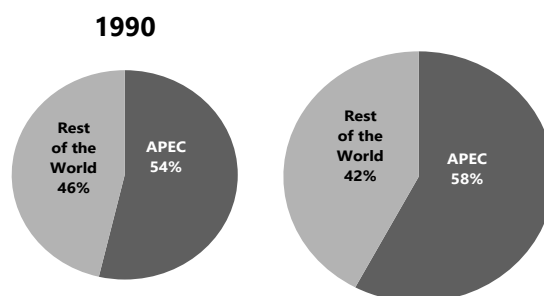
Figure 2.2 • World GDP (PPP constant 2017 USD), 1990 and 2018



Sources : World Bank, ESTO analysis

China posted the largest GDP (PPP constant 2017 USD) in terms of growth (6.8%) and share (31%), outstripping US (2.9% and 29%, respectively) in 2018. South-East Asia continued to show its strong impact in APEC region's economy with GDP (PPP constant 2017 USD) increasing 5.1% to USD 7 378 billion (PPP constant 2017 USD) in 2018 from 2017. Viet Nam (7.1%), the Philippines (6.3%) and Indonesia (5.2%) were among the member economies in South-East Asia that showed significant expansion during the same year.

Figure 2.3 • World TPES, 1990 and 2018



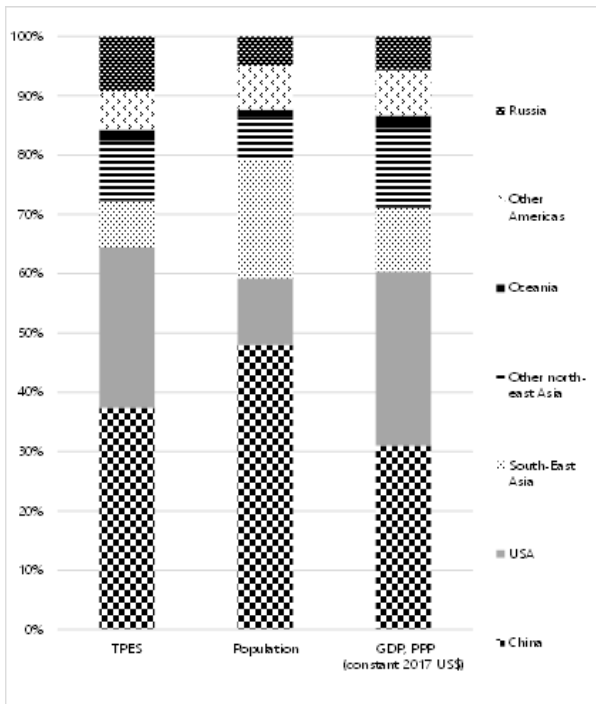
Sources IEA and APEC (TPES), ESTO analysis

APEC continued its prominent role in shaping the global energy sector. It accounted for more than 50% of the world total primary energy supply (TPES), from 54% in 1990 to 58% in 2018 (Figure 2.3). The CAGR between 1990 to 2018 was 2.0% while the rest of the world was 1.4%.

In 2018, China, US and north-east Asia were the top three energy consuming regions in APEC. Together, they accounted for 40% and 33% of the global GDP (PPP constant 2017 USD) and population respectively, notably, these three regions consumed 43% of the world's energy. The combined TPES was even higher (one percentage point more) than the rest of the world's TPES. Nevertheless, the relative shares² of GDP, population and TPES of these three regions varied from one another (Figure 2.4). For example, China and the US consistently topped APEC TPES, China and US were among the highest (22% and 16%, respectively), however, the US accounted for only 6% of the world's population while China, accounted for 18%.

² Relative shares within the APEC regions differ from shares in the world total.

Figure 2.4 • Relative shares, 2018



Sources: IEA and APEC (TPES), World Bank (GDP PPP and Population), ESTO Analysis

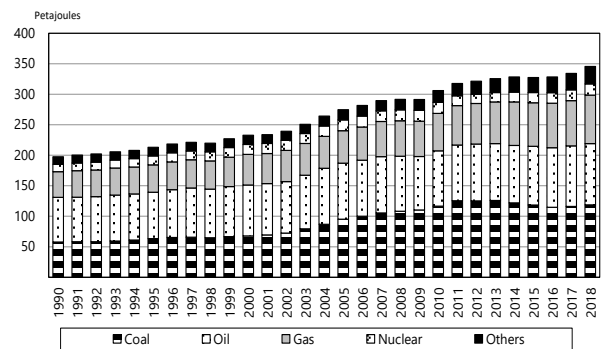
A snapshot of the key energy trends in APEC are discussed in the following sections.

Energy supply trends

Total primary energy supply

APEC’s total primary energy supply (TPES) continued recovering after declining in 2015. In 2018, TPES expanded 3.4% to 345 532 petajoules (PJ) compared with 1.7% in 2017. The volume was more than double the energy requirements in 1990, the compound annual growth rate (CAGR) was maintained at 2.0% between the mentioned period (Figure 2.5).

Figure 2.5 • Total primary energy supply, 1990-2018



Sources: APEC data, ESTO analysis

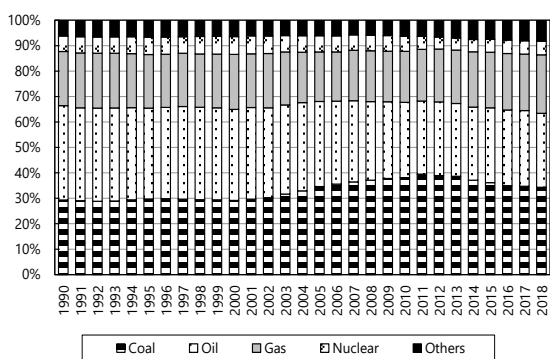
South-East Asia was the main driver for the increase in TPES, growing 5.8% to 27 174 PJ in 2018 from 2017. The significant growth in APEC TPES in 2018 can also be attributed to China and Russia, increasing 4.4% and 4.2%, respectively.

The increase in US was likewise notable. After posting negative growths for the last three years, US TPES rebounded 3.5% to 93 398 PJ in 2018. The increase was brought by huge increases exhibited in most of its energy sources from 2017 to 2018. In particular, other fuels [(geothermal, solar, biomass, etc) (12.8%)] and gas (10%), offsetting the decline in coal (3.1%), all other fuel source (2.6%) and hydro (2.3%).

Primary energy mix by source

APEC TPES is consistently dominated by fossil fuels, accounting for 86% of TPES in 2018. Coal comprised 40% of total fossil fuels as it continued to be the major fuel to supply both industry and power sectors. Oil followed with 34% of total fossil fuel and finally gas (27%). (Figure 2.6).

Figure 2.6 • Primary energy mix, 1990-2018



Sources: : APEC data, ESTO analysis

After dwindling for the last six years, coal grew by 2.2% to 118 731 PJ and continued to account for the biggest chunk of TPES (34%) in 2018. The compound annual growth rate (CAGR) was maintained at 2.6% between 1990 to 2018. The recovery of coal was driven mainly by the huge increase in South-East Asia [(SEA), (22%)] and in part by Russia (5.3%) and China (2.4%). All other regions experienced contraction from 2017 to 2018.

Oil, the second largest fuel (29% of TPES) in APEC, rose 1.1% to 100 467 PJ in 2018. CAGR was also 1.1%. Increases in China (4.8%), US and Oceania (both at 1.4%) contributed to the increase in total oil supply in 2018.

An unprecedented growth was seen in gas in 2018 at 7.1%. Except SEA, most of the regions experienced huge expansion in gas supply, in particular the three large consuming regions in

APEC, namely, China (13.3%), US (10%) and Russia (7.5%).

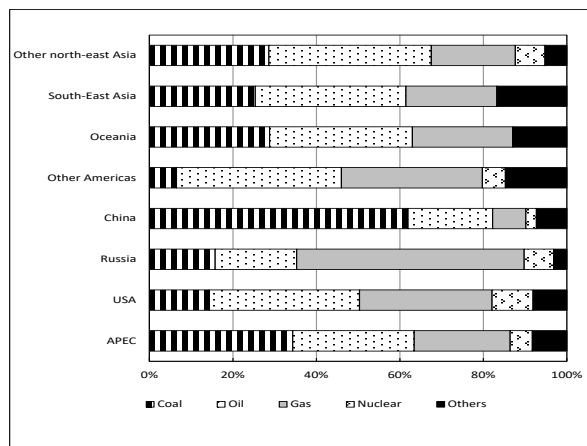
All other energy sources (including hydro, geothermal, solar, etc), comprised only 8% of TPES but also contributed to the increase in TPES. They surged significantly from 26 954 PJ in 2017 to 28 554 PJ in 2018 (or equivalently 5.9%).

Increase in nuclear supply in 2018 was also notable with 4.6% from 17 536 PJ in 2017. CAGR between 1990 to 2018 was 1.5%.

Primary energy mix by region

The structure of energy mixes by region in 2018 remained the same as in previous years. China's energy mix consisted mostly of coal (62%), in Russia continued to be gas (54%) and similarly in US, oil (36%). All the other regions' energy mixes comprised of more than one-third oil (Figure 2.7).

Figure 2.7 • Primary energy mix by region, 2018



Sources: APEC data, ESTO analysis

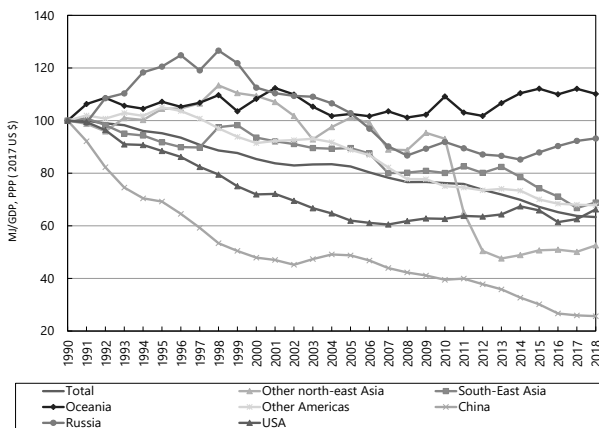
Among renewable energy (RE) supply, hydro was largest in China (50% of APEC hydro supply), geothermal energy supply was huge in SEA (50% of APEC geothermal supply), although the increase in geothermal from 2017 to 2018 was more evident in US (8.8%) than SEA (6.2%). China and US, both accounted for 29% of APEC solar,

wind, biomass, and other RE, in 2018; solar saw a remarkable growth in both regions.

Primary energy intensity

Primary energy intensity is defined as the ratio of total primary energy (petajoules) and GDP (PPP constant 2017 USD). In 2018 primary energy intensity improved slightly compared with 2017. From a 2.2% reduction in 2017, reduced only 0.7% to 63 MJ/USD (PPP constant 2017 USD) in 2018. Nevertheless, primary energy intensity has improved over the years (-36.6% from 1990 to 2018) (Figure 2.8).

Figure 2.8 • Primary energy intensity by region, 1990-2018

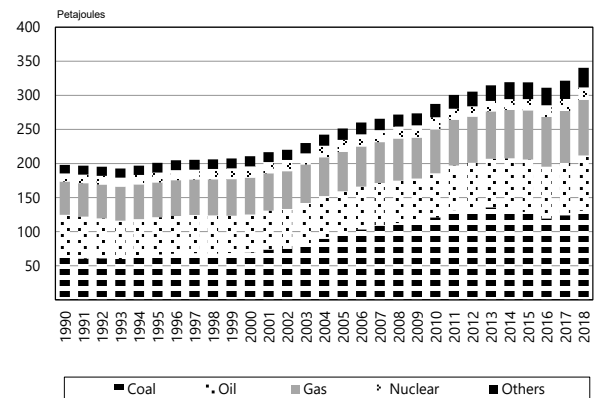


Sources: APEC data (TPES), World Bank (GDP), ESTO analysis

Indigenous production

Domestic production saw an unprecedented increase in 2018 and met more than 95% of energy requirement in APEC. Gas (6.8%) and all other fuels (6.5%) played the most important roles in the 5.8% growth of indigenous production to 340 285 PJ in 2018, while US (9.0%) and SEA (8.4%) drove the increase across regions. The CAGR between 1990 to 2018 was 2% (Figure 2.9).

Figure 2.9 • APEC Indigenous production, 1990-2018

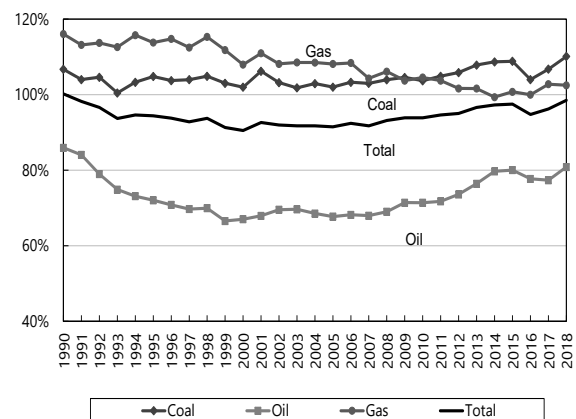


Sources: APEC data, ESTO analysis

Self-sufficiency

The robust increase in domestic production redounded a two-percentage point addition to the self-sufficiency level of APEC (98%) in 2018 from 96% in 2017. APEC is more than self-sufficient on coal (110%), gas (102%), nuclear (100%) and all other fuels (100%). Oil which saw reduction in the last two years, bounced back with four-percentage point more (81%) in 2018 from the 2017 level (Figure 2.10).

Figure 2.10 • APEC energy self-sufficiency, 1990-2018

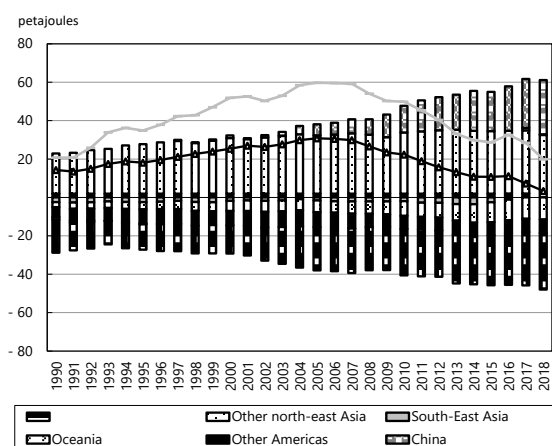


Sources: APEC data, ESTO analysis

Net imports by region

APEC as a whole is a net importer. The net imports (Imports – Exports) in 2018 was lower than expected. It dipped further from the 2017 level with an unprecedented -21.7% to 16 585 PJ. Import levels of four regions in APEC slid in 2018 compared with 2017 level, notably the US (-2.4%) and in part Russia and SEA (both with -0.7%) and other north-East Asia (-0.6%). As a result, total import volume of APEC grew by only 2.0% in 2018, two percentage points lower than 2017 imports. The CAGR between 1990 and 2018 was 3.4%. In 2018, net importers were other north-East Asia, China, US and SEA, with other north-East Asia as largest net importer. On the other hand, net exporters were Russia, Oceania and other Americas, with Russia still the biggest (Figure 2.11).

Figure 2.11 • Net imports by region, 1990-2018



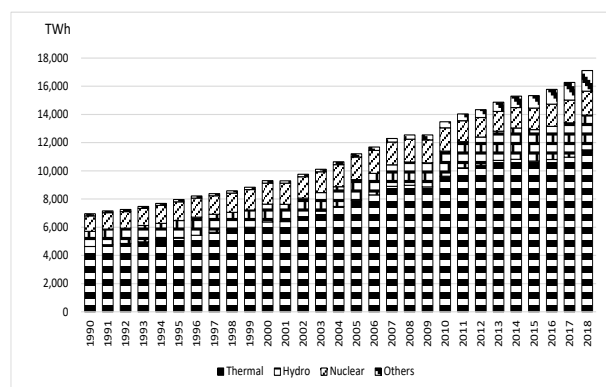
Sources: APEC data, ESTO analysis

Power generation

Electricity generation in APEC continued to bounce back with 5.2% growth to 17 115 TWh in 2018. As in the past, the increase in total generation can be attributed to the huge increase of electricity output from all other

renewables [(geothermal, solar, biomass, etc) (19.3%)], in particular, solar (38.1%) and in part wind (15.4%) and solid biomass (12.2%). Electricity output from thermal and nuclear energy likewise posted notable increases in 2018, with 4.8% and 4.7%, respectively. Hydropower generation grew 1.2% in 2018, almost three percentage point lower than the 2017 growth (Figure 2.12).

Figure 2.12 • Power generation by type, 1990-2018



Sources: APEC data, ESTO analysis

The power generation mix of APEC continued to be dominated by fossil fuel (67%). The shares of each to total fossil fuel in 2018 likewise remained the same; coal was still the majority (67%), then gas (31%) and lastly oil (2%).

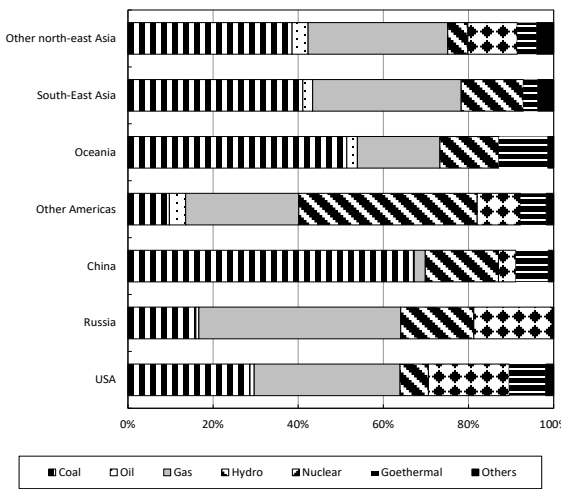
Power generation mix by region

Power generation mixes of the regions in APEC in 2018 have the same structure as in previous year. Except for other Americas, electricity output from fossil fuels remained the bulk of the regions' respective power generation mixes. Most of the regions' power generation mixes consisted of over 60% fossil fuels then followed by hydro—China (17%), SEA (15%) and Oceania (14%)—or nuclear [US (19%), Russia (18%) and other north-east Asia (12%)]. Conversely, hydropower dominated other America's power generation

mix with 42% followed closely by fossil fuel (40%) (Figure 2.13).

In the US, fuel-switching from coal to gas accelerated, bringing the electricity output from coal to 29%, the lowest by far since 1990. Corollary, the continued shale revolution in the region pushed up 13.6% to 1 519 TWh of electricity generation from gas in 2018.

Figure 2.13 • Power generation mix by region, 2018



Sources: APEC data, ESTO analysis

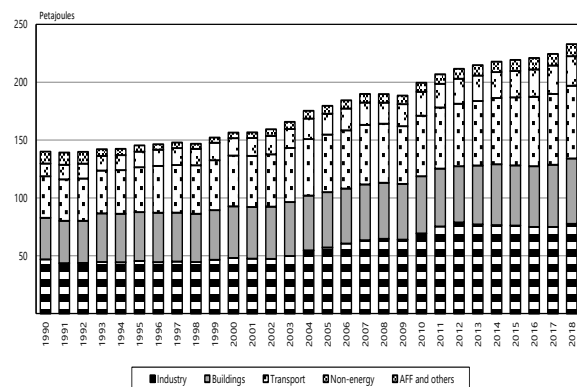
All other renewables are seen to drive the growth of power generation in most of the regions in APEC. Solar grew significantly in China as the region continued its race to achieve low carbon energy. Notably for the first time, wind power generation increased unprecedentedly (65.5%) in Russia in 2018, spurred by the region’s policy to increase renewable energy for power. Incidentally, Russia’s wind power generation drove the electricity output from wind in APEC in 2018, overtaking South-East Asia (SEA).

Energy demand trends in APEC

Total final consumption (including non-energy use) in APEC in 2018 grew 3.8% to 232 427 PJ

Non-energy use consumption corresponded to 11% of the total energy consumption in APEC in 2018; seven percentage points more than the agriculture (combined agriculture, fishery and forestry) energy consumption. Fuel requirement for non-energy use in 2018 has more than doubled since 1990 (equivalently 3.1% CAGR), the biggest expansion among the energy consuming sectors in APEC. China and the US attributed largely for the total non-energy consumption, more than 50% of APEC non-energy use in 2018 (Figure 2.14).

Figure 2.14 • Total final consumption in APEC by sector, 1990-2018



Sources: APEC data, ESTO analysis

Total final energy consumption by sector

The annual growth rate of total final energy consumption [(TFEC)—excluding non-energy use] in APEC continued to fluctuate. After growing slowly for the last six years, growth of TFEC was seen to be picking up again in 2018. TFEC notably increased 3.7% to 206 835 PJ in 2018 compared with 1.3% in 2017. The buildings sector (commercial and residential combined) emerged as the main driver of the growth; 5.2%; by far the second highest growth since 1993. Among the two sub-sectors, the residential pushed up the sector to increase 6.9%, reflective of alarmingly rising energy requirement for household use in APEC subregions: in particular,

Russia (19%) and US (10.6%). Together, household energy consumption of these two regions accounted for almost 50% of APEC household energy consumption.

Industry remained the leading consuming sector accounting for 38% (77 631 PJ) of APEC energy demand in 2018 and growing almost as fast as TFEC. South-East Asia, for two second consecutive years, boosted energy consumption in the sector (12.4% in 2018 from 4.3% in 2017), spurred by large energy requirement in manufacturing of non-metallic mineral products (i.e. cement and glass).

The transport sector came second with 30%. Note that this was not a structural change, as last year the combined buildings and agriculture was reported as the second largest consuming sector. In this edition of the analysis, buildings and agriculture sector was disaggregated further and corresponding to 27% and 5%, respectively, of APEC energy consumption in 2018. Consumption in the transport sector increased slightly in 2018, rising 2.6% to 62 729 PJ compared with 2.0% in 2017. The increase in Russia's transport sector (5.4%) largely contributed to the transport demand growth in APEC in 2018, the place occupied previously by SEA (5.2%) which is now behind Russia.

The agriculture sector likewise grew significantly, 3.5% in 2018 compared with 2.0% in 2017. It accounted for 5% of APEC TFEC.

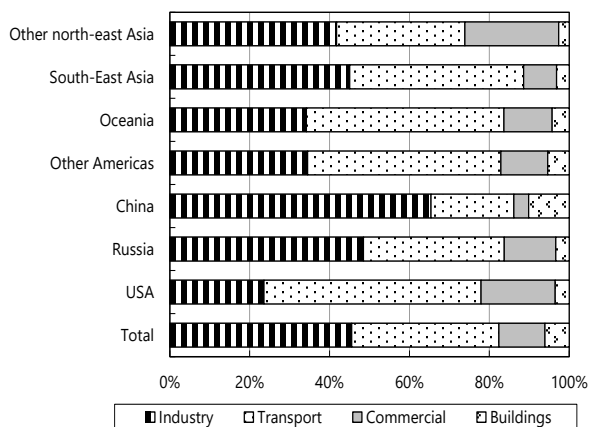
Total final energy consumption by region

The strength of final energy consumption in APEC was largely driven by South-East Asia with a notable 6.8% growth in 2018 spurred by the increase in the industry sector.

China (36%) and the US (29%) were the two largest energy consuming regions in APEC comprising two-thirds of the final energy consumption in 2018 (*Figure 2.15*). China continued to form a huge chunk of energy consumption in industry in APEC with a staggering 54%, the same level even during the time of the region's shifting towards more consumer and service-facing sectors. As a result of its structural rebalancing, energy consumption in the industry sector slowed down in the last six years, which also dampened overall energy consumption in APEC. In 2018, China's industry consumption started to gather pace again with a huge 4.4% growth, signaling a start of China's industry sector bouncing back. China's strong appetite for gas use in the industry sector remarkably grew 42.3% in 2018, the fastest by far since 1990, while coal (44%) remained to take up the biggest chunk of China's industry consumption.

Interestingly in 2018, the US consumed more energy than ever before. Following the slowdown of previous years, the US energy consumption bounced back with a huge 4.9% (60 487 PJ) from -0.3% in 2017. To a very large extent, it can be attributed to the unprecedented surge in gas use (10.6%) in transport sector and partly on renewables (9.4%) mainly for household use. The large increases in gas and renewables along with heat, electricity and oil more than offset the minor slump in coal (-1.0%) and all other fuels (-1.9%).

Figure 2.15 • Total final energy consumption in APEC by region by sector, 2018



Sources: APEC data, ESTO analysis

The third largest consuming region in APEC in 2018 was shared by Russia and other north-east Asia (both at 9%). While Russia's energy consumption seen a significant 3.9% rise to 18 206 PJ in 2018, other north-east Asia fell 1.4% to 18 235 PJ. The huge growth in residential consumption (19%) offset the drop experienced in the industry (7.1%) and services sectors (5.8%) in Russia in 2018. In contrast, energy consumption in other north-east Asia fell across all sectors, highest drop by far was energy consumption in the residential sector.

Energy consumption in South-East Asia underwent a structural change in 2018. The industry had both the largest absolute growth and the fastest rate of growth in 2018, a level occupied by transport in the previous year. As a result, coal remarkably grew 40% to meet the energy demand in industry sector. Nevertheless, the robust growth of energy consumption in the transport sector was maintained at 5.2% growth as in 2017, as mobility level in the sector is constantly swelling that required large amount of fuel.

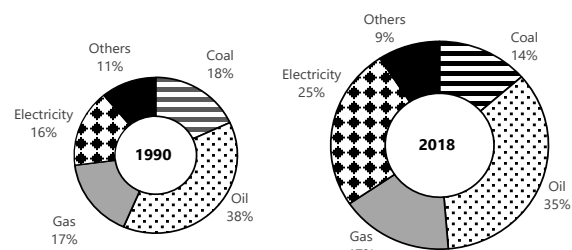
Other Americas likewise posted a significant 3.1% increase to 14 695 PJ in 2018. Energy consumption in the buildings sector (4.5%) drove the overall energy demand in the region in 2018 while the transport sector accounted for the largest chunk (40%).

Lastly, Oceania continued its modest growth with 1.2% to 3 947 PJ in 2018. The transport sector drove the overall energy consumption in the region at 1.9%, even faster than the region's total consumption. The transport sector likewise continued to form the biggest chunk with 42% share.

Final energy consumption by energy source

The strength in final energy consumption in APEC in 2018 was reflected across all fuels, except coal (Figure 2.16).

Figure 2.16 • Total final energy consumption by energy source, 1990 and 2018



Sources: APEC data, ESTO analysis

Gas grew a record high 12% to 34 792 PJ in 2018, pushing the level one percentage point higher (17%) than 2017 and offsetting the contraction seen in coal. The main players in the robust gas consumption were the three major energy consuming regions in APEC, namely the US, China and Russia. Together, these economies took 80% of APEC gas consumption with the US accounting for more than 40% of the demand growth. The gains may likely stem from weather-related activity, such as the rising demand for

space heating and cooling that increased gas consumption. It can also be attributed to the continuation of environmental policies that encouraged coal-to-gas switching in industry and buildings in order to improve local air quality in most of the regions in APEC.

Oil remained the bulk of APEC total final energy consumption but grew at a slower pace (1.4%) to one percentage point (35%) lower than the 2017 level. China and South-East Asia (SEA) largely contributed to the increase in oil consumption (both at 2.6%), while the US accounted for the bulk of demand growth (43%) in 2018. As in the past, the increasing fuel requirement in the transport sector boosted the expansion of oil consumption.

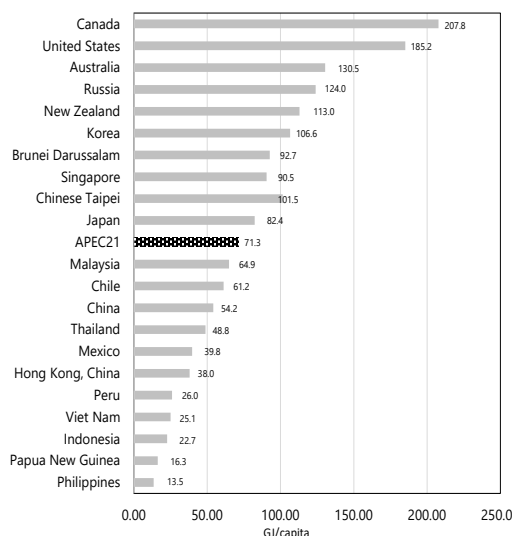
Coal consumption continued to plunge spurred by the region's preference for cleaner fuel. Consumption fell 3.3% to 27 720 PJ in 2018. Contraction of coal use was seen across all sectors largest was from the buildings sector.

Electricity consumption grew 5.2% to 52 379 PJ in 2018, a faster pace not seen since 2010. Heat similarly expanded robustly (6.6% to 9 601 PJ) compared with 2.9% in 2017. The boost in these two fuel sources appeared to be weather related, in response to the need for cooling or heating demand across the APEC region.

Final energy consumption per capita

On average, energy per capita of APEC in 2018 was 71.21 GJ, 3.1 % higher than the 2017 level. The order of final energy per capita in APEC in 2018 from among the top energy users was unchanged (*Figure 2.17*).

Figure 2.17 • Energy consumption per capita, 2018



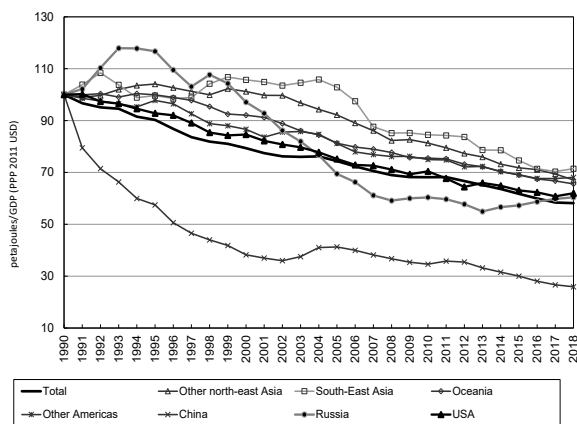
Sources: APEC data (TFEC), World Bank (Population), DGBAS (CT data), ESTO analysis

Top three continued to be Canada (207.75 GJ), US (185.15 GJ) and Australia (130.47 GJ). Eleven member economies were way below the APEC average per capita in 2018, including the biggest energy consuming regions in APEC, namely, China—largest in APEC; Mexico—second largest in other Americas and Indonesia—the largest in South-East Asia.

Final energy intensity

Final energy intensity [Total final energy consumption (PJ)/GDP (PPP, constant 2017 USD)] in APEC continued to show improvement over the last two decades. The 2018 reduction level, however, was very minimal as compared with last year's level. Between the periods 1990 and 2018, energy intensity was estimated to reduce 41.8% to 58 MJ/USD (PPP, constant 2017) (*Figure 2.18*).

Figure 2.18 • Final energy intensity by region, 1990-2018



Sources: APEC data (TPES), World Bank (GDP), ESTO analysis

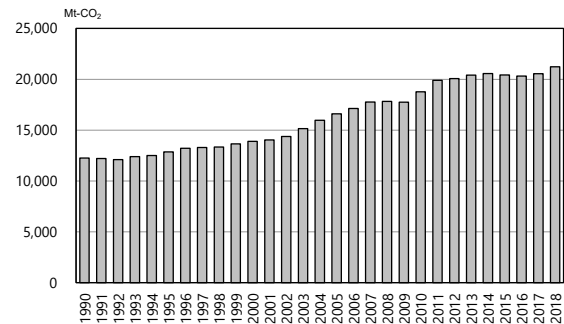
Note again that this is not the APEC energy intensity goal which uses 2005 as base year.

CO₂ emissions

Economies in APEC expanded in 2018 such that economic activity and mobility requiring large energy services increased robustly across all sectors. Against this backdrop, CO₂ emissions from fuel combustion redounded to a worrying 3.3% to 21 237 metric tonnes in 2018 (Figure 2.19).

As could be expected, the main drivers of energy consumption in APEC in 2018 were the key players in the increase of CO₂ emission, namely, South-East Asia (7.7%), China (4.5%) and the US (3%). On the other hand, CO₂ emissions from other north-East Asia (2.2%) and Oceania (0.6%) declined but not enough to offset the increases in all other regions. Likewise, despite the rapid gains in the deployment of renewables, the pace of growth in power demand put upward pressure on emissions, which means renewables are still relatively small as compared with fossil fuelled power plants.

Figure 2.19 • CO₂ Emission in the APEC region, 1990-2018



Sources: APEC data, ESTO analysis

APEC goals

Energy intensity goal

The Asia Pacific Energy Research Centre (APERC) has been reporting the progress of energy intensity goal at the Energy Working Group (EWG) meeting using the formula final energy consumption (PJ)/GDP (PPP constant USD). Total final energy consumption in this case included industry, transport, buildings (commercial and residential), and agriculture (including forestry and fishery) sectors, excluding non-energy consumption. In the last EWG meeting held virtually, the progress on energy intensity goal was reported however, 2018 data were still preliminary. Using the final data, energy intensity in 2018 compared with 2005 has improved 22% which was 48% of the way to the goal in 43% of the time. Assuming these trends on final energy consumption and GDP continue, APEC goal of 45% energy intensity reduction will be achieved by 2035.

RE doubling goal

APERC in collaboration with EGNRET are also keeping track of the renewable energy (RE) doubling goal. In monitoring the RE goal, traditional biomass, which includes biomass used for residential, commercial and agriculture

sectors, are excluded in the RE share. Much of the biomass used in these sectors are for heating (residential), cooking (residential and commercial) and crop drying (agriculture)]. Only modern renewables are considered such as hydro, geothermal, etc (including biomass used in the industrial sector, biogas and wood pellets).

From 2010 to 2018, considerable progress has been made toward achieving the renewable doubling goal, spurred by rapid decrease in costs and favorable government policies (FIT, RPS, etc.). In 2018, it was estimated that RE share from total TFEC expanded from 6% in 2010 to 8.6% in 2018 which was 44% of the way to the goal in 40% of the time. Assuming this increasing trend continues, the APEC RE share doubling goal in 2030 in the final energy demand will be achieved and will reach 12.6%—0.6% more than the target. In terms of total primary energy supply (TPES), RE share increased from 4.9% in 2010 to 6.9% in 2018 which was 41% of the way to the goal in 40% of the time. Assuming this trend continues, APEC RE share goal from TPES in 2030 will be met and will reach 10%. But this does not mean that APEC will stop its efforts in the deployment of RE. Related studies need to be conducted to address the challenges that may come along the way.

Energy balance table

This section presents the 2018 aggregate energy balance table (EBT) of APEC (Table 2.1). Note that the export/import row does not imply the volume of trade between APEC region and the rest of the world. The 2018 APEC EBT featured more detailed categories of products and unit of energy was expressed in petajoules

(PJ). *“Peat and peat products”* have their own separate columns (columns 3 and 4). The renewables were also disaggregated further and now included *“Geothermal”* (column 11), *“Solar”* (column 12), *“Tide, wave and ocean”* (column 13), *“Wind”* (column 14) and *“Solid biomass”* (column 15). The category *“Other”* (column 16) now included all other renewable and non-renewable products. A *“Total renewable”* column was also added summarising all renewable products.

An additional row was also added in the flow to include *“Transfers”* (row 8). Meanwhile the *“Other sector”* (row 21) is the aggregated term used for residential and commercial, agriculture and all other sectors. In the analysis on energy demand trends, the combined residential and commercial was referred to as *“buildings sector”*. The agriculture sector included fishery and forestry. Total final energy consumption comprises industry, transport, buildings and agriculture sector, while total final consumption includes non-energy. Non-energy comprised 11% of the total final consumption. In the new format of EBT, renewable energy was 4% of TFEC in 2018.

Table 2.1 • APEC Energy balance table (PJ), 2018

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	Renewables
	Coal	Coal products	Peat	Peat products	Oil shale and oil sands	Crude Oil, NGL and condensate	Petroleum products	Gas	Nuclear	Hydro	Geothermal	Solar	Tide, Wave, Ocean	Wind	Solid Biomass	Others	Electricity	Heat	Total		
1 Indigenous production	130 583		13			81 265		81 403	18 350	8 896	1 753	1 494	2	2 612	8 932	4 978		2	340 285	26 991	
2 Import	18 959	589				61 889	24 347	18 761							52	140	468		125 204	192	
3 Export	-28 621	-450	-2			-29 473	-28 285	-21 023							-56	-275	-435		-108 620	-331	
4 International marine bunkers							-4 822									-6			-4 828	-6	
5 International aviation bunkers							-3 776												-3 776		
6 Stock change	-2 236	-147	-1			-417	-301	312							-3				-2 793	-2	
7 Total primary energy supply	118 727	-8	11			113 327	-12 860	79 430	18 350	8 896	1 753	1 494	2	2 612	8 925	4 837	33	2	345 532	26 844	
8 Transfers						-4 829	950	7											-3 871		
9 Main activity producer	-73 615	-616	-6			-27	-1 447	-27 499	-18 350	-8 761	-1 659	-1 021	-2	-2 566	-1 566	-1 428	59 096	8 362	-71 106	-15 915	
10 Autoproducer	-1 329	-1 732	-5			-20	-1 010	-4 629	-135	-28	-318			-46	-668	-408	2 503	3 214	-4 611	-1 321	
11 Gas processing	-535						-89	-1 009											-1 633		
12 Petroleum refineries						-107 848	109 934	3											2 090		
13 Coal transformation	-22 326	12 427	-1	1			-19									-5			-9 922		
14 Other transformation						1 087	-779	-478							-402		-18	21	-569	-402	
15 Losses & own-use	-1 683	-826	-1			-484	-4 754	-7 929							-6	-17	-9 280	-1 980	-26 960	-17	
16 Discrepancy	2 724	-173				-679	459	1 136							-9	-9	45	-17	3 477	-19	
17 Total final consumption	21 964	9 073				528	90 385	39 033			66	155			6 274	2 970	52 379	9 601	232 427	9 170	
18 Total final energy consumption	19 257	8 463				3	72 875	34 792			66	155			6 274	2 970	52 379	9 601	206 835	9 170	
19 Industry sector	15 470	8 279				3	7 108	14 561			5	1			3 268	310	23 689	4 937	77 631	3 358	
20 Transport sector	72						55 443	3 613								2 526	1 074		62 729	2 526	
21 Other sector	3 714	184					10 324	16 617			61	154			3 006	134	27 617	4 664	66 475	3 285	
21.1 Residential & commercial	2 498	149					6 139	16 234			59	150			2 758	124	23 686	4 352	56 123	3 019	
21.2 Agriculture	536	29					2 355	167			2				246	14	887	119	4 357	261	
21.3 Other	680	6					1 829	216			4				1	-5	3 044	193	5 995	6	
22 Non-energy	2 707	610				524	17 510	4 241											25 592		

Sources: APEC data, ESTO analysis

3 Energy balance and other tables by member economy

AUSTRALIA

Energy balance table of Australia

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production	12 035		576						
Import	6	6	767	1 281	208		216		724
Export	-10 318	- 16	- 458	- 96	- 5		- 5		- 3
International marine bunkers				- 24					- 2
International aviation bunkers				- 200			- 200		
Stock changes	84		4	- 34	- 3	- 1	- 1		- 13
Total primary energy supply	1 807	- 9	889	928	200	- 1	11		705
Transfers			16	127					
Total transformation sector	-1 696	68	-1 042	919	376	13	134		284
Main activity producers	-1 574			- 8					- 6
Autoproducers				- 40					- 38
Gas processing									
Petroleum refineries			-1 042	967	376	13	134		328
Coal transformation	- 122	68							
Other transformation									
Losses & own use		- 36	- 2	- 175					- 118
Discrepancy	- 4		139	69	37	- 12	- 13	1	- 5
Total final consumption	106	23	1	1 868	614		131	1	867
Total final energy consumption	106	23	1	1 695	614		131	1	867
Industry sector	106	23	1	162					133
Iron and steel	1	13		1					
Chemical & petrochemical	6	1		4					4
Non-metallic minerals	20			7					1
Other industries	176	18	1	150					127
Transport sector				1 379	606		131		612
Domestic air transport				133	2		131		
Road				1 166	592				547
Rail				48					48
Inland waterways				25	12				10
Other transport				8					7
Other sector				154	7				122
Residential				15					
Commerce and public services				37					29
Agriculture				102	7				93
Non-specified others									
Non-energy				173					
2017									
Indigenous production	12 268		641						
Import	3	5	697	1 199	227		206		657
Export	-10 235	- 13	- 450	- 96	- 7		- 2		- 4
International marine bunkers				- 23					- 2
International aviation bunkers				- 187			- 187		
Stock changes	- 167		1	14	6		- 1		7
Total primary energy supply	1 869	- 8	890	906	226		16		658
Transfers			- 14	159					
Total transformation sector	-1 767	69	- 978	874	364	14	125		264
Main activity producers	-1 640			- 10					- 6
Autoproducers				- 41					- 39
Gas processing									
Petroleum refineries			- 978	925	364	14	125		310
Coal transformation	- 127	69							
Other transformation									
Losses & own use		- 39	- 2	- 168				- 1	- 107
Discrepancy	- 5		105	55	33	- 13	- 13	1	6
Total final consumption	96	23	1	1 827	622		128	1	821
Total final energy consumption	96	23	1	1 655	622		128	1	821
Industry sector	95	23	1	149					124
Iron and steel	1	10		1					
Chemical & petrochemical	6	1		4					4
Non-metallic minerals	16			7					1
Other industries	171	25	1	138					118
Transport sector				1 355	614		128		578
Domestic air transport				130	2		128		
Road				1 147	599				515
Rail				47					47
Inland waterways				24	12				10
Other transport				8	1				7
Other sector				150	7				120
Residential				15					
Commerce and public services				34					28
Agriculture				101	7				92
Non-specified others									
Non-energy				172					

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				4 237	57			326			17 231	379
29	20		84	168							2 229	
- 10	- 59		- 14	- 3 042							- 13 929	
- 21											- 24	
											- 200	
- 6	- 3		- 7								53	
- 8	- 42		63	1 363	57			326			5 360	379
	43		84								143	
31	25	39	16	- 515	- 57			- 139	939		- 1 523	- 196
- 1			- 1	- 354	- 57			- 76	824		- 1 245	- 133
- 1			- 1	- 161				- 63	115		- 149	- 63
	33	25	39	18							- 75	
											- 55	
		- 39	- 17	- 327					- 171		- 711	
- 16	41		36	15							220	
7	66		182	536				187	768		3 489	184
7	57		19	480				187	768		3 260	184
3	8		18	258				117	273		939	113
				9					13		36	
				35				4	14		64	
	4		1	46				3	17		92	3
2	4		16	168				110	230		853	110
2	28			17				5	21		1 423	5
											133	
	27			3				5			1 174	5
									12		59	
2				14					10		32	
2	21		1	205				66	473		898	66
	15			149				64	213		442	64
2	4		1	55				1	252		346	1
	2			1					8		111	
	10		163	56							229	
				3 696	58			319			16 982	373
9	24		75	186							2 090	
- 13	- 58		- 12	- 2 572							- 13 366	
- 21											- 23	
											- 187	
- 1	2		1								- 152	
- 26	- 31		64	1 310	58			319			5 343	373
	73		86								145	
26	25	36	20	- 503	- 58			- 122	928		- 1 557	- 180
- 1			- 2	- 352	- 58			- 65	824		- 1 302	- 123
- 1			- 1	- 151				- 57	104		- 145	- 57
	27	25	36	23							- 53	
											- 58	
- 2		- 36	- 21	- 298					- 168		- 675	
8	5		29	24							180	
6	71		178	534				196	760		3 436	192
6	62		16	480				196	760		3 210	192
3	8		14	260				127	270		925	123
				8					12		31	
				36				4	15		66	
	4		1	45				2	16		86	2
3	4		13	171				121	227		853	121
2	33			16				4	21		1 396	4
											130	
	33			4				4			1 155	4
									12		58	
2											24	
				12					9		29	
	21		1	204				65	469		889	65
	15			149				64	213		441	64
	4		1	54				1	249		338	1
	2			1					7		109	
	10		162	54							226	

Major energy indicators of Australia

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	3 606	3 873	4 526	4 751	5 285	5 300	5 291	5 343	5 360
Indigenous production	6 595	7 825	9 779	11 102	13 538	16 033	16 204	16 982	17 231
Import	603	873	1 105	1 302	1 754	2 002	2 040	2 090	2 229
Export	-3 304	-4 609	-6 428	-7 530	-9 584	-12 476	-12 932	-13 366	-13 929
Final energy consumption	2 207	2 430	2 728	2 815	3 009	3 157	3 176	3 210	3 260
Industry	809	882	996	933	939	936	928	925	939
Transport	884	966	1 074	1 136	1 256	1 355	1 372	1 396	1 423
Residential	314	348	379	389	429	439	443	441	442
Commerce & public services	146	174	211	261	292	328	331	338	346
Others	54	61	67	97	92	99	102	109	111
Coal & Peat									
Primary energy supply	1 493	1 590	2 023	2 155	2 124	1 819	1 878	1 869	1 807
Indigenous production	4 442	5 352	6 891	8 440	10 323	12 501	12 224	12 268	12 035
Import					1	3	1	3	6
Export	-2 800	-3 698	-5 083	-6 322	-7 961	-10 609	-10 532	-10 235	-10 318
Transformation sector	-1 393	-1 535	-1 868	-2 055	-2 039	-1 737	-1 796	-1 767	-1 696
Power generation	-1 208	-1 354	-1 722	-1 898	-1 872	-1 622	-1 668	-1 640	-1 574
Final energy consumption	106	106	109	102	89	80	93	96	106
Industry	100	100	105	93	84	80	93	95	106
Transport	3	4	4	8	4				
Residential									
Commerce & public services	3	2	1	1	1				
Others									
Coal & peat products									
Primary energy supply	-32	-20	-7	-19	-11	-22	-15	-8	-9
Indigenous production									
Import				1		4	6	5	6
Export	-16	-11	-1		-10	-25	-20	-13	-16
Transformation sector	123	116	84	100	76	76	72	69	68
Power generation	-3	-2	-2	-5	-5	-1			
Final energy consumption	77	81	64	55	17	18	20	23	23
Industry	75	79	63	54	17	18	20	23	23
Transport									
Residential									
Commerce & public services	2	2	1	2					
Others									
Crude oil & NGL									
Primary energy supply	1 385	1 477	1 531	1 422	1 336	1 082	939	890	889
Indigenous production	1 215	1 188	1 420	1 075	1 069	757	735	641	576
Import	427	737	934	895	925	847	682	697	767
Export	-245	-434	-811	-552	-634	-533	-489	-450	-458
Transformation sector	-1 284	-1 453	-1 572	-1 427	-1 340	-1 176	-1 008	-978	-1 042
Petroleum refineries	-1 284	-1 453	-1 572	-1 427	-1 340	-1 180	-1 013	-978	-1 042
Petroleum products									
Primary energy supply	-78	-114	-102	123	406	695	857	906	928
Import	175	136	170	407	667	967	1 147	1 199	1 281
Export	-144	-120	-145	-138	-102	-80	-74	-96	-96
Transformation sector	1 301	1 485	1 578	1 404	1 288	1 068	906	874	919
Power generation	-40	-33	-22	-35	-58	-57	-51	-51	-48
Petroleum refineries	1 342	1 521	1 602	1 439	1 347	1 125	957	925	967
Final energy consumption	1 067	1 150	1 282	1 350	1 476	1 609	1 623	1 655	1 695
Industry	121	124	149	129	132	162	151	149	162
Transport	874	948	1 049	1 100	1 219	1 311	1 328	1 355	1 379
Residential	16	15	15	12	15	15	17	15	15
Commerce & public services	11	12	13	21	26	33	33	34	37
Others	46	51	57	88	83	89	94	101	102
Gas									
Primary energy supply	619	701	807	794	1 146	1 387	1 281	1 310	1 363
Indigenous production	718	1 047	1 195	1 313	1 862	2 436	2 894	3 696	4 237
Import					160	181	204	186	168
Export	-98	-346	-388	-518	-876	-1 229	-1 817	-2 572	-3 042
Transformation sector	-163	-162	-182	-238	-409	-501	-508	-503	-515
Power generation	-145	-149	-170	-226	-409	-498	-503	-503	-515
Final energy consumption	351	414	465	493	485	491	485	480	480
Industry	238	272	300	321	299	280	267	260	258
Transport	7	8	13	15	13	13	15	16	17
Residential	81	95	107	116	130	146	149	149	149
Commerce & public services	31	39	45	40	44	51	53	54	55
Others						1	1	1	1
Electricity									
Power generation	555	622	756	822	909	905	923	928	939
Thermal	502	562	692	750	831	784	789	783	779
Hydro	51	57	59	55	49	48	54	58	57
Nuclear									
Others	3	3	4	17	30	72	80	87	103
Final energy consumption	465	522	622	681	756	761	762	760	768
Industry	213	234	277	267	296	276	278	270	273
Transport	7	7	8	12	13	21	22	21	21
Residential	139	152	176	197	218	213	213	213	213
Commerce & public services	98	119	150	196	220	242	242	249	252
Others	9	9	10	9	9	9	6	7	8

Major economic indicators of Australia

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ¹	17.07	19.15	20.39	22.03	23.82	24.19	24.60	24.98
Gross domestic product ³								
Real term, billion USD (constant 2010)	613	849	996	1 146	1 312	1 348	1 379	1 420
GDP, billion USD (PPP, constant 2017)	534	740	868	999	1 144	1 175	1 203	1 239
Nominal, billion USD (current)	311	415	693	1 146	1 352	1 209	1 329	1 433
GDP per capita ³								
Real term (constant 2010 USD)	35 911	44 334	48 814	52 022	55 080	55 729	56 058	56 832
GDP, PPP (constant 2017 USD)	31 309	38 652	42 557	45 354	48 020	48 586	48 905	49 576
Nominal (current USD)	18 212	21 679	33 999	52 022	56 756	49 971	54 028	57 355
Nominal GDP & its components (billions of current AUD) ¹								
Gross domestic product	404	661	922	1 301	1 625	1 661	1 764	1 850
Households and NPISHs final consumption expenditure	223	384	531	731	929	967	1 000	1 044
General government final consumption expenditure	70	118	162	234	293	310	328	346
Gross fixed capital formation	112	172	250	353	426	420	422	450
Stock change	5	2	4	-3	1	1	2	3
Exports of goods and services	61	128	168	258	325	320	374	403
Imports of goods and services	69	143	194	271	349	357	363	396
Real GDP & its components (billions of 2010 AUD) ¹								
Gross Domestic Product	798	1 106	1 296	1 492	1 708	1 755	1 797	1 850
Households and NPISHs final consumption expenditure	424	586	712	845	965	992	1 014	1 044
General government final consumption expenditure	149	201	234	272	304	317	333	346
Gross fixed capital formation	162	239	312	396	445	429	429	450
Stock change	8	3	8	-3	1	1	2	3
Exports of goods and services	94	201	229	273	344	367	387	403
Imports of goods and services	73	142	205	291	353	352	369	396
Sectoral shares of Real GDP (%) ¹								
Agriculture, Fishery and Forestry	3.1	3.2	3.0	2.9	2.7	2.4	2.6	2.5
Industry	29.0	26.5	25.7	25.6	25.4	24.9	24.0	24.1
Services, etc.	59.1	62.2	63.2	63.5	63.6	64.1	64.5	64.4
Industrial production index (2010=100) ²	74.6	93.2	97.5	100.0	109.8	109.6	110.4	110.4
External trade (billions of current USD) ¹								
Exports, f.o.b.	39.8	63.9	106.1	212.6	187.7	192.5	231.1	257.1
Imports, c.i.f.	42.0	71.5	125.3	201.6	208.5	196.3	228.8	235.4
Balance of payments (billions of current USD) ²								
Trade balance	0.5	-4.9	-14.3	11.3	-19.0	-5.8	10.5	20.9
Current account	-15.5	-15.5	-43.3	-44.7	-57.0	-41.0	-35.8	-29.1
Overall balance	1.3	-2.1	6.0	-0.5	-1.4	5.9	13.2	-6.0
Foreign exchange rate (AUD/USD) ¹	1.28	1.72	1.31	1.09	1.33	1.35	1.30	1.34
PPP conversion factor, GDP (AUD/USD) ¹	1.37	1.31	1.39	1.50	1.47	1.45	1.47	1.45
Price Indices								
GDP Deflator (2017=100) ³	50.6	59.8	71.2	87.2	95.1	94.6	98.1	100.0
Producer Price Index (2010=100) ²	66.4	75.9	86.7	100.0	107.5	109.8	111.6	113.6
Consumer Price Index (2010=100) ²	59.8	74.4	86.3	100.0	112.0	113.5	115.7	117.9
Growth rate (%) ³								
Real GDP	3.6	3.9	3.2	2.1	2.2	2.8	2.4	2.9
Population	1.5	1.2	1.3	1.6	1.4	1.6	1.7	1.5
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices	6.0	7.1	6.0	1.9	0.3	2.1	1.6	1.8
Consumer prices	7.3	4.5	2.7	2.9	1.5	1.3	1.9	1.9

Source ¹: *World Development Indicators*, World Bank

²: *International Financial Statistics*, International Monetary Fund

³: Calculated from ¹ and ² by ESTO

Note : N.A. means "not available"

: AUD means Australian Dollar, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

BRUNEI DARUSSALAM

Energy balance table of Brunei Darussalam

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production			246						
Import				16	6		1		8
Export			-224						
International marine bunkers									
International aviation bunkers				-4			-4		
Stock changes			-7						
Total primary energy supply			16	12	7		-2		8
Transfers									
Total transformation sector			-16	14	6		2		4
Main activity producers				-1					-1
Autoproducers									
Gas processing				1					
Petroleum refineries			-16	13	6		2		5
Coal transformation									
Other transformation									
Losses & own use									
Discrepancy				1					1
Total final consumption				27	13				13
Total final energy consumption				27	13				13
Industry sector				6					5
Iron and steel									
Chemical & petrochemical				1					
Non-metallic minerals									
Other industries				5					5
Transport sector				19	13				6
Domestic air transport									
Road				19	13				6
Rail									
Inland waterways									
Other transport									
Other sector				2					1
Residential				1					
Commerce and public services									
Agriculture									
Non-specified others				1					1
Non-energy									
2017									
Indigenous production			250						
Import				19	10		1		8
Export			-240						
International marine bunkers									
International aviation bunkers				-3			-3		
Stock changes			3						
Total primary energy supply			13	15	9		-2		8
Transfers									
Total transformation sector			-13	10	3		2		4
Main activity producers				-1					-1
Autoproducers									
Gas processing				1					
Petroleum refineries			-13	10	3		2		5
Coal transformation									
Other transformation									
Losses & own use									
Discrepancy				1					1
Total final consumption				26	13				13
Total final energy consumption				26	13				13
Industry sector				6					5
Iron and steel									
Chemical & petrochemical									
Non-metallic minerals									
Other industries				6					5
Transport sector				19	13				6
Domestic air transport									
Road				19	13				6
Rail									
Inland waterways									
Other transport									
Other sector				2					1
Residential				1					
Commerce and public services									
Agriculture									
Non-specified others				1					1
Non-energy									

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat		Total renewables
				446								692
				-281								16
												-505
												-4
				-2								-8
				163								191
	1		-1									
			1	-94								-96
				-49								-49
				-6								-6
			1	-40								-39
												-2
				-46						-4		-50
				3					15			20
	1	1		26					12			65
	1	1		1					12			40
			1						1			6
			1									1
									1			6
												19
												19
	1			1					11			14
	1			1					5			7
									6			6
												1
				25								25
				463								712
				-295								19
												-535
												-3
												3
				168								196
	1			-87								-90
				-45								-46
				-6								-6
	1			-36								-35
												-3
				-51						-4		-55
				-10					15			5
	1			20					11			57
	1			1					11			38
									1			6
												6
												19
												19
	1			1					11			13
	1			1					5			6
									6			6
												1
				19								19

Major energy indicators of Brunei Darussalam

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	53	116	137	130	137	174	180	196	191
Indigenous production	691	825	903	969	859	775	736	712	692
Import	1	1	1	2	5	13	16	19	16
Export	-635	-703	-768	-834	-729	-610	-572	-535	-505
Final energy consumption	16	23	24	28	34	38	36	38	40
Industry	3	4	3	3	5	6	5	6	6
Transport	8	11	12	14	17	19	18	19	19
Residential	4	5	5	6	7	6	7	6	7
Commerce & public services	1	3	5	5	5	7	6	6	6
Others								1	1
Coal & Peat									
Primary energy supply									
Indigenous production									
Import									
Export									
Transformation sector									
Power generation									
Final energy consumption									
Industry									
Transport									
Residential									
Commerce & public services									
Others									
Coal & peat products									
Primary energy supply									
Indigenous production									
Import									
Export									
Transformation sector									
Power generation									
Final energy consumption									
Industry									
Transport									
Residential									
Commerce & public services									
Others									
Crude oil & NGL									
Primary energy supply	5	12	28	23	26	18	15	13	16
Indigenous production	340	391	451	488	366	280	270	250	246
Import									
Export	-334	-375	-428	-462	-347	-267	-256	-240	-224
Transformation sector	-14	-17	-24	-26	-25	-18	-11	-13	-16
Petroleum refineries	-14	-17	-24	-26	-25	-18	-11	-13	-16
Petroleum products									
Primary energy supply	-1	-2	-2	-2	1	10	13	15	12
Import	1	1	1	2	5	13	16	19	16
Export									
Transformation sector	13	20	21	23	21	16	11	10	14
Power generation							-1	-1	-1
Petroleum refineries	13	19	21	22	21	16	11	10	13
Final energy consumption	10	15	14	17	22	25	23	26	27
Industry	2	3	2	2	5	5	4	6	6
Transport	8	11	12	14	17	19	18	19	19
Residential	1	1	1	1	1	1	1	1	1
Commerce & public services									
Others								1	1
Gas									
Primary energy supply	50	106	112	109	111	147	152	168	163
Indigenous production	351	433	452	481	492	494	466	463	446
Import									
Export	-301	-328	-340	-372	-382	-343	-316	-295	-281
Transformation sector	-22	-39	-45	-52	-56	-58	-71	-87	-94
Power generation	-22	-39	-45	-52	-56	-58	-56	-52	-54
Final energy consumption	1	2	1	1	1	1	1	1	1
Industry									
Transport									
Residential	1	2	1	1	1	1	1	1	1
Commerce & public services									
Others									
Electricity									
Power generation	5	9	11	13	15	17	17	15	15
Thermal	5	9	11	13	15	17	17	15	15
Hydro									
Nuclear									
Others	0								
Final energy consumption	4	7	9	10	11	12	12	11	12
Industry	1	1	1	1	1	1	1	1	1
Transport									
Residential	2	3	3	4	5	5	5	5	5
Commerce & public services	1	3	5	5	5	7	6	6	6
Others									

Major economic indicators of Brunei Darussalam

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ^{*1}	0.26	0.33	0.37	0.39	0.41	0.42	0.42	0.43
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	10	12	13	14	14	13	13	13
GDP, billion USD (PPP, constant 2017)	18	415	693	1 146	1 352	1 209	1 329	1 433
Nominal, billion USD (current)	4	6	10	14	13	11	12	14
GDP per capita ^{*3}								
Real term (constant 2010 USD)	37 081	35 931	36 329	35 269	32 873	31 685	31 753	31 437
GDP, PPP (constant 2017 USD)	71 231	1246 297	1899 154	2949 055	3257 824	2879 578	3131 385	3340 345
Nominal (current USD)	13 608	18 013	26 105	35 270	31 165	27 158	28 572	31 628
Nominal GDP & its components (billions of current BND) ^{*1}								
Gross domestic product	6	10	16	19	18	16	17	18
Households and NPISHs final consumption expenditure	2	3	4	3	4	3	3	4
General government final consumption expenditure	1	3	3	4	4	4	4	4
Gross fixed capital formation	1	1	2	4	6	5	6	7
Stock change								
Exports of goods and services	4	7	11	13	9	8	8	10
Imports of goods and services	2	4	4	5	7	6	6	8
Real GDP & its components (billions of 2010 BND) ^{*1}								
Gross Domestic Product	13	16	18	19	19	18	18	18
Households and NPISHs final consumption expenditure	1	2	2	3	3	3	3	4
General government final consumption expenditure	2	3	3	4	4	4	4	5
Gross fixed capital formation	3	2	3	4	6	6	6	8
Stock change		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Exports of goods and services	11	15	16	13	10	10	10	10
Imports of goods and services	3	4	4	5	6	6	6	8
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	0.6	0.7	0.9	0.7	0.9	0.8	0.8	0.8
Industry	82.7	83.2	80.0	68.7	63.4	63.1	63.2	62.9
Services, etc.	25.2	24.8	26.3	32.5	37.7	38.0	37.9	38.2
Industrial production index (2010=100) ^{*2}	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	2.2	3.9	6.2	8.9	6.4	4.9	5.6	6.6
Imports, c.i.f.	1.0	1.1	1.5	2.5	3.2	2.7	3.1	4.2
Balance of payments (billions of current USD) ^{*2}								
Trade balance	N.A.	N.A.	4.8	6.2	3.1	1.9	1.4	1.1
Current account	N.A.	N.A.	4.0	5.0	2.5	1.3	0.9	0.6
Overall balance	N.A.	N.A.	3.9	0.2	1.5	0.2	-1.2	0.7
Foreign exchange rate (BND/USD) ^{*1}	1.81	1.72	1.66	1.36	1.37	1.38	1.38	1.35
PPP conversion factor, GDP (BND/USD) ^{*1}	0.44	0.47	0.58	0.60	0.69	0.67	0.65	0.69
Price Indices								
GDP Deflator (2010=100) ^{*3}	48.8	63.4	87.7	100.0	95.6	86.8	91.1	99.5
Producer Price Index	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Consumer Price Index (2010=100) ^{*2}	78.0	95.0	95.5	100.0	99.9	99.7	98.4	99.4
Growth rate (%) ^{*3}								
Real GDP	1.1	2.8	0.4	2.6	-0.4	-2.5	1.3	0.1
Population	2.9	2.1	1.6	1.2	1.3	1.2	1.1	1.1
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Consumer prices	2.1	1.6	1.2	0.4	-0.5	-0.3	-1.3	1.0

Source ^{*1}: *World Development Indicators*, World Bank

^{*2}: *International Financial Statistics*, International Monetary Fund

^{*3}: Calculated from ^{*1} and ^{*2} by ESTO

Note : N.A. means "not available"

: BND means Brunei Dollar, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

Energy prices in Brunei Darussalam in 2018

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	1.38
Local Currency Unit		BND

IMPORT PRICES

WHOLESALE PRICES

CONSUMER PRICES

	Unit	Amount		Unit	Amount		Unit	Amount
Coal and Coal Products			Coal and Coal Products			Coal and Coal Products		
Coking Coal			Coking Coal			Coking Coal		
Anthracite			Anthracite			Anthracite		
Other bituminous coal			Other bituminous coal			Other bituminous coal		
Sub-bituminous Coal			Sub-bituminous Coal			Sub-bituminous Coal		
Lignite			Lignite			Lignite		
Peat			Peat			Peat		
Patent Fuel			Patent Fuel			Patent Fuel		
Coke			Coke			Coke		
Coal Tar			Coal Tar			Coal Tar		
BKB/PB			BKB/PB			BKB/PB		
			Gas Works Gas			Gas Works Gas		
Oil and Oil Products			Oil and Oil Products			Oil and Oil Products		
Crude Oil			Crude Oil			Crude Oil	USD/barrel	73.17
Natural Gas Liquids			Natural Gas Liquids			Natural Gas Liquids		
Ethane			Ethane			Ethane		
LPG			LPG			LPG Cylinder 12 kg	BND/cylinder	10.00
Naphtha			Naphtha			Cylinder 44 kg	BND/cylinder	34.56
Motor Gasoline			Motor Gasoline			Naphtha		
Aviation Gasoline			Aviation Gasoline			Motor Gasoline RON97	BND/L	0.53
Gasoline Type Jet Fuel			Gasoline Type Jet Fuel			RON92	BND/L	0.52
Kerosene Type Jet Fuel			Kerosene Type Jet Fuel			RON85	BND/L	0.36
Other Kerosene			Other Kerosene			Aviation Gasoline		
Gas/Diesel Oil			Gas/Diesel Oil			Gasoline Type Jet Fuel		
Fuel Oil			Fuel Oil			Kerosene Type Jet Fuel		
White Spirit SBP			White Spirit SBP			Other Kerosene		
Lubricants			Lubricants			Gas/Diesel Oil	BND/L	0.31
Bitumen			Bitumen			Fuel Oil		
Paraffin Waxes			Paraffin Waxes			White Spirit SBP		
Petroleum Coke			Petroleum Coke			Lubricants		
						Bitumen		
						Paraffin Waxes		
						Petroleum Coke		
Natural Gas			Natural Gas			Natural Gas		
Natural Gas			Natural Gas			Natural Gas		
Liquefied Natural Gas			Liquefied Natural Gas			Liquefied Natural Gas (export)	USD/Mmbtu	10.45
Compressed Natural Gas			Compressed Natural Gas			Compressed Natural Gas		
Electricity			Electricity			Electricity		
Electricity			Electricity			Industrial		
						Commercial - The first 10 units	BND/kVA	0.20
						Next 100 units	BND/kVA	0.07
						Next 100 units	BND/kVA	0.06
						Remaining units	BND/kVA	0.05
						Minimum charge	BND	2.00
						Residential - 1-600 kWh	BND/kWh	0.01
						601-2000 kWh	BND/kWh	0.08
						2001-4000 kWh	BND/kWh	0.10
						4001 kWh above	BND/kWh	0.12
						Others (Government)	BND/kWh	0.10
Other Energy Products			Other Energy Products			Other Energy Products		

CANADA

Energy balance table of Canada

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production	1 299		11 185						
Import	199	30	1 827	566	180	1	129	3	92
Export	- 836	- 1	- 8 212	- 929	- 296	- 24	- 50		- 273
International marine bunkers				- 19					- 4
International aviation bunkers				- 37			- 37		
Stock changes	- 53	3	- 32	- 13	- 3		- 3	1	- 5
Total primary energy supply	609	32	4 768	- 433	- 119	- 23	38	4	- 189
Transfers			- 315	470	185	- 2	- 4		21
Total transformation sector	- 553	58	- 3 945	3 831	1 385	87	246	32	1 261
Main activity producers	- 452			- 57					- 9
Autoproducers		- 2		- 23					- 6
Gas processing									
Petroleum refineries			- 4 101	3 911	1 385	87	246	32	1 276
Coal transformation	- 102	59							
Other transformation			156						
Losses & own use				- 646	- 1	- 1			- 105
Discrepancy	- 14	- 18	- 508	758	118	44	4	- 19	190
Total final consumption	42	72		3 980	1 568	105	284	16	1 177
Total final energy consumption	38	70		3 193	1 568		284	16	1 177
Industry sector	38	70		257	36		1	1	166
Iron and steel	7	67							
Chemical & petrochemical									
Non-metallic minerals	11	2		18					
Other industries	40	1		239	36		1	1	166
Transport sector				2 583	1 480		283		791
Domestic air transport				283	2		281		
Road				2 156	1 477				668
Rail				93					93
Inland waterways				46					28
Other transport				5	1		2		1
Other sector				353	52			15	220
Residential				70				1	54
Commerce and public services				55				13	7
Agriculture				228	52			1	158
Non-specified others									
Non-energy	3	2		787		105			
2017									
Indigenous production	1 294		10 413						
Import	195	33	1 898	484	156	1	105	3	46
Export	- 773		- 7 468	- 1 013	- 365	- 27	- 49		- 342
International marine bunkers				- 16					- 4
International aviation bunkers				- 27			- 27		
Stock changes	- 20	7	- 14	- 14	1		- 1		- 7
Total primary energy supply	695	40	4 830	- 586	- 209	- 25	28	3	- 306
Transfers			- 528	692	208	- 4	- 2		43
Total transformation sector	- 661	45	- 4 039	3 944	1 492	79	250	33	1 362
Main activity producers	- 580			- 58					- 8
Autoproducers		- 2		- 20					- 4
Gas processing									
Petroleum refineries			- 4 166	4 021	1 492	79	250	33	1 375
Coal transformation	- 82	47							
Other transformation			127						
Losses & own use				- 643	- 1	- 1		- 1	- 99
Discrepancy	11	- 18	- 263	458	29	54	- 12	- 18	152
Total final consumption	45	67		3 865	1 519	102	264	18	1 151
Total final energy consumption	42	65		3 108	1 519		264	18	1 151
Industry sector	42	65		259	36		1	1	164
Iron and steel	7	62							
Chemical & petrochemical									
Non-metallic minerals	14	2		21					
Other industries	42	2		237	36		1	1	164
Transport sector				2 500	1 430		263		777
Domestic air transport				263	2		261		
Road				2 096	1 428				657
Rail				91					91
Inland waterways				46					28
Other transport				4	1		2		1
Other sector				349	53			17	210
Residential				71				2	52
Commerce and public services				58				15	8
Agriculture				220	52			1	150
Non-specified others									
Non-energy	4	2		757		102			

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				6 477	1 389	1 099		710			22 160	2 090
24	9		127	808				56	48		3 533	56
- 149	- 6		- 131	- 2 804				- 58	- 221		- 13 062	- 58
- 15											- 19	
											- 37	
1			- 4	- 20							- 115	
- 139	4		- 8	4 461	1 389	1 099		707	- 174		12 459	2 087
- 14	156	256	- 127								155	
186	64	129	441	- 801	- 1 389	- 1 099		- 246	2 355	20	- 1 769	- 1 632
- 21			- 27	- 388	- 1 283	- 1 099		- 162	2 143	19	- 1 279	- 1 442
- 2		- 13	- 3	- 259	- 106			- 84	213	1	- 260	- 190
209	64	142	470								- 190	
											- 42	
											2	
- 5	- 18	- 398	- 119	- 1 420					- 328		- 2 394	
21	- 86	13	474	- 80				- 3	34	8	176	
49	121		659	2 161				458	1 888	28	8 627	451
49	78		20	2 025				458	1 888	28	7 699	451
23	10		20	639				228	662	26	1 919	221
				88					33		196	
				164					75	12	251	
1			17	33				6	7		78	
22	10		3	355				221	546	14	1 416	221
18	11			153				90	29		2 855	90
											283	
	11			2				90	4		2 253	90
											93	
18											46	
				151					24		180	
8	57			1 232				140	1 197	2	2 925	140
	15			675				138	621		1 505	138
	33			518				1	539	1	1 114	1
8	9			39					37		304	
								2		1	3	2
	43		639	136							929	
				6 360	1 420	1 105		696			21 289	2 108
34	12		128	879				62	36		3 587	62
- 119	- 7		- 105	- 2 956				- 53	- 259		- 12 522	- 53
- 12											- 16	
											- 27	
											24	
- 2	- 2		- 5	65							- 2	
- 99	3		18	4 349	1 420	1 105		706	- 224		12 335	2 117
- 15	161	301									165	
164	72	116	376	- 687	- 1 420	- 1 105		- 246	2 386	19	- 1 765	- 1 664
- 24			- 26	- 303	- 1 312	- 1 105		- 158	2 159	18	- 1 339	- 1 467
- 2		- 11	- 2	- 259	- 109			- 88	228	1	- 249	- 197
191	72	127	404								- 145	
											- 34	
											2	
- 10	- 14	- 391	- 126	- 1 334					- 333		- 2 309	
12	- 99	- 26	366	- 330					20	9	- 113	
53	124		634	1 997				459	1 849	29	8 312	453
53	80		23	1 869				459	1 849	29	7 421	453
26	8		23	611				229	656	26	1 888	223
				85					31		186	
				152					67	12	231	
1			20	32				6	7		83	
25	8		3	342				223	550	14	1 411	223
18	11			136				90	28		2 754	90
											263	
	11			2				90	4		2 192	90
											91	
18											46	
				134					24		162	
9	60			1 122				140	1 165	2	2 779	140
	16			593				138	604		1 407	138
1	34			493				1	526	1	1 079	1
8	10			36					35		291	
								2		1	3	2
	45		611	129							891	

Major energy indicators of Canada

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	8 846	9 792	10 620	11 471	10 918	11 832	11 950	12 335	12 459
Indigenous production	11 575	14 736	15 696	16 829	16 680	19 783	20 064	21 289	22 160
Import	1 943	1 896	3 018	3 665	3 533	3 658	3 723	3 587	3 533
Export	-4 427	-6 907	-8 364	-9 085	-9 547	-11 520	-12 003	-12 522	-13 062
Final energy consumption	6 005	6 522	7 010	7 177	6 900	7 305	7 165	7 421	7 699
Industry	1 978	2 146	2 313	2 139	1 792	1 889	1 820	1 888	1 919
Transport	1 805	2 000	2 183	2 459	2 539	2 662	2 678	2 754	2 855
Residential	1 316	1 357	1 375	1 390	1 384	1 451	1 364	1 407	1 505
Commerce & public services	770	859	962	972	948	1 018	1 016	1 079	1 114
Others	136	160	176	217	236	286	286	294	306
Coal & Peat									
Primary energy supply	1 024	1 050	1 322	1 236	941	752	709	695	609
Indigenous production	1 588	1 710	1 441	1 447	1 421	1 292	1 223	1 294	1 299
Import	390	269	614	510	312	196	164	195	199
Export	-892	-979	-799	-703	-842	-756	-756	-773	-836
Transformation sector	-973	-985	-1 245	-1 098	-909	-665	-664	-661	-553
Power generation	-836	-869	-1 126	-977	-799	-581	-584	-580	-452
Final energy consumption	43	45	54	58	58	48	38	42	38
Industry	41	43	52	56	57	47	38	42	38
Transport									
Residential	2	2	2	2	1				
Commerce & public services									
Others									
Coal & peat products									
Primary energy supply	-8	11	5	24	26	29	28	40	32
Indigenous production	9	22	17	35	30	33	34	33	30
Import	-5	-9	-8	-7	-2	-2	-1		-1
Export									
Transformation sector	84	74	70	79	59	51	46	45	58
Power generation	-1	-1	-3	-1		-2	-2	-2	-2
Final energy consumption	77	88	85	85	68	58	63	65	70
Industry	77	88	85	85	68	58	63	65	70
Transport									
Residential									
Commerce & public services									
Others									
Crude oil & NGL									
Primary energy supply	3 467	3 525	4 048	4 305	4 357	4 845	4 499	4 830	4 768
Indigenous production	3 942	4 750	5 377	5 985	6 999	9 477	9 446	10 413	11 185
Import	1 136	1 276	1 965	2 056	1 773	2 159	2 173	1 898	1 827
Export	-1 583	-2 534	-3 284	-3 636	-4 350	-6 781	-7 149	-7 468	-8 212
Transformation sector	-3 582	-3 525	-3 992	-4 209	-3 991	-3 770	-3 822	-4 039	-3 945
Petroleum refineries	-3 596	-3 525	-3 989	-4 284	-4 108	-3 911	-3 953	-4 166	-4 101
Petroleum products									
Primary energy supply	-263	-294	-401	-327	-326	-463	-353	-586	-433
Import	321	278	308	657	542	501	560	484	566
Export	-496	-516	-624	-914	-857	-952	-902	-1 013	-929
Transformation sector	3 469	3 522	3 931	4 179	4 067	3 717	3 778	3 944	3 831
Power generation	-159	-85	-101	-148	-87	-87	-81	-78	-80
Petroleum refineries	3 628	3 607	4 032	4 327	4 155	3 804	3 859	4 021	3 911
Final energy consumption	2 267	2 317	2 541	2 894	2 936	3 002	3 013	3 108	3 193
Industry	284	241	270	250	213	231	235	259	257
Transport	1 672	1 774	1 962	2 257	2 373	2 413	2 425	2 500	2 583
Residential	195	144	136	131	114	80	77	71	70
Commerce & public services	31	52	56	94	60	67	63	58	55
Others	84	106	117	162	176	211	212	220	228
Gas									
Primary energy supply	2 292	2 810	3 109	3 398	3 169	3 684	4 126	4 349	4 461
Indigenous production	3 709	5 453	6 212	6 473	5 419	5 826	6 217	6 360	6 477
Import	22	23	56	328	784	693	714	879	808
Export	-1 383	-2 710	-3 462	-3 659	-3 314	-2 749	-2 879	-2 956	-2 804
Transformation sector	-102	-241	-369	-415	-598	-762	-730	-687	-801
Power generation	-78	-181	-308	-342	-484	-622	-601	-562	-647
Final energy consumption	1 672	1 952	2 066	1 817	1 643	1 869	1 796	1 869	2 025
Industry	706	767	809	583	531	607	594	611	639
Transport	121	212	199	180	103	150	154	136	153
Residential	476	567	580	582	554	621	551	593	675
Commerce & public services	348	385	453	454	431	456	459	493	518
Others	21	21	25	18	24	35	37	36	39
Electricity									
Power generation	1 735	2 016	2 180	2 234	2 171	2 368	2 389	2 386	2 355
Thermal	390	434	597	566	503	485	475	433	431
Hydro	1 068	1 209	1 291	1 303	1 265	1 376	1 387	1 420	1 389
Nuclear	263	352	262	331	326	367	365	365	363
Others	14	21	31	34	76	141	162	168	173
Final energy consumption	1 505	1 608	1 733	1 758	1 716	1 794	1 779	1 849	1 888
Industry	605	665	732	741	632	628	628	656	662
Transport	12	14	16	15	15	24	27	28	29
Residential	467	474	498	544	578	613	598	604	621
Commerce & public services	390	421	453	421	457	492	492	526	539
Others	31	34	35	37	34	36	34	35	37

Major economic indicators of Canada

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ^{*1}	27.69	30.69	32.24	34.00	35.70	36.11	36.54	37.06
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	933	1 207	1 434	1 614	1 795	1 813	1 870	1 908
GDP, billion USD (PPP, constant 2017)	887	1 147	1 363	1 533	1 706	1 723	1 777	1 813
Nominal, billion USD (current)	594	742	1 170	1 614	1 557	1 528	1 650	1 716
GDP per capita ^{*3}								
Real term (constant 2010 USD)	33 709	39 341	44 473	47 450	50 264	50 196	51 173	51 479
GDP, PPP (constant 2017 USD)	32 036	37 389	42 267	45 096	47 770	47 706	48 634	48 924
Nominal (current USD)	21 449	24 185	36 278	47 450	43 596	42 316	45 142	46 311
Nominal GDP & its components (billions of current CAD) ^{*1}								
Gross domestic product	693	1 102	1 417	1 662	1 990	2 026	2 141	2 224
Households and NPISHs final consumption expenditure	388	603	772	950	1 151	1 185	1 240	1 289
General government final consumption expenditure	157	211	271	358	416	426	444	466
Gross fixed capital formation	151	217	310	391	475	461	487	501
Stock change	-3	11	11		-1		17	12
Exports of goods and services	174	489	524	486	634	638	673	713
Imports of goods and services	173	426	468	517	683	686	720	757
Real GDP & its components (billions of 2005 CAD) ^{*1}								
Gross Domestic Product	1 035	1 339	1 590	1 790	1 990	2 010	2 074	2 116
Households and NPISHs final consumption expenditure	583	753	882	1 025	1 151	1 175	1 217	1 243
General government final consumption expenditure	296	314	351	403	416	423	433	446
Gross fixed capital formation	233	303	399	440	475	453	469	474
Stock change	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Exports of goods and services	245	554	577	522	634	643	652	672
Imports of goods and services	227	449	528	591	683	683	712	731
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Industry	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Services, etc.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Industrial production index (2010=100) ^{*2}	65.6	81.1	91.4	111.9	113.1	112.5	109.3	105.7
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	127.6	276.6	360.5	387.5	410.1	390.0	420.7	450.8
Imports, c.i.f.	123.2	244.8	322.4	402.7	430.1	412.9	443.7	470.5
Balance of payments (billions of current USD) ^{*2}								
Trade balance	9.4	44.4	50.6	-9.4	-18.6	-19.2	-18.8	-17.1
Current account	-20.3	18.5	21.9	-58.2	-54.7	-47.3	-46.4	-43.0
Overall balance	2.5	8.0	2.7	3.8	6.0	3.8	-4.1	-9.2
Foreign exchange rate (CAD/USD) ^{*1}	1.17	1.49	1.21	1.03	1.28	1.33	1.30	1.30
PPP conversion factor, GDP (CAD/USD) ^{*1}	1.24	1.23	1.21	1.22	1.25	1.21	1.20	1.20
Price Indices								
GDP Deflator (2010=100) ^{*3}	66.9	82.3	89.1	92.9	100.0	100.8	103.2	105.1
Producer Price Index (2010=100) ^{*2}	49.2	71.2	83.5	90.0	94.2	96.4	97.8	102.1
Consumer Price Index (2010=100) ^{*2}	37.8	67.3	75.2	81.9	91.9	93.7	95.7	98.0
Growth rate (%) ^{*3}								
Real GDP	0.2	4.9	5.0	3.1	0.7	1.0	3.2	2.0
Population	1.5	0.9	0.9	1.1	0.7	1.1	1.2	1.4
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices	0.0	0.3	7.4	4.3	1.6	2.3	1.5	4.4
Consumer prices	0.0	4.8	2.1	2.7	2.2	2.0	2.1	2.4

Source ^{*1}: *World Development Indicators*, World Bank

^{*2}: *International Financial Statistics*, International Monetary Fund

^{*3}: Calculated from ^{*1} and ^{*2} by ESTO

Note

: N.A. means "not available"

: CAD means Canadian Dollar, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

CHILE

Energy balance table of Chile

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production	38		17						
Import	274		377	356	25	7	27		238
Export	-7	-1		-31	-1				
International marine bunkers				-5					
International aviation bunkers				-28			-28		
Stock changes	-5	-1	2	-2		-1	1		
Total primary energy supply	300	-2	397	288	23	6			238
Transfers			40	-39	-2	-9		-2	-10
Total transformation sector	-294	11	-440	402	133	3	28	7	125
Main activity producers	-279			-12					-5
Autoproducers				-4					-2
Gas processing									
Petroleum refineries			-440	419	133	3	28	7	132
Coal transformation	-15	11							
Other transformation									
Losses & own use		-6		-14					
Discrepancy	1		3	13	-6		-3		5
Total final consumption	7	3		650	149		25	5	358
Total final energy consumption	7	3		639	149		25	5	358
Industry sector	7	3		151			2	1	115
Iron and steel		2							
Chemical & petrochemical									
Non-metallic minerals				9					
Other industries	14	1		142			2	1	114
Transport sector				392	149		23		211
Domestic air transport				23			23		
Road				351	148				201
Rail				2					2
Inland waterways				16					7
Other transport									
Other sector				96				4	33
Residential				46				4	
Commerce and public services				30					22
Agriculture				9					5
Non-specified others				10					7
Non-energy				12					
2017									
Indigenous production	41		13						
Import	280		373	343	24	7	28	1	227
Export	-15	-1		-21	-2				-1
International marine bunkers				-6					
International aviation bunkers				-26			-26		
Stock changes	3		-1	-6	-2	-1	-1		-2
Total primary energy supply	309	-1	385	284	20	7	1		224
Transfers			34	-33	-4	-10		-2	-5
Total transformation sector	-304	10	-422	393	137	3	26	7	122
Main activity producers	-290			-16					-9
Autoproducers				-6					-3
Gas processing									
Petroleum refineries			-423	415	137	3	26	7	133
Coal transformation	-14	10							
Other transformation			2						
Losses & own use		-6		-12					
Discrepancy	5		3	5	-5		-5		5
Total final consumption	9	3		637	149		23	6	346
Total final energy consumption	9	3		623	149		23	6	346
Industry sector	9	3		151			2		115
Iron and steel		3							
Chemical & petrochemical									
Non-metallic minerals				9					
Other industries	18	1		142			2		115
Transport sector				379	149		21		199
Domestic air transport				22			21		
Road				340	148				190
Rail				2					2
Inland waterways				16					7
Other transport									
Other sector				93				5	31
Residential				44				5	
Commerce and public services				30					20
Agriculture				9					4
Non-specified others				9					6
Non-energy				14					

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				44	84		8	380			571	471
1	51		7	145							1 151	
-16	-5		-9	-6							-45	
-5											-5	
	-2							-1			-28	
											-8	-1
-20	43		-2	183	84		8	379			1 636	470
-1	-2		-13								1	
44	21	10	31	-91	-84		-8	-228	296		-434	-320
			-7	-86	-84		-8	-57	271		-255	-148
-2				-5				-165	25		-149	-165
46	21	10	39								-21	
											-3	
								-6			-6	-6
-1	-2	-10		-12					-24		-56	
7	4		5	4				19	-10		30	19
29	64		21	84				170	263		1 177	170
29	64		10	65				170	263		1 146	170
15	9		10	36				88	159		443	88
				5					2		5	
			9						2		11	
15	9		1	31				88	154		430	88
9	1			1					4		397	
											23	
	1			1					2		354	
									2		4	
9											16	
5	53			28				82	100		306	82
	42			21				78	48		193	78
	8			6				1	43		80	1
1	3			1				1	9		20	1
3								2			13	2
			12	19							31	
				43	77		2	367			543	446
1	50		6	147							1 143	
-12	-3		-3	-7							-45	
-6											-6	
			1	-1							-26	
-2			4	182	77		2	368			-4	
-19	46		-11								1 605	447
	-2										1	
44	13	10	31	-97	-77		-2	-226	286		-439	-305
			-7	-91	-77		-2	-56	259		-272	-135
-3				-4				-165	27		-149	-165
47	14	10	37								-9	
											-4	
								-5			-5	-5
-2	-1	-10		-11				-1	-26		-56	-1
5	5			-4				14	-9		15	14
29	62		24	71				156	251		1 127	156
29	62		9	62				156	251		1 103	156
15	10		9	34				78	149		424	78
				3					2		5	
											3	
			9						2		11	
15	9		1	30				78	145		414	78
9	1			1					3		383	
											22	
	1			1					2		342	
									2		3	
9											16	
5	52			28				78	98		296	78
	39			20				75	45		184	75
	9			7				1	46		84	1
2	3			1					6		16	
3								2	1		12	2
			14	9							23	

Major energy indicators of Chile

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	587	768	1 054	1 188	1 292	1 487	1 583	1 605	1 636
Indigenous production	332	348	359	391	386	506	525	543	571
Import	303	458	780	931	960	1 049	1 145	1 143	1 151
Export	-9	-5	-37	-73	-26	-36	-50	-45	-45
Final energy consumption	426	598	753	813	956	1 038	1 086	1 103	1 146
Industry	143	202	278	305	365	439	444	424	443
Transport	128	191	237	258	299	354	370	383	397
Residential	131	172	204	205	223	166	183	184	193
Commerce & public services	20	27	26	39	57	67	75	84	80
Others	5	6	8	6	12	11	13	29	33
Coal & Peat									
Primary energy supply	104	94	128	112	188	276	299	309	300
Indigenous production	61	29	10	11	11	53	42	41	38
Import	46	61	122	100	159	238	278	280	274
Export						-14	-15	-15	-7
Transformation sector	-84	-78	-107	-92	-176	-290	-307	-304	-294
Power generation	-70	-58	-87	-72	-161	-274	-291	-290	-279
Final energy consumption	21	16	21	18	14	7	6	9	7
Industry	18	15	20	17	14	7	6	9	7
Transport									
Residential	1								
Commerce & public services									
Others	2	1							
Coal & peat products									
Primary energy supply	1	4	1	1	-1	-2	-2	-1	-2
Indigenous production									
Import	1	1	1	2					
Export	-1	-1	-1	-1		-1	-4	-1	-1
Transformation sector	7	11	9	11	9	10	11	10	11
Power generation									
Final energy consumption	4	9	4	7	3	2	3	3	3
Industry	4	9	4	7	3	2	3	3	3
Transport									
Residential									
Commerce & public services									
Others									
Crude oil & NGL									
Primary energy supply	275	352	426	456	388	375	373	385	397
Indigenous production	49	28	18	15	26	12	11	13	17
Import	233	327	418	441	363	364	360	373	377
Export									
Transformation sector	-263	-341	-419	-471	-414	-432	-424	-422	-440
Petroleum refineries	-263	-341	-419	-471	-414	-432	-424	-423	-440
Petroleum products									
Primary energy supply	-4	40	13	28	240	265	302	284	288
Import	23	69	81	159	307	316	354	343	356
Export	-9	-2	-36	-72	-26	-20	-19	-21	-31
Transformation sector	241	320	389	422	298	383	373	393	402
Power generation	-20	-21	-19	-41	-73	-32	-32	-22	-17
Petroleum refineries	263	343	408	464	372	415	405	415	419
Final energy consumption	222	334	381	393	494	575	607	623	639
Industry	56	87	86	87	127	165	163	151	151
Transport	127	190	236	256	297	349	365	379	392
Residential	32	45	46	37	39	34	42	44	46
Commerce & public services	5	7	7	10	19	18	26	30	30
Others	3	4	7	4	12	9	11	18	19
Gas									
Primary energy supply	48	48	218	285	187	167	182	182	183
Indigenous production	59	60	67	67	65	35	42	43	44
Import			154	221	126	131	153	147	145
Export		-2					-13	-7	-6
Transformation sector	-1	-1	-70	-114	-73	-81	-89	-97	-91
Power generation	-3	-3	-69	-113	-73	-81	-89	-95	-91
Final energy consumption	9	11	43	53	69	58	60	62	65
Industry			28	33	46	32	34	34	36
Transport				1	1	1	1	1	1
Residential	7	9	11	15	17	19	19	20	21
Commerce & public services	1	1	3	4	5	6	5	7	6
Others				1				1	1
Electricity									
Power generation	66	101	144	189	218	271	286	286	296
Thermal	31	28	74	87	130	153	162	160	159
Hydro	32	66	67	95	78	86	84	77	84
Nuclear									
Others	3	7	3	6	10	32	40	49	53
Final energy consumption	56	87	132	174	197	241	253	251	263
Industry	37	60	92	117	129	152	157	149	159
Transport	1	1	1	1	2	4	4	3	4
Residential	16	23	22	30	34	42	49	45	48
Commerce & public services	3	4	16	26	32	42	43	46	43
Others			1					7	9

Major economic indicators of Chile

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ¹	13.27	15.34	16.18	17.06	17.97	18.21	18.47	18.73
Gross domestic product ³								
Real term, billion USD (constant 2010)	79	145	182	219	265	269	272	283
GDP, billion USD (PPP, constant 2017)	126	232	292	351	425	432	437	454
Nominal, billion USD (current)	33	78	123	219	244	250	277	298
GDP per capita ³								
Real term (constant 2010 USD)	5 933	9 420	11 225	12 808	14 722	14 777	14 741	15 112
GDP, PPP (constant 2017 USD)	9 525	15 122	18 020	20 561	23 634	23 722	23 664	24 259
Nominal (current USD)	2 494	5 074	7 599	12 808	13 574	13 754	14 999	15 925
Nominal GDP & its components (billions of current CLP) ¹								
Gross domestic product	10 096	42 005	68 832	111 509	159 553	169 537	179 756	191 266
Households and NPISHs final consumption expenditure	6 246	26 906	40 528	65 037	101 221	107 485	113 984	121 274
General government final consumption expenditure	985	5 075	7 280	13 502	20 732	23 362	25 363	27 754
Gross fixed capital formation	2 421	8 833	15 248	24 035	37 934	38 545	37 781	40 796
Stock change	199	457	- 215	1 768	17	- 887	429	1 789
Exports of goods and services	3 281	12 825	27 643	42 089	46 871	47 722	51 122	54 674
Imports of goods and services	2 953	12 091	21 652	34 923	47 221	46 690	48 923	55 020
Real GDP & its components (billions of 2008 CLP) ¹								
Gross Domestic Product	42 735	78 419	98 564	118 578	143 545	146 001	147 736	153 571
Households and NPISHs final consumption expenditure	21 402	43 078	54 733	71 982	90 567	93 018	96 190	99 777
General government final consumption expenditure	7 227	10 186	12 073	15 520	18 453	19 776	20 684	21 574
Gross fixed capital formation	5 119	11 693	18 821	25 610	32 452	32 018	31 026	32 530
Stock change	N.A.	710	- 281	1 589	29	- 717	373	1 382
Exports of goods and services	11 180	27 009	37 060	40 623	43 778	43 999	43 337	45 493
Imports of goods and services	5 568	15 357	24 598	36 576	41 778	42 142	44 066	47 552
Sectoral shares of Real GDP (%) ¹								
Agriculture, Fishery and Forestry	3.9	3.5	3.9	3.7	3.5	3.5	3.5	3.4
Industry	42.7	41.9	36.5	32.3	30.4	29.8	29.3	29.6
Services, etc.	47.9	49.8	51.8	55.7	57.7	58.2	58.5	58.3
Industrial production index (2010=100) ²	N.A.	78.4	98.1	100.0	111.7	109.7	110.3	N.A.
External trade (billions of current USD) ¹								
Exports, f.o.b	8.4	19.2	41.3	71.1	62.0	60.7	68.9	75.5
Imports, c.i.f.	7.9	18.5	32.7	59.2	62.4	59.4	65.3	75.0
Balance of payments (billions of current USD) ²								
Trade balance	1.3	2.2	11.3	15.9	3.4	4.9	7.4	0.0
Current account	-0.5	-0.9	1.8	3.1	-5.6	-4.0	-6.0	0.0
Overall balance	2.4	-0.1	2.7	3.9	0.5	0.4	-4.0	0.0
Foreign exchange rate (CLP/USD) ¹	304.90	539.59	559.77	510.25	654.12	676.96	648.83	641.28
PPP conversion factor, GDP (CLP/USD) ¹	168.60	286.58	333.69	359.84	391.36	409.98	411.26	412.36
Price Indices								
GDP Deflator (2013=100) ³	23.6	53.6	69.8	94.0	111.2	116.1	121.7	124.5
Producer Price Index (2010=100) ²	N.A.	N.A.	1.4	100.0	93.9	90.5	100.0	0.0
Consumer Price Index (2010=100) ²	30.0	73.7	83.7	100.0	118.4	122.9	125.6	0.0
Growth rate (%) ³								
Real GDP	3.3	5.3	5.7	5.8	2.3	1.7	1.2	3.9
Population	1.7	1.2	1.0	1.0	1.2	1.3	1.4	1.4
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices	N.A.	N.A.	N.A.	23.0	-6.8	-3.7	10.5	-100.0
Consumer prices	26.0	3.8	3.1	1.4	4.3	3.8	2.2	-100.0

Source ¹: *World Development Indicators*, World Bank

²: *International Financial Statistics*, International Monetary Fund

³: Calculated from ¹ and ² by ESTO

Note : N.A. means "not available"

: CLP means Chilean Peso, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

CHINA

Energy balance table of China

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production	76 103		7 927						
Import	5 030	3	19 338	2 836	19	287	178		30
Export	- 123	- 279	- 110	-2 686	- 555	- 2	- 633		- 791
International marine bunkers				- 194					- 8
International aviation bunkers				- 207			- 207		
Stock changes	- 595	- 152	- 423	- 282	6	- 30	- 22		- 4
Total primary energy supply	80 415	- 428	26 732	- 533	- 530	256	- 684		- 773
Transfers				-4 544	- 8	- 450	- 72	72	- 16
Total transformation sector	-62 905	7 480	-26 221	29 340	6 151	2 260	2 057		7 827
Main activity producers	-45 936	- 353	- 6	- 105		- 2			- 11
Autoproducers		-1 317		- 227		- 53			- 2
Gas processing	- 453								
Petroleum refineries			-26 215	29 673	6 152	2 315	2 057		7 841
Coal transformation	-16 516	9 150							
Other transformation									
Losses & own use	- 1 636	- 369	- 156	-1 382	- 16	- 32		- 1	- 106
Discrepancy	2 931	143	- 354	- 214	9	20	- 37		- 55
Total final consumption	18 806	6 826	1	22 667	5 606	2 053	1 265	71	6 877
Total final energy consumption	16 142	6 293	1	18 273	5 606	74	1 265	71	6 864
Industry sector	12 499	6 132	1	3 197	320	74		17	629
Iron and steel	2 123	3 929		30	2				22
Chemical & petrochemical	3 324	1 288	1	1 820	16	74		1	29
Non-metallic minerals	5 129	368		448	7				121
Other industries	4 939	1 094		899	295			16	457
Transport sector	72			11 202	4 247		1 265		5 130
Domestic air transport				1 331			1 265		16
Road				8 196	4 247				3 884
Rail	72			191					190
Inland waterways				1 135					699
Other transport				348					342
Other sector	3 570	160		3 874	1 040			54	1 105
Residential	1 737	95		1 581					
Commerce and public services	622	30		62	2			7	5
Agriculture	532	29		738	105			2	627
Non-specified others	680	6		1 492	933			45	473
Non-energy	2 664	534		4 394		1 979			13
2017									
Indigenous production	72 262		8 018						
Import	4 831		17 562	2 595	1	256	162		32
Export	- 202	- 231	- 204	-2 409	- 453	- 1	- 578		- 734
International marine bunkers				- 178					- 7
International aviation bunkers				- 195			- 195		
Stock changes	1 089	392	- 269	73	- 11	26	6		- 19
Total primary energy supply	77 981	161	25 108	- 114	- 464	281	- 604		- 729
Transfers				-4 515		- 331	- 54	54	- 70
Total transformation sector	-59 100	6 191	-24 699	27 888	5 725	2 011	1 876		7 959
Main activity producers	-43 116	- 366	- 6	- 98		- 4			- 10
Autoproducers		-1 055		- 203		- 34			- 3
Gas processing	- 374								
Petroleum refineries			-24 693	28 188	5 725	2 049	1 876		7 972
Coal transformation	-15 609	7 613							
Other transformation									
Losses & own use	- 1 981	- 291	- 171	-1 250	- 19				- 108
Discrepancy	3 761	- 17	- 237	64	41	12	- 15		- 26
Total final consumption	20 661	6 043	1	22 073	5 283	1 973	1 203	54	7 026
Total final energy consumption	18 348	5 467	1	17 814	5 283	54	1 203	54	7 019
Industry sector	13 941	5 325	1	2 982	338	54		10	681
Iron and steel	2 359	3 231		38	3				26
Chemical & petrochemical	3 597	1 255	1	1 572	24	54		1	36
Non-metallic minerals	5 650	316		425	10				120
Other industries	5 716	1 045		948	302			8	500
Transport sector	79	2		10 866	3 949		1 203		5 145
Domestic air transport				1 271			1 203		16
Road				7 913	3 949				3 900
Rail	79	2		192					191
Inland waterways				1 140					695
Other transport				350					343
Other sector	4 327	140		3 966	996			44	1 193
Residential	2 090	99		1 620					
Commerce and public services	794	26		69	2			5	6
Agriculture	638	11		764	99			1	661
Non-specified others	806	4		1 512	895			38	527
Non-energy	2 313	577		4 259		1 919			7

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				5 967	4 435	3 212		5 029			102 672	8 687
697	988		636	4 442					20		31 669	
-515	-57		-133	-125					-75		-3 398	
-186											-194	
											-207	
37	-18		-251								-1 451	
33	913		251	10 284	4 435	3 212		5 029	-55		129 092	8 687
-965	-263	-39	-2 803								-4 544	
1 601	1 965	821	6 657	-3 095	-4 435	-3 212		-3 302	25 803	5 244	-35 303	-6 961
-6		-28	-58	-2 057	-4 435	-3 212		-3 302	25 803	5 244	-28 359	-6 961
-25	-2	-79	-67								-1 544	
				-1 039							-1 492	
1 633	1 967	927	6 782								3 459	
											-7 366	
-23	-8	-6	-1 190	-1 374				-6	-4 141	-741	-9 805	-6
-5	-33	-6	-108	1 407				-2		-13	3 898	-1
642	2 575	771	2 808	7 221				1 719	21 607	4 490	83 338	1 719
626	2 214	752	801	6 850				1 719	21 607	4 490	75 375	1 719
118	485	752	801	3 572				276	13 645	2 953	42 277	276
	5		1	407				21	2 212	184	8 906	21
23	422	752	503	942				39	2 754	1 600	11 768	39
62	32		226	511				15	1 263	18	7 752	15
34	27		71	1 712				200	7 417	1 151	17 414	200
498	63			1 018				501	579		13 373	501
51											1 331	
3	63			928				501	125		9 751	501
2									326		590	
436											1 135	
6				89					128		565	
9	1 666			2 260				942	7 383	1 537	19 725	942
	1 581			1 765				736	3 621	1 217	10 752	736
5	44			275				28	1 256	128	2 400	28
1	4			5				178	447	1	1 930	178
4	37			216					2 058	191	4 643	
16	361	19	2 007	372							7 963	
				5 516	4 313	2 707		4 446			97 262	7 956
568	966		610	3 693					23		28 704	
-464	-66		-112	-132					-70		-3 247	
-171											-178	
											-195	
-28	3		96								1 286	
-95	902		594	9 077	4 313	2 707		4 446	-47		123 632	7 956
-1 091	-326	-55	-2 640								-4 515	
1 876	1 846	807	5 789	-2 501	-4 313	-2 707		-2 764	23 780	4 641	-33 583	-6 275
-7		-31	-46	-1 778	-4 313	-2 707		-2 764	23 780	4 641	-26 726	-6 275
-28	-2	-76	-60								-1 257	
				-723							-1 098	
1 911	1 848	913	5 894								3 496	
											-7 997	
-28	-1	-8	-1 086	-1 332				-10	-3 873	-579	-9 487	-10
12	-10	-1	50	688				-2		-55	4 200	-1
673	2 411	743	2 707	5 931				1 670	19 860	4 006	80 247	1 670
658	2 130	729	684	5 534				1 670	19 860	4 006	72 701	1 670
137	349	729	684	2 511				262	12 799	2 676	40 498	262
1	6		2	222				30	2 010	210	8 100	30
26	280	729	423	727				39	2 615	1 418	11 224	39
65	36		194	393				11	1 190	14	7 999	11
45	27		65	1 169				182	6 984	1 034	17 078	182
508	62			1 000				516	511		12 974	516
52											1 271	
3	62			912				516	110		9 452	516
2									288		561	
445											1 140	
6				88					112		550	
13	1 719			2 023				892	6 551	1 330	19 229	892
	1 620			1 586				695	3 266	1 063	10 420	695
7	48			235				26	1 104	105	2 359	26
1	4			4				170	423	1	2 012	170
5	47			197					1 757	161	4 437	
15	281	14	2 023	397							7 546	

Major energy indicators of China

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	28 077	36 861	39 841	70 166	100 602	119 535	119 444	123 632	129 092
Indigenous production	30 453	37 588	39 361	63 943	88 476	98 942	93 486	97 262	102 672
Import	375	1 488	4 044	7 713	16 091	22 907	26 225	28 704	31 669
Export	-1 733	-1 919	-2 643	-1 959	-2 149	-2 446	-3 078	-3 247	-3 398
Final energy consumption	22 159	22 710	22 863	39 378	56 431	71 604	71 539	72 701	75 375
Industry	14 241	14 289	13 570	24 329	36 136	42 069	40 668	40 498	42 277
Transport	1 245	1 623	2 946	5 205	7 603	12 003	12 362	12 974	13 373
Residential	4 432	4 115	3 610	5 307	6 788	9 202	9 886	10 420	10 752
Commerce & public services	278	321	567	1 034	1 379	2 222	2 321	2 359	2 400
Others	1 963	2 361	2 170	3 503	4 524	6 108	6 302	6 450	6 573
Coal & Peat									
Primary energy supply	22 321	29 027	28 617	52 608	73 987	79 553	76 718	77 981	80 415
Indigenous production	23 636	29 630	30 051	51 557	71 214	75 474	69 508	72 262	76 103
Import	50	41	54	654	3 963	3 639	4 557	4 831	5 030
Export	-398	-664	-1 205	-411	-433	-133	-219	-202	-123
Transformation sector	-9 135	-15 412	-18 208	-33 778	-46 796	-55 691	-56 713	-59 100	-62 905
Power generation	-6 461	-10 770	-13 829	-25 081	-33 092	-39 427	-40 480	-43 116	-45 936
Final energy consumption	13 916	13 323	9 193	16 316	21 101	22 470	20 418	18 348	16 142
Industry	8 349	8 777	6 286	12 393	17 110	17 777	15 766	13 941	12 499
Transport	464	283	189	175	130	111	91	79	72
Residential	3 933	3 164	1 806	2 118	1 959	2 167	2 137	2 090	1 737
Commerce & public services	241	222	331	596	689	888	880	794	622
Others	930	877	581	1 034	1 213	1 527	1 544	1 444	1 212
Coal & peat products									
Primary energy supply	-69	-347	-367	-407	14	-231	145	161	-428
Indigenous production					3	1	1		3
Import					-95	-277	-291	-231	-279
Export	-37	-252	-433	-364	-95	-277	-291	-231	-279
Transformation sector	2 325	2 276	1 655	2 367	4 553	6 608	6 525	6 191	7 480
Power generation	-26	-30	-32	-86	-816	-1 328	-1 389	-1 421	-1 669
Final energy consumption	2 154	1 119	1 072	1 521	3 670	5 389	5 502	5 467	6 293
Industry	2 090	983	797	1 200	3 434	5 207	5 328	5 325	6 132
Transport	1	3	3			1	1	2	
Residential	39	81	228	271	205	134	129	99	95
Commerce & public services	3	9	14	25	9	27	25	26	30
Others	35	35	35	35	35	35	35	35	35
Crude oil & NGL									
Primary energy supply	4 928	6 194	8 953	12 598	17 952	22 857	24 004	25 108	26 732
Indigenous production	5 791	6 282	6 824	7 593	8 500	8 983	8 360	8 018	7 927
Import	122	716	2 942	5 310	9 951	14 046	15 952	17 562	19 338
Export	-1 004	-763	-431	-338	-127	-120	-123	-204	-110
Transformation sector	-4 650	-6 037	-8 543	-12 177	-17 533	-22 575	-23 637	-24 699	-26 221
Petroleum refineries	-4 589	-6 009	-8 501	-12 159	-17 530	-22 567	-23 631	-24 693	-26 215
Petroleum products									
Primary energy supply	-136	330	299	706	-48	40	-264	-114	-533
Import	196	730	1 042	1 732	2 021	2 203	2 299	2 595	2 836
Export	-294	-217	-421	-694	-1 275	-1 728	-2 251	-2 409	-2 686
Transformation sector	3 867	5 147	7 574	10 945	16 163	25 085	26 349	27 888	29 340
Power generation	-607	-713	-633	-691	-389	-285	-303	-300	-333
Petroleum refineries	4 491	5 881	8 218	11 641	16 552	25 369	26 652	28 188	29 673
Final energy consumption	3 036	4 162	6 497	9 743	12 741	16 851	17 119	17 814	18 273
Industry	1 405	1 484	2 371	2 901	3 636	2 990	2 891	2 982	3 197
Transport	735	1 261	2 584	4 630	6 567	10 187	10 416	10 866	11 202
Residential	125	296	462	679	781	1 281	1 485	1 620	1 581
Commerce & public services	4	15	39	63	55	63	62	69	62
Others	768	1 107	1 041	1 470	1 701	2 331	2 266	2 276	2 230
Gas									
Primary energy supply	570	669	897	1 727	3 552	7 890	8 368	9 077	10 284
Indigenous production	570	669	1 013	1 838	3 559	5 015	5 099	5 516	5 967
Import					133	2 995	3 395	3 693	4 442
Export			-117	-111	-150	-121	-126	-132	-125
Transformation sector	-14	20	308	645	-258	-1 693	-2 102	-2 501	-3 095
Power generation	-37	-39	-151	-405	-798	-1 406	-1 646	-1 778	-2 057
Final energy consumption	543	352	825	1 864	2 566	4 309	4 640	5 534	6 850
Industry	463	256	637	1 336	1 102	1 725	1 908	2 511	3 572
Transport	2	2	15	115	362	840	896	1 000	1 018
Residential	73	86	156	336	902	1 369	1 438	1 586	1 765
Commerce & public services	1	2	14	43	101	201	214	235	275
Others	5	6	3	34	99	173	184	202	220
Electricity									
Power generation	2 236	3 668	4 880	9 001	15 146	20 932	22 079	23 776	25 798
Thermal	1 780	2 896	4 011	7 370	11 995	15 163	15 694	16 790	18 016
Hydro	456	686	801	1 429	2 600	4 069	4 263	4 312	4 434
Nuclear		46	60	191	266	615	768	893	1 060
Others	0	40	8	10	285	1 085	1 355	1 780	2 288
Final energy consumption	1 767	2 760	3 730	7 174	12 422	17 396	18 336	19 860	21 607
Industry	1 302	1 967	2 539	4 947	8 613	11 555	11 865	12 799	13 645
Transport	38	66	101	155	264	405	451	511	579
Residential	173	362	523	1 039	1 845	2 724	3 032	3 266	3 621
Commerce & public services	27	72	151	271	465	926	1 013	1 104	1 256
Others	227	294	416	762	1 234	1 785	1 976	2 180	2 506

Major economic indicators of China

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ^{*1}	1 135.19	1 262.65	1 303.72	1 337.71	1 371.22	1 378.67	1 386.40	1 392.73
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	828	2 232	3 562	6 087	8 914	9 524	10 186	10 873
GDP, billion USD (PPP, constant 2017)	1 616	4 358	6 955	11 885	17 403	18 595	19 887	21 230
Nominal, billion USD (current)	395	1 211	2 286	6 087	11 062	11 233	12 310	13 895
GDP per capita ^{*3}								
Real term (constant 2010 USD)	729	1 768	2 732	4 550	6 500	6 908	7 347	7 807
GDP, PPP (constant 2017 USD)	1 424	3 452	5 335	8 885	12 692	13 488	14 344	15 243
Nominal (current USD)	348	959	1 753	4 550	8 067	8 148	8 879	9 977
Nominal GDP & its components (billions of current CNY) ^{*1}								
Gross domestic product	1 887	10 028	18 732	41 212	68 886	74 640	83 204	91 928
Households and NPISHs final consumption expenditure	944	4 686	7 415	14 147	26 020	28 867	32 069	35 412
General government final consumption expenditure	258	1 689	2 772	6 012	11 172	12 214	13 583	15 201
Gross fixed capital formation	453	3 267	7 385	18 104	28 997	31 014	34 830	39 385
Stock change	192	100	172	1 083	786	805	959	874
Exports of goods and services	257	2 095	6 337	11 204	14 710	14 618	16 385	17 569
Imports of goods and services	201	1 857	5 316	9 698	12 475	12 920	14 927	16 863
Real GDP & its components (billions of 2000 CNY) ^{*1}								
Gross Domestic Product	6 397	17 251	27 528	47 044	68 886	73 604	78 716	84 031
Households and NPISHs final consumption expenditure	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
General government final consumption expenditure	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Gross fixed capital formation	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Stock change	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Exports of goods and services	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Imports of goods and services	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	34.4	18.4	13.9	10.1	8.4	8.1	7.9	7.6
Industry	28.3	37.2	39.0	40.7	40.8	40.5	40.1	39.8
Services, etc.	47.0	46.2	47.9	49.3	50.8	51.4	52.0	52.6
Industrial production index (2010=100) ^{*4}	9.3	34.0	57.1	100.0	146.7	155.5	0.0	0.0
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	62.1	249.2	762.0	1577.8	2273.5	2097.6	2263.3	2486.7
Imports, c.i.f.	53.3	225.1	660.0	1396.2	1679.6	1587.9	1843.8	2135.7
Balance of payments (billions of current USD) ^{*2}								
Trade balance	N.A.	N.A.	694.9	1486.4	2142.8	1989.5	2216.2	2417.4
Current account	N.A.	N.A.	132.4	237.8	304.2	202.2	195.1	25.5
Overall balance	N.A.	N.A.	227.7	524.7	-130.0	-214.2	304.6	197.6
Foreign exchange rate (CNY/USD) ^{*1}	4.78	8.28	8.19	6.77	6.23	6.64	6.76	6.62
PPP conversion factor, GDP (CNY/USD) ^{*1}	1.69	2.72	2.84	3.33	3.87	3.99	4.18	4.23
Price Indices								
GDP Deflator (2015=100) ^{*4}	29.5	58.1	68.0	87.6	100.0	101.4	105.7	109.4
Producer Price Index (2000=100) ^{*3}	101.3	100.0	102.0	102.6	92.2	95.9	103.4	100.7
Consumer Price Index (2010=100) ^{*2}	40.4	81.0	86.5	100.0	114.9	117.2	119.1	121.6
Growth rate (%) ^{*3}								
Real GDP ^{*4}	3.9	8.5	11.4	10.6	7.0	6.8	6.9	6.8
Population ^{*4}	1.5	0.8	0.6	0.5	0.5	0.5	0.6	0.5
Price ^{*4}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices ^{*3}	-12.2	5.3	-1.1	11.5	-3.4	4.0	7.8	-2.6
Consumer prices	3.1	0.3	1.8	3.2	1.4	2.0	1.6	2.1

Source ^{*1}: *World Development Indicators*, World Bank

^{*2}: *International Financial Statistics*, International Monetary Fund

^{*3}: Calculated from ^{*1} and ^{*2} by ESTO

^{*4}: Calculated from ^{*1}, ^{*2} and ^{*3} by ESTO

Note : N.A. means "not available"

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

HONG KONG, CHINA

Energy balance table of Hong Kong, China

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production									
Import	287			909	21	13	282		273
Export				- 9	- 1				- 5
International marine bunkers				- 464					- 150
International aviation bunkers				- 288			- 288		
Stock changes	- 17			11			7		- 8
Total primary energy supply	270			159	20	13			110
Transfers									
Total transformation sector	- 270			- 16		- 13			- 3
Main activity producers	- 270			- 3					- 3
Autoproducers									
Gas processing				- 13		- 13			
Petroleum refineries									
Coal transformation									
Other transformation									
Losses & own use									
Discrepancy				- 48	5				- 53
Total final consumption				95	25				54
Total final energy consumption				95	25				54
Industry sector				3					3
Iron and steel									
Chemical & petrochemical									
Non-metallic minerals									
Other industries				3					3
Transport sector				82	25				46
Domestic air transport									
Road				75	24				41
Rail									
Inland waterways				7	2				5
Other transport									
Other sector				10					5
Residential				3					
Commerce and public services				7					5
Agriculture									
Non-specified others									
Non-energy									
2017									
Indigenous production									
Import	277			899	21	11	266		254
Export				- 12					- 5
International marine bunkers				- 458					- 124
International aviation bunkers				- 279			- 279		
Stock changes	- 14			16		2	14		- 8
Total primary energy supply	263			166	20	13			118
Transfers									
Total transformation sector	- 263			- 17		- 13			- 4
Main activity producers	- 263			- 4					- 4
Autoproducers									
Gas processing				- 13		- 13			
Petroleum refineries									
Coal transformation									
Other transformation									
Losses & own use									
Discrepancy				- 54	5				- 59
Total final consumption				95	25				55
Total final energy consumption				95	25				55
Industry sector				3					3
Iron and steel									
Chemical & petrochemical									
Non-metallic minerals									
Other industries				3					3
Transport sector				84	25				47
Domestic air transport									
Road				76	23				41
Rail									
Inland waterways				7	2				6
Other transport									
Other sector				8					5
Residential				2					
Commerce and public services				6					5
Agriculture									
Non-specified others									
Non-energy									

Major energy indicators of Hong Kong, China

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	392	457	579	590	559	558	603	600	600
Indigenous production				3	2	3	3	5	5
Import	567	973	896	1 055	1 333	1 273	1 318	1 347	1 365
Export	- 93	- 345	- 68	- 74	- 30	- 34	- 20	- 17	- 11
Final energy consumption	215	279	376	285	280	290	284	281	283
Industry	66	59	75	24	16	14	14	12	12
Transport	64	103	159	98	90	89	88	87	86
Residential	32	41	48	56	58	63	59	58	59
Commerce & public services	52	73	92	107	116	124	122	124	126
Others	2	3	3						
Coal & Peat									
Primary energy supply	264	253	182	287	261	280	280	263	270
Indigenous production									
Import	236	241	160	285	272	295	294	277	287
Export									
Transformation sector	- 264	- 253	- 181	- 287	- 261	- 280	- 280	- 263	- 270
Power generation	- 264	- 253	- 181	- 287	- 261	- 280	- 280	- 263	- 270
Final energy consumption									
Industry									
Transport									
Residential									
Commerce & public services									
Others									
Coal & peat products									
Primary energy supply									
Indigenous production									
Import			1						
Export			- 1						
Transformation sector									
Power generation									
Final energy consumption									
Industry									
Transport									
Residential									
Commerce & public services									
Others									
Crude oil & NGL									
Primary energy supply									
Indigenous production									
Import									
Export									
Transformation sector									
Petroleum refineries									
Petroleum products									
Primary energy supply	134	181	247	190	134	112	155	166	159
Import	331	704	581	645	901	811	855	899	909
Export	- 87	- 339	- 63	- 58	- 21	- 29	- 15	- 12	- 9
Transformation sector	- 22	- 31	- 30	- 32	- 15	- 13	- 18	- 17	- 16
Power generation	- 6	- 7	- 2	- 2	- 2	- 2	- 4	- 4	- 3
Petroleum refineries									
Final energy consumption	113	149	218	112	100	99	98	95	95
Industry	40	38	56	9	4	4	4	3	3
Transport	61	100	155	93	87	86	85	84	82
Residential	8	7	5	5	3	4	3	2	3
Commerce & public services	3	3	2	6	6	5	6	6	7
Others									
Gas									
Primary energy supply		1	117	85	132	125	127	126	123
Indigenous production									
Import		1	117	85	119	125	127	126	123
Export									
Transformation sector	14	19	- 94	- 58	- 104	- 96	- 101	- 101	- 97
Power generation		- 1	- 117	- 85	- 117	- 107	- 115	- 113	- 110
Final energy consumption	14	20	23	27	28	29	26	26	26
Industry	1	1	1	1	1	1	1	1	1
Transport									
Residential	6	9	11	15	15	15	14	14	14
Commerce & public services	5	8	9	11	11	12	11	11	11
Others	1	2	2						
Electricity									
Power generation	104	100	113	139	138	137	142	133	132
Thermal	104	100	113	139	138	137	142	133	131
Hydro									
Nuclear									
Others	0								
Final energy consumption	88	110	134	144	151	161	159	158	160
Industry	25	20	18	15	11	9	9	8	8
Transport	3	3	4	5	3	3	3	3	3
Residential	17	24	32	36	39	44	43	42	42
Commerce & public services	43	62	81	89	98	105	104	105	106
Others									

Major economic indicators of Hong Kong, China

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ¹	5.70	6.67	6.81	7.02	7.29	7.34	7.39	7.45
Gross domestic product ³								
Real term, billion USD (constant 2010)	104	153	189	229	264	270	280	288
GDP, billion USD (PPP, constant 2017)	164	242	298	361	417	426	442	455
Nominal, billion USD (current)	77	172	182	229	309	321	341	362
GDP per capita ³								
Real term (constant 2010 USD)	18 251	23 016	27 689	32 550	36 261	36 819	37 930	38 704
GDP, PPP (constant 2017 USD)	28 798	36 317	43 690	51 361	57 216	58 096	59 849	61 072
Nominal (current USD)	13 486	25 757	26 650	32 550	42 432	43 731	46 166	48 543
Nominal GDP & its components (billions of current HKD) ¹								
Gross domestic product	599	1 338	1 412	1 776	2 398	2 490	2 659	2 835
Households and NPISHs final consumption expenditure	344	784	812	1 090	1 593	1 650	1 784	1 936
General government final consumption expenditure	41	125	131	157	231	248	261	281
Gross fixed capital formation	157	355	302	387	537	535	576	612
Stock change	6	14	- 5	38	- 21		11	11
Exports of goods and services	703	1 686	2 506	3 647	4 698	4 658	5 024	5 340
Imports of goods and services	652	1 627	2 333	3 543	4 641	4 601	4 997	5 346
Real GDP & its components (billions of 2013 HKD) ¹								
Gross Domestic Product	988	1 455	1 789	2 169	2 508	2 562	2 659	2 735
Households and NPISHs final consumption expenditure	627	948	1 039	1 297	1 658	1 691	1 784	1 879
General government final consumption expenditure	110	170	188	212	246	254	261	273
Gross fixed capital formation	240	382	411	479	559	559	576	586
Stock change	11	22	- 7	53	- 22		11	12
Exports of goods and services	847	1 950	3 084	4 060	4 715	4 747	5 024	5 208
Imports of goods and services	809	1 963	2 909	3 925	4 647	4 687	4 997	5 221
Sectoral shares of Real GDP (%) ¹								
Agriculture, Fishery and Forestry	N.A.	0.2	0.2	0.1	0.1	0.1	0.1	0.1
Industry	N.A.	11.7	7.9	6.6	7.5	7.5	7.2	7.2
Services, etc.	N.A.	83.8	88.2	89.6	88.8	88.9	88.6	88.8
Manufacturing production index (2010=100) ²	162.5	135.6	112.0	100.0	98.1	97.7	98.1	99.3
External trade (billions of current USD) ¹								
Exports, f.o.b.	82.4	202.7	292.1	400.7	510.5	516.6	549.9	568.5
Imports, c.i.f.	84.7	214.0	300.2	441.4	558.8	546.5	588.9	626.6
Balance of payments (billions of current USD) ²								
Trade balance	N.A.	20.5	31.1	3.3	-22.9	-16.7	-22.9	-32.3
Current account	N.A.	7.5	21.6	16.0	10.3	12.7	15.6	13.5
Overall balance	N.A.	12.5	0.4	12.2	30.0	0.8	38.0	-7.8
Foreign exchange rate (HKD/USD) ¹	7.79	7.79	7.78	7.77	7.75	7.76	7.79	7.84
PPP conversion factor, GDP (HKD/USD) ¹	5.75	7.10	5.45	5.14	5.83	5.93	6.01	6.09
Price Indices								
GDP Deflator (2016=100) ³	60.7	91.9	78.9	81.9	95.6	97.2	100.0	103.6
Producer Price Index (2010=100) ²	89.5	87.5	85.6	94.3	103.3	100.5	101.8	105.6
Consumer Price Index (2010=100) ²	57.0	95.9	89.5	100.0	122.9	125.9	127.8	130.8
Growth rate (%) ³								
Real GDP	3.8	7.7	7.4	6.8	2.4	2.2	3.8	2.9
Population	0.3	0.9	0.4	0.7	0.9	0.6	0.8	0.8
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices	N.A.	-1.6	2.3	-1.7	-1.7	-2.7	1.3	3.8
Consumer prices	10.4	-3.7	0.8	2.3	3.0	2.4	1.5	2.4

Source ¹: *World Development Indicators*, World Bank

²: *International Financial Statistics*, International Monetary Fund

³: Calculated from ¹ and ² by ESTO

Note

: N.A. means "not available"

: HKD means Hong Kong Dollar, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

Energy prices in Hong Kong, China in 2018

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	
Local Currency Unit		HKD

IMPORT PRICES

WHOLESALE PRICES

CONSUMER PRICES

IMPORT PRICES		WHOLESALE PRICES		CONSUMER PRICES	
	Unit	Amount		Unit	Amount
Coal and Coal Products			Coal and Coal Products		
Coking Coal			Coking Coal		
Anthracite	HKD/tonne	6,132.67	Anthracite		
Other bituminous coal	HKD/tonne	682.59	Other bituminous coal		
Sub-bituminous Coal			Sub-bituminous Coal		
Lignite			Lignite		
Peat			Peat		
Patent Fuel			Patent Fuel		
Coke			Coke		
Coal Tar			Coal Tar		
BKB/PB			BKB/PB		
			Gas Works Gas		
Oil and Oil Products			Oil and Oil Products		
Crude Oil			Crude Oil		
Natural Gas Liquids			Natural Gas Liquids		
Ethane			Ethane		
LPG	HKD/kg	4.89	LPG	HKD/kg	27.35
Naphtha			Naphtha		
Motor Gasoline	HKD/L	4.35	Motor Gasoline	Motor Gasoline (regular)	HKD/L 15.08
Aviation Gasoline			Aviation Gasoline		
Gasoline Type Jet Fuel			Gasoline Type Jet Fuel		
Kerosene Type Jet Fuel	HKD/L	4.16	Kerosene Type Jet Fuel		
Other Kerosene			Other Kerosene		
Gas/Diesel Oil			Gas/Diesel Oil		
Fuel Oil	HKD/L	3.22	Fuel Oil		
White Spirit SBP			White Spirit SBP		
Lubricants			Lubricants		
Bitumen			Bitumen		
Paraffin Waxes			Paraffin Waxes		
Petroleum Coke			Petroleum Coke		
Natural Gas			Natural Gas		
Natural Gas	HKD/kg	4.12	Natural Gas		
Liquefied Natural Gas			Liquefied Natural Gas		
Compressed Natural Gas			Compressed Natural Gas		
Electricity			Electricity		
Electricity			Electricity	Industrial	
				Commercial	
				Residential	
				Others	
Other Energy Products			Other Energy Products		
Gas oil, diesel oil and naphtha	HKD/L	4.19		Environmental diesel oil (road)	HKD/L 13.50

INDONESIA

Energy balance table of Indonesia

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production	13 731		1 696						
Import	135		663	1 361	635		54		241
Export	-8 774		-436	-69					
International marine bunkers									
International aviation bunkers									
Stock changes	-2 259		120	93	140		3	-14	-66
Total primary energy supply	2 833		2 043	1 385	775		57	-14	175
Transfers									
Total transformation sector	-2 244		-2 004	2 147	498		154	35	956
Main activity producers	-2 244			-161					-126
Autoproducers									
Gas processing									
Petroleum refineries			-2 004	2 421	498	113	154	35	1 082
Coal transformation									
Other transformation				-113		-113			
Losses & own use			-39	-5	-3				-2
Discrepancy									
Total final consumption	589			3 527	1 270		211	21	1 129
Total final energy consumption	589			3 237	1 270		211	21	1 129
Industry sector	589			225				1	141
Iron and steel	43								
Chemical & petrochemical									
Non-metallic minerals	468								
Other industries	155			225				1	141
Transport sector				2 369	1 259		211		898
Domestic air transport				211			211		
Road				2 158	1 259				898
Rail									
Inland waterways									
Other transport									
Other sector				643	11			20	90
Residential				514				18	
Commerce and public services				35				1	20
Agriculture									
Non-specified others				94	11			1	70
Non-energy				290					
2017									
Indigenous production	11 355		1 766						
Import	112		830	1 364	610		69		252
Export	-7 064		-602	-87					
International marine bunkers									
International aviation bunkers									
Stock changes	-2 014		-7	219	142		-5	-14	70
Total primary energy supply	2 389		1 987	1 496	752		64	-14	323
Transfers									
Total transformation sector	-2 044	1	-1 949	1 951	487		134	35	772
Main activity producers	-2 043			-192					-165
Autoproducers									
Gas processing									
Petroleum refineries			-1 949	2 249	487	106	134	35	937
Coal transformation	-1	1							
Other transformation				-106		-106			
Losses & own use			-38	-5	-2				-2
Discrepancy									
Total final consumption	345	1		3 442	1 236		198	21	1 092
Total final energy consumption	345	1		3 124	1 236		198	21	1 092
Industry sector	345	1		274				1	194
Iron and steel	7								
Chemical & petrochemical									
Non-metallic minerals	241								
Other industries	193	1		274				1	194
Transport sector				2 197	1 223		198		774
Domestic air transport				198			198		
Road				1 998	1 223				774
Rail									
Inland waterways									
Other transport									
Other sector				654	13			20	124
Residential				490				18	
Commerce and public services				41				1	27
Agriculture									
Non-specified others				122	13			1	97
Non-energy				318					

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				2 611	78		505	893			19 514	1 474
33	381		16						5		2 164	
- 12			- 57	- 1 332				- 73			- 10 684	- 73
33	- 2										- 2 046	
54	379		- 41	1 279	78		505	820	5		8 948	1 401
35	139		330	- 195	- 78		- 505	- 187	1 022		- 2 044	- 768
- 35				- 392	- 78		- 505	- 187	1 022		- 2 545	- 768
					197						197	
70	139		330								418	
											- 113	
				- 381					- 105		- 530	
				135							135	
89	517		290	838				633	922		6 508	633
89	517			692				633	922		6 074	633
76	7			683				291	337		2 125	291
				29							72	
				333							333	
				45							513	
76	7			276				291	337		1 285	291
1								177	1		2 548	177
											211	
1								177			2 336	177
									1		1	
12	510			9				164	584		1 401	164
	496			6				155	370		1 045	155
	14			3				9	214		261	9
12											94	
			290	145							435	
				2 600	67		460	653			16 902	1 179
25	374		34						4		2 310	
- 17			- 69	- 1 343				- 8			- 9 104	- 8
47	- 20										- 1 802	
54	353		- 35	1 257	67		460	646	4		8 306	1 171
31	139		353	- 74	- 67		- 460	- 11	918		- 1 736	- 536
- 26				- 408	- 67		- 460	- 11	918		- 2 263	- 536
					334						334	
57	139		353								300	
											- 106	
				- 378					- 120		- 541	
				- 13					2		- 11	
85	492		318	792				635	803		6 018	635
85	492			649				635	803		5 557	635
72	7			634				299	260		1 812	299
				27							35	
				303							303	
				44							285	
72	7			259				299	260		1 286	299
1								131	1		2 328	131
											198	
1								131			2 129	131
									1		1	
12	485			16				205	542		1 417	205
	472			9				196	340		1 035	196
	13			7				9	202		260	9
12											122	
			318	143							461	

Major energy indicators of Indonesia

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	4 028	4 966	6 197	7 472	7 314	8 191	8 045	8 306	8 948
Indigenous production	7 196	9 049	9 843	11 222	13 374	16 876	16 957	16 902	19 514
Import	427	662	992	1 679	1 664	2 179	2 113	2 310	2 164
Export	-3 355	-4 403	-4 440	-5 351	-7 675	-11 158	-10 279	-9 104	-10 684
Final energy consumption	2 954	4 022	4 912	5 573	5 240	5 422	5 306	5 557	6 074
Industry	977	1 250	1 620	1 870	2 232	2 008	1 728	1 812	2 125
Transport	359	541	712	1 015	1 416	1 940	2 179	2 328	2 548
Residential	1 506	2 059	2 339	2 382	1 277	1 029	1 032	1 035	1 045
Commerce & public services	32	75	113	150	185	253	248	260	261
Others	79	96	127	156	131	192	120	122	94
Coal & Peat									
Primary energy supply	143	227	549	1 018	1 654	2 137	2 229	2 389	2 833
Indigenous production	266	1 030	1 896	3 760	6 774	11 363	11 231	11 355	13 731
Import	15	16	3	2	1	74	96	112	135
Export	-106	-771	-1 439	-2 727	-5 125	-9 007	-8 152	-7 064	-8 774
Transformation sector	-109	-138	-339	-633	-848	-1 726	-1 857	-2 044	-2 244
Power generation	-109	-138	-338	-632	-847	-1 725	-1 856	-2 043	-2 244
Final energy consumption	34	89	211	385	806	412	372	345	589
Industry	34	89	211	385	806	412	372	345	589
Transport									
Residential									
Commerce & public services									
Others									
Coal & peat products									
Primary energy supply									
Indigenous production									
Import									
Export									
Transformation sector		1	1	1	1		1	1	
Power generation									
Final energy consumption		1	1	1	1		1	1	
Industry		1	1	1	1		1	1	
Transport									
Residential									
Commerce & public services									
Others									
Crude oil & NGL									
Primary energy supply	1 672	1 994	2 187	2 156	1 824	2 248	2 046	1 987	2 043
Indigenous production	3 162	3 472	3 067	2 283	2 057	1 731	1 893	1 766	1 696
Import	271	406	461	693	593	801	870	830	663
Export	-1 690	-1 769	-1 310	-936	-788	-674	-736	-602	-436
Transformation sector	-1 639	-1 955	-2 145	-2 114	-1 789	-2 205	-2 008	-1 949	-2 004
Petroleum refineries	-1 639	-1 955	-2 145	-2 114	-1 789	-2 205	-2 008	-1 949	-2 004
Petroleum products									
Primary energy supply	-508	-546	-208	483	840	1 300	1 249	1 496	1 385
Import	140	240	528	983	1 070	1 304	1 145	1 364	1 361
Export	-511	-607	-479	-324	-216	-201	-75	-87	-69
Transformation sector	1 524	1 833	1 958	1 624	1 580	1 858	1 878	1 951	2 147
Power generation	-155	-110	-185	-365	-344	-195	-231	-192	-161
Petroleum refineries	1 699	1 980	2 174	2 075	2 031	2 117	2 202	2 249	2 421
Final energy consumption	973	1 276	1 700	2 019	2 204	2 944	2 906	3 124	3 237
Industry	273	297	395	406	301	369	247	274	225
Transport	359	541	712	1 015	1 406	1 885	2 049	2 197	2 369
Residential	249	306	418	386	328	441	454	490	514
Commerce & public services	13	35	47	56	37	56	37	41	35
Others	79	96	127	156	131	192	120	122	94
Gas									
Primary energy supply	1 095	1 102	1 319	1 386	1 557	1 461	1 390	1 257	1 279
Indigenous production	2 143	2 359	2 531	2 751	3 103	2 724	2 686	2 600	2 611
Import									
Export	-1 048	-1 256	-1 212	-1 364	-1 546	-1 263	-1 296	-1 343	-1 332
Transformation sector	-282	-623	-670	-538	-693	-333	-258	-74	-195
Power generation	-13	-224	-233	-150	-420	-428	-464	-408	-392
Final energy consumption	285	398	495	631	660	711	583	649	692
Industry	284	397	493	628	648	694	567	634	683
Transport									
Residential		1	1	2	6	9	9	9	6
Commerce & public services			1	1	5	8	7	7	3
Others									
Electricity									
Power generation	119	195	328	461	611	843	893	917	1 022
Thermal	92	157	282	398	514	755	785	802	847
Hydro	23	30	36	39	63	50	67	67	78
Nuclear									
Others	4	8	10	24	34	38	41	49	96
Final energy consumption	100	179	287	385	533	730	778	803	922
Industry	51	89	122	153	184	231	245	260	337
Transport						1	1	1	1
Residential	32	61	110	148	215	319	337	340	370
Commerce & public services	16	29	55	84	133	180	194	202	214
Others									

Major economic indicators of Indonesia

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ¹¹	181.41	211.51	226.29	241.83	258.38	261.55	264.65	267.66
Gross domestic product ¹³								
Real term, billion USD (constant 2010)	310	453	571	755	988	1 038	1 090	1 147
GDP, billion USD (PPP, constant 2017)	822	1 203	1 516	2 004	2 622	2 754	2 894	3 044
Nominal, billion USD (current)	106	165	286	755	861	932	1 016	1 042
GDP per capita ¹³								
Real term (constant 2010 USD)	1 708	2 144	2 524	3 122	3 824	3 968	4 121	4 285
GDP, PPP (constant 2017 USD)	4 533	5 689	6 699	8 287	10 150	10 531	10 936	11 372
Nominal (current USD)	585	780	1 263	3 122	3 332	3 563	3 838	3 894
Nominal GDP & its components (trillions of current IDR) ¹¹								
Gross domestic product	195 597	1389 770	2774 281	6864 133	#####	#####	#####	#####
Households and NPISHs final consumption expenditure	124 184	856 798	1785 596	3858 822	6621 880	7171 523	7783 651	8455 027
General government final consumption expenditure	18 649	90 780	224 981	618 178	1123 750	1181 613	1239 470	1336 613
Gross fixed capital formation	59 758	275 881	655 854	2127 841	3782 012	4040 202	4370 575	4789 385
Stock change	4 217	33 283	39 975	129 095	144 179	158 867	210 636	338 634
Exports of goods and services	53 409	569 490	945 122	1667 918	2438 993	2367 365	2742 061	3111 923
Imports of goods and services	50 046	423 318	830 083	1537 720	2394 879	2273 528	2606 283	3268 839
Real GDP & its components (trillions of 2010 IDR) ¹¹								
Gross Domestic Product	2816 408	4121 726	5192 501	6864 133	8982 517	9434 613	9912 928	#####
Households and NPISHs final consumption expenditure	1510 655	2527 173	3078 760	3858 822	4980 431	5231 670	5492 293	5774 371
General government final consumption expenditure	260 623	285 633	423 592	618 178	775 398	774 305	790 756	828 683
Gross fixed capital formation	870 587	1060 872	1513 165	2127 841	2911 356	3041 585	3228 763	3443 242
Stock change	5273 750	-7109 153	-7157 321	129 095	112 848	133 400	126 884	197 370
Exports of goods and services	458 032	883 948	1231 826	1667 918	2004 467	1971 183	2146 565	2287 090
Imports of goods and services	477 155	782 932	1183 138	1537 720	1862 939	1818 133	1964 819	2198 263
Sectoral shares of Real GDP (%) ¹¹								
Agriculture, Fishery and Forestry	19.6	16.5	15.3	13.9	13.0	12.8	12.7	12.5
Industry	42.1	47.7	45.8	42.8	41.0	40.5	40.2	39.8
Services, etc.	N.A.	34.2	36.9	40.7	42.8	43.1	43.3	43.6
Industrial production index (2010=100) ¹²	43.3	74.3	88.3	100.0	126.1	131.2	137.4	144.9
External trade (billions of current USD) ¹¹								
Exports, f.o.b.	25.7	65.4	87.0	157.8	150.4	144.5	168.8	180.2
Imports, c.i.f.	21.8	43.6	75.7	135.7	142.7	135.7	156.9	188.7
Balance of payments (billions of current USD) ¹²								
Trade balance	5.4	25.0	17.6	31.0	14.0	15.3	18.8	-0.2
Current account	-3.0	8.0	0.3	5.1	-17.5	-17.0	-16.2	-30.6
Overall balance	1.5	0.1	-2.0	31.7	-0.7	12.4	12.5	-5.4
Foreign exchange rate (IDR/USD) ¹¹	1842.81	8421.78	9704.74	9090.43	13389.41	13308.33	13380.83	14236.94
PPP conversion factor, GDP (IDR/USD) ¹¹	349.82	1385.05	1960.13	3336.99	4353.33	4518.10	4695.66	4762.64
Price Indices								
GDP Deflator (2010=100) ¹³	6.9	33.7	53.4	100.0	128.3	131.4	137.1	142.3
Producer Price Index (2010=100) ¹²	14.8	58.6	88.8	100.0	81.0	87.4	91.5	96.5
Consumer Price Index (2010=100) ¹²	12.7	44.0	68.7	100.0	132.3	137.0	142.2	146.7
Growth rate (%) ¹³								
Real GDP	7.2	4.9	5.7	6.2	4.9	5.0	5.1	5.2
Population	1.8	1.4	1.3	1.3	1.3	1.2	1.2	1.1
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices	10.0	12.5	15.9	4.8	4.4	7.9	4.6	5.5
Consumer prices	7.8	3.7	10.5	5.1	6.4	3.5	3.8	3.2

Source ¹¹: *World Development Indicators*, World Bank

¹²: *International Financial Statistics*, International Monetary Fund

¹³: Calculated from ¹¹ and ¹² by ESTO

Note

: N.A. means "not available"

: IDR means Rupiah, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

Energy prices in Indonesia in 2018

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	14,038
Local Currency Unit		IDR

IMPORT PRICES			WHOLESALE PRICES			CONSUMER PRICES		
	Unit	Amount		Unit	Amount		Unit	Amount
Coal and Coal Products			Coal and Coal Products			Coal and Coal Products		
Coking Coal			Coking Coal			Coking Coal		
Anthracite			Anthracite			Anthracite		
Other bituminous coal	USD/tonne	83.27	Other bituminous coal	USD/tonne	98.96	Other bituminous coal	USD/BOE	12.78
Sub-bituminous Coal			Sub-bituminous Coal			Sub-bituminous Coal		
Lignite			Lignite			Lignite		
Peat			Peat			Peat		
Patent Fuel			Patent Fuel			Patent Fuel		
Coke			Coke			Coke		
Coal Tar			Coal Tar			Coal Tar		
BKB/PB			BKB/PB			BKB/PB		
			Gas Works Gas			Gas Works Gas		
Oil and Oil Products			Oil and Oil Products			Oil and Oil Products		
Crude Oil			Crude Oil	USD/bbl	67.47	Crude Oil		
Natural Gas Liquids			Natural Gas Liquids			Natural Gas Liquids		
Ethane			Ethane			Ethane		
LPG			LPG			LPG - 12kg	USD/BOE	103.76
Naphtha			Naphtha			Naphtha		
Motor Gasoline			Motor Gasoline			Motor Gasoline (regular)		
Aviation Gasoline			Aviation Gasoline			Aviation Gasoline		
Gasoline Type Jet Fuel			Gasoline Type Jet Fuel			Gasoline Type Jet Fuel		
Kerosene Type Jet Fuel			Kerosene Type Jet Fuel			Kerosene Type Jet Fuel		
Other Kerosene			Other Kerosene			Other Kerosene		
Gas/Diesel Oil			Gas/Diesel Oil			Gas/Diesel Oil		
Fuel Oil			Fuel Oil			Fuel Oil		
White Spirit SBP			White Spirit SBP			White Spirit SBP		
Lubricants			Lubricants			Lubricants		
Bitumen			Bitumen			Bitumen		
Paraffin Waxes			Paraffin Waxes			Paraffin Waxes		
Petroleum Coke			Petroleum Coke			Petroleum Coke		
Natural Gas			Natural Gas			Natural Gas		
Natural Gas			Natural Gas			Natural Gas		
Liquefied Natural Gas			Liquefied Natural Gas			Liquefied Natural Gas		
Compressed Natural Gas			Compressed Natural Gas			Compressed Natural Gas		
Electricity			Electricity			Electricity		
Electricity			Electricity			Industrial	USD/BOE	126.12
						Commercial	USD/BOE	144.56
						Residential	USD/BOE	128.11
						Others		
Other Energy Products			Other Energy Products			Other Energy Products		

JAPAN

Energy balance table of Japan

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production	31		17						
Import	4 758	47	6 354	1 833	70	869	53	63	27
Export	- 1	- 42		- 741	- 109		- 111	- 24	- 337
International marine bunkers				- 187					- 6
International aviation bunkers				- 304			- 304		
Stock changes		- 2	- 25	15	- 1	11	5	5	- 5
Total primary energy supply	4 788	3	6 346	614	- 40	880	- 358	43	- 321
Transfers			- 39	33		33	- 9	- 1	4
Total transformation sector	-4 359	636	-6 313	5 890	1 671	377	543	459	1 874
Main activity producers	-2 502	- 144	- 21	- 256				- 2	- 14
Autoproducers	- 172	- 112		- 169				- 2	- 10
Gas processing				- 59					
Petroleum refineries			-6 488	6 597	1 671	535	543	462	1 899
Coal transformation	-1 685	892		- 19					
Other transformation			196	- 204		- 158			
Losses & own use	- 18	- 115	- 2	- 269		- 1		- 1	- 2
Discrepancy		- 45	12	- 231	1	- 88	- 2	3	30
Total final consumption	411	478	4	6 036	1 632	1 201	173	503	1 586
Total final energy consumption	411	442	1	4 656	1 632	255	173	476	1 580
Industry sector	408	437	1	716		255		50	199
Iron and steel	96	386		52				4	10
Chemical & petrochemical	108	31	1	354		255		6	24
Non-metallic minerals	128	12		83				3	25
Other industries	169	17		228				36	141
Transport sector				2 871	1 632		148		966
Domestic air transport				148			148		
Road				2 585	1 632				918
Rail				7					7
Inland waterways				132					41
Other transport									
Other sector	3	4		1 068			25	426	415
Residential				461				283	
Commerce and public services	3	4		425			25	122	254
Agriculture				129				21	108
Non-specified others				53					52
Non-energy		36	3	1 380		945		27	6
2017									
Indigenous production	32		18						
Import	4 838	38	6 648	1 871	40	904	56	67	22
Export		- 36		- 739	- 124		- 92	- 18	- 362
International marine bunkers				- 178					- 7
International aviation bunkers				- 296			- 296		
Stock changes		2	59	- 14	3	- 8	- 3	- 17	6
Total primary energy supply	4 871	4	6 725	644	- 80	895	- 335	33	- 342
Transfers			- 41	36	3	30	- 4	- 4	- 1
Total transformation sector	-4 473	635	-6 651	6 065	1 746	418	512	545	1 911
Main activity producers	-2 609	- 200	- 57	- 349				- 2	- 22
Autoproducers	- 162	- 64		- 181				- 2	- 10
Gas processing				- 58					
Petroleum refineries			-6 782	6 867	1 746	569	512	549	1 943
Coal transformation	-1 703	899		- 19					
Other transformation			188	- 196		- 151			
Losses & own use	- 16	- 115	- 3	- 262		- 1		- 1	- 2
Discrepancy	37	- 33	- 19	- 162	2	- 69	6	5	30
Total final consumption	419	491	11	6 321	1 672	1 274	180	578	1 597
Total final energy consumption	419	454	1	4 854	1 672	268	180	547	1 591
Industry sector	416	450	1	761		268		50	204
Iron and steel	98	400		57				4	11
Chemical & petrochemical	109	30	1	382		268		6	24
Non-metallic minerals	132	11		85				3	25
Other industries	172	19		237				37	144
Transport sector				2 908	1 672		146		962
Domestic air transport				146			146		
Road				2 624	1 672				914
Rail				7					7
Inland waterways				131					41
Other transport									
Other sector	3	4		1 185			34	497	425
Residential				541				343	
Commerce and public services	3	4		460			34	133	263
Agriculture				129				21	108
Non-specified others				54					54
Non-energy		36	10	1 467		1 007		31	6

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				93	291	708	96	870			2 107	991
74	506		172	3 950				58			16 999	58
- 116	- 3		- 41								- 784	
- 180			- 1								- 187	
											- 304	
- 5	4			17							5	
- 227	507		129	4 060	291	708	96	928			17 836	1 049
- 6	- 23		35								- 6	
455	61	209	241	- 2 742	- 291	- 708	- 91	- 639	3 778	23	- 4 818	- 833
- 132	- 9	- 61	- 39	- 2 675	- 280	- 708	- 83	- 303	3 199	17	- 3 757	- 514
- 40	- 7	- 65	- 44	- 136	- 12		- 7	- 331	582		- 358	- 318
	- 56	- 3		69							10	
627	179	338	343								109	
			- 19								- 817	
	- 46								- 1	- 4	6	- 1
- 37	- 2	- 216	- 11	- 52				- 6	- 337	- 1	- 800	- 6
	- 120	7	- 62	- 49				- 12	- 37		- 363	- 13
185	423		333	1 217			5	272	3 404	22	11 849	197
167	265		107	1 207			5	272	3 404	22	10 420	197
71	35		106	479				161	1 240		3 442	116
4	14		20	109				1	253		896	
21	1		47	87				6	198		785	
20	2		33	32				30	63		348	6
26	18		7	251				124	726		1 514	110
91	34			2				18	63		2 954	18
											148	
	34			2				18			2 605	18
									63		70	
91											132	
5	196		1	726			5	93	2 102	22	4 024	63
	178			361			2	10	939	1	1 774	12
5	17			366			2	61	1 151	21	2 033	49
									10		140	
								22	1		77	1
18	158		226	9							1 429	
				107	302	359	94	810			1 722	956
92	512		177	4 112				50			17 556	50
- 103	- 4		- 36								- 775	
- 170			- 1								- 178	
											- 296	
4	1		- 1	5							53	
- 176	510		139	4 224	302	359	94	860			18 082	1 005
- 8	- 18		37								- 5	
414	95	191	232	- 2 907	- 302	- 359	- 88	- 574	3 826	23	- 4 804	- 795
- 196	- 9	- 73	- 48	- 2 839	- 292	- 359	- 84	- 265	3 284	17	- 3 753	- 509
- 43	- 7	- 75	- 43	- 137	- 10		- 4	- 303	546		- 315	- 285
	- 55	- 3		69							11	
653	211	342	342								86	
			- 19								- 827	
	- 45								- 1	- 4	6	- 1
- 40	- 11	- 199	- 8	- 58				- 3	- 321	- 1	- 779	- 3
5	- 90	8	- 61	- 24				- 13	- 32		- 247	- 13
195	486		339	1 235			5	270	3 473	22	12 247	195
174	314		109	1 225			5	270	3 473	22	10 723	195
78	54		108	474				158	1 248		3 508	115
7	14		21	103				1	255		914	
22	13		48	87				6	200		815	
21	3		32	32				28	64		352	6
28	23		7	252				123	729		1 532	110
90	38			2				18	63		2 990	18
											146	
	38			2				18			2 644	18
									63		70	
90											131	
7	222		1	749			5	94	2 162	22	4 225	62
	199			386			2	9	984	1	1 924	12
7	23			363			2	61	1 167	21	2 081	48
									10		140	
									2		80	1
21	172		230	9							1 524	

Major energy indicators of Japan

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	18 366	20 648	21 695	21 866	20 992	18 105	17 886	18 082	17 836
Indigenous production	3 119	4 079	4 390	4 278	4 251	1 341	1 466	1 722	2 107
Import	16 029	17 577	18 234	18 675	17 908	17 953	17 624	17 556	16 999
Export	- 213	- 483	- 265	- 426	- 751	- 796	- 804	- 775	- 784
Final energy consumption	10 808	12 089	12 585	12 707	11 669	10 779	10 677	10 723	10 420
Industry	4 526	4 550	4 345	4 278	3 836	3 568	3 516	3 508	3 442
Transport	3 011	3 585	3 726	3 634	3 292	3 049	3 016	2 990	2 954
Residential	1 591	1 891	2 040	2 107	2 094	1 846	1 848	1 924	1 774
Commerce & public services	1 404	1 804	2 193	2 398	2 194	2 089	2 060	2 081	2 033
Others	276	260	281	292	252	227	238	220	217
Coal & Peat									
Primary energy supply	3 251	3 605	4 065	4 609	4 819	4 928	4 848	4 871	4 788
Indigenous production	187	148	64	27	25	31	31	32	31
Import	3 062	3 461	4 004	4 582	4 794	4 897	4 816	4 838	4 758
Export									- 1
Transformation sector	-2 972	-3 150	-3 473	-4 086	-4 223	-4 430	-4 443	-4 473	-4 359
Power generation	- 799	-1 165	-1 629	-2 249	-2 393	-2 746	-2 731	-2 771	-2 674
Final energy consumption	418	439	427	448	423	428	410	419	411
Industry	418	439	427	447	415	423	406	416	408
Transport									
Residential									
Commerce & public services		1	1	1	8	5	3	3	3
Others									
Coal & peat products									
Primary energy supply	- 40	- 92	- 4	15	14	57	27	4	3
Indigenous production									
Import	15	18	76	81	30	80	60	38	47
Export	- 57	- 104	- 78	- 49	- 20	- 23	- 30	- 36	- 42
Transformation sector	888	793	629	693	666	550	601	635	636
Power generation	- 333	- 347	- 325	- 289	- 305	- 309	- 288	- 264	- 256
Final energy consumption	655	534	416	459	489	445	441	454	442
Industry	652	532	416	459	487	442	438	450	437
Transport									
Residential	3	2							
Commerce & public services					2	3	4	4	4
Others									
Crude oil & NGL									
Primary energy supply	8 561	9 600	9 208	9 030	7 762	7 040	6 931	6 725	6 346
Indigenous production	23	31	27	31	29	20	19	18	17
Import	8 667	9 681	9 263	9 027	7 727	6 969	6 850	6 648	6 354
Export									
Transformation sector	-8 274	-9 430	-8 998	-8 953	-7 607	-6 959	-6 888	-6 651	-6 313
Petroleum refineries	-7 591	-9 030	-8 975	-8 928	-7 685	-6 940	-6 987	-6 782	-6 488
Petroleum products									
Primary energy supply	1 917	1 492	1 470	1 150	724	663	471	644	614
Import	2 513	2 272	2 229	2 138	1 883	1 880	1 705	1 871	1 833
Export	- 156	- 379	- 187	- 376	- 731	- 773	- 774	- 739	- 741
Transformation sector	5 974	7 481	7 614	7 605	6 758	6 200	6 218	6 065	5 890
Power generation	-1 419	-1 194	- 902	- 879	- 657	- 619	- 610	- 530	- 425
Petroleum refineries	7 693	9 104	8 959	8 878	7 750	7 082	7 108	6 867	6 597
Final energy consumption	6 251	7 058	7 150	6 754	5 549	5 008	4 923	4 854	4 656
Industry	1 643	1 737	1 579	1 339	974	851	815	761	716
Transport	2 950	3 517	3 658	3 562	3 214	2 968	2 934	2 908	2 871
Residential	574	669	728	690	612	508	505	541	461
Commerce & public services	820	892	943	923	541	492	468	460	425
Others	263	244	242	240	207	188	201	184	182
Gas									
Primary energy supply	1 847	2 226	2 748	2 958	3 596	4 196	4 258	4 224	4 060
Indigenous production	80	86	96	121	134	100	103	107	93
Import	1 771	2 144	2 657	2 841	3 460	4 096	4 154	4 112	3 950
Export									
Transformation sector	-1 248	-1 458	-1 861	-1 816	-2 366	-2 959	-3 029	-2 907	-2 742
Power generation	-1 411	-1 632	-2 005	-1 907	-2 432	-3 021	-3 092	-2 977	-2 812
Final energy consumption	557	751	885	1 088	1 198	1 192	1 191	1 225	1 207
Industry	183	270	305	434	453	458	468	474	479
Transport			1	4	4	3	3	2	2
Residential	309	359	377	392	384	360	368	386	361
Commerce & public services	66	121	202	258	357	370	353	363	366
Others									
Electricity									
Power generation	3 102	3 516	3 798	3 958	4 190	3 797	3 800	3 830	3 781
Thermal	1 949	2 054	2 215	2 434	2 637	3 100	3 056	2 959	2 767
Hydro	316	284	303	277	302	314	286	302	291
Nuclear	728	1 049	1 159	1 097	1 038	34	65	118	234
Others	108	130	121	150	214	349	393	451	489
Final energy consumption	2 753	3 138	3 502	3 689	3 728	3 418	3 419	3 473	3 404
Industry	1 525	1 476	1 507	1 466	1 362	1 242	1 234	1 248	1 240
Transport	61	68	67	68	66	63	63	63	63
Residential	656	818	901	997	1 078	964	962	984	939
Commerce & public services	501	765	1 017	1 147	1 210	1 138	1 150	1 167	1 151
Others	11	11	11	11	12	11	11	12	12

Major economic indicators of Japan

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ¹	123.54	126.84	127.77	128.07	127.14	126.99	126.79	126.53
Gross domestic product ³								
Real term, billion USD (constant 2010)	613	849	996	1 146	1 312	1 348	1 379	1 420
GDP, billion USD (PPP, constant 2017)	3 962	4 505	4 778	4 801	5 044	5 070	5 180	5 197
Nominal, billion USD (current)	311	415	693	1 146	1 352	1 209	1 329	1 433
GDP per capita ³								
Real term (constant 2010 USD)	4 961	6 694	7 792	8 949	10 318	10 616	10 878	11 221
GDP, PPP (constant 2017 USD)	32 069	35 518	37 391	37 487	39 673	39 926	40 859	41 074
Nominal (current USD)	2 516	3 274	5 427	8 949	10 631	9 519	10 484	11 325
Nominal GDP & its components (billions of current JPY) ¹								
Gross domestic product	453 609	526 706	524 133	500 354	531 320	535 537	545 897	547 126
Households and NPISHs final consumption expenditure	232 097	286 589	291 543	288 956	300 612	298 240	302 642	304 428
General government final consumption expenditure	61 445	88 761	94 958	97 527	105 297	106 575	107 107	108 335
Gross fixed capital formation	154 919	144 237	128 942	106 724	126 403	124 953	129 892	131 971
Stock change	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Exports of goods and services	46 358	55 960	73 444	75 237	93 571	87 113	96 907	101 355
Imports of goods and services	42 834	48 432	65 533	67 929	95 797	81 806	91 829	100 078
Real GDP & its components (billions of 2005 JPY) ¹								
Gross Domestic Product	417 308	474 562	503 252	505 718	531 320	534 093	545 674	547 437
Households and NPISHs final consumption expenditure	229 820	267 390	284 613	292 119	300 612	299 825	303 765	303 725
General government final consumption expenditure	62 824	84 520	93 189	98 044	105 297	106 803	106 974	107 895
Gross fixed capital formation	141 195	135 937	129 843	109 253	126 403	125 985	129 704	130 462
Stock change	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Exports of goods and services	33 393	52 744	71 119	82 819	93 571	95 173	101 675	105 159
Imports of goods and services	44 820	62 549	75 470	76 248	95 797	94 245	97 430	100 715
Sectoral shares of Real GDP (%) ¹								
Agriculture, Fishery and Forestry	N.A.	1.7	1.3	1.2	1.1	1.0	1.0	1.0
Industry	N.A.	31.0	29.9	29.1	29.0	28.9	29.6	29.9
Services, etc.	N.A.	68.5	69.7	69.3	69.3	69.5	68.9	68.9
Industrial production index (2010=100) ²	103.9	103.2	105.9	100.0	97.3	97.2	100.0	101.0
External trade (billions of current USD) ¹								
Exports, f.o.b.	287.6	479.2	594.9	769.8	624.9	645.1	698.3	738.1
Imports, c.i.f.	235.4	379.5	515.9	694.1	648.1	607.7	672.1	748.5
Balance of payments (billions of current USD) ²								
Trade balance	N.A.	118.0	107.0	108.5	-7.3	51.2	43.8	10.6
Current account	N.A.	130.7	170.1	220.9	136.5	197.0	203.2	176.1
Overall balance	N.A.	32.1	38.6	12.9	-41.6	-79.6	56.5	16.2
Foreign exchange rate (JPY/USD) ¹	144.79	107.77	110.22	87.78	121.04	108.79	112.17	110.42
PPP conversion factor, GDP (JPY/USD) ¹	187.71	154.72	129.55	111.67	103.45	105.50	105.38	104.61
Price Indices								
GDP Deflator (2010=100) ³	108.7	111.0	104.1	98.9	100.0	100.3	100.0	99.9
Producer Price Index (2010=100) ²	107.7	99.5	97.2	100.0	102.7	99.1	101.4	103.9
Consumer Price Index (2010=100) ²	94.5	102.7	100.4	100.0	103.6	103.5	104.0	105.0
Growth rate (%) ³								
Real GDP	4.9	2.8	1.7	4.2	1.2	0.5	2.2	0.3
Population	0.3	0.2	0.0	0.0	-0.1	-0.1	-0.2	-0.2
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices	1.5	0.0	1.7	-0.1	-2.3	-3.5	2.3	2.5
Consumer prices	3.1	-0.7	-0.3	-0.7	0.8	-0.1	0.5	1.0

Source ¹: *World Development Indicators*, World Bank

²: *International Financial Statistics*, International Monetary Fund

³: Calculated from ¹ and ² by ESTO

Note

: N.A. means "not available"

: JPY means Yen, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

Energy prices in Japan in 2018

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	110.63
Local Currency Unit		JPY

IMPORT PRICES

WHOLESALE PRICES

CONSUMER PRICES

	Unit	Amount		Unit	Amount		Unit	Amount
Coal and Coal Products			Coal and Coal Products			Coal and Coal Products		
Coking Coal	JPY/tonne	17 716	Coking Coal			Coking Coal		
Anthracite			Anthracite			Anthracite		
Other bituminous coal	JPY/tonne	13 346	Other bituminous coal			Other bituminous coal		
Sub-bituminous Coal			Sub-bituminous Coal			Sub-bituminous Coal		
Lignite			Lignite			Lignite		
Peat			Peat			Peat		
Patent Fuel			Patent Fuel			Patent Fuel		
Coke			Coke			Coke		
Coal Tar			Coal Tar			Coal Tar		
BKB/PB			BKB/PB			BKB/PB		
			Gas Works Gas			Gas Works Gas		
Oil and Oil Products			Oil and Oil Products			Oil and Oil Products		
Crude Oil	JPY/kL	50,272.0	Crude Oil			Crude Oil		
Natural Gas Liquids			Natural Gas Liquids			Natural Gas Liquids		
Ethane			Ethane			Ethane		
LPG	JPY/tonne	61,587.0	LPG	JPY/kg	137.4	LPG	JPY/m ³	772.4
Naphtha	JPY/kL	47,764.0	Naphtha	JPY/kL	51,181.7	Naphtha		
Motor Gasoline	JPY/kL	55,432.1	Motor Gasoline	JPY/kL	128,527.0	Motor Gasoline (regular)	JPY/L	150.0
Aviation Gasoline			Aviation Gasoline			Aviation Gasoline		
Gasoline Type Jet Fuel			Gasoline Type Jet Fuel			Gasoline Type Jet Fuel		
Kerosene Type Jet Fuel	JPY/kL	60,899.0	Kerosene Type Jet Fuel			Kerosene Type Jet Fuel		
Other Kerosene	JPY/kL	61,088.9	Other Kerosene	JPY/kL	76,410.0	Other Kerosene	JPY/L	100.6
Gas/Diesel Oil	JPY/kL	63,009.3	Gas/Diesel Oil	JPY/kL	108,735.0	Gas/Diesel Oil	JPY/L	129.0
Fuel Oil			Fuel Oil	JPY/kL	50,336.0	Fuel Oil		
White Spirit SBP			White Spirit SBP			White Spirit SBP		
Lubricants			Lubricants			Lubricants		
Bitumen			Bitumen			Bitumen		
Paraffin Waxes			Paraffin Waxes			Paraffin Waxes		
Petroleum Coke			Petroleum Coke			Petroleum Coke		
Natural Gas			Natural Gas			Natural Gas		
Natural Gas			Natural Gas			Natural Gas		
Liquefied Natural Gas	JPY/tonne	60,362.0	Liquefied Natural Gas			Liquefied Natural Gas		
Compressed Natural Gas			Compressed Natural Gas			Compressed Natural Gas		
Electricity			Electricity			Electricity		
Electricity			Electricity			Industrial		
						Commercial		
						Residential	JPY/kWh	24.30
						Others		
Other Energy Products			Other Energy Products			Other Energy Products		

KOREA

Energy balance table of Korea

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production	22		34						
Import	3 332	9	6 406	1 716	1	1 112			10
Export			- 26	- 2 944	- 460	- 221	- 647	- 36	- 1 090
International marine bunkers				- 400					- 47
International aviation bunkers				- 222			- 222		
Stock changes	9		89	- 33	- 10	- 13	- 3	- 3	- 9
Total primary energy supply	3 363	9	6 504	- 1 884	- 469	878	- 873	- 39	- 1 135
Transfers			139	- 120	9	- 141	- 8	28	4
Total transformation sector	- 3 305	330	- 6 521	6 220	875	1 128	959	117	2 054
Main activity producers	- 2 156	- 83		- 65					- 6
Autoproducers	- 151	- 98		- 75		- 48			
Gas processing				- 9					
Petroleum refineries			- 7 041	6 850	875	1 596	959	117	2 060
Coal transformation	- 998	512							
Other transformation			520	- 481		- 420			
Losses & own use		- 123		- 247					
Discrepancy	123	- 4	- 121	- 6	2	- 39	- 1	- 3	- 1
Total final consumption	181	212	3 963	417	1 825	77	103	922	
Total final energy consumption	181	191	1 856	417	77	103	922		
Industry sector	181	172		153				3	50
Iron and steel	66	163		3					
Chemical & petrochemical	1			32					1
Non-metallic minerals	96			21					6
Other industries	56	19		97				2	43
Transport sector				1 383	417		56		765
Domestic air transport				56			56		
Road				1 309	417				751
Rail				4					4
Inland waterways				13					9
Other transport									
Other sector		19		320			21	100	107
Residential		19		142				76	28
Commerce and public services				78				13	13
Agriculture				12				4	7
Non-specified others				88			20	6	59
Non-energy		21		2 106		1 825			
2017									
Indigenous production	29		32						
Import	3 410	10	6 399	1 593	6	1 018			12
Export			- 15	- 2 782	- 429	- 225	- 674	- 29	- 1 004
International marine bunkers				- 427					- 55
International aviation bunkers				- 211			- 211		
Stock changes	10		- 8	- 12	- 1	10	- 8	2	5
Total primary energy supply	3 449	10	6 407	- 1 840	- 424	803	- 893	- 27	- 1 042
Transfers			- 33	37	17	- 11	- 4	21	19
Total transformation sector	- 3 303	311	- 6 382	6 032	819	1 074	976	117	1 978
Main activity producers	- 2 151	- 84		- 61					- 6
Autoproducers	- 162	- 96		- 72		- 46			
Gas processing				- 5					
Petroleum refineries			- 6 885	6 630	819	1 527	976	117	1 984
Coal transformation	- 989	492							
Other transformation			503	- 461		- 408			
Losses & own use		- 124		- 269					- 2
Discrepancy	21	- 3	8	115	5	56	- 4	- 7	6
Total final consumption	167	193	4 075	416	1 922	75	104	958	
Total final energy consumption	167	171	1 898	416	75	104	958		
Industry sector	167	151		150				3	50
Iron and steel	57	141		4					
Chemical & petrochemical	1			27					1
Non-metallic minerals	99			21					6
Other industries	41	19		99				2	43
Transport sector				1 409	416		55		784
Domestic air transport				55			55		
Road				1 332	416				767
Rail				4					4
Inland waterways				18					12
Other transport									
Other sector		21		339			20	101	124
Residential		21		153				76	39
Commerce and public services				81				15	13
Agriculture				12				4	7
Non-specified others				93			20	6	64
Non-energy		21		2 177		1 922			

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				11	12	1 456	9	347		2	1 894	230
281	311		1	2 078							13 542	
- 172	- 21		- 297								- 2 970	
- 353											- 400	
											- 222	
- 2	10		- 3	- 91							- 26	
- 246	300		- 300	1 998	12	1 456	9	347		2	11 818	230
- 48	19		- 6								19	
376	98	186	427	- 1 087	- 12	- 1 456		- 167	2 110	249	- 3 639	- 138
- 59				- 1 014	- 12	- 1 456		- 112	1 982	97	- 2 821	- 118
			- 27	- 73				- 55	129	152	- 172	- 20
	- 8	- 1									- 9	
435	139	210	460								- 190	
											- 486	
	- 33	- 24	- 5								39	
- 34	- 3	- 198	- 13	- 6					- 204	- 7	- 588	
16	- 6		27	33					7	- 12	20	
64	409	11	135	938			9	180	1 913	232	7 629	92
64	261	11	2	938			9	180	1 913	232	5 501	92
46	42	11	2	315				109	1 004	132	2 067	30
	2			65					200		498	
15	4	11		45				18	191	87	373	
13	1		2	24				31	46		218	
17	34			181				61	567	45	1 025	29
4	141			51				27	11		1 472	27
											56	
	141			51				27			1 387	27
									11		15	
4											13	
14	79			572			9	44	899	100	1 962	35
9	29			400			1	34	244	86	899	9
3	48			172			6	33	595	14	898	22
1							1	3	50		67	4
1	1							- 26	10		98	
	148		133								2 128	
				13	10	1 619	8	343		2	2 055	198
254	304			1 827							13 237	
- 105	- 10		- 307								- 2 798	
- 372											- 427	
											- 211	
- 10	- 8		- 2	- 30							- 39	
- 234	285		- 308	1 809	10	1 619	8	343		2	11 817	198
- 24	15	19	- 14								4	
366	93	165	443	- 896	- 10	- 1 619		- 143	2 026	236	- 3 748	- 112
- 54				- 827	- 10	- 1 619		- 89	1 905	84	- 2 852	- 94
			- 26	- 70				- 54	121	153	- 180	- 19
	- 5										- 5	
421	132	184	469								- 256	
											- 498	
	- 34	- 19									42	
- 58	- 11	- 184	- 13	- 6					- 203	- 7	- 609	
19	2		38	21					61	- 19	204	
69	385		147	928			8	200	1 884	213	7 668	85
69	276			928			8	200	1 884	213	5 470	85
47	49			313				135	988	121	2 026	29
	3			65					196		463	
15	10			45				17	187	79	355	
13	1			23				29	46		218	
18	36			180				89	558	42	1 030	29
5	149			50				22	10		1 492	22
											55	
	149			50				22			1 404	22
									10		14	
5											18	
16	78			565			8	43	885	91	1 952	34
9	29			393			1	33	240	79	895	9
5	48			172			5	33	588	13	891	21
1							1	3	47		63	4
1	1							- 26	10		103	
	109		146								2 199	

Major energy indicators of Korea

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	3 890	6 061	7 878	8 804	10 468	11 417	11 824	11 817	11 818
Indigenous production	947	885	1 442	1 799	1 882	2 152	2 153	2 055	1 894
Import	3 096	6 301	8 653	8 847	11 173	12 552	13 012	13 237	13 542
Export	- 159	- 659	-1 714	-1 496	-1 917	-2 628	-2 691	-2 798	-2 970
Final energy consumption	2 436	3 671	4 274	4 609	4 996	5 271	5 391	5 470	5 501
Industry	806	1 223	1 611	1 635	1 883	2 013	2 002	2 026	2 067
Transport	610	1 016	1 100	1 222	1 254	1 418	1 462	1 492	1 472
Residential	542	403	630	771	832	797	868	895	899
Commerce & public services	364	776	721	805	858	876	903	891	898
Others	114	253	213	176	169	167	155	166	165
Coal & Peat									
Primary energy supply	1 063	1 114	1 756	2 070	3 057	3 373	3 401	3 449	3 363
Indigenous production	317	103	152	53	40	33	32	29	22
Import	658	1 179	1 639	1 956	3 036	3 385	3 397	3 410	3 332
Export									
Transformation sector	- 991	- 912	-1 610	-2 034	-2 851	-3 199	-3 187	-3 303	-3 305
Power generation	- 164	- 388	-1 024	-1 421	-2 051	-2 181	-2 178	-2 313	-2 307
Final energy consumption	113	200	267	174	189	201	211	167	181
Industry	111	200	267	174	189	201	211	167	181
Transport									
Residential									
Commerce & public services									
Others	1								
Coal & peat products									
Primary energy supply				9	18	11	10	10	9
Indigenous production									
Import				9	18	11	10	10	9
Export									
Transformation sector	439	187	202	175	293	371	308	311	330
Power generation	- 86	- 108	- 109	- 100	- 144	- 179	- 176	- 181	- 182
Final energy consumption	378	110	113	150	194	228	160	171	191
Industry	16	53	89	110	158	201	137	151	172
Transport									
Residential	362	57	24	40	36	27	23	21	19
Commerce & public services									
Others									
Crude oil & NGL									
Primary energy supply	1 810	3 764	5 296	4 974	5 066	5 903	6 218	6 407	6 504
Indigenous production			28	22	29	28	29	32	34
Import	1 787	3 736	5 267	4 913	5 090	5 950	6 250	6 399	6 406
Export		- 1	- 4		- 20	- 14	- 22	- 15	- 26
Transformation sector	-1 780	-3 776	-5 141	-4 968	-4 939	-5 784	-6 083	-6 382	-6 521
Petroleum refineries	-1 780	-3 840	-5 358	-5 190	-5 232	-6 193	-6 526	-6 885	-7 041
Petroleum products									
Primary energy supply	272	51	-1 149	-1 102	-1 083	-1 604	-1 621	-1 840	-1 884
Import	538	1 040	1 031	875	1 383	1 574	1 697	1 593	1 716
Export	- 159	- 658	-1 710	-1 496	-1 897	-2 614	-2 669	-2 782	-2 944
Transformation sector	1 634	3 373	4 713	4 652	4 652	5 476	5 685	6 032	6 220
Power generation	- 189	- 414	- 337	- 271	- 213	- 177	- 200	- 133	- 141
Petroleum refineries	1 823	3 850	5 260	5 167	5 169	6 050	6 321	6 630	6 850
Final energy consumption	1 546	2 535	2 296	2 063	1 839	1 822	1 871	1 898	1 856
Industry	456	580	459	334	247	143	150	150	153
Transport	606	1 010	1 092	1 199	1 189	1 343	1 381	1 409	1 383
Residential	80	106	162	133	125	127	148	153	142
Commerce & public services	296	607	388	248	144	99	99	81	78
Others	108	232	194	150	133	110	94	105	100
Gas									
Primary energy supply	114	348	712	1 146	1 618	1 647	1 730	1 809	1 998
Indigenous production				18	20	7	6	13	11
Import	112	346	715	1 093	1 645	1 630	1 658	1 827	2 078
Export									
Transformation sector	- 85	- 174	- 241	- 464	- 739	- 803	- 860	- 896	-1 087
Power generation	- 85	- 174	- 241	- 464	- 754	- 803	- 860	- 896	-1 087
Final energy consumption	28	167	457	669	862	858	901	928	938
Industry	3	22	121	175	297	310	314	313	315
Transport				14	43	49	50	50	51
Residential	19	112	261	351	374	342	371	393	400
Commerce & public services	6	33	76	130	148	157	166	172	172
Others				1					
Electricity									
Power generation	379	652	1 039	1 396	1 788	1 977	2 012	2 026	2 110
Thermal	166	400	632	853	1 229	1 339	1 364	1 416	1 537
Hydro	23	10	14	13	13	8	10	10	12
Nuclear	190	241	392	528	535	593	583	534	481
Others	0	1		2	11	37	54	66	81
Final energy consumption	340	588	947	1 287	1 618	1 783	1 862	1 884	1 913
Industry	208	335	541	662	821	945	955	988	1 004
Transport	4	6	7	9	8	8	10	10	11
Residential	64	102	134	183	221	230	248	240	244
Commerce & public services	59	133	246	407	532	548	592	588	595
Others	5	12	19	25	36	53	58	58	60

Major economic indicators of Korea

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ¹	42.87	47.01	48.18	49.55	51.01	51.22	51.36	51.61
Gross domestic product ³								
Real term, billion USD (constant 2010)	364	725	926	1 144	1 330	1 369	1 412	1 450
GDP, billion USD (PPP, constant 2017)	543	1 079	1 380	1 704	1 981	2 039	2 104	2 165
Nominal, billion USD (current)	283	576	935	1 144	1 466	1 500	1 624	1 725
GDP per capita ³								
Real term (constant 2010 USD)	8 496	15 414	19 225	23 087	26 064	26 726	27 493	28 091
GDP, PPP (constant 2017 USD)	12 656	22 964	28 641	34 394	38 829	39 815	40 957	41 948
Nominal (current USD)	6 610	12 257	19 403	23 087	28 732	29 289	31 617	33 423
Nominal GDP & its components (billions of current KRW) ¹								
Gross domestic product	200 556	651 634	957 448	1322 611	1658 020	1740 780	1835 698	1893 497
Households and NPISHs final consumption expenditure	100 738	355 141	500 911	667 061	804 812	834 805	872 791	908 274
General government final consumption expenditure	22 008	71 028	123 149	187 875	250 088	265 295	283 046	305 513
Gross fixed capital formation	74 874	206 895	291 800	399 786	481 002	517 350	578 457	574 986
Stock change	4 452	7 451	19 449	30 752	8 600	7 368	14 255	17 872
Exports of goods and services	50 128	221 159	337 817	622 999	712 776	698 621	751 429	788 279
Imports of goods and services	51 655	209 540	316 357	585 862	599 257	582 659	664 279	701 151
Real GDP & its components (billions of 2010 KRW) ¹								
Gross Domestic Product	454 146	903 551	1155 130	1426 618	1658 020	1706 880	1760 812	1807 736
Households and NPISHs final consumption expenditure	279 924	511 607	617 417	725 119	804 812	825 676	848 589	872 304
General government final consumption expenditure	77 174	115 735	151 963	205 739	250 088	261 162	271 429	286 645
Gross fixed capital formation	175 602	306 030	369 229	425 635	481 002	512 635	562 777	549 071
Stock change	6 575	10 058	17 797	17 171	8 600	7 662	13 945	16 658
Exports of goods and services	55 318	218 958	359 712	549 438	712 776	729 685	747 784	773 753
Imports of goods and services	84 743	231 805	343 052	485 464	599 257	630 267	686 089	691 374
Sectoral shares of Real GDP (%) ¹								
Agriculture, Fishery and Forestry	4.9	3.0	2.3	2.2	2.0	1.8	1.8	1.8
Industry	34.3	33.2	34.6	35.1	34.1	34.2	34.6	34.4
Services, etc.	53.4	54.9	54.6	54.6	55.6	55.6	55.3	55.5
Industrial production index (2010=100) ²	22.9	53.6	71.6	100.0	108.4	110.4	113.8	115.4
External trade (billions of current USD) ¹								
Exports, f.o.b.	65.0	172.3	284.4	466.4	526.8	495.4	573.7	604.9
Imports, c.i.f.	69.8	160.5	261.2	425.2	436.5	406.2	478.5	535.2
Balance of payments (billions of current USD) ²								
Trade balance	-3.7	15.4	32.5	47.9	120.3	116.5	113.6	110.1
Current account	-2.8	10.2	12.2	28.0	105.1	97.9	75.2	77.5
Overall balance	-1.1	23.8	19.4	26.9	11.7	7.6	4.4	17.5
Foreign exchange rate (KRW/USD) ¹	707.76	1130.96	1024.12	1156.06	1131.16	1160.43	1130.42	1100.50
PPP conversion factor, GDP (KRW/USD) ¹	557.45	747.24	788.92	840.89	857.37	858.99	871.70	870.77
Price Indices								
GDP Deflator (2010=100) ³	44.2	72.1	82.9	92.7	100.0	102.0	104.3	104.7
Producer Price Index (2010=100) ²	56.4	79.1	86.9	100.0	100.9	99.1	102.5	104.5
Consumer Price Index (2010=100) ²	44.6	73.1	86.2	100.0	109.8	110.9	113.1	114.7
Growth rate (%) ³								
Real GDP	9.9	9.1	4.3	6.8	2.8	2.9	3.2	2.7
Population	1.0	0.8	0.2	0.5	0.5	0.4	0.3	0.5
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices	4.2	2.1	2.1	3.8	-4.0	-1.8	3.5	1.9
Consumer prices	8.6	2.3	2.8	2.9	0.7	1.0	1.9	1.5

Source ¹: World Development Indicators, World Bank

²: International Financial Statistics, International Monetary Fund

³: Calculated from ¹ and ² by ESTO

Note

: N.A. means "not available"

: KRW means Won, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

Energy prices in Korea in 2018

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	1,100.58
Local Currency Unit		won

IMPORT PRICES

WHOLESALE PRICES

CONSUMER PRICES

	Unit	Amount		Unit	Amount		Unit	Amount
Coal and Coal Products	USD/tonne	182.94	Coal and Coal Products			Coal and Coal Products		
Coking Coal	USD/tonne	146.24	Coking Coal			Coking Coal		
Anthracite	USD/tonne	95.00	Anthracite			Anthracite		
Other bituminous coal			Other bituminous coal			Other bituminous coal		
Sub-bituminous Coal			Sub-bituminous Coal			Sub-bituminous Coal		
Lignite			Lignite			Lignite		
Peat			Peat			Peat		
Patent Fuel			Patent Fuel			Patent Fuel		
Coke			Coke			Coke		
Coal Tar			Coal Tar			Coal Tar		
BKB/PB			BKB/PB			BKB/PB		
			Gas Works Gas			Gas Works Gas		
Oil and Oil Products			Oil and Oil Products			Oil and Oil Products		
Crude Oil	USD/bbl	71.48	Crude Oil			Crude Oil		
Natural Gas Liquids			Natural Gas Liquids			Natural Gas Liquids		
Ethane			Ethane			Ethane		
LPG	USD/bbl	48.00	LPG			LPG		
Naphtha	USD/bbl	70.59	Naphtha			Naphtha		
Motor Gasoline			Motor Gasoline	KRW/t	1,455.55	Motor Gasoline (regular)	KRW/t	1,581.37
Aviation Gasoline	USD/bbl	151.33	Aviation Gasoline			Aviation Gasoline		
Gasoline Type Jet Fuel			Gasoline Type Jet Fuel			Gasoline Type Jet Fuel		
Kerosene Type Jet Fuel			Kerosene Type Jet Fuel			Kerosene Type Jet Fuel		
Other Kerosene	USD/bbl	62.86	Other Kerosene	KRW/t	765.44	Other Kerosene	KRW/t	942.34
Gas/Diesel Oil	USD/bbl	86.59	Gas/Diesel Oil	KRW/t	1,277.05	Gas/Diesel Oil	KRW/t	1,391.90
Fuel Oil	USD/bbl	70.70	Fuel Oil	KRW/t	658.87	Fuel Oil	KRW/t	724.33
White Spirit SBP			White Spirit SBP			White Spirit SBP		
Lubricants			Lubricants			Lubricants		
Bitumen			Bitumen	KRW/kg	533.41	Bitumen		
Paraffin Waxes			Paraffin Waxes			Paraffin Waxes		
Petroleum Coke			Petroleum Coke			Petroleum Coke		
Natural Gas			Natural Gas			Natural Gas		
Natural Gas			Natural Gas			Natural Gas		
Liquefied Natural Gas	USD/tonne	526.84	Liquefied Natural Gas	KRW/MJ	13.23	Liquefied Natural Gas	KRW/MJ	14.58
Compressed Natural Gas			Compressed Natural Gas			Compressed Natural Gas		
Electricity			Electricity			Electricity		
Electricity			Electricity			Industrial	KRW/kWh	106.46
						Commercial	KRW/kWh	129.97
						Residential	KRW/kWh	106.87
						Others		
Other Energy Products			Other Energy Products			Other Energy Products		
Gas oil, diesel oil and naphtha						Environmental diesel oil (road)		

MALAYSIA

Energy balance table of Malaysia

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production	70		1 423						
Import	868		388	827	445		22		287
Export			- 628	- 671	- 129		- 35	- 2	- 303
International marine bunkers				- 18					- 4
International aviation bunkers				- 104			- 104		
Stock changes	8		- 19	20					34
Total primary energy supply	946		1 164	54	316		- 117	- 2	14
Transfers			- 85	85					
Total transformation sector	- 857		-1 071	1 040	231		144	3	395
Main activity producers	- 857			- 9					- 8
Autoproducers				- 6					- 6
Gas processing				23				2	5
Petroleum refineries			-1 071	1 032	231		144	1	404
Coal transformation									
Other transformation									
Losses & own use			- 8	- 25					
Discrepancy	- 14		- 2	14	- 2		- 2		- 1
Total final consumption	76		1 168	546	546		26		408
Total final energy consumption	76		1 050	546	546		26		408
Industry sector	76			102	5				75
Iron and steel									
Chemical & petrochemical									
Non-metallic minerals	76								
Other industries				102	5				75
Transport sector				856	537		26		293
Domestic air transport				26			26		
Road				830	537				293
Rail									
Inland waterways									
Other transport									
Other sector				92	3				40
Residential				33					
Commerce and public services				19					3
Agriculture				12					12
Non-specified others				28	3				25
Non-energy				118					
2017									
Indigenous production	79		1 455						
Import	803		427	554	215		50		216
Export	- 16		- 626	- 463	- 12		- 56	- 3	- 215
International marine bunkers				- 16					- 4
International aviation bunkers				- 108			- 108		
Stock changes	2		- 12	6	2				3
Total primary energy supply	868		1 243	- 27	206		- 113	- 2	3
Transfers			- 82	82					
Total transformation sector	- 794		-1 143	1 142	345		136	3	403
Main activity producers	- 794			- 10					- 6
Autoproducers				- 9					- 9
Gas processing				23				2	6
Petroleum refineries			-1 143	1 139	345		136		413
Coal transformation									
Other transformation									
Losses & own use			- 9	- 22					
Discrepancy	1		- 9	7	11		4		- 11
Total final consumption	75		1 183	562	562		27		393
Total final energy consumption	75		1 071	562	562		27		393
Industry sector	75			112	8				73
Iron and steel									
Chemical & petrochemical									
Non-metallic minerals	75								
Other industries				112	8				73
Transport sector				874	552		27		295
Domestic air transport				27			27		
Road				847	552				295
Rail									
Inland waterways									
Other transport									
Other sector				85	3				24
Residential				47					
Commerce and public services				11					1
Agriculture				1					1
Non-specified others				25	3				22
Non-energy				112					

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				2 569	95			48			4 205	143
4	22		46	291							2 374	
- 57	- 19		- 126	- 1 143				- 17	- 5		- 2 465	- 17
- 13											- 18	
											- 104	
- 22	5		3					6			15	6
- 88	8		- 77	1 717	95			37	- 5		4 007	132
	85											
101	40	5	120	- 802	- 95			- 19	609		- 1 193	- 113
- 1				- 484	- 95			- 7	583		- 867	- 102
				- 53				- 11	26		- 45	- 11
	2		14	- 265							- 242	
102	38	5	107								- 38	
- 1		- 5	- 19	- 35					- 51		- 119	
4	6		9	- 90					- 2		- 94	
16	138		33	790				18	550		2 602	18
16	54			352				18	550		2 046	18
15	7			346					274		797	
											76	
15	7			346					274		722	
				5				18	2		881	18
											26	
				5				18			853	18
									2		2	
2	47			1					275		368	
	33								107		140	
1	14			1					166		185	
									2		15	
											28	
	85		33	438							555	
				2 727	96			31			4 386	126
9	18		45	293							2 077	
- 26	- 9		- 144	- 1 292				- 10	- 4		- 2 411	- 10
- 12											- 16	
											- 108	
	1							1			- 3	1
- 29	11		- 99	1 728	96			22	- 4		3 926	118
	82											
68	36	7	143	- 906	- 96			- 11	592		- 1 214	- 107
- 4				- 497	- 96			- 5	573		- 829	- 101
				- 43				- 6	19		- 40	- 6
	2		13	- 365							- 342	
72	35	7	130								- 4	
- 1		- 7	- 13	- 32					- 44		- 107	
- 13	18		- 1	- 84				5	- 17		- 96	5
24	147		30	705				16	527		2 508	16
24	65			293				16	527		1 983	16
24	8			286					257		731	
											75	
24	8			286					257		656	
				6				16	2		898	16
											27	
				6				16			869	16
									2		2	
	57			1					269		354	
	47								109		156	
	10			1					157		170	
									2		4	
											25	
	82		30	412							524	

Major energy indicators of Malaysia

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	836	1 458	2 066	2 764	3 182	3 719	3 898	3 926	4 007
Indigenous production	1 948	2 691	3 264	4 012	3 906	4 163	4 269	4 386	4 205
Import	406	466	681	1 008	1 551	1 945	2 100	2 077	2 374
Export	-1 489	-1 650	-1 826	-2 197	-2 200	-2 291	-2 398	-2 411	-2 465
Final energy consumption	519	796	1 096	1 444	1 501	1 816	1 928	1 983	2 046
Industry	221	337	477	652	541	585	671	731	797
Transport	204	289	452	573	624	876	903	898	881
Residential	35	51	69	91	111	132	137	156	140
Commerce & public services	60	100	93	123	180	186	199	170	185
Others		19	4	4	45	37	17	28	43
Coal & Peat									
Primary energy supply	57	67	97	285	611	733	784	868	946
Indigenous production	3	4	10	18	63	68	64	79	70
Import	60	66	81	277	547	672	716	803	868
Export	-1	-2	-1	-2	-3	-7	-1	-16	
Transformation sector	-34	-40	-63	-232	-542	-654	-710	-794	-857
Power generation	-34	-40	-63	-232	-542	-654	-710	-794	-857
Final energy consumption	21	30	41	56	76	74	75	75	76
Industry	21	30	41	56	76	74	75	75	76
Transport									
Residential									
Commerce & public services									
Others									
Coal & peat products									
Primary energy supply									
Indigenous production									
Import									
Export									
Transformation sector									
Power generation									
Final energy consumption									
Industry									
Transport									
Residential									
Commerce & public services									
Others									
Crude oil & NGL									
Primary energy supply	419	811	947	1 119	1 045	1 085	1 236	1 243	1 164
Indigenous production	1 282	1 548	1 352	1 567	1 442	1 406	1 474	1 455	1 423
Import	94	89	323	342	340	351	456	427	388
Export	-960	-830	-722	-795	-722	-674	-696	-626	-628
Transformation sector	-418	-710	-927	-1 025	-950	-1 027	-1 152	-1 143	-1 071
Petroleum refineries	-418	-710	-927	-1 025	-950	-1 027	-1 152	-1 143	-1 071
Petroleum products									
Primary energy supply	61	-47	-133	-76	17	72	51	-27	54
Import	252	310	277	333	433	595	642	554	827
Export	-164	-304	-357	-353	-353	-428	-511	-463	-671
Transformation sector	311	614	843	915	894	1 018	1 053	1 142	1 040
Power generation	-125	-98	-40	-24	-31	-18	-15	-20	-15
Petroleum refineries	436	698	877	897	887	1 016	1 041	1 139	1 032
Final energy consumption	392	575	736	869	856	1 035	1 058	1 071	1 050
Industry	146	207	221	232	117	91	101	112	102
Transport	204	288	452	568	613	847	877	874	856
Residential	20	26	28	33	30	28	25	47	33
Commerce & public services	22	35	30	32	52	32	39	11	19
Others		19	4	4	44	36	15	26	40
Gas									
Primary energy supply	285	604	1 131	1 422	1 487	1 755	1 730	1 728	1 717
Indigenous production	649	1 118	1 877	2 405	2 378	2 603	2 628	2 727	2 569
Import				56	231	327	286	293	291
Export	-363	-513	-746	-1 039	-1 122	-1 175	-1 184	-1 292	-1 143
Transformation sector	-101	-428	-786	-1 002	-752	-1 186	-902	-906	-802
Power generation	-57	-269	-507	-553	-572	-633	-601	-541	-537
Final energy consumption	19	25	98	228	192	213	261	293	352
Industry	19	24	97	223	181	201	251	286	346
Transport				4	10	11	9	6	5
Residential									
Commerce & public services			1	1	1	1	1	1	1
Others									
Electricity									
Power generation	83	140	231	339	428	533	564	592	614
Thermal	68	117	206	317	405	480	488	492	512
Hydro	14	22	25	22	23	50	72	96	95
Nuclear									
Others	0					2	4	4	7
Final energy consumption	86	167	220	291	376	477	519	527	550
Industry	35	76	117	141	167	218	244	257	274
Transport					1	1	1	2	2
Residential	15	25	41	58	81	103	112	109	107
Commerce & public services	37	65	62	91	126	153	160	157	166
Others					1	2	2	2	2

Major economic indicators of Malaysia

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ^{*1}	18.03	23.19	25.69	28.21	30.27	30.68	31.11	31.53
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	82	163	205	255	330	345	365	382
GDP, billion USD (PPP, constant 2017)	186	369	465	579	750	784	829	868
Nominal, billion USD (current)	44	94	144	255	301	301	319	359
GDP per capita ^{*3}								
Real term (constant 2010 USD)	4 537	7 007	7 974	9 041	10 912	11 244	11 737	12 131
GDP, PPP (constant 2017 USD)	10 308	15 920	18 118	20 540	24 792	25 546	26 648	27 537
Nominal (current USD)	2 442	4 044	5 587	9 041	9 955	9 818	10 259	11 377
Nominal GDP & its components (billions of current MYR) ^{*1}								
Gross domestic product	119	356	544	821	1 177	1 250	1 372	1 447
Households and NPISHs final consumption expenditure	62	156	240	395	635	685	760	831
General government final consumption expenditure	16	36	62	103	154	157	167	173
Gross fixed capital formation	39	90	121	184	304	319	344	350
Stock change	- 1	6	1	8	- 5	6	7	- 9
Exports of goods and services	89	427	614	714	817	834	961	995
Imports of goods and services	86	359	494	583	729	751	867	893
Real GDP & its components (billions of 2005 MYR) ^{*1}								
Gross Domestic Product	291	579	730	909	1 177	1 229	1 300	1 362
Households and NPISHs final consumption expenditure	137	236	328	451	635	672	718	775
General government final consumption expenditure	31	53	85	111	154	156	164	170
Gross fixed capital formation	78	142	157	205	304	312	331	336
Stock change	5	50	- 3	34	- 5		1	- 14
Exports of goods and services	163	523	679	756	817	828	900	920
Imports of goods and services	135	398	528	625	729	739	815	825
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	20.2	11.1	10.3	9.4	8.3	7.6	7.6	7.3
Industry	48.5	51.3	49.0	40.1	38.4	38.4	38.0	37.5
Services, etc.	31.6	38.5	41.4	49.4	52.0	52.6	52.9	54.0
Industrial production index (2010=100) ^{*2}	31.6	78.4	100.0	100.0	121.5	126.5	132.1	136.1
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	29.5	98.2	141.6	198.6	200.0	189.7	218.1	247.5
Imports, c.i.f.	29.3	82.0	114.3	164.6	176.0	168.7	195.4	217.6
Balance of payments (billions of current USD) ^{*2}								
Trade balance	2.5	20.7	33.0	38.4	27.9	24.5	27.3	28.4
Current account	-0.9	8.5	20.0	25.6	9.1	7.1	9.0	8.0
Overall balance	0.9	2.2	10.2	19.6	-5.8	7.3	7.9	11.0
Foreign exchange rate (MYR/USD) ^{*1}	2.70	3.80	3.79	3.22	3.91	4.15	4.30	4.04
PPP conversion factor, GDP (MYR/USD) ^{*1}	0.97	1.19	1.29	1.42	1.57	1.59	1.65	1.63
Price Indices								
GDP Deflator (2010=100) ^{*3}	40.9	61.5	74.5	90.4	100.0	101.7	105.5	106.3
Producer Price Index (2010=100) ^{*2}	50.4	69.0	82.4	100.0	102.2	101.1	107.9	106.7
Consumer Price Index (2010=100) ^{*2}	56.8	80.5	87.8	100.0	112.8	115.1	119.6	120.7
Growth rate (%) ^{*3}								
Real GDP	9.0	8.9	5.3	7.4	5.1	4.4	5.7	4.7
Population	2.9	2.4	2.0	1.7	1.4	1.4	1.4	1.4
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices	0.7	3.1	6.9	5.6	-7.5	-1.1	6.7	-1.1
Consumer prices	2.6	1.5	3.0	1.6	2.1	2.1	3.9	0.9

Source ^{*1}: *World Development Indicators*, World Bank

^{*2}: *International Financial Statistics*, International Monetary Fund

^{*3}: Calculated from ^{*1} and ^{*2} by ESTO

Note : N.A. means "not available"

: MYR means Malaysian Ringgit, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

Energy prices in Malaysia in 2018

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	7.84
Local Currency Unit		MYR

IMPORT PRICES

WHOLESALE PRICES

CONSUMER PRICES

	Unit	Amount		Unit	Amount		Unit	Amount
Coal and Coal Products			Coal and Coal Products			Coal and Coal Products		
Coking Coal			Coking Coal			Coking Coal		
Anthracite	MYR/tonne	788.88	Anthracite			Anthracite		
Other bituminous coal	MYR/tonne	367.39	Other bituminous coal			Other bituminous coal		
Sub-bituminous Coal	MYR/tonne	335.80	Sub-bituminous Coal			Sub-bituminous Coal		
Lignite			Lignite			Lignite		
Peat			Peat			Peat		
Patent Fuel			Patent Fuel			Patent Fuel		
Coke	MYR/tonne	1,243.65	Coke			Coke		
Coal Tar			Coal Tar			Coal Tar		
BKB/PB			BKB/PB			BKB/PB		
			Gas Works Gas			Gas Works Gas		
Oil and Oil Products			Oil and Oil Products			Oil and Oil Products		
Crude Oil	MYR/tonne	2,169.32	Crude Oil			Crude Oil		
Natural Gas Liquids			Natural Gas Liquids			Natural Gas Liquids		
Ethane			Ethane			Ethane		
LPG	MYR/tonne	5,708.03	LPG			LPG		
Naphtha			Naphtha			Naphtha		
Motor Gasoline	MYR/tonne	2,798.83	Motor Gasoline			Motor Gasoline (regular)		
Aviation Gasoline			Aviation Gasoline			Aviation Gasoline		
Gasoline Type Jet Fuel			Gasoline Type Jet Fuel			Gasoline Type Jet Fuel		
Kerosene Type Jet Fuel	MYR/tonne	2,806.30	Kerosene Type Jet Fuel			Kerosene Type Jet Fuel		
Other Kerosene	MYR/tonne	2,772.38	Other Kerosene			Other Kerosene		
Gas/Diesel Oil	MYR/tonne	2,468.54	Gas/Diesel Oil			Gas/Diesel Oil		
Fuel Oil	MYR/tonne	1,580.05	Fuel Oil			Fuel Oil		
White Spirit SBP			White Spirit SBP			White Spirit SBP		
Lubricants	MYR/tonne	5,161.71	Lubricants			Lubricants		
Bitumen			Bitumen			Bitumen		
Paraffin Waxes			Paraffin Waxes			Paraffin Waxes		
Petroleum Coke			Petroleum Coke			Petroleum Coke		
Natural Gas			Natural Gas			Natural Gas		
Natural Gas	MYR/tonne	1,436.09	Natural Gas			Natural Gas		
Liquefied Natural Gas	MYR/tonne	2.26	Liquefied Natural Gas			Liquefied Natural Gas		
Compressed Natural Gas			Compressed Natural Gas			Compressed Natural Gas		
Electricity			Electricity			Electricity		
Electricity			Electricity			Industrial		
						Commercial		
						Residential		
						Others		
Other Energy Products			Other Energy Products			Other Energy Products		
Gas oil, diesel oil and naphtha						Environmental diesel oil (road)		

MEXICO

Energy balance table of Mexico

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production	286		4 425						
Import	227	35	31	2 384	1 082	10	112		637
Export		- 1	-2 765	- 301		- 66			- 8
International marine bunkers				- 35					- 31
International aviation bunkers				- 183			- 183		
Stock changes	- 44		- 43	- 20	- 7		- 12		- 3
Total primary energy supply	469	33	1 648	1 845	1 075	- 56	- 82		595
Transfers			- 208	242		- 4			
Total transformation sector	- 370	14	-1 568	1 134	388	91	71		322
Main activity producers	- 324			- 287					- 34
Autoproducers		- 3		- 57					- 5
Gas processing				- 33					
Petroleum refineries			-1 571	1 512	388	92	71		361
Coal transformation	- 46	16							
Other transformation			3	- 1		- 1			
Losses & own use		- 15		- 157					- 30
Discrepancy	5	1	128	22	133	19	11		- 130
Total final consumption	104	33		3 086	1 595	49			757
Total final energy consumption	104	30		2 908	1 595	1			757
Industry sector	104	30		238		1			55
Iron and steel		30		5					1
Chemical & petrochemical				14		1			5
Non-metallic minerals	7			105					
Other industries	193			114					48
Transport sector				2 224	1 595				564
Domestic air transport				1	1				
Road				2 170	1 595				514
Rail				27					27
Inland waterways				27					24
Other transport									
Other sector				446					138
Residential				241					
Commerce and public services				64					2
Agriculture				141					136
Non-specified others									
Non-energy		3		178		48			
2017									
Indigenous production	276		4 721						
Import	254	34	26	2 122	973	22	88		540
Export		- 3	-2 724	- 332		- 78			- 8
International marine bunkers				- 33					- 30
International aviation bunkers				- 166			- 166		
Stock changes	- 29		- 24	3			- 1		8
Total primary energy supply	500	31	1 999	1 594	972	- 57	- 79		510
Transfers			- 240	279		- 5			
Total transformation sector	- 395	17	-1 969	1 477	480	108	84		444
Main activity producers	- 345			- 315					- 24
Autoproducers		- 4		- 61					- 7
Gas processing				- 32					
Petroleum refineries			-1 972	1 889	480	110	84		476
Coal transformation	- 50	20							
Other transformation			4	- 2		- 2			
Losses & own use		- 16		- 182					- 30
Discrepancy	5	1	209	- 113	41	2	- 5		- 144
Total final consumption	110	33		3 056	1 493	48			780
Total final energy consumption	110	29		2 857	1 493	1			780
Industry sector	110	29		268		1			55
Iron and steel		29		6					1
Chemical & petrochemical				16		1			6
Non-metallic minerals	7			120					
Other industries	206			127					48
Transport sector				2 147	1 493				592
Domestic air transport				1	1				
Road				2 090	1 492				537
Rail				28					28
Inland waterways				28					27
Other transport									
Other sector				441					132
Residential				241					
Commerce and public services				65					2
Agriculture				135					130
Non-specified others									
Non-energy		3		199		47			

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				1 079	117	149	113	452			6 622	679
94	292		157	1 616					14		4 306	
- 223	- 4								- 8		- 3 077	
- 4											- 35	
											- 183	
- 1	2		2	35							- 72	
- 134	289		159	2 729	117	149	113	452	5		7 562	679
	159		87								34	
160	- 21	87	37	- 1 664	- 117	- 149	- 113	- 135	1 208		- 1 761	- 362
- 253				- 1 175	- 114	- 149	- 111	- 10	965		- 1 204	- 234
- 11	- 4		- 37	- 491	- 4		- 3	- 125	243		- 439	- 128
	- 33			1							- 32	
424	15	87	74								- 58	
											- 29	
											1	
- 36		- 87	- 4	- 472					- 231		- 875	
22	- 10		- 22	64					38		259	
11	417		257	658				317	1 020		5 217	317
11	414		129	640				317	1 020		5 019	317
9	45		129	596				56	539		1 563	56
1			4	138					19		192	
1	1		6	123					21		158	
1			104	48					42		203	
6	44		15	287				56	457		1 107	56
3	62			2					4		2 230	
											1	
	62			2							2 172	
									4		30	
3											27	
	307			42				260	477		1 226	260
	241			31				256	228		756	256
	62			11				4	91		170	4
	5								45		186	
									114		114	
	2		128	17							199	
				1 112	115	119	127	433			6 903	674
90	264		146	1 495					8		3 939	
- 237	- 8			- 1					- 6		- 3 066	
- 3											- 33	
											- 166	
- 7	3			14							- 36	
- 156	258		146	2 621	115	119	127	433	1		7 540	674
	180		104								39	
192	- 11	118	63	- 1 603	- 115	- 119	- 127	- 122	1 159		- 1 797	- 363
- 291				- 1 132	- 112	- 119	- 124	- 8	933		- 1 222	- 244
- 14	- 2		- 38	- 473	- 3		- 3	- 114	227		- 431	- 120
	- 32			1							- 31	
497	24	118	101								- 84	
											- 30	
											1	
- 31		- 118	- 4	- 454					- 220		- 872	
25	- 12		- 19	70					38		211	
29	416		290	634				311	979		5 122	311
29	414		139	617				311	979		4 903	311
28	44		139	574				50	531		1 564	50
2			3	133					19		187	
3	1		5	118					22		156	
3			117	47					41		215	
21	43		14	277				50	448		1 108	50
1	61			2					4		2 153	
											1	
	61			2							2 092	
									4		32	
1											28	
	309			41				261	444		1 186	261
	241			30				257	213		740	257
	63			11				4	85		165	4
	5								42		177	
									104		104	
	2		151	17							219	

Major energy indicators of Mexico

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	5 179	5 518	6 315	7 561	7 475	7 741	7 742	7 540	7 562
Indigenous production	8 187	8 541	9 601	11 032	9 317	7 938	7 556	6 903	6 622
Import	244	367	1 076	1 327	2 009	2 959	3 536	3 939	4 306
Export	-3 172	-3 267	-4 105	-4 660	-3 698	-3 024	-3 151	-3 066	-3 077
Final energy consumption	3 108	3 268	3 683	4 190	4 602	4 793	4 872	4 903	5 019
Industry	1 078	1 059	1 166	1 291	1 372	1 480	1 468	1 564	1 563
Transport	1 185	1 271	1 501	1 852	2 139	2 139	2 217	2 153	2 230
Residential	659	725	755	740	745	744	744	740	756
Commerce & public services	62	117	143	143	148	167	166	165	170
Others	123	95	119	164	197	263	278	281	299
Coal & Peat									
Primary energy supply	169	229	270	498	544	459	487	500	469
Indigenous production	157	189	238	296	335	242	291	276	286
Import	7	24	65	193	207	202	204	254	227
Export					-3				
Transformation sector	-169	-228	-269	-428	-433	-439	-433	-395	-370
Power generation	-72	-140	-183	-345	-341	-366	-380	-345	-324
Final energy consumption				78	131	126	44	110	104
Industry				78	131	126	44	110	104
Transport									
Residential									
Commerce & public services									
Others									
Coal & peat products									
Primary energy supply	3	12	18	11	11	20	32	31	33
Indigenous production									
Import	4	12	18	11	11	20	32	34	35
Export								-3	-1
Transformation sector	60	33	31	43	45	33	17	17	14
Power generation		-17	-16	-7	-7	-6	-5	-4	-3
Final energy consumption	39	34	32	34	32	32	30	29	30
Industry	39	34	32	34	32	32	30	29	30
Transport									
Residential									
Commerce & public services									
Others									
Crude oil & NGL									
Primary energy supply	3 449	3 569	3 234	3 851	3 263	2 907	2 484	1 999	1 648
Indigenous production	6 418	6 598	7 167	8 270	6 500	5 483	5 220	4 721	4 425
Import	10	10	16	14	14	17	21	26	31
Export	-2 966	-3 031	-3 910	-4 429	-3 253	-2 608	-2 752	-2 724	-2 765
Transformation sector	-3 114	-3 195	-2 927	-3 286	-3 003	-2 753	-2 411	-1 969	-1 568
Petroleum refineries	-3 117	-3 202	-2 929	-3 290	-3 008	-2 762	-2 416	-1 972	-1 571
Petroleum products									
Primary energy supply	-66	-96	506	421	690	875	1 197	1 594	1 845
Import	207	255	873	788	1 247	1 451	1 782	2 122	2 384
Export	-198	-221	-186	-215	-405	-407	-391	-332	-301
Transformation sector	2 226	2 265	1 757	2 258	2 226	2 063	1 800	1 477	1 134
Power generation	-633	-683	-973	-678	-444	-318	-341	-377	-344
Petroleum refineries	2 862	3 004	2 780	2 983	2 707	2 420	2 157	1 889	1 512
Final energy consumption	1 861	1 990	2 292	2 608	2 836	2 847	2 949	2 857	2 908
Industry	312	275	313	307	246	262	296	268	238
Transport	1 182	1 267	1 497	1 847	2 134	2 134	2 212	2 147	2 224
Residential	275	321	320	288	276	252	243	241	241
Commerce & public services	23	56	73	64	63	67	65	65	64
Others	70	71	90	102	117	131	133	135	141
Gas									
Primary energy supply	968	1 041	1 486	1 930	2 271	2 707	2 771	2 621	2 729
Indigenous production	953	988	1 398	1 610	1 783	1 439	1 274	1 112	1 079
Import	15	61	101	322	529	1 263	1 489	1 495	1 616
Export		-8	-9	-9	-33	-1	-1	-1	
Transformation sector	-144	-184	-410	-810	-1 200	-1 428	-1 506	-1 603	-1 664
Power generation	-144	-226	-449	-847	-1 227	-1 448	-1 516	-1 604	-1 665
Final energy consumption	487	483	491	459	524	563	576	617	640
Industry	453	453	465	420	482	519	534	574	596
Transport				1	4	1	1	2	2
Residential	34	22	19	31	32	33	31	30	31
Commerce & public services		7	6	7	9	11	11	11	11
Others									
Electricity									
Power generation	417	548	740	903	992	1 119	1 154	1 159	1 208
Thermal	303	388	564	727	806	906	939	934	960
Hydro	85	99	119	100	134	111	111	115	117
Nuclear	11	30	30	39	21	42	38	39	49
Others	18	31	27	37	31	60	67	71	81
Final energy consumption	361	430	523	683	776	927	973	979	1 020
Industry	192	246	298	394	442	504	525	531	539
Transport	3	4	4	4	4	4	4	4	4
Residential	73	102	130	153	175	202	212	213	228
Commerce & public services	39	54	63	70	75	86	86	85	91
Others	53	24	28	62	81	132	145	146	158

Major economic indicators of Mexico

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ^{*1}	83.94	98.90	106.01	114.09	121.86	123.33	124.78	126.19
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	543	543	543	543	543	543	543	543
GDP, billion USD (PPP, constant 2017)	1 257	1 759	1 889	2 033	2 350	2 419	2 470	2 523
Nominal, billion USD (current)	261	708	877	1 058	1 172	1 078	1 159	1 222
GDP per capita ^{*3}								
Real term (constant 2010 USD)	6 471	5 493	5 125	4 761	4 458	4 405	4 354	4 305
GDP, PPP (constant 2017 USD)	14 971	17 783	17 815	17 817	19 288	19 612	19 796	19 992
Nominal (current USD)	3 112	7 158	8 278	9 271	9 617	8 745	9 288	9 687
Nominal GDP & its components (billions of current MXN) ^{*1}								
Gross domestic product	735	6 694	9 563	13 366	18 551	20 118	21 912	23 492
Households and NPISHs final consumption expenditure	514	4 548	6 563	8 735	12 163	13 189	14 301	15 215
General government final consumption expenditure	62	637	1 006	1 573	2 288	2 418	2 548	2 740
Gross fixed capital formation	132	1 438	1 980	2 885	4 178	4 612	4 849	5 185
Stock change	39	98	136	162	140	169	185	159
Exports of goods and services	137	1 701	2 905	3 970	6 412	7 456	8 259	9 230
Imports of goods and services	146	1 809	3 058	4 152	6 790	7 854	8 656	9 669
Real GDP & its components (billions of 2008 MXN) ^{*1}								
Gross Domestic Product	9 241	12 933	13 887	14 948	17 284	17 787	18 164	18 552
Households and NPISHs final consumption expenditure	5 779	8 398	10 026	10 052	11 346	11 772	12 148	12 429
General government final consumption expenditure	1 300	1 657	1 679	1 853	2 075	2 129	2 143	2 208
Gross fixed capital formation	1 810	2 780	2 774	3 163	3 744	3 783	3 723	3 757
Stock change	90	156	176	172	142	156	152	128
Exports of goods and services	1 349	3 104	3 979	4 381	5 910	6 122	6 377	6 755
Imports of goods and services	1 132	3 477	4 363	4 647	5 927	6 096	6 485	6 866
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	3.9	3.2	3.2	3.3	3.1	3.1	3.2	3.2
Industry	36.8	36.3	35.2	32.9	31.2	30.4	29.7	29.2
Services, etc.	55.2	56.7	57.8	59.9	61.6	62.2	62.8	63.2
Industrial production index (2010=100) ^{*2}	68.0	95.7	100.2	100.0	109.5	109.7	109.7	110.1
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	40.7	166.4	214.2	298.3	380.6	373.9	409.4	450.7
Imports, c.i.f.	43.5	179.5	228.2	310.2	405.3	397.5	432.2	476.5
Balance of payments (billions of current USD) ^{*2}								
Trade balance	-4.4	-8.4	-7.7	-2.9	-13.1	-11.0	-13.8	5.2
Current account	-7.5	-18.8	-9.1	-4.9	-24.4	-20.5	-25.4	-4.4
Overall balance	1.0	6.6	6.2	43.3	8.5	9.1	6.8	13.2
Foreign exchange rate (MXN/USD) ^{*1}	2.81	9.46	10.90	12.64	15.85	18.66	18.93	19.24
PPP conversion factor, GDP (MXN/USD) ^{*1}	1.35	6.10	7.13	7.68	8.33	8.45	8.87	9.13
Price Indices								
GDP Deflator (2013=100) ^{*3}	8.0	51.8	68.9	89.4	107.3	113.1	120.6	126.6
Producer Price Index (2010=100) ^{*2}	11.9	57.7	77.8	100.0	117.9	124.6	133.2	140.5
Consumer Price Index (2010=100) ^{*2}	11.8	63.3	80.5	100.0	119.4	122.8	130.2	136.6
Growth rate (%) ^{*3}								
Real GDP ^{*3}	5.2	4.9	2.3	5.1	3.3	2.9	2.1	2.1
Population ^{*3}	1.9	1.5	1.4	1.4	1.2	1.2	1.2	1.1
Price ^{*2}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices	21.7	7.8	4.7	4.2	2.9	5.7	6.9	5.5
Consumer prices	26.7	9.5	4.0	4.2	2.7	2.8	6.0	4.9

Source ^{*1}: *World Development Indicators*, World Bank

^{*2}: *International Financial Statistics*, International Monetary Fund

^{*3}: Calculated from ^{*1} and ^{*2} by ESTO

Note

: N.A. means "not available"

: MXN means Mexican Nuevo Peso, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

NEW ZEALAND

Energy balance table of New Zealand

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production	76		55						
Import	13		227	119	44		12		54
Export	-37		-47	-8	-1				
International marine bunkers				-13					-1
International aviation bunkers				-54			-54		
Stock changes	-3		2	4					2
Total primary energy supply	49		238	47	44		-42		54
Transfers			-8	9					
Total transformation sector	-25	4	-239	233	61		59		76
Main activity producers	-9								
Autoproducers		-7							
Gas processing									
Petroleum refineries			-239	233	61		59		76
Coal transformation	-16	11							
Other transformation									
Losses & own use	-1	-2		-14					
Discrepancy	-1		9	6	3		-2		5
Total final consumption	22	2		281	108		15		135
Total final energy consumption	22	2		268	108		15		135
Industry sector	20	2		19					15
Iron and steel		2							
Chemical & petrochemical									
Non-metallic minerals	2								
Other industries	35			19					15
Transport sector				224	106		15		101
Domestic air transport				15			15		
Road				203	106				97
Rail				2					2
Inland waterways				4					3
Other transport									
Other sector	3			26	2				19
Residential				4					
Commerce and public services	1			7	1				4
Agriculture	2			13	1				12
Non-specified others				2					2
Non-energy				13					
2017									
Indigenous production	69		70						
Import	10		230	108	45		12		42
Export	-35		-59	-10	-2				-1
International marine bunkers				-12					-2
International aviation bunkers				-52			-52		
Stock changes	4		1	7	3		1		2
Total primary energy supply	48		242	41	47		-39		41
Transfers			-8	9					
Total transformation sector	-24	4	-238	233	59		54		83
Main activity producers	-5								
Autoproducers		-7							
Gas processing									
Petroleum refineries			-238	234	59		54		83
Coal transformation	-18	11							
Other transformation									
Losses & own use	-3	-2		-15					
Discrepancy	1		4	9	3		-2		8
Total final consumption	22	2		278	109		13		131
Total final energy consumption	22	2		264	109		13		131
Industry sector	18	2		18					15
Iron and steel		2							
Chemical & petrochemical									
Non-metallic minerals	2								
Other industries	33			18					15
Transport sector				219	107		13		96
Domestic air transport				14			13		
Road				199	107				92
Rail				1					1
Inland waterways				4					3
Other transport									
Other sector	4			27	2				20
Residential				4					
Commerce and public services	1			7	1				5
Agriculture	3			14	1				13
Non-specified others				2					2
Non-energy				14					

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				155	95		207	61			649	361
-7	1		8								359	
-12											-92	
											-13	
											-54	
											9	
-19			1	6							858	361
	9		10	161	95		207	61				
20		12	5	-48	-95		-199	-16	160		-224	-308
				-43	-95		-198	-9	155		-198	-302
				-2			-2	-6	5		-12	-7
20		12	5								-5	
											-5	
				-4							-4	
		-12	-2	-9					-18		-44	
									-2		12	
1	9		13	104			8	45	140		602	53
1	9			62			8	45	140		547	53
	3			49			5	37	50		181	42
				2					5		8	
				26					1		27	
				2					1		5	
	3			20			5	37	43		159	42
1											224	
											15	
											203	
											2	
1											4	
	5			13			3	8	90		142	11
	3			5				8	45		62	8
	2			6			2		34		50	3
				1			1		8		26	1
									2		4	
				13	43						55	
				175	91		204	61			670	355
-6	1		9								348	
-10	-1										-104	
											-12	
											-52	
											16	
-17			1	3							866	355
			10	178	91		204	62				
	9											
19		13	6	-54	-91		-196	-15	159		-222	-301
				-52	-91		-194	-9	154		-198	-294
				-2			-2	-6	5		-12	-6
19		13	6								-5	
											-7	
		-13	-2	-10					-18		-48	
				3					-1		17	
1	9		14	117			8	46	140		613	54
1	9			69			8	46	140		552	54
	3			55			5	39	50		186	43
				2					5		9	
				29					1		30	
				2					1		5	
	3			22			5	39	43		159	43
1											219	
											14	
											199	
											1	
1											4	
	5			15			3	7	90		146	11
	3			6				7	45		62	8
	2			7			2		34		52	3
				1			1		9		27	1
									2		4	
				14	48						62	

Major energy indicators of New Zealand

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	538	624	716	711	769	865	860	866	858
Indigenous production	483	531	599	540	706	694	678	670	649
Import	160	214	249	310	301	328	353	348	359
Export	-71	-86	-108	-104	-180	-125	-111	-104	-92
Final energy consumption	383	428	473	501	504	534	537	552	547
Industry	152	163	177	171	171	182	185	186	181
Transport	124	153	170	190	191	202	206	219	224
Residential	51	52	57	61	62	62	61	62	62
Commerce & public services	34	35	39	47	48	52	52	52	50
Others	23	25	29	33	32	36	33	31	30
Coal & Peat									
Primary energy supply	50	48	46	92	54	57	48	48	49
Indigenous production	60	90	87	132	130	81	68	69	76
Import				24	5	9	10	10	13
Export	-10	-41	-47	-70	-71	-41	-36	-35	-37
Transformation sector	-19	-22	-24	-67	-31	-30	-23	-24	-25
Power generation	-6	-7	-10	-51	-13	-12	-5	-6	-9
Final energy consumption	28	25	19	22	23	24	21	22	22
Industry	22	21	17	19	19	20	19	18	20
Transport									
Residential	4	1	1	1	1				
Commerce & public services	1	1	1	1	1	1	1	1	1
Others		1	1	1	2	2	1	3	2
Coal & peat products									
Primary energy supply									
Indigenous production									
Import									
Export									
Transformation sector	6	7	4	4	4	4	4	4	4
Power generation	-1	-2	-6	-7	-8	-8	-7	-7	-7
Final energy consumption		1	1	2	2	2	2	2	2
Industry		1	1	2	2	2	2	2	2
Transport									
Residential									
Commerce & public services									
Others									
Crude oil & NGL									
Primary energy supply	183	214	227	218	229	249	242	242	238
Indigenous production	82	79	81	45	115	90	77	70	55
Import	138	174	198	202	219	228	233	230	227
Export	-40	-44	-53	-27	-103	-76	-66	-59	-47
Transformation sector	-177	-206	-218	-216	-224	-243	-238	-238	-239
Petroleum refineries	-204	-218	-218	-216	-224	-243	-238	-238	-239
Petroleum products									
Primary energy supply	-36	2	12	38	30	34	38	41	47
Import	22	39	51	84	77	91	110	108	119
Export	-21	-1	-9	-8	-6	-8	-9	-10	-8
Transformation sector	208	205	220	227	225	245	241	233	233
Power generation		-1							
Petroleum refineries	208	205	220	227	225	245	241	234	233
Final energy consumption	155	188	209	238	229	246	252	264	268
Industry	12	13	14	18	15	18	19	18	19
Transport	121	151	170	190	191	201	205	219	224
Residential	1	2	2	3	3	3	3	4	4
Commerce & public services	7	6	5	6	5	6	6	7	7
Others	15	16	18	21	16	18	18	16	16
Gas									
Primary energy supply	162	160	212	135	156	171	176	178	161
Indigenous production	162	160	212	135	161	169	177	175	155
Import									
Export									
Transformation sector	-83	-58	-79	-72	-73	-51	-44	-54	-48
Power generation	-52	-44	-79	-72	-73	-51	-44	-54	-44
Final energy consumption	63	65	70	44	51	68	70	69	62
Industry	51	54	56	29	39	52	55	55	49
Transport	2	1							
Residential	3	4	7	6	5	6	6	6	5
Commerce & public services	4	5	6	7	6	8	7	7	6
Others	2	2	2	2	1	1	1	1	1
Electricity									
Power generation	116	130	141	154	162	159	157	159	160
Thermal	23	21	40	55	43	32	25	30	26
Hydro	83	99	88	84	89	88	93	91	95
Nuclear									
Others	10	10	13	16	29	39	39	39	39
Final energy consumption	103	111	123	137	145	143	141	140	140
Industry	41	46	50	55	54	50	50	50	50
Transport									
Residential	37	38	41	44	46	45	44	45	45
Commerce & public services	19	21	25	29	33	34	34	34	34
Others	5	6	8	8	12	13	12	11	10

Major economic indicators of New Zealand

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ¹	3.33	3.86	4.13	4.35	4.60	4.69	4.79	4.84
Gross domestic product ³								
Real term, billion USD (constant 2010)	84	113	138	147	169	175	181	186
GDP, billion USD (PPP, constant 2017)	92	125	152	161	186	193	199	206
Nominal, billion USD (current)	45	53	115	147	177	188	205	208
GDP per capita ³								
Real term (constant 2010 USD)	25 108	29 355	33 338	33 700	36 792	37 353	37 725	38 522
GDP, PPP (constant 2017 USD)	27 616	32 286	36 667	37 066	40 467	41 084	41 493	42 635
Nominal (current USD)	13 663	13 641	27 751	33 700	38 616	40 106	42 849	42 950
Nominal GDP & its components (billions of current NZD) ¹								
Gross domestic product	76	120	163	203	254	270	289	300
Households and NPISHs final consumption expenditure	46	69	95	118	146	156	165	173
General government final consumption expenditure	14	20	29	40	47	49	52	56
Gross fixed capital formation	16	25	40	40	58	61	67	71
Stock change		1	1	1	1	1	2	1
Exports of goods and services	20	43	46	62	71	72	79	84
Imports of goods and services	20	39	48	57	68	69	76	84
Real GDP & its components (billions of 2005 NZD) ¹								
Gross Domestic Product	126	170	207	221	254	264	272	282
Households and NPISHs final consumption expenditure	68	89	113	124	146	155	161	167
General government final consumption expenditure	26	30	37	43	47	48	50	52
Gross fixed capital formation	21	30	46	43	58	60	64	66
Stock change	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Exports of goods and services	26	46	54	61	71	72	75	77
Imports of goods and services	20	33	50	53	68	72	77	80
Sectoral shares of Real GDP (%) ¹								
Agriculture, Fishery and Forestry	5.9	5.5	5.0	4.1	4.5	4.3	4.0	4.2
Industry	26.7	24.5	23.9	22.2	21.2	21.1	21.0	20.8
Services, etc.	60.0	62.3	63.0	65.5	65.8	66.0	66.3	65.9
Manufacturing production index (2010=100) ²	74.5	90.3	102.0	100.0	102.4	104.4	106.5	106.5
External trade (billions of current USD) ¹								
Exports, f.o.b.	9.4	13.3	21.7	31.4	34.4	33.8	38.1	39.7
Imports, c.i.f.	9.5	13.9	26.2	30.6	36.6	36.1	40.1	43.8
Balance of payments (billions of current USD) ²								
Trade balance	N.A.	0.5	-3.0	2.0	-1.4	-1.9	-1.6	-3.5
Current account	N.A.	-1.7	-8.0	-3.4	-4.7	-4.0	-5.6	-7.7
Overall balance	N.A.	0.7	3.3	1.0	-6.4	5.8	-2.2	-8.5
Foreign exchange rate (NZD/USD) ¹	1.68	2.20	1.42	1.39	1.43	1.44	1.41	1.45
PPP conversion factor, GDP (NZD/USD) ¹	1.54	1.44	1.54	1.50	1.48	1.44	1.45	1.45
Price Indices								
GDP Deflator (2010=100) ³	60.5	70.3	78.6	92.2	100.0	102.5	106.2	106.4
Producer Price Index (2010=100) ²	61.4	73.1	82.1	100.0	105.1	105.6	110.4	115.0
Consumer Price Index (2010=100) ²	64.7	77.0	87.0	100.0	107.9	108.6	110.7	112.4
Growth rate (%) ³								
Real GDP	0.2	2.9	3.3	1.6	3.6	3.7	3.2	3.8
Population	0.9	0.6	1.1	1.1	1.9	2.1	2.1	1.0
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices	4.6	7.6	4.6	2.7	-2.1	0.5	4.5	4.2
Consumer prices	6.1	2.6	3.0	2.3	0.3	0.6	1.9	1.6

Source ¹: *World Development Indicators*, World Bank

²: *International Financial Statistics*, International Monetary Fund

³: Calculated from ¹ and ² by ESTO

Note

: N.A. means "not available"

: NZD means New Zealand Dollar, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

Energy prices in New Zealand in 2018

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	7.84
Local Currency Unit		NZ

IMPORT PRICES

WHOLESALE PRICES

CONSUMER PRICES

	Unit	Amount		Unit	Amount		Unit	Amount
Coal and Coal Products			Coal and Coal Products			Coal and Coal Products		
Coking Coal			Coking Coal			Coking Coal		
Anthracite			Anthracite			Anthracite		
Other bituminous coal			Other bituminous coal			Other bituminous coal		
Sub-bituminous Coal			Sub-bituminous Coal			Sub-bituminous Coal		
Lignite			Lignite			Lignite		
Peat			Peat			Peat		
Patent Fuel			Patent Fuel			Patent Fuel		
Coke			Coke			Coke		
Coal Tar			Coal Tar			Coal Tar		
BKB/PB			BKB/PB			BKB/PB		
			Gas Works Gas			Gas Works Gas		
Oil and Oil Products			Oil and Oil Products			Oil and Oil Products		
Crude Oil			Crude Oil			Crude Oil		
Natural Gas Liquids			Natural Gas Liquids			Natural Gas Liquids		
Ethane			Ethane			Ethane		
LPG			LPG			LPG		
Naphtha			Naphtha			Naphtha		
Motor Gasoline			Motor Gasoline			Motor Gasoline (regular)	NZ/L	2.25
Aviation Gasoline			Aviation Gasoline			Aviation Gasoline		
Gasoline Type Jet Fuel			Gasoline Type Jet Fuel			Gasoline Type Jet Fuel		
Kerosene Type Jet Fuel			Kerosene Type Jet Fuel			Kerosene Type Jet Fuel		
Other Kerosene			Other Kerosene			Other Kerosene		
Gas/Diesel Oil			Gas/Diesel Oil			Gas/Diesel Oil	NZ/L	1.43
Fuel Oil			Fuel Oil			Fuel Oil	NZ/L	0.70
White Spirit SBP			White Spirit SBP			White Spirit SBP		
Lubricants			Lubricants			Lubricants		
Bitumen			Bitumen			Bitumen		
Paraffin Waxes			Paraffin Waxes			Paraffin Waxes		
Petroleum Coke			Petroleum Coke			Petroleum Coke		
Natural Gas			Natural Gas			Natural Gas		
Natural Gas			Natural Gas			Natural Gas		
						Natural Gas Households	NZ/GJ	39.93
						Natural Gas Industry	NZ/GJ	7.41
Liquefied Natural Gas			Liquefied Natural Gas			Liquefied Natural Gas		
Compressed Natural Gas			Compressed Natural Gas			Compressed Natural Gas		
Electricity			Electricity			Electricity		
Electricity			Electricity			Industrial	NZ/MWh	142.65
						Commercial	NZ/MWh	168.46
						Residential	NZ/MWh	290.51
						Others		
Other Energy Products			Other Energy Products			Other Energy Products		
Gas oil, diesel oil and naphtha						Environmental diesel oil (road)		

PAPUA NEW GUINEA

Energy balance table of Papua New Guinea

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production			41						
Import			56	56	1			3	27
Export			-41	-16		-15			
International marine bunkers									
International aviation bunkers									
Stock changes			-2		1	-1			
Total primary energy supply			54	39	2	-16		3	27
Transfers					3	-3	6	-6	
Total transformation sector			-53	16		19		5	14
Main activity producers				-7					-1
Autoproducers				-28					-6
Gas processing									
Petroleum refineries			-53	51		19		5	20
Coal transformation									
Other transformation									
Losses & own use									
Discrepancy			-1						
Total final consumption				56	5	1	6	2	40
Total final energy consumption				56	5	1	6	2	40
Industry sector				24		1			21
Iron and steel									
Chemical & petrochemical									
Non-metallic minerals									
Other industries				24		1			21
Transport sector				26	5		6		15
Domestic air transport				6			6		
Road				20	5				15
Rail									
Inland waterways									
Other transport									
Other sector				7				2	4
Residential				1				1	
Commerce and public services				1				1	
Agriculture				4					4
Non-specified others									
Non-energy									
2017									
Indigenous production			43						
Import			59	52	3			3	23
Export			-43	-21		-20			
International marine bunkers									
International aviation bunkers									
Stock changes			-3		1	-1			
Total primary energy supply			56	30	4	-21		3	23
Transfers					1	-1	6	-5	
Total transformation sector			-59	26		23		4	17
Main activity producers				-6					-1
Autoproducers				-26					-5
Gas processing									
Petroleum refineries			-59	57		23		4	23
Coal transformation									
Other transformation									
Losses & own use									
Discrepancy			4						
Total final consumption				56	5		6	2	40
Total final energy consumption				56	5		6	2	40
Industry sector				24					21
Iron and steel									
Chemical & petrochemical									
Non-metallic minerals									
Other industries				24					21
Transport sector				25	5		6		14
Domestic air transport				6			6		
Road				19	5				14
Rail									
Inland waterways									
Other transport									
Other sector				7				2	4
Residential				1				1	
Commerce and public services				1				1	
Agriculture				4					4
Non-specified others									
Non-energy									

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				112	3		15	69			240	87
24			-1	-96							112	
											-153	
											-3	
24			-1	16	3		15	69			196	87
-22	1		1	-7	-3		-15	-1	17		-46	-19
-5				-2	-2				5		-6	-2
-22				-4	-1		-15		12		-36	-16
5	1		1								-3	
								-1			-1	-1
				-9					-1		-10	
											-1	
2	1							68	15		140	68
2	1							68	15		140	68
1	1							3	11		38	3
1	1							3	11		38	3
											26	
											6	
											20	
								66	4		76	66
								56	2		59	56
								10	2		13	10
											4	
				126	3		15	69			257	87
22			-1	-107							111	
											-172	
											-4	
21			-1	19	3		15	69			192	87
-19	1		1	-7	-3		-15	-1	17		-43	-19
-5				-2	-2				5		-6	-2
-21				-6	-1		-15		12		-36	-16
				2							2	
6	1		1								-2	
								-1			-1	-1
				-12					-1		-13	
											4	
2	1							68	15		139	68
2	1							68	15		139	68
1	1							3	11		38	3
1	1							3	11		38	3
											25	
											6	
											19	
								66	4		76	66
								56	2		59	56
								10	2		13	10
											4	

Major energy indicators of Papua New Guinea

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply		90	116	141	165	187	191	192	196
Indigenous production		270	221	179	127	255	260	257	240
Import		28	49	78	84	85	99	111	112
Export		-208	-154	-116	-44	-153	-172	-172	-153
Final energy consumption		83	97	111	124	134	136	139	140
Industry		13	20	26	31	35	36	38	38
Transport		11	12	15	19	23	24	25	26
Residential		46	50	54	57	59	59	59	59
Commerce & public services		10	11	12	13	13	13	13	13
Others		3	4	4	5	4	4	4	4
Coal & Peat									
Primary energy supply									
Indigenous production									
Import									
Export									
Transformation sector									
Power generation									
Final energy consumption									
Industry									
Transport									
Residential									
Commerce & public services									
Others									
Coal & peat products									
Primary energy supply									
Indigenous production									
Import									
Export									
Transformation sector									
Power generation									
Final energy consumption									
Industry									
Transport									
Residential									
Commerce & public services									
Others									
Crude oil & NGL									
Primary energy supply				43	41	26	59	56	54
Indigenous production		209	154	103	37	51	49	43	41
Import				38	42	26	58	59	56
Export		-208	-154	-98	-37	-51	-49	-43	-41
Transformation sector				-42	-40	-26	-60	-59	-53
Petroleum refineries				-42	-40	-26	-60	-59	-53
Petroleum products									
Primary energy supply		28	49	22	34	54	24	30	39
Import		28	49	40	43	59	42	52	56
Export				-18	-7	-5	-20	-21	-16
Transformation sector		-5	-20	15	10	-2	30	26	16
Power generation		-5	-20	-26	-29	-27	-27	-32	-34
Petroleum refineries				41	39	25	57	57	51
Final energy consumption		24	30	37	44	52	54	56	56
Industry		8	12	16	19	23	24	24	24
Transport		11	12	15	19	23	24	25	26
Residential		1	1	1	1	1	1	1	1
Commerce & public services		1	1	1	1	1	1	1	1
Others		3	4	4	5	4	4	4	4
Gas									
Primary energy supply		3	5	5	5	16	17	19	16
Indigenous production		3	5	5	5	113	120	126	112
Import									
Export						-96	-103	-107	-96
Transformation sector		-3	-5	-5	-5	-105	-6	-7	-7
Power generation		-3	-5	-5	-5	-7	-8	-9	-7
Final energy consumption									
Industry									
Transport									
Residential									
Commerce & public services									
Others									
Electricity									
Power generation		5	9	12	15	15	15	17	17
Thermal		3	6	9	10	10	11	12	12
Hydro		3	3	3	3	3	3	3	3
Nuclear									
Others	0			1	2	2	2	2	2
Final energy consumption		5	8	11	14	14	14	15	15
Industry		3	6	9	10	10	10	11	11
Transport									
Residential			1	1	1	2	2	2	2
Commerce & public services		2	2	2	2	2	2	2	2
Others									

Major economic indicators of Papua New Guinea

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ^{*1}	4.62	5.85	6.49	7.31	8.11	8.27	8.44	8.61
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	6	10	11	14	19	20	21	21
GDP, billion USD (PPP, constant 2017)	11	17	19	25	34	35	37	36
Nominal, billion USD (current)	3	4	5	14	22	21	23	24
GDP per capita ^{*3}								
Real term (constant 2010 USD)	1 393	1 643	1 646	1 949	2 337	2 416	2 452	2 398
GDP, PPP (constant 2017 USD)	2 440	2 878	2 883	3 414	4 204	4 289	4 353	4 236
Nominal (current USD)	698	602	749	1 949	2 679	2 510	2 695	2 801
Nominal GDP & its components (billions of current PGK) ^{*1}								
Gross domestic product	3	10	15	39	60	65	73	77
Households and NPISHs final consumption expenditure	2	4	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
General government final consumption expenditure	1	2	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Gross fixed capital formation	1	2	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Stock change			N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Exports of goods and services	1	6	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Imports of goods and services	2	5	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Real GDP & its components (billions of 1998 PGK) ^{*1}								
Gross Domestic Product	20	29	33	43	59	62	64	63
Households and NPISHs final consumption expenditure	3	3	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
General government final consumption expenditure	1	1	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Gross fixed capital formation	1	2	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Stock change			N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Exports of goods and services	3	5	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Imports of goods and services	3	4	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	10.3	10.4	N.A.	18.9	N.A.	N.A.	N.A.	N.A.
Industry	6.0	8.3	N.A.	31.9	N.A.	N.A.	N.A.	N.A.
Services, etc.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Industrial production index (2010=100) ^{*2}	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	1.2	2.1	3.3	5.7	8.5	8.2	10.0	10.5
Imports, c.i.f.	1.2	1.2	1.7	3.5	2.6	2.1	3.1	3.5
Balance of payments (billions of current USD) ^{*2}								
Trade balance	0.1	1.1	1.8	2.2	N.A.	N.A.	N.A.	N.A.
Current account	-0.1	0.3	0.3	-1.1	N.A.	N.A.	N.A.	N.A.
Overall balance	0.1	0.1	-0.3	0.0	N.A.	N.A.	N.A.	N.A.
Foreign exchange rate (PGK/USD) ^{*1}	0.96	2.78	3.10	2.72	2.77	3.13	3.19	3.29
PPP conversion factor, GDP (PGK/USD) ^{*1}	0.73	1.25	1.56	1.82	1.82	1.87	1.97	2.07
Price Indices								
GDP Deflator (2013=100) ^{*3}	15.7	33.2	46.3	89.2	101.4	105.3	113.4	121.5
Wholesale Price Index	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Consumer Price Index (2010=100) ^{*2}	21.4	52.9	77.1	100.0	127.8	136.3	143.7	150.5
Growth rate (%) ^{*3}								
Real GDP	-3.0	-2.5	6.3	10.1	9.5	4.1	3.5	-0.8
Population	2.4	2.3	2.2	2.3	2.0	2.0	2.0	2.0
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wholesale prices	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Consumer prices	7.0	15.6	1.8	6.0	6.0	6.7	5.4	4.7

Source ^{*1}: *World Development Indicators*, World Bank

^{*2}: *International Financial Statistics*, International Monetary Fund

^{*3}: Calculated from ^{*1} and ^{*2} by ESTO

Note

: N.A. means "not available"

: PGK means Kina, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

PERU

Energy balance table of Peru

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production	6		228						
Import	10	2	238	239	43		18		154
Export	-19		-14	-199	-91				-19
International marine bunkers									
International aviation bunkers				-50			-30		
Stock changes	29		10	17	3				2
Total primary energy supply	26	2	462	6	-45		-11		136
Transfers			-125	170	62				35
Total transformation sector	-5		-338	335	81		28		92
Main activity producers				-5					-2
Autoproducers	-5			-9					-6
Gas processing									
Petroleum refineries			-338	349	81		28		100
Coal transformation									
Other transformation									
Losses & own use									
Discrepancy				-87	-10				-47
Total final consumption	21	2	423	423	87		16		216
Total final energy consumption	21	2	411	411	87		16		216
Industry sector	21	2		43	1				21
Iron and steel		2							
Chemical & petrochemical									
Non-metallic minerals									
Other industries	43			43	1				21
Transport sector				317	86		15		189
Domestic air transport									
Road				317	86		15		189
Rail									
Inland waterways									
Other transport									
Other sector				51			1		6
Residential				40					
Commerce and public services				4					
Agriculture				2					2
Non-specified others				6			1		5
Non-energy				12					
2017									
Indigenous production	8		230						
Import	14	2	265	235	40		19		158
Export	-10		-3	-259	-102		-29		-22
International marine bunkers									
International aviation bunkers									
Stock changes	17		-3	24	3		27		-15
Total primary energy supply	29	2	489	6	-59		17		121
Transfers			-138	179	67				31
Total transformation sector	-9		-362	347	78		27		98
Main activity producers	-8			-14					-10
Autoproducers	-2			-8					-5
Gas processing									
Petroleum refineries			-356	368	78		27		113
Coal transformation									
Other transformation			-6						
Losses & own use			-6	-1					
Discrepancy			17	-79	-3				-37
Total final consumption	20	2	445	445	83		44		213
Total final energy consumption	20	2	433	433	83		44		213
Industry sector	20	2		39	3				16
Iron and steel		2							
Chemical & petrochemical									
Non-metallic minerals									
Other industries	40			39	3				16
Transport sector				339	75		43		191
Domestic air transport									
Road				339	75		43		191
Rail									
Inland waterways									
Other transport									
Other sector				55	5		2		7
Residential				37					
Commerce and public services				4					
Agriculture				2					2
Non-specified others				12	5		2		5
Non-energy				13					

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				514	111			144			1 003	254
	17		7					11			500	11
- 89			- 1	- 210							- 442	
- 20											- 50	
12	7		- 6					1			57	1
- 97	23			304	111			156			1 067	266
13	59		1								45	
113	10		11	- 168	- 111			- 34	198		- 123	- 145
- 3				- 158	- 108			- 20	189		- 103	- 128
- 3				- 10	- 3			- 7	9		- 24	- 10
120	10		11								11	
								- 8			- 8	- 8
				- 37					- 25		- 62	
- 27	- 3			- 2				6			- 83	6
3	89		12	96				127	174		844	127
3	89			96				127	174		832	127
2	20			52				21	101		241	21
				2				1	57		62	1
2	20			50				20	44		201	20
1	25			30				16			363	16
1	25			30				16			363	16
	43			14				91	72		228	91
	40			5				85	36		165	85
	4			9				6	32		50	6
									4		6	
											6	
			12								12	
				523	105			136			1 003	241
1	10		8					13			530	13
- 104	- 2			- 229							- 502	
9	6		- 7	7				1			46	1
- 93	14			301	105			150			1 075	255
19	60		1								40	
123	9		12	- 166	- 105			- 32	190		- 137	- 136
- 4				- 155	- 102			- 14	181		- 112	- 117
- 2				- 10	- 2			- 11	9		- 24	- 13
129	9		12								12	
								- 7			- 12	- 7
				- 41					- 23		- 71	
- 38				- 4				1			- 64	1
10	83		13	90				120	167		844	120
10	83			90				120	167		831	120
3	18			56				18	97		231	18
				8				1	54		64	1
3	18			48				17	43		187	17
7	24			29				14			381	14
7	24			29				14			381	14
	41			5				88	70		218	88
	37			4				82	34		158	82
	4			1				6	32		42	6
									4		6	
											12	
			13								13	

Major energy indicators of Peru

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	418	477	519	580	759	1 052	1 056	1 075	1 067
Indigenous production	446	421	385	454	820	1 017	1 045	1 003	1 003
Import	70	182	226	284	312	344	459	530	500
Export	-95	-107	-88	-159	-302	-350	-464	-502	-442
Final energy consumption	364	404	452	464	643	776	804	831	832
Industry	76	87	124	144	171	215	210	231	241
Transport	105	128	142	146	254	336	372	381	363
Residential	152	142	148	137	163	156	157	158	165
Commerce & public services	1		1	10	28	39	37	42	50
Others	30	47	35	27	27	30	28	18	12
Coal & Peat									
Primary energy supply	4	11	21	31	32	33	34	29	26
Indigenous production	3	2		1	3	7	7	8	6
Import	1	7	19	28	28	12	18	14	10
Export					-3	-7	-5	-10	-19
Transformation sector	-1	-2	-5	-10	-12	-7	-13	-9	-5
Power generation			-4	-10	-12	-7	-13	-9	-5
Final energy consumption	3	10	16	22	26	29	23	20	21
Industry	2	9	16	22	25	29	23	20	21
Transport									
Residential									
Commerce & public services									
Others					1				
Coal & peat products									
Primary energy supply	2	4	6	7	2	1	2	2	2
Indigenous production									
Import	2	7	6	6	2	1	3	2	2
Export									
Transformation sector		-2	-5	-6					
Power generation									
Final energy consumption	1	1	1	1	2	1	2	2	2
Industry	1	1	1	1	2	1	2	2	2
Transport									
Residential									
Commerce & public services									
Others									
Crude oil & NGL									
Primary energy supply	302	293	312	401	463	445	451	489	462
Indigenous production	274	258	210	222	298	268	232	230	228
Import	37	101	129	203	201	181	223	265	238
Export	-6	-59	-29	-27	-40	-17	-5	-3	-14
Transformation sector	-311	-312	-324	-345	-432	-301	-304	-362	-338
Petroleum refineries	-311	-312	-324	-345	-432	-301	-304	-356	-338
Petroleum products									
Primary energy supply	-58	7	7	-90	-173	27	-9		6
Import	30	67	72	48	79	137	200	235	239
Export	-88	-48	-59	-132	-172	-125	-213	-259	-199
Transformation sector	274	266	284	307	388	324	323	347	335
Power generation	-32	-39	-29	-25	-22	-11	-18	-21	-14
Petroleum refineries	306	304	313	332	409	335	341	368	349
Final energy consumption	208	254	282	264	336	414	430	433	411
Industry	42	48	70	67	53	51	40	39	43
Transport	105	128	142	146	236	303	333	339	317
Residential	36	37	42	25	27	35	36	37	40
Commerce & public services	1			2	3	3	3	4	4
Others	24	40	27	23	18	22	17	14	8
Gas									
Primary energy supply	19	18	21	68	230	330	347	301	304
Indigenous production	19	18	21	68	319	531	588	523	514
Import									
Export					-89	-201	-241	-229	-210
Transformation sector	-3	-2	-9	-45	-131	-182	-200	-166	-168
Power generation	-3	-2	-9	-45	-131	-182	-200	-166	-168
Final energy consumption	3			6	48	81	80	90	96
Industry	1			6	30	47	48	56	52
Transport					15	27	27	29	30
Residential	2					2	3	4	5
Commerce & public services					2	5	1	1	9
Others									
Electricity									
Power generation	50	58	72	92	129	174	186	190	198
Thermal	12	11	13	25	55	82	92	79	78
Hydro	38	46	58	65	72	85	87	105	111
Nuclear									
Others	0	1	1	1	2	7	7	7	10
Final energy consumption	42	46	62	82	114	152	163	167	174
Industry	26	27	37	47	61	85	95	97	101
Transport									
Residential	15	18	23	25	27	33	34	34	36
Commerce & public services			1	7	23	30	31	32	32
Others	1	1	2	2	2	3	4	4	4

Major economic indicators of Peru

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ¹	22.07	26.46	27.87	29.03	30.47	30.93	31.44	31.99
Gross domestic product ³								
Real term, billion USD (constant 2010)	58	86	106	148	186	194	199	206
GDP, billion USD (PPP, constant 2017)	116	170	210	292	369	384	393	409
Nominal, billion USD (current)	26	52	76	148	190	192	211	222
GDP per capita ³								
Real term (constant 2010 USD)	2 650	3 243	3 796	5 082	6 114	6 262	6 314	6 454
GDP, PPP (constant 2017 USD)	5 249	6 422	7 519	10 066	12 110	12 404	12 507	12 782
Nominal (current USD)	1 197	1 956	2 729	5 082	6 229	6 205	6 711	6 941
Nominal GDP & its components (billions of current PEN) ¹								
Gross domestic product	5	181	251	417	604	648	688	730
Households and NPISHs final consumption expenditure	4	128	163	257	395	421	441	465
General government final consumption expenditure		21	29	44	78	85	91	96
Gross fixed capital formation	1	36	43	98	140	139	142	153
Stock change			1	1	7	4	1	2
Exports of goods and services	1	30	67	116	129	146	170	185
Imports of goods and services	1	34	51	99	144	148	157	172
Real GDP & its components (billions of 2007 PEN) ¹								
Gross Domestic Product	151	222	274	382	483	502	514	535
Households and NPISHs final consumption expenditure	106	143	167	236	311	323	331	343
General government final consumption expenditure	16	25	30	41	59	62	64	65
Gross fixed capital formation	21	38	44	96	116	111	113	118
Stock change	1		-3	4	11	9	7	8
Exports of goods and services	27	58	93	108	118	131	143	149
Imports of goods and services	20	42	57	103	132	134	144	148
Sectoral shares of Real GDP (%) ¹								
Agriculture, Fishery and Forestry	6.9	7.7	6.9	6.1	5.6	5.5	5.5	5.8
Industry	34.6	35.2	38.2	36.6	33.9	34.0	33.8	33.5
Services, etc.	N.A.	48.7	46.5	48.2	51.3	51.4	51.6	51.7
Manufacturing Production Index (2010=100) ²	41.2	61.6	75.1	100.0	109.8	108.3	108.0	108.0
External trade (billions of current USD) ¹								
Exports, f.o.b.	3.3	7.0	17.4	35.8	34.4	37.1	45.4	49.1
Imports, c.i.f.	2.6	7.4	12.5	30.0	37.9	36.3	39.9	43.3
Balance of payments (billions of current USD) ²								
Trade balance	0.4	-0.1	5.6	7.4	N.A.	N.A.	N.A.	N.A.
Current account	-1.4	-1.5	1.1	-3.6	-9.5	-5.1	-2.7	-3.6
Overall balance	-2.0	-0.5	1.2	9.3	N.A.	N.A.	N.A.	N.A.
Foreign exchange rate (PEN/USD) ¹	0.19	3.49	3.30	2.83	3.18	3.38	3.26	3.29
PPP conversion factor, GDP (PEN/USD) ¹	0.07	1.35	1.36	1.48	1.71	1.74	1.75	1.74
Price Indices								
GDP Deflator (2007=100) ³	3.6	81.3	91.5	109.1	125.3	129.1	133.8	136.5
Wholesale Price Index (2010=100) ²	4.7	79.0	86.8	100.0	112.6	114.5	115.7	117.6
Consumer Price Index (2010=100) ²	3.1	79.2	87.1	100.0	117.8	122.0	125.4	127.1
Growth rate (%) ³								
Real GDP	-5.0	2.7	6.3	8.3	3.3	4.0	2.5	4.0
Population	2.1	1.5	0.9	0.8	1.3	1.5	1.7	1.7
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices	6737.4	4.3	2.3	1.8	1.8	1.7	1.0	1.7
Consumer prices	7481.7	3.8	1.6	1.5	3.5	3.6	2.8	1.3

Source ¹: *World Development Indicators*, World Bank

²: *International Financial Statistics*, International Monetary Fund

³: Calculated from ¹ and ² by ESTO

Note : N.A. means "not available"

: PEN means Nuevo Sol, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

PHILIPPINES

Energy balance table of the Philippines

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production	260		25						
Import	581		482	511	99	43	49	1	219
Export	- 112		- 24	- 69	- 10	- 9			- 5
International marine bunkers				- 3					- 1
International aviation bunkers				- 68			- 68		
Stock changes	- 45			- 17	- 8		- 2		- 7
Total primary energy supply	685		483	354	81	34	- 20	1	205
Transfers									
Total transformation sector	- 577		- 484	427	109	11	43	2	172
Main activity producers	- 577			- 30					- 16
Autoproducers									
Gas processing									
Petroleum refineries			- 484	457	109	11	43	2	187
Coal transformation									
Other transformation									
Losses & own use			- 3						
Discrepancy			4	- 20	- 1	- 3	1		- 4
Total final consumption	108			761	189	43	24	3	373
Total final energy consumption	101			708	189		24	3	373
Industry sector									
Iron and steel	9			5					1
Chemical & petrochemical	1			6					2
Non-metallic minerals	63			9					2
Other industries	56			41					25
Transport sector									
Domestic air transport				492	189		24		270
Road				24			24		
Rail				431	182				249
Inland waterways				37	7				21
Other transport									
Other sector									
Residential				154				3	74
Commerce and public services				53				3	
Agriculture				93					66
Non-specified others				2					2
Non-specified others				7					7
Non-energy	7			53		43			
2017									
Indigenous production	264		26						
Import	492		436	514	90	46	47	2	226
Export	- 136		- 25	- 59	- 4	- 7			- 4
International marine bunkers				- 4					
International aviation bunkers				- 66			- 66		
Stock changes	29		10	- 7	- 4	1			- 4
Total primary energy supply	648		447	376	82	40	- 19	2	221
Transfers									
Total transformation sector	- 515		- 428	365	96	9	38	2	140
Main activity producers	- 515			- 41					- 17
Autoproducers									
Gas processing									
Petroleum refineries			- 428	406	96	9	38	2	157
Coal transformation									
Other transformation									
Losses & own use			- 7						
Discrepancy			- 13	4	6	- 3	2		- 1
Total final consumption	132			745	184	46	21	4	361
Total final energy consumption	126			684	184		21	4	361
Industry sector									
Iron and steel	9			5					1
Chemical & petrochemical	1			9				1	2
Non-metallic minerals	98			10					2
Other industries	37			38					26
Transport sector									
Domestic air transport				475	183		21		259
Road				21			21		
Rail				414	176				237
Inland waterways				40	7				22
Other transport									
Other sector									
Residential				148	1			3	70
Commerce and public services				49				3	
Agriculture				87					58
Non-specified others				2					2
Non-specified others				10					9
Non-energy	6			61		46			

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				151	34		376	558			1 403	964
32	59		9					6			1 580	6
- 10			- 34								- 204	- 3
- 3											- 68	
								2			- 60	2
19	58		- 25	151	34		376	567			2 648	972
15	23		53	- 139	- 34		- 376	- 239	359		- 1 062	- 645
- 15				- 139	- 34		- 376	- 16	359		- 813	- 422
								- 8			- 8	- 8
30	23		53								- 26	
								- 215			- 215	- 215
				- 9					- 62		- 74	
6	- 2		- 18								- 16	
39	79		10	2				327	297		1 496	327
39	79			2				327	297		1 436	327
24	8			2				51	99		315	51
4	1								20		34	
4									6		13	
6	1								8		80	
10	6			2				51	65		216	51
8								20			512	20
											24	
								20			451	20
8											37	
6	70							257	198		609	257
	49							241	102		395	241
6	21							16	86		195	16
									10		11	
											7	
			10								60	
				135	35		370	548			1 377	952
42	54		7					6			1 448	6
- 17			- 31								- 221	
- 4											- 4	
											- 66	
- 1	- 1		1					3			34	3
20	53		- 23	135	35		370	557			2 568	961
15	20		45	- 129	- 35		- 370	- 232	340		- 1 003	- 636
- 24				- 129	- 35		- 370	- 9	340		- 758	- 413
								- 16			- 16	- 16
39	20		45								- 22	
								- 207			- 207	- 207
8	- 1		- 7	- 4					- 60		- 70	
43	72		15	2				325	280		1 485	325
43	72			2				325	280		1 418	325
26	4			2				50	92		332	50
3									19		33	
6									6		16	
7									7		114	
9	3			2				50	61		188	50
11								19			495	19
											21	
								19			433	19
11											40	
6	68							256	188		591	256
	45							240	96		385	240
6	22							16	82		184	16
									9		12	
											10	
			15								68	

Major energy indicators of the Philippines

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	1 200	1 405	1 679	1 655	1 819	2 278	2 430	2 568	2 648
Indigenous production	776	681	849	951	1 136	1 257	1 376	1 377	1 403
Import	496	790	916	799	908	1 242	1 347	1 448	1 580
Export	- 28	- 41	- 76	- 81	- 165	- 154	- 231	- 221	- 204
Final energy consumption	780	908	954	941	1 041	1 248	1 349	1 418	1 436
Industry	173	208	190	207	249	283	312	332	315
Transport	196	300	348	344	336	442	478	495	512
Residential	370	350	331	296	330	366	378	385	395
Commerce & public services	34	44	71	78	111	141	162	184	195
Others	6	5	15	16	15	17	19	22	18
Coal & Peat									
Primary energy supply	53	69	194	223	294	486	548	648	685
Indigenous production	26	27	27	64	147	163	248	264	260
Import	30	38	151	147	242	382	443	492	581
Export					- 91	- 69	- 151	- 136	- 112
Transformation sector	- 23	- 31	- 158	- 173	- 213	- 388	- 428	- 515	- 577
Power generation	- 23	- 31	- 158	- 173	- 213	- 388	- 428	- 515	- 577
Final energy consumption	22	31	29	44	77	93	112	126	101
Industry	22	31	29	44	77	93	112	126	101
Transport									
Residential									
Commerce & public services									
Others									
Coal & peat products									
Primary energy supply									
Indigenous production									
Import									
Export									
Transformation sector									
Power generation									
Final energy consumption									
Industry									
Transport									
Residential									
Commerce & public services									
Others									
Crude oil & NGL									
Primary energy supply	422	661	643	445	372	437	435	447	483
Indigenous production	10	5	2	26	38	30	29	26	25
Import	413	664	639	437	375	438	442	436	482
Export		- 4		- 24	- 36	- 30	- 28	- 25	- 24
Transformation sector	- 436	- 643	- 626	- 424	- 358	- 426	- 440	- 428	- 484
Petroleum refineries	- 436	- 643	- 626	- 424	- 358	- 426	- 440	- 428	- 484
Petroleum products									
Primary energy supply	- 15	26	23	126	198	284	342	376	354
Import	53	88	126	215	288	414	456	514	511
Export	- 28	- 37	- 76	- 57	- 38	- 55	- 52	- 59	- 69
Transformation sector	326	460	532	359	285	346	365	365	427
Power generation	- 107	- 182	- 88	- 59	- 62	- 59	- 52	- 41	- 30
Petroleum refineries	433	642	620	417	347	405	416	406	457
Final energy consumption	329	473	526	491	474	586	646	684	708
Industry	94	113	83	70	59	58	61	62	61
Transport	196	300	347	344	328	425	460	475	492
Residential	33	50	60	44	39	41	47	49	53
Commerce & public services	5	9	24	21	39	54	68	87	93
Others	2	2	12	12	9	8	10	12	9
Gas									
Primary energy supply				113	127	119	137	135	151
Indigenous production				113	127	119	137	135	151
Import									
Export									
Transformation sector				- 107	- 121	- 113	- 129	- 129	- 139
Power generation				- 107	- 121	- 113	- 129	- 129	- 139
Final energy consumption				1	3	2	3	2	2
Industry				1	3	2	3	2	2
Transport									
Residential									
Commerce & public services									
Others									
Electricity									
Power generation	95	121	163	204	244	297	327	340	359
Thermal	52	76	93	138	180	221	248	256	275
Hydro	22	22	28	30	28	31	29	35	34
Nuclear									
Others	21	22	42	36	36	44	50	49	50
Final energy consumption	76	96	132	163	199	244	267	280	297
Industry	36	39	47	57	67	81	87	92	99
Transport									
Residential	20	30	46	58	68	82	92	96	102
Commerce & public services	17	23	34	44	59	72	78	82	86
Others	3	4	3	4	5	9	9	9	10

Major economic indicators of the Philippines

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ¹	61.90	77.99	86.33	93.97	102.11	103.66	105.17	106.65
Gross domestic product ³								
Real term, billion USD (constant 2010)	98	130	163	208	279	299	320	340
GDP, billion USD (PPP, constant 2017)	260	358	460	578	799	854	908	963
Nominal, billion USD (current)	44	84	107	208	306	319	328	347
GDP per capita ³								
Real term (constant 2010 USD)	1 586	1 669	1 894	2 217	2 735	2 887	3 043	3 191
GDP, PPP (constant 2017 USD)	4 207	4 590	5 323	6 147	7 822	8 239	8 636	9 031
Nominal (current USD)	716	1 073	1 244	2 217	3 001	3 074	3 123	3 252
Nominal GDP & its components (billions of current PHP) ¹								
Gross domestic product	1 077	3 698	5 917	9 399	13 944	15 132	16 557	18 265
Households and NPISHs final consumption expenditure	767	2 652	4 376	6 598	10 106	10 979	11 951	13 250
General government final consumption expenditure	109	409	525	914	1 522	1 704	1 875	2 200
Gross fixed capital formation	249	716	1 076	1 918	3 100	3 783	4 246	4 983
Stock change	11	- 137	21	2	- 125	- 58	- 15	- 27
Exports of goods and services	296	1 603	2 440	3 090	3 794	4 036	4 893	5 519
Imports of goods and services	359	1 546	2 522	3 123	4 453	5 312	6 394	7 662
Real GDP & its components (billions of 2000 PHP) ¹								
Gross Domestic Product	5 267	6 985	8 774	11 184	14 991	16 063	17 176	18 265
Households and NPISHs final consumption expenditure	3 677	5 356	6 821	8 215	11 035	11 823	12 528	13 250
General government final consumption expenditure	704	829	863	1 206	1 665	1 821	1 940	2 200
Gross fixed capital formation	983	1 278	1 435	2 222	3 301	3 991	4 412	4 983
Stock change	53	- 146	34	2	24	27	43	- 27
Exports of goods and services	838	1 770	2 377	2 952	3 849	4 204	4 935	5 519
Imports of goods and services	1 028	2 103	2 760	3 416	4 885	5 804	6 683	7 662
Sectoral shares of Real GDP (%) ¹								
Agriculture, Fishery and Forestry	16.5	15.2	14.8	13.4	11.3	10.4	10.1	9.7
Industry	32.9	32.0	30.8	30.0	30.0	30.3	30.3	30.6
Services, etc.	50.6	52.8	54.4	56.6	58.8	59.3	59.6	59.8
Manufacturing Production Index (2010=100) ²	N.A.	108.7	103.2	100.0	136.4	152.3	151.9	163.1
External trade (billions of current USD) ¹								
Exports, f.o.b.	8.1	38.1	41.3	51.5	58.8	57.4	68.7	69.3
Imports, c.i.f.	13.0	37.0	49.5	58.5	74.8	89.4	101.9	119.3
Balance of payments (billions of current USD) ²								
Trade balance	-4.0	-8.2	-12.1	-16.9	-23.3	-35.5	-40.2	-51.0
Current account	-2.7	-2.2	2.0	7.2	7.3	-1.2	-2.1	-8.9
Overall balance	-0.6	1.1	-0.5	21.0	5.0	-1.3	0.7	0.5
Foreign exchange rate (PHP/USD) ¹	24.31	44.19	55.09	45.11	45.50	47.49	50.40	52.66
PPP conversion factor, GDP (PHP/USD) ¹	7.24	13.78	15.68	17.78	19.00	18.95	19.39	19.65
Price Indices								
GDP Deflator (2000=100) ³	20.5	52.9	67.4	84.0	93.0	94.2	96.4	100.0
Producer Price Index (2010=100) ²	N.A.	59.5	92.8	100.0	85.7	81.6	80.9	81.4
Consumer Price Index (2010=100) ²	28.6	63.7	78.7	100.0	115.4	116.9	120.2	126.5
Growth rate (%) ³								
Real GDP	3.0	4.4	4.9	7.3	6.3	7.1	6.9	6.3
Population	2.6	2.2	1.9	1.7	1.6	1.5	1.5	1.4
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices	N.A.	12.5	9.0	-4.9	-6.7	-4.8	-0.9	0.7
Consumer prices	12.2	4.0	6.5	3.8	0.7	1.3	2.9	5.2

Source ¹: *World Development Indicators*, World Bank

²: *International Financial Statistics*, International Monetary Fund

³: Calculated from ¹ and ² by ESTO

Note

: N.A. means "not available"

: PHP means Philippine Peso, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

RUSSIA

Energy balance table of Russia

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production	10 065		23 369						
Import	704	3	21	46	1	1	1		2
Export	-5 497	-79	-10 963	-5 440	-185	-809	-115		-1 792
International marine bunkers				-492					-411
International aviation bunkers				-239			-239		
Stock changes	-189		-98	4	-1	9			-9
Total primary energy supply	5 083	-76	12 329	-6 120	-185	-798	-353		-2 209
Transfers							-19		19
Total transformation sector	-4 525	1 039	-12 055	11 449	1 718	1 198	557		3 429
Main activity producers	-1 958			-40					
Autoproducers	-617	-135	-20	-272					-64
Gas processing									
Petroleum refineries			-12 034	11 761	1 718	1 198	557		3 492
Coal transformation	-1 951	1 174							
Other transformation									
Losses & own use	-28	-57	-273	-174					-154
Discrepancy	-288			60			54		155
Total final consumption	242	907	1	5 214	1 533	400	239		1 239
Total final energy consumption	235	907	1	3 719	1 533		239		1 239
Industry sector	139	906	1	332					192
Iron and steel	93	899		14					
Chemical & petrochemical	8	1		18					5
Non-metallic minerals	31	4		14					12
Other industries	19	6		286					174
Transport sector				2 583	1 533		239		761
Domestic air transport				239			239		
Road				2 183	1 520				627
Rail				110	1				109
Inland waterways				17					10
Other transport				34	12				16
Other sector	96			804					286
Residential	71			560					70
Commerce and public services	23			93					87
Agriculture	2			120					117
Non-specified others				31					12
Non-energy	7			1 495		400			
2017									
Indigenous production	9 304		22 985						
Import	718	3	26	51	2	1	3		6
Export	-4 965	-85	-10 637	-5 326	-191	-807	-98		-1 727
International marine bunkers				-492					-382
International aviation bunkers				-226			-226		
Stock changes	-222	2	68	-4	-8	1			-2
Total primary energy supply	4 835	-80	12 443	-5 997	-197	-805	-321		-2 106
Transfers							-17		17
Total transformation sector	-4 263	1 005	-12 182	11 734	1 673	1 165	534		3 345
Main activity producers	-1 815			-34					
Autoproducers	-542	-138	-21	-247					-66
Gas processing									
Petroleum refineries			-12 161	12 016	1 673	1 165	534		3 412
Coal transformation	-1 906	1 143							
Other transformation									
Losses & own use	-27	-40	-259	-511					-124
Discrepancy	-305		-1	-169		-5	29		46
Total final consumption	240	885	1	5 058	1 476	356	226		1 178
Total final energy consumption	235	885	1	3 819	1 476		226		1 178
Industry sector	128	884	1	664					149
Iron and steel	83	876		14					
Chemical & petrochemical	6	2		403					6
Non-metallic minerals	33	3		6					4
Other industries	20	7		242					139
Transport sector				2 467	1 476		226		734
Domestic air transport				226			226		
Road				2 103	1 465				620
Rail				82	1				80
Inland waterways				18					11
Other transport				37	9				23
Other sector	107		1	688					294
Residential	64			437					66
Commerce and public services	40			104					96
Agriculture	2			120					117
Non-specified others				27					15
Non-energy	5			1 238		356			

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				25 398	688	2 246	4	368			62 138	815
	5		36	323					19		1 116	
-2 006	-227		-306	-8 434				-2	-64		-30 479	-2
-81											-492	
											-239	
7			-2	34				-4			-253	-2
-2 080	-223		-273	17 321	688	2 246	4	363	-45		31 792	812
2 114	1 320		1 113	-8 524	-688	-2 246	-4	-190	3 993	5 482	-6 267	-720
-40				-5 638	-684	-2 246	-4	-3	3 736	2 507	-4 331	-692
-163	-2		-44	-2 757	-4			-183	272	2 960	-756	-25
2 318	1 322		1 156								-273	
											-777	
											-131	-4
-20	-1			-845				-4	-14	15	-3 590	
52	-199			-168				-6	-1 214	-992	-395	
66	897		840	7 785				167	2 734	4 490	21 539	91
66	547		96	5 954				167	2 734	4 490	18 206	91
28	16		96	1 603				71	1 225	1 542	5 818	3
14				508				35	226	266	2 041	
2	11			295				4	170	527	1 025	1
1	1			356				1	60	88	554	
12	4		96	443				30	769	661	2 214	3
13	37			1 351					295		4 229	
											239	
	36			10							2 193	
											300	
7									190		17	
6				1 341					105		1 480	
24	495			3 000				96	1 214	2 948	8 159	88
	490			2 843				42	599	2 092	6 207	42
5	2			100				49	548	737	1 550	43
	2			57				5	67	119	369	2
19									1	1	32	
	350		744	1 830							3 332	
				24 323	666	2 231	4	325			59 840	781
	7		33	302					23		1 124	
-1 971	-205		-327	-7 853				-1	-61		-28 928	-1
-110											-492	
											-226	
6	-4		3	-656				6			-805	6
-2 074	-202		-292	16 117	666	2 231	4	331	-38		30 513	786
2 083	1 269	733	930	-8 459	-666	-2 231	-4	-183	3 919	5 325	-6 005	-699
-34				-5 475	-662	-2 231	-4	-3	3 671	2 358	-4 194	-669
-123	-1	-25	-32	-2 865	-4			-177	261	2 954	-781	-27
2 241	1 270	758	962								-145	
											-764	
											-122	-4
-27	-2	-357		-828				-4	-13	13	-3 693	
73	-313			90				-6	-1 141	-881	-385	
55	752	376	639	6 921				142	2 739	4 444	20 429	86
55	416	376	93	5 260				142	2 739	4 444	17 525	86
23	23	376	93	1 591				52	1 220	1 722	6 261	3
14				514				20	220	260	1 987	
2	19	376		284				5	170	499	1 369	1
1	1			394				1	66	96	598	
6	4		93	399				25	764	867	2 324	2
13	18			1 267					279		4 013	
											226	
	18			10							2 113	
1									183		265	
6											18	
5				1 257					96		1 391	
20	374			2 402				90	1 240	2 722	7 251	83
1	369			2 243				37	599	1 835	5 216	37
6	2			104				48	576	774	1 646	43
1	2			56				5	64	113	361	3
12									1	1	29	
	337		546	1 660							2 904	

Major energy indicators of Russia

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	36 816	26 660	25 932	27 287	28 847	28 999	29 911	30 513	31 792
Indigenous production	54 145	40 515	40 952	50 383	53 571	55 870	57 513	59 840	62 138
Import	5 043	1 259	1 377	971	958	1 156	986	1 124	1 116
Export	-22 318	-14 446	-16 013	-23 551	-25 206	-27 176	-27 886	-28 928	-30 479
Final energy consumption	24 487	17 740	15 976	15 395	15 922	16 467	16 912	17 525	18 206
Industry	8 737	6 141	5 352	5 151	5 289	5 833	6 244	6 261	5 818
Transport	4 852	3 188	3 118	3 708	4 040	3 930	3 948	4 013	4 229
Residential	3 496	6 151	5 873	4 629	4 667	4 803	4 793	5 216	6 207
Commerce & public services	1 519	1 068	948	1 454	1 550	1 524	1 559	1 646	1 550
Others	5 883	1 191	684	453	375	376	369	389	402
Coal & Peat									
Primary energy supply	7 955	5 419	5 065	4 794	4 308	4 942	4 808	4 835	5 083
Indigenous production	8 055	5 471	5 382	6 591	6 965	8 385	8 757	9 304	10 065
Import	1 330	576	639	567	635	596	584	718	704
Export	-1 596	-749	-1 021	-2 251	-3 532	-4 105	-4 499	-4 965	-5 497
Transformation sector	-5 857	-4 521	-4 383	-4 369	-4 257	-4 490	-4 271	-4 263	-4 525
Power generation	-4 235	-3 291	-3 174	-3 021	-2 748	-2 575	-2 418	-2 357	-2 574
Final energy consumption	1 730	562	481	282	212	265	264	235	235
Industry	78	73	65	45	42	116	132	128	139
Transport									
Residential	470	328	374	118	65	87	78	64	71
Commerce & public services	862	36	16	112	103	58	52	40	23
Others	320	125	27	7	3	4	3	2	2
Coal & peat products									
Primary energy supply	47	-10	-41	-80	-61	-65	-65	-80	-76
Indigenous production									
Import	139	11	5	4	6	3	2	3	3
Export	-96	-37	-46	-84	-67	-71	-66	-85	-79
Transformation sector	530	259	302	345	497	983	1 002	1 005	1 039
Power generation	-158	-97	-171	-197	-218	-131	-130	-138	-135
Final energy consumption	561	454	241	244	373	873	897	885	907
Industry	532	439	240	243	372	873	896	884	906
Transport									
Residential	27	14	1			1	1		
Commerce & public services					1				
Others									
Crude oil & NGL									
Primary energy supply	13 479	7 925	7 696	9 079	10 757	12 142	12 334	12 443	12 329
Indigenous production	22 033	12 837	13 534	19 624	21 208	22 453	23 043	22 985	23 369
Import	778	358	248	102	46	148	32	26	21
Export	-9 333	-5 148	-6 077	-10 628	-10 394	-10 364	-10 724	-10 637	-10 963
Transformation sector	-12 934	-7 756	-7 610	-8 955	-10 549	-11 893	-12 034	-12 182	-12 055
Petroleum refineries	-12 871	-7 740	-7 566	-8 923	-10 516	-11 868	-11 999	-12 161	-12 034
Petroleum products									
Primary energy supply	-2 435	-1 950	-2 416	-3 669	-4 934	-6 307	-5 831	-5 997	-6 120
Import	307	126	13	1	119	82	49	51	46
Export	-2 691	-1 927	-2 232	-3 498	-4 689	-5 661	-5 200	-5 326	-5 440
Transformation sector	8 756	5 918	6 604	8 044	10 036	11 488	11 270	11 734	11 449
Power generation	-2 536	-1 573	-928	-670	-432	-386	-285	-281	-313
Petroleum refineries	11 293	7 492	7 532	8 744	10 469	11 875	11 555	12 016	11 761
Final energy consumption	5 263	2 773	2 975	2 917	3 244	3 701	3 633	3 819	3 719
Industry	1 024	355	710	430	462	605	670	664	332
Transport	3 051	1 723	1 771	1 991	2 357	2 495	2 413	2 467	2 583
Residential	367	219	182	265	198	342	321	437	560
Commerce & public services	18	15	41	35	70	100	89	104	93
Others	803	461	271	195	158	159	140	147	150
Gas									
Primary energy supply	15 382	13 257	13 356	14 640	16 058	15 251	15 546	16 117	17 321
Indigenous production	21 638	20 120	19 709	21 597	22 615	21 953	22 542	24 323	25 398
Import	2 363	122	441	260	146	303	307	302	323
Export	-8 446	-6 448	-6 556	-7 010	-6 455	-6 907	-7 332	-7 853	-8 434
Transformation sector	-9 535	-7 957	-7 931	-8 618	-9 336	-8 685	-8 441	-8 459	-8 524
Power generation	-9 535	-7 957	-7 805	-8 532	-9 266	-8 602	-8 348	-8 341	-8 396
Final energy consumption	5 108	4 333	4 197	4 464	4 574	4 535	4 883	5 260	5 954
Industry	1 277	1 050	1 082	1 261	1 355	1 486	1 525	1 591	1 603
Transport	1 426	1 230	1 128	1 417	1 376	1 140	1 238	1 267	1 351
Residential	1 973	1 811	1 805	1 597	1 693	1 773	1 969	2 243	2 843
Commerce & public services	368	182	103	149	127	90	96	104	100
Others	64	60	79	40	23	46	54	56	57
Electricity									
Power generation	3 896	3 092	3 155	3 424	3 730	3 836	3 920	3 932	4 008
Thermal	2 872	2 097	2 085	2 254	2 505	2 514	2 535	2 521	2 569
Hydro	597	631	591	622	599	605	665	666	688
Nuclear	426	358	471	538	613	704	708	731	736
Others	0	6	9	11	12	14	13	14	14
Final energy consumption	2 976	2 226	2 191	2 340	2 616	2 636	2 678	2 739	2 734
Industry	1 734	1 130	1 125	1 188	1 177	1 184	1 175	1 220	1 225
Transport	374	235	219	299	307	296	297	279	295
Residential	385	454	507	392	467	538	578	599	599
Commerce & public services	241	216	231	399	608	559	566	576	548
Others	242	191	109	61	57	59	63	65	68

Major economic indicators of Russia

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ¹¹	147.97	146.60	143.52	142.85	146.41	146.67	146.84	146.83
Gross domestic product ¹³								
Real term, billion USD (constant 2010)	1 416	952	1 282	1 525	1 662	1 666	1 696	1 739
GDP, billion USD (PPP, constant 2017)	3 189	2 143	2 886	3 435	3 743	3 750	3 819	3 926
Nominal, billion USD (current)	517	260	764	1 525	1 363	1 277	1 574	1 670
GDP per capita ¹³								
Real term (constant 2010 USD)	9 571	6 491	8 929	10 675	11 355	11 356	11 551	11 844
GDP, PPP (constant 2017 USD)	21 554	14 620	20 108	24 043	25 566	25 569	26 006	26 738
Nominal (current USD)	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Nominal GDP & its components (billions of current RUR) ¹¹								
Gross domestic product	1	7 306	21 610	46 309	83 087	85 616	91 843	104 630
Households and NPISHs final consumption expenditure		3 374	10 792	23 843	43 770	45 589	48 559	51 753
General government final consumption expenditure		1 103	3 646	8 671	14 761	15 810	16 731	18 394
Gross fixed capital formation		1 232	3 837	10 014	17 126	18 734	20 189	21 293
Stock change		134	502	458	1 277	1 040	1 492	1 703
Exports of goods and services		3 219	7 607	13 529	23 849	22 136	23 963	31 930
Imports of goods and services		1 756	4 648	9 790	17 163	17 691	19 090	21 571
Real GDP & its components (billions of 2000 RUR) ¹¹								
Gross Domestic Product	72 791	48 910	65 870	78 380	85 451	85 616	87 179	89 390
Households and NPISHs final consumption expenditure	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
General government final consumption expenditure	19 404	13 926	15 026	15 982	15 584	15 810	16 210	16 415
Gross fixed capital formation	36 355	7 787	12 514	17 914	18 501	18 734	19 606	19 643
Stock change	12 068	2 569	4 017	1 972	1 400	1 040	1 435	1 279
Exports of goods and services	13 116	10 743	16 554	19 370	21 456	22 136	23 245	24 535
Imports of goods and services	14 755	5 479	12 568	19 338	18 366	17 691	20 755	21 300
Sectoral shares of Real GDP (%) ¹¹								
Agriculture, Fishery and Forestry	4.6	4.8	4.0	3.3	3.8	3.8	3.8	3.8
Industry	39.4	31.4	31.9	28.5	28.7	29.2	29.2	29.1
Services, etc.	51.3	51.2	50.8	56.6	57.4	57.0	57.0	57.2
Industrial production index (2010=100) ¹²	N.A.	69.2	91.4	100.0	112.3	114.8	117.2	120.6
External trade (billions of current USD) ¹¹								
Exports, f.o.b.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Imports, c.i.f.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Balance of payments (billions of current USD) ¹²								
Trade balance	N.A.	57.1	116.2	147.0	148.4	90.2	114.6	195.1
Current account	N.A.	45.4	84.4	67.5	67.8	24.5	32.2	115.7
Overall balance	N.A.	27.0	70.0	45.9	-1.2	13.6	20.0	36.1
Foreign exchange rate (RUR/USD) ¹¹	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
PPP conversion factor, GDP (RUR/USD) ¹¹	0.00	7.30	12.74	15.82	23.56	24.20	24.05	24.77
Price Indices								
GDP Deflator (2016=100) ¹³	0.0	14.9	32.8	59.1	97.2	100.0	105.3	117.0
Producer Price Index (2010=100) ¹²	N.A.	27.1	61.7	100.0	156.6	163.4	175.8	197.2
Consumer Price Index (2010=100) ¹²	N.A.	30.8	61.4	100.0	151.5	162.2	168.2	173.0
Growth rate (%) ¹³								
Real GDP ¹³	-3.0	10.0	6.4	4.5	-2.0	0.2	1.8	2.5
Population ¹³	0.2	-0.4	-0.4	0.0	0.2	0.2	0.1	0.0
Price ¹²	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices	N.A.	46.5	20.6	12.2	13.8	4.3	7.6	12.2
Consumer prices	N.A.	20.8	12.7	6.8	15.5	7.0	3.7	2.9

Source ¹¹: World Development Indicators, World Bank

¹²: International Financial Statistics, International Monetary Fund

¹³: Calculated from ¹¹ and ¹² by ESTO

Note : N.A. means "not available"

: - means "very small number"

: RUR means Russian Ruble, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

Energy prices in the Russian Federation in 2018

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	62.6681
Local Currency Unit		Ruble

IMPORT PRICES	US		WHOLESALE PRICES (Ruble ⁵)		CONSUMER PRICES (Ruble ⁷)		
	Unit	Amount ¹	Unit	Amount	Unit	Amount	
Coal and Coal Products			Coal and Coal Products		Coal and Coal Products		
Coking Coal	USD/tonne	102.70	Coking Coal	Rub/tonne	11,029.00	Coking Coal	
Anthracite	USD/tonne	36.50	Anthracite	Rub/tonne	11,849.00	Anthracite	
Other bituminous coal	USD/tonne	9.90	Other bituminous coal			Other bituminous coal	
Sub-bituminous Coal			Sub-bituminous Coal			Sub-bituminous Coal	
Lignite	USD/tonne	14.60	Lignite	Rub/tonne	1,301.00	Lignite	
Peat	USD/tonne	123.80	Peat			Peat	
Patent Fuel		145.60	Patent Fuel			Patent Fuel ⁸	Rub/tonne 2,900.01
Coke	USD/tonne	404.50	Coke			Coke	
Coal Tar ²	USD/tonne	148.10	Coal Tar			Coal Tar	
BKB/PB	USD/tonne	5,539.70	BKB/PB			BKB/PB	
			Gas Works Gas			Gas Works Gas	
Oil and Oil Products		15,089.90	Oil and Oil Products			Oil and Oil Products	
Crude Oil	USD/tonne	128.80	Crude Oil	Rub/tonne	19,869.00	Crude Oil	
Natural Gas Liquids	USD/tonne	2,774.40	Natural Gas Liquids			Natural Gas Liquids	
Ethane	USD/tonne	555.10	Ethane			Ethane	
LPG	USD/tonne	1,178.20	LPG ⁹	Rub/tonne	22,476.00	LPG	
Naphtha	USD/tonne	501.20	Naphtha			Naphtha	
Motor Gasoline	USD/tonne	1,249.90	Motor Gasoline	Rub/tonne	49,428.00	Motor Gasoline ⁹	Rub/liter 44.83
Aviation Gasoline	USD/tonne		Aviation Gasoline			Aviation Gasoline	
Gasoline Type Jet Fuel	USD/tonne	622.90	Gasoline Type Jet Fuel			Gasoline Type Jet Fuel	
Kerosene Type Jet Fuel	USD/tonne	3,116.10	Kerosene Type Jet Fuel	Rub/tonne	49,310.00	Kerosene Type Jet Fuel	
Other Kerosene	USD/tonne	646.00	Other Kerosene			Other Kerosene	
Gas/Diesel Oil	USD/tonne	537.20	Gas/Diesel Oil	Rub/tonne	57,707.00	Gas/Diesel Oil	Rub/liter 46.68
Fuel Oil ³	USD/tonne	1,398.10	Fuel Oil	Rub/tonne	22,154.00	Fuel Oil	
White Spirit SBP	USD/tonne	2,056.50	White Spirit SBP			White Spirit SBP	
Lubricants	USD/tonne	589.90	Lubricants	Rub/tonne	78,569.00	Lubricants	
Bitumen	USD/tonne	2,738.20	Bitumen ⁶	Rub/tonne	12,255.00	Bitumen	
Paraffin Waxes ⁴	USD/tonne	567.50	Paraffin Waxes			Paraffin Waxes	
Petroleum Coke	USD/tonne		Petroleum Coke			Petroleum Coke	
Natural Gas		18.10	Natural Gas			Natural Gas	
Natural Gas	USD/Mm ³	293,991.90	Natural Gas	Rub/1000 m ³	5,319.00	Natural Gas	Rub/m ³ 75.59
Liquefied Natural Gas	1000 m ³		Liquefied Natural Gas			Liquefied Natural Gas	Rub/m ³ 273.55
Compressed Natural Gas			Compressed Natural Gas			Compressed Natural Gas	Rub/50 liter
Electricity		16.40	Electricity			Electricity	
Electricity	USD/MWh		Electricity	Rub/MWh	2,579.00	Industrial	
		746.90				Commercial	
		876.40				Residential ¹⁰	Rub/100 kWh 387.16
						Others ¹¹	Rub/100 kWh 280.42
Other Energy Products			Other Energy Products			Other Energy Products	
Charcoal	USD/tonne	706.20					
Wood pellets	USD/tonne	538.40					

Notes:

¹ Price in USD per 1 ton. Average import prices are the ratio of the total value of imports to its quantity according to the Federal customs service (FCS of Russia), in reliance on mutual trade in goods with the EAEU member states.

² Wood tar

³ fuel oil for other purposes, a sulfur content of no more than 1 w.%, not containing biodiesel

⁴ Paraffin containing oils less than 0.75% wt%

⁵ Acquisition cost for industrial enterprises at the end of the period

⁶ Liquid construction bitumen

⁷ At the end of the period

⁸ All types of coal

⁹ AN-95 (Octane: 95 RON) and higher

¹⁰ Household in dwellings which are not furnished with kitchen electric ranges

¹¹ Household in dwellings which are furnished with kitchen electric ranges

SINGAPORE

Energy balance table of Singapore

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production									
Import	20		2 394	4 680	555	293	57	1	894
Export			- 32	-3 533	- 895	- 26	- 221	- 12	-1 004
International marine bunkers				-2 009					- 99
International aviation bunkers				- 365			- 365		
Stock changes				22	- 9				
Total primary energy supply	20		2 362	-1 205	- 348	267	- 529	- 11	- 209
Transfers			298	- 298		- 97			- 104
Total transformation sector	- 12		-2 236	2 150	380	130	529	11	398
Main activity producers	- 12								
Autoproducers				- 5					
Gas processing									
Petroleum refineries			-2 236	2 155	380	130	529	11	398
Coal transformation									
Other transformation									
Losses & own use				- 83					
Discrepancy			- 424	26					
Total final consumption	8			589	32	301			85
Total final energy consumption	8			266	32				85
Industry sector	8			166					22
Iron and steel									
Chemical & petrochemical				133					
Non-metallic minerals									
Other industries	16			32					22
Transport sector				95	32				63
Domestic air transport									
Road				92	32				60
Rail									
Inland waterways				3					3
Other transport									
Other sector				4					
Residential				1					
Commerce and public services				3					
Agriculture									
Non-specified others									
Non-energy				324		301			
2017									
Indigenous production									
Import	38		2 452	5 296	700	343	129	1	888
Export			- 33	-4 222	-1 072	- 43	- 311	- 10	-1 062
International marine bunkers				-2 042					- 88
International aviation bunkers				- 347			- 347		
Stock changes			- 15	- 14	- 3				8
Total primary energy supply	38		2 404	-1 329	- 375	301	- 529	- 9	- 254
Transfers			305	- 308		- 143			- 85
Total transformation sector	- 12		-2 294	2 207	408	116	529	9	426
Main activity producers	- 12								
Autoproducers				- 7					
Gas processing									
Petroleum refineries			-2 294	2 214	408	116	529	9	426
Coal transformation									
Other transformation									
Losses & own use				- 86					
Discrepancy	- 18		- 415	76					
Total final consumption	8			561	33	274			87
Total final energy consumption	8			264	33				87
Industry sector	8			162					22
Iron and steel									
Chemical & petrochemical				129					
Non-metallic minerals									
Other industries	15			33					22
Transport sector				98	33				65
Domestic air transport									
Road				94	33				62
Rail									
Inland waterways				3					3
Other transport									
Other sector				4					
Residential				1					
Commerce and public services				3					
Agriculture									
Non-specified others									
Non-energy				297		274			

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
									26		26	13
2 746	19		115	375				3			7 473	3
-1 058	- 11		- 307								-3 565	
-1 910											-2 009	
											- 365	
30											22	
- 191	7		- 192	375				29			1 581	16
- 97											1	
216	39	147	299	- 319				- 29	191		- 255	- 16
				- 276				- 29	166		- 152	- 16
- 3		- 2		- 43					26		- 23	
220	39	149	299								- 81	
- 20		- 63							- 10		- 94	
106	- 41	37	- 76								- 398	
14	6	121	31	56					182		834	
14	6	121	7	56					182		511	
14	2	121	7	49					72		295	
13		121									133	
2	2		7	49					72		169	
									11		106	
											92	
									11		11	
											3	
	4			6					99		110	
	1			2					26		29	
	3			3					72		79	
									1		1	
			23								324	
									27		27	14
3 161	10		64	372				3			8 160	3
-1 346	- 15		- 364								-4 255	
-1 954											-2 042	
											- 347	
- 18				- 3							- 32	
- 158	- 5		- 300	369				30			1 512	17
- 79											- 3	
204	40	144	331	- 317				- 30	189		- 258	- 17
				- 280				- 30	166		- 156	- 17
- 4		- 3		- 37					22		- 22	
208	40	147	331								- 80	
- 21		- 65							- 10		- 96	
68	- 30	38		3							- 354	
13	6	117	31	54					179		801	
13	6	117	8	54					179		504	
13	2	117	8	48					72		290	
12		117									129	
2	2		8	48					72		169	
									10		108	
											95	
									10		10	
											3	
	4			6					96		107	
	1			2					26		30	
	3			3					69		76	
									1		1	
			23								297	

Major energy indicators of Singapore

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	483	789	782	880	984	1 328	1 360	1 512	1 581
Indigenous production	3	8	8	17	25	26	28	27	26
Import	2 571	3 387	3 455	4 739	6 493	7 302	7 705	8 160	7 473
Export	-1 544	-2 030	-1 746	-2 660	-3 667	-3 819	-4 116	-4 255	-3 565
Final energy consumption	130	160	234	299	410	485	492	504	511
Industry	25	31	91	135	214	272	276	290	295
Transport	57	79	73	82	102	109	109	108	106
Residential	12	15	26	25	27	29	31	30	29
Commerce & public services	34	33	40	51	66	74	76	76	79
Others	1	2	3	5	1	1	1	1	1
Coal & Peat									
Primary energy supply						17	18	38	20
Indigenous production									
Import						17	18	38	20
Export									
Transformation sector						-10	-11	-12	-12
Power generation						-10	-11	-12	-12
Final energy consumption						7	7	8	8
Industry						7	7	8	8
Transport									
Residential									
Commerce & public services									
Others									
Coal & peat products									
Primary energy supply	1								
Indigenous production									
Import	1	1							
Export	-1	-1							
Transformation sector									
Power generation									
Final energy consumption	1								
Industry	1								
Transport									
Residential									
Commerce & public services									
Others									
Crude oil & NGL									
Primary energy supply	1 745	2 199	1 786	2 496	1 878	2 038	2 184	2 404	2 362
Indigenous production									
Import	1 823	2 199	1 786	2 503	1 901	2 070	2 210	2 452	2 394
Export	-1			-7	-20	-32	-31	-33	-32
Transformation sector	-1 745	-2 199	-1 786	-2 496	-2 231	-2 078	-2 137	-2 294	-2 236
Petroleum refineries	-1 745	-2 199	-1 786	-2 496	-2 231	-2 078	-2 137	-2 294	-2 236
Petroleum products									
Primary energy supply	-1 266	-1 472	-1 060	-1 843	-1 191	-1 113	-1 240	-1 329	-1 205
Import	747	1 133	1 622	2 026	4 320	4 857	5 110	5 296	4 680
Export	-1 543	-2 030	-1 746	-2 653	-3 647	-3 788	-4 085	-4 222	-3 533
Transformation sector	1 545	1 790	1 466	2 383	2 026	2 017	2 100	2 207	2 150
Power generation	-185	-228	-276	-93	-92	-8	-5	-7	-6
Petroleum refineries	1 733	2 021	1 747	2 481	2 119	2 026	2 106	2 214	2 155
Final energy consumption	79	90	131	150	215	257	259	264	266
Industry	5	6	53	68	117	153	156	162	166
Transport	56	78	72	78	93	99	99	98	95
Residential	2		4	2	1	1	1	1	1
Commerce & public services	17	7	2	3	4	3	3	3	3
Others									
Gas									
Primary energy supply		53	47	210	272	358	367	369	375
Indigenous production									
Import		53	47	210	272	356	365	372	375
Export									
Transformation sector	3	-49	-42	-189	-225	-307	-315	-317	-319
Power generation		-53	-47	-193	-225	-307	-315	-317	-319
Final energy consumption	3	3	4	21	43	51	51	54	56
Industry				17	36	44	45	48	49
Transport					1	1			
Residential	1	2	2	2	2	2	2	2	2
Commerce & public services					3	3	4	3	3
Others	1	2	3	3					
Electricity									
Power generation	57	80	114	138	167	182	186	189	191
Thermal	56	78	112	134	163	176	180	183	185
Hydro									
Nuclear									
Others	1	2	2	3	4	6	6	6	6
Final energy consumption	47	66	98	128	152	171	175	179	182
Industry	20	25	38	51	61	68	68	72	72
Transport	1	1	1	4	8	9	10	10	11
Residential	9	14	21	22	24	26	27	26	26
Commerce & public services	18	26	38	49	59	67	69	69	72
Others				2	1	1	1	1	1

Major economic indicators of Singapore

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ^{*1}	3.05	4.03	4.27	5.08	5.54	5.61	5.61	5.64
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	69	136	173	240	299	309	322	333
GDP, billion USD (PPP, constant 2017)	114	226	286	397	495	511	533	551
Nominal, billion USD (current)	36	96	128	240	308	319	342	373
GDP per capita ^{*3}								
Real term (constant 2010 USD)	22 572	33 851	40 499	47 237	54 010	55 043	57 379	59 073
GDP, PPP (constant 2017 USD)	37 348	56 011	67 011	78 160	89 366	91 076	94 941	97 745
Nominal (current USD)	11 862	23 852	29 961	47 237	55 647	56 828	60 914	66 189
Nominal GDP & its components (billions of current SGD) ^{*1}								
Gross domestic product	70	166	213	327	423	440	472	503
Households and NPISHs final consumption expenditure	31	69	85	119	157	161	167	175
General government final consumption expenditure	7	17	21	32	43	45	48	51
Gross fixed capital formation	22	54	49	84	115	116	120	116
Stock change	3	5	-4	7	-8	2	9	12
Exports of goods and services	125	312	479	647	755	727	806	894
Imports of goods and services	118	292	415	561	640	611	686	751
Real GDP & its components (billions of 2010 SGD) ^{*1}								
Gross Domestic Product	97	193	245	340	423	437	456	472
Households and NPISHs final consumption expenditure	45	87	107	130	157	162	167	174
General government final consumption expenditure	9	22	26	35	43	45	46	48
Gross fixed capital formation	25	60	56	88	115	117	122	118
Stock change	3	3	-3	6	-8	2	8	10
Exports of goods and services	98	273	432	599	755	755	802	868
Imports of goods and services	89	256	379	521	640	641	690	740
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Industry	26.5	27.9	25.4	27.1	24.3	24.1	24.7	25.0
Services, etc.	66.8	65.4	68.2	66.8	70.0	69.6	68.9	69.0
Industrial production index (2010=100) ^{*2}	27.4	57.6	70.8	100.0	107.1	111.1	122.6	131.3
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	52.7	137.8	229.6	351.9	351.6	330.5	373.4	413.0
Imports, c.i.f.	60.9	134.5	200.0	310.8	297.1	283.3	327.9	370.9
Balance of payments (billions of current USD) ^{*2}								
Trade balance	-1.6	15.8	47.6	63.2	92.6	90.8	97.4	104.0
Current account	3.1	10.6	29.7	55.0	57.6	56.2	55.6	64.1
Overall balance	7.0	4.8	14.1	37.7	5.2	0.0	24.6	15.0
Foreign exchange rate (SGD/USD) ^{*1}	1.81	1.72	1.66	1.36	1.37	1.38	1.38	1.35
PPP conversion factor, GDP (SGD/USD) ^{*1}	0.97	0.94	0.85	0.86	0.88	0.88	0.89	0.89
Price Indices								
GDP Deflator (2015=100) ^{*3}	72.4	85.8	86.9	96.3	100.0	100.7	103.5	106.7
Wholesale Price Index (2010=100) ^{*2}	92.9	87.5	97.9	100.0	86.8	80.7	86.4	92.0
Consumer Price Index (2010=100) ^{*2}	71.8	85.2	88.0	100.0	113.2	112.6	113.3	113.8
Growth rate (%) ^{*3}								
Real GDP	9.8	9.0	7.4	14.5	3.0	3.2	4.3	3.4
Population	4.0	1.7	2.4	1.8	1.2	1.3	0.1	0.5
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wholesale prices	1.7	10.1	9.6	4.7	-15.3	-7.0	7.1	6.4
Consumer prices	3.5	1.4	0.4	2.8	-0.5	-0.5	0.6	0.4

Source ^{*1}: *World Development Indicators*, World Bank

^{*2}: *International Financial Statistics*, International Monetary Fund

^{*3}: Calculated from ^{*1} and ^{*2} by ESTO

Note

: N.A. means "not available"

: SGD means Singapore Dollar, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

Energy prices in Singapore in 2018

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	1.3488
Local Currency Unit		SGD

IMPORT PRICES

WHOLESALE PRICES

CONSUMER PRICES

	Unit	Amount		Unit	Amount		Unit	Amount
Coal and Coal Products			Coal and Coal Products			Coal and Coal Products		
Coking Coal			Coking Coal			Coking Coal		
Anthracite			Anthracite			Anthracite		
Other bituminous coal			Other bituminous coal			Other bituminous coal		
Sub-bituminous Coal			Sub-bituminous Coal			Sub-bituminous Coal		
Lignite			Lignite			Lignite		
Peat			Peat			Peat		
Patent Fuel			Patent Fuel			Patent Fuel		
Coke			Coke			Coke		
Coal Tar			Coal Tar			Coal Tar		
BKB/PB			BKB/PB			BKB/PB		
			Gas Works Gas			Gas Works Gas		
Oil and Oil Products			Oil and Oil Products			Oil and Oil Products		
Crude Oil			Crude Oil			Crude Oil		
Natural Gas Liquids			Natural Gas Liquids			Natural Gas Liquids		
Ethane			Ethane			Ethane		
LPG			LPG			LPG		
Naphtha			Naphtha			Naphtha		
Motor Gasoline			Motor Gasoline			Motor Gasoline (regular)		
Aviation Gasoline			Aviation Gasoline			Aviation Gasoline		
Gasoline Type Jet Fuel			Gasoline Type Jet Fuel			Gasoline Type Jet Fuel		
Kerosene Type Jet Fuel			Kerosene Type Jet Fuel			Kerosene Type Jet Fuel		
Other Kerosene			Other Kerosene			Other Kerosene		
Gas/Diesel Oil			Gas/Diesel Oil			Gas/Diesel Oil		
Fuel Oil			Fuel Oil			Fuel Oil		
White Spirit SBP			White Spirit SBP			White Spirit SBP		
Lubricants			Lubricants			Lubricants		
Bitumen			Bitumen			Bitumen		
Paraffin Waxes			Paraffin Waxes			Paraffin Waxes		
Petroleum Coke			Petroleum Coke			Petroleum Coke		
Natural Gas			Natural Gas			Natural Gas		
Natural Gas			Natural Gas			Natural Gas		
Liquefied Natural Gas			Liquefied Natural Gas			Liquefied Natural Gas	SGD cents/kWh	18.80
Compressed Natural Gas			Compressed Natural Gas			Compressed Natural Gas		
Electricity			Electricity			Electricity		
Electricity			Electricity			Industrial		
						Commercial		
						Residential	SGD cents/kWh	22.87
						Others		
Other Energy Products			Other Energy Products			Other Energy Products		
Condensate						Auto LPG		

CHINESE TAIPEI

Energy balance table of Chinese Taipei

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production			3						
Import	1 640	9	1 938	757	4	485	6		
Export		- 1	- 18	- 755	- 173		- 40		- 395
International marine bunkers				- 49					- 5
International aviation bunkers				- 122			- 122		
Stock changes	- 21		- 32	11	3	5			5
Total primary energy supply	1 661	8	1 954	- 180	- 172	480	- 156		- 405
Transfers				- 12	121	- 115	- 2		
Total transformation sector	-1 504	203	-1 961	1 959	374	401	171		601
Main activity producers	- 857			- 68					- 3
Autoproducers	- 338	- 45		- 19					
Gas processing									
Petroleum refineries			-1 961	2 046	374	401	171		605
Coal transformation	- 309	248							
Other transformation									
Losses & own use		- 52		- 124					- 1
Discrepancy	- 10	- 81	9	3	4	- 3	- 3		4
Total final consumption	147	78	2	1 646	327	764	10		199
Total final energy consumption	145	64		670	327		10		199
Industry sector	145	64		76					4
Iron and steel	7	64		6					
Chemical & petrochemical	64			35					2
Non-metallic minerals	38			10					1
Other industries	71			25					1
Transport sector				496	325		4		165
Domestic air transport				4			4		
Road				489	325				163
Rail				1					1
Inland waterways				2					1
Other transport									
Other sector				97	2		6		30
Residential				45					
Commerce and public services				32	1		6		11
Agriculture				3					2
Non-specified others				17					16
Non-energy	2	14	2	976		764			
2017									
Indigenous production			3						
Import	1 659	8	1 875	798	6	530	4		2
Export		- 1	- 17	- 707	- 184		- 35		- 347
International marine bunkers				- 51					- 4
International aviation bunkers				- 119			- 119		
Stock changes	6		- 15	- 15	- 11	2			6
Total primary energy supply	1 653	7	1 861	- 63	- 168	528	- 149		- 356
Transfers				- 22	129	- 123			1
Total transformation sector	-1 464	196	-1 869	1 819	370	354	158		556
Main activity producers	- 881			- 113					- 5
Autoproducers	- 277	- 42		- 10					
Gas processing									
Petroleum refineries			-1 869	1 942	370	354	158		561
Coal transformation	- 307	239							
Other transformation									
Losses & own use		- 51		- 118					- 1
Discrepancy	4	- 79	9	5	4	- 2	2		- 1
Total final consumption	193	72	1	1 621	336	757	11		199
Total final energy consumption	192	60		684	336		11		199
Industry sector	192	60		74					4
Iron and steel	9	60		7					
Chemical & petrochemical	94			26					2
Non-metallic minerals	51			8					
Other industries	79			33					1
Transport sector				511	334		4		167
Domestic air transport				4			4		
Road				498	334				163
Rail				1					1
Inland waterways				7					4
Other transport									
Other sector				99	2		7		28
Residential				46					
Commerce and public services				38	1		7		13
Agriculture				3					2
Non-specified others				13					12
Non-energy	1	12	1	937		757			

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				7	16	302		83			411	80
90	88		84	845							5 189	
-79	-4		-63								-773	
-44											-49	
											-122	
-8	3		4	12							-30	
-25	81		17	840	16	302		84			4 686	80
-15	-4		2	7							-5	
107	57	100	147	-666	-16	-302		-63	992	101	-1 258	-60
-65				-665	-16	-302		-8	842		-1 075	-24
-4		-10	-4	-4				-55	150	101	-209	-36
											88	
											-62	
-4	-5	-93	-20	-14					-102	-22	-315	
1				-5					1		-83	
65	129	7	146	163				20	891	78	3 025	20
65	62	7		163				20	891	78	2 031	20
53	12	7		116				16	536	78	1 032	16
5				18					61		156	
19	7	7		45					144	73	361	
9				10					21		79	
20	4			44				16	311	5	472	16
2	1								5		502	
											4	
	1										489	
									5		6	
2											2	
10	49			47				4	349		497	4
	45			29				4	169		247	4
9	4			17					170		219	
									7		10	
1									4		21	
	67		145								994	
				9	20	245		78			354	80
104	64		90	828							5 169	
-65	-1		-74								-725	
-47											-51	
											-119	
-1	-2		-9	4							-5	
-7	64		24	832	20	245		77			4 633	79
-17	-2		-10	13							-9	
99	51	87	142	-670	-20	-245		-57	973	64	-1 272	-59
-108				-668	-20	-245		-8	843		-1 091	-27
-2		-4	-4	-3				-49	130	64	-187	-31
											74	
											-68	
-3	-6	-87	-21	-13					-103	-16	-301	
2				-13							-75	
75	107		136	150				21	870	48	2 976	21
75	63		1	150				21	870	48	2 025	21
58	12		1	105				16	508	48	1 004	16
6			1	18					56		149	
18	6			39					135	43	338	
7				9					19		87	
27	5			39				16	297	5	469	16
4	1								5		516	
											4	
	1										498	
									5		6	
4											7	
14	49			46				4	356		505	4
	46			27				4	171		248	4
12	4			18					174		230	
									7		10	
1									4		17	
	45		136								951	

Major energy indicators of Chinese Taipei

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	1 957	2 611	3 453	4 176	4 554	4 630	4 659	4 633	4 686
Indigenous production	447	452	503	536	554	509	460	354	411
Import	1 719	2 497	3 336	4 517	4 835	4 998	5 065	5 169	5 189
Export	- 23	- 72	- 100	- 649	- 681	- 711	- 728	- 725	- 773
Final energy consumption	1 064	1 392	1 737	1 972	1 984	1 994	2 028	2 025	2 031
Industry	515	647	841	945	997	992	1 002	1 004	1 032
Transport	277	407	470	522	494	507	521	516	502
Residential	125	169	215	242	241	240	249	248	247
Commerce & public services	102	125	171	219	227	227	228	230	219
Others	45	45	40	44	25	28	28	27	31
Coal & Peat									
Primary energy supply	440	670	1 142	1 478	1 594	1 609	1 629	1 653	1 661
Indigenous production	12	6	2						
Import	471	728	1 129	1 492	1 586	1 629	1 616	1 659	1 640
Export									
Transformation sector	- 331	- 527	- 948	- 1 290	- 1 378	- 1 386	- 1 418	- 1 464	- 1 504
Power generation	- 208	- 391	- 755	- 1 088	- 1 138	- 1 080	- 1 101	- 1 157	- 1 195
Final energy consumption	107	126	158	181	182	203	207	192	145
Industry	107	126	158	181	182	203	207	192	145
Transport									
Residential									
Commerce & public services									
Others									
Coal & peat products									
Primary energy supply	3	7	10	2		7	6	7	8
Indigenous production									
Import	5	8	9	6	6	5	6	8	9
Export	- 1			- 1	- 3			- 1	- 1
Transformation sector	89	96	135	138	180	199	207	196	203
Power generation	- 18	- 16	- 22	- 23	- 22	- 43	- 42	- 42	- 45
Final energy consumption	31	32	50	49	67	61	63	60	64
Industry	31	32	50	49	67	61	63	60	64
Transport									
Residential									
Commerce & public services									
Others									
Crude oil & NGL									
Primary energy supply	904	1 273	1 595	2 279	1 924	1 845	1 900	1 861	1 954
Indigenous production	7	2	1	2	3	3	3	3	3
Import	930	1 264	1 625	2 293	1 928	1 851	1 891	1 875	1 938
Export								- 17	- 18
Transformation sector	- 904	- 1 273	- 1 595	- 2 288	- 1 930	- 1 847	- 1 903	- 1 869	- 1 961
Petroleum refineries	- 904	- 1 273	- 1 595	- 2 288	- 1 930	- 1 847	- 1 903	- 1 869	- 1 961
Petroleum products									
Primary energy supply	166	104	- 4	- 471	- 62	- 48	- 79	- 63	- 180
Import	281	372	354	372	767	798	808	798	757
Export	- 22	- 72	- 99	- 647	- 678	- 711	- 727	- 707	- 755
Transformation sector	775	1 048	1 371	2 134	1 921	1 845	1 860	1 819	1 959
Power generation	- 208	- 290	- 280	- 162	- 112	- 117	- 117	- 123	- 87
Petroleum refineries	983	1 337	1 651	2 296	2 033	1 963	1 977	1 942	2 046
Final energy consumption	619	775	874	891	775	692	695	684	670
Industry	210	251	275	234	177	86	78	74	76
Transport	276	406	468	520	490	502	516	511	496
Residential	47	52	61	55	50	47	48	46	45
Commerce & public services	46	29	38	48	43	40	37	38	32
Others	39	37	32	35	15	17	17	16	20
Gas									
Primary energy supply	59	146	235	372	555	724	757	832	840
Indigenous production	44	32	25	18	10	13	11	9	7
Import	32	125	219	353	547	714	744	828	845
Export									
Transformation sector	- 11	- 52	- 142	- 283	- 438	- 578	- 610	- 670	- 666
Power generation	- 11	- 52	- 142	- 284	- 439	- 580	- 611	- 671	- 668
Final energy consumption	31	50	65	79	92	132	140	150	163
Industry	8	21	31	34	43	88	94	105	116
Transport									
Residential	19	23	26	32	31	27	27	27	29
Commerce & public services	4	6	8	13	18	17	18	18	17
Others									
Electricity									
Power generation	325	479	665	819	889	929	951	973	992
Thermal	176	318	488	634	697	749	779	836	835
Hydro	29	32	32	28	26	27	35	32	28
Nuclear	118	127	139	144	150	131	114	81	100
Others	1	2	6	12	16	22	22	25	29
Final energy consumption	276	406	576	716	786	832	851	870	891
Industry	159	217	316	394	451	485	493	508	536
Transport	1	1	2	2	4	5	5	5	5
Residential	59	91	124	152	156	162	170	171	169
Commerce & public services	51	90	126	159	165	170	173	174	170
Others	6	7	8	9	9	11	11	11	11

Major economic indicators of Chinese Taipei

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ¹¹	20.28	22.18	22.73	23.14	23.46	23.52	23.56	23.58
Gross domestic product ¹³								
Real term, billion USD (constant 2010)	147	282	344	425	491	502	518	532
GDP, billion USD (PPP, constant 2017)	235	456	651	935	1 123	1 149	1 224	1 300
Nominal, billion USD (current)	169	320	360	425	562	550	556	603
GDP per capita ¹³								
Real term (constant 2010 USD)	7 271	12 703	15 148	18 385	20 925	21 330	21 999	22 580
GDP, PPP (constant 2017 USD)	11 593	20 566	28 642	40 385	47 874	48 868	51 948	55 138
Nominal (current USD)	8 357	14 429	15 845	18 385	23 936	23 404	23 623	25 556
Nominal GDP & its components (billions of current TWD) ¹²								
Gross domestic product	4 474	10 329	12 037	14 060	17 055	17 555	17 983	18 343
Private Final Consumption	2 341	5 706	6 780	7 481	8 788	9 082	9 326	9 609
Government Final Consumption	806	1 625	1 857	2 122	2 364	2 482	2 487	2 623
Gross Fixed Capital Formation	1 109	2 719	2 923	3 330	3 664	3 808	3 796	3 991
Changes in Inventories	31	93	34	197	42	- 10	- 25	85
Exports	2 021	5 444	7 841	11 198	12 157	11 808	12 096	12 219
Imports	1 834	5 258	7 399	10 268	9 959	9 615	9 696	10 184
Real GDP & its components (billions of 2011 TWD) ¹²								
Gross Domestic Product	5 161	9 863	12 050	14 890	17 183	17 555	18 137	18 634
Private Final Consumption	3 156	6 179	7 255	7 703	8 849	9 082	9 327	9 518
Government Final Consumption	1 290	1 958	2 073	2 238	2 394	2 482	2 472	2 572
Gross Fixed Capital Formation	1 532	3 355	3 352	3 325	3 681	3 808	3 798	3 910
Changes in Inventories	- 23	64	35	214	52	- 10	- 29	112
Exports	1 925	4 676	6 836	10 255	11 919	11 808	12 340	12 424
Imports	2 370	5 703	7 066	8 767	9 711	9 615	9 771	9 905
Sectoral shares of Real GDP (%) ¹²								
Agriculture	7.3	3.7	2.8	2.5	2.1	1.9	2.0	2.0
Industry	28.8	26.0	28.7	33.3	36.3	36.9	37.4	37.5
Services	65.1	71.4	68.4	63.9	61.8	61.3	61.0	61.1
Industrial production index (2011=100) ¹¹	N.A.	N.A.	N.A.	87.7	98.1	100.0	105.0	108.8
External trade (billions of current USD) ¹¹								
Exports, f.o.b.	67.4	151.9	199.8	277.4	284.4	279.2	315.5	334.0
Imports, c.i.f.	54.8	140.7	185.4	255.7	236.4	229.2	257.2	284.8
Balance of payments (billions of current USD) ¹³								
Balance on Goods and Services	7.1	6.4	10.2	25.8	62.4	62.4	60.5	72.5
Current account	10.9	8.2	14.9	36.7	72.8	72.8	71.3	83.1
Overall balance	-3.9	2.5	20.1	40.2	15.0	15.0	10.7	12.5
Foreign exchange rate (TWD/USD) ¹¹	26.400	32.266	33.422	33.049	30.368	31.898	32.318	30.439
PPP conversion factor, GDP (TWD/USD) ¹⁴	16.56	19.93	17.68	15.05	13.27	13.92	13.69	12.47
Price Indices								
GDP Deflator (2011=100) ¹²	86.7	104.7	99.9	94.4	99.3	100.0	99.2	98.4
Wholesale Price Index (2016=100) ¹²	87.2	91.2	99.3	113.0	103.1	100.0	100.9	104.6
Consumer Price Index (2011=100) ¹²	66.3	85.5	88.4	93.8	98.6	100.0	100.6	102.0
Growth rate (%) ¹²								
Real GDP	5.5	6.3	5.4	10.2	1.5	3.7	5.5	6.1
Population	1.1	0.8	0.4	0.3	0.3	0.5	0.4	0.3
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wholesale prices	-0.6	1.8	0.6	5.5	-8.9	-11.6	-2.1	4.6
Consumer prices	4.1	1.3	2.3	1.0	-0.3	1.1	2.0	2.0

Source ¹¹: "Taiwan Statistical Data Book", National Development Council (Chinese Taipei)

¹²: National Statistics of the Directorate-General of Budget, Accounting and Statistics (DGBAS)

¹³: "Financial Statistics Monthly" Central Bank, Chinese Taipei

¹⁴: PPP in 2010 is estimated by IEA data; 2012-2017 from IMF

Note : N.A. means "not available"

: #N/A shows N.A. (not available)

: TWD shows New Taiwan Dollar, USD shows United States Dollar

Energy prices in Chinese Taipei in 2018

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	30.63
Local Currency Unit		TWD

IMPORT PRICES

WHOLESALE PRICES

CONSUMER PRICES

	Unit	Amount		Unit	Amount		Unit	Amount
Coal and Coal Products			Coal and Coal Products			Coal and Coal Products		
Coking Coal	USD/tonne	217.02	Coking Coal			Coking Coal		
Anthracite	USD/tonne	175.89	Anthracite			Anthracite		
Other bituminous coal	USD/tonne	111.68	Other bituminous coal			Other bituminous coal		
Sub-bituminous Coal	USD/tonne	77.77	Sub-bituminous Coal			Sub-bituminous Coal		
Lignite			Lignite			Lignite		
Peat			Peat			Peat		
Patent Fuel			Patent Fuel			Patent Fuel		
Coke	USD/tonne	346.58	Coke			Coke		
Coal Tar			Coal Tar			Coal Tar		
BKB/PB			BKB/PB			BKB/PB		
			Gas Works Gas			Gas Works Gas		
Oil and Oil Products		70.47	Oil and Oil Products			Oil and Oil Products		
Crude Oil	USD/bbl		Crude Oil			Crude Oil		
Natural Gas Liquids			Natural Gas Liquids			Natural Gas Liquids		
Ethane		550.87	Ethane			Ethane		
LPG	USD/tonne	640.68	LPG	TWD/kg	22.36	LPG	TWD/kg	22.36
Naphtha	USD/tonne		Naphtha			Naphtha		
Motor Gasoline			Motor Gasoline	TWD/L	22.93	Motor Gasoline	TWD/L	26.17
Aviation Gasoline			Aviation Gasoline			Aviation Gasoline		
Gasoline Type Jet Fuel			Gasoline Type Jet Fuel			Gasoline Type Jet Fuel		
Kerosene Type Jet Fuel			Kerosene Type Jet Fuel			Kerosene Type Jet Fuel		
Other Kerosene			Other Kerosene	TWD/L	35.30	Other Kerosene	TWD/L	35.30
Gas/Diesel Oil		527.09	Gas/Diesel Oil	TWD/L	20.51	Gas/Diesel Oil	TWD/L	22.20
Fuel Oil	USD/kL		Fuel Oil	TWD/kL	17,367.00	Fuel Oil	TWD/kL	17,367.00
White Spirit SBP			White Spirit SBP			White Spirit SBP		
Lubricants			Lubricants			Lubricants		
Bitumen	USD/tonne		Bitumen			Bitumen		
Paraffin Waxes			Paraffin Waxes			Paraffin Waxes		
Petroleum Coke			Petroleum Coke			Petroleum Coke		
Natural Gas			Natural Gas			Natural Gas		
Natural Gas		475.18	Natural Gas	TWD/m ³	12.68	Natural Gas	TWD/m ³	13.86
Liquefied Natural Gas	USD/tonne	387.66	Liquefied Natural Gas	TWD/m ³	13.82	Liquefied Natural Gas		
Compressed Natural Gas			Compressed Natural Gas			Compressed Natural Gas		
Electricity			Electricity			Electricity		
Electricity			Electricity	TWD/ kWh	2.60	Industrial	TWD/ kWh	2.54
						Commercial	TWD/ kWh	3.46
						Residential	TWD/ kWh	2.47
						Others		
Other Energy Products			Other Energy Products			Other Energy Products		

THAILAND

Energy balance table of Thailand

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production	155		793						
Import	215	441	2 066	109	49		2		21
Export	- 2		- 66	- 461	- 54		- 35		- 202
International marine bunkers									
International aviation bunkers				- 245			- 245		
Stock changes			172	- 129	- 52		31	- 74	- 23
Total primary energy supply	368	441	2 965	- 727	- 56		- 247	- 74	- 204
Transfers			- 278	278					
Total transformation sector	- 289	- 27	- 2 407	2 238	415		281	74	1 063
Main activity producers	- 289	- 27		- 2					- 1
Autoproducers									
Gas processing									
Petroleum refineries			- 2 407	2 219	415		281	74	1 064
Coal transformation									
Other transformation				21					
Losses & own use				- 96					
Discrepancy	- 38	- 168		- 15					- 19
Total final consumption	41	246	281	1 679	358		34		840
Total final energy consumption	41	246		1 517	358		34		840
Industry sector	41	246		200	1				137
Iron and steel	3			14					7
Chemical & petrochemical	2	6		25					12
Non-metallic minerals	19	183		11					7
Other industries	149	113		150	1				111
Transport sector				1 090	357		34		582
Domestic air transport				34			34		
Road				985	357				571
Rail				3					3
Inland waterways				67					8
Other transport									
Other sector				227					120
Residential				81					
Commerce and public services				25					
Agriculture				120					120
Non-specified others									
Non-energy			281	162					
2017									
Indigenous production	170		819						
Import	266	322	1 955	124	56		2		30
Export	- 1		- 73	- 433	- 51		- 26		- 191
International marine bunkers									
International aviation bunkers				- 169			- 169		
Stock changes	- 106	- 106	260	- 185	- 55		- 31	- 67	- 22
Total primary energy supply	329	215	2 960	- 663	- 50		- 225	- 68	- 183
Transfers			- 274	274					
Total transformation sector	- 297	- 25	- 2 324	2 102	353		257	68	1 029
Main activity producers	- 297	- 25		- 3					- 2
Autoproducers									
Gas processing									
Petroleum refineries			- 2 324	2 085	353		257	68	1 031
Coal transformation									
Other transformation				19					
Losses & own use				- 90					
Discrepancy			- 79	- 11					- 5
Total final consumption	31	191	283	1 613	303		32		841
Total final energy consumption	31	191		1 460	303		32		841
Industry sector	31	191		214	2				148
Iron and steel	3			14					7
Chemical & petrochemical	3	7		26					13
Non-metallic minerals	16	141		17					11
Other industries	104	84		157	2				116
Transport sector				1 029	300		32		582
Domestic air transport				32			32		
Road				936	300				571
Rail				3					3
Inland waterways				57					8
Other transport									
Other sector				217					111
Residential				74					
Commerce and public services				32					
Agriculture				111					111
Non-specified others									
Non-energy			283	153					

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				1 082	28			1 102			3 160	1 122
	34		2	804				4	96		3 735	4
- 137	- 19		- 15					- 1	- 4		- 534	- 1
											- 245	
- 11	4		- 4	2				1			47	1
- 148	18		- 17	1 888	28			1 106	92		6 162	1 126
	192		87									
235	117		53	- 1 083	- 28			- 447	675		- 1 369	- 473
- 1				- 1 083	- 28			- 344	675		- 1 098	- 369
								- 25			- 25	- 25
236	96		53								- 188	
	21							- 79			- 58	- 79
	- 96			- 318					- 61		- 475	
- 2			6	- 150				- 24			- 395	- 24
86	231		129	337				635	706		3 924	630
86	198			244				635	706		3 388	630
27	34			162				334	289		1 272	329
1	5			17					28		62	
1	11			59				11	44		147	11
2	2			36				12	23		284	7
22	15			50				311	194		967	311
59	58			82				81	1		1 253	81
											34	
	58			82				81			1 148	81
									1		4	
59											67	
	107							220	415		863	220
	81							220	163		465	220
	25								251		276	
									1		122	
	33		129	93							536	
				1 105	17			1 102			3 213	1 115
2	32		3	968				3	88		3 724	3
- 140	- 12		- 12					- 1	- 4		- 512	- 1
											- 169	
- 13	6		- 2	- 1				2			- 135	2
- 151	25		- 11	2 072	17			1 106	84		6 121	1 119
	189		85									
233	109		53	- 1 493	- 17			- 474	668		- 1 861	- 489
- 1				- 1 493	- 17			- 309	668		- 1 476	- 325
								- 22			- 22	- 22
234	90		53								- 239	
	19							- 143			- 123	- 143
	- 90			- 272					- 59		- 420	
- 1			- 5	- 62				- 18			- 170	- 18
81	234		122	246				614	693		3 671	612
81	203			244				614	693		3 233	612
32	32			153				309	291		1 189	306
2	5			17					28		62	
2	11			51				12	44		142	12
1	4			35				13	24		246	10
27	13			50				284	195		874	284
49	65			90				81	1		1 201	81
											32	
	65			90				81			1 107	81
									1		4	
49											57	
	106							225	402		844	225
	74							225	161		459	225
	32								240		272	
									1		112	
	31		122	2							438	

Major energy indicators of Thailand

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	1 757	2 838	2 983	4 221	5 019	5 550	6 031	6 121	6 162
Indigenous production	1 083	1 612	1 655	2 351	2 970	3 449	3 601	3 213	3 160
Import	787	1 352	1 664	2 435	2 750	3 171	3 150	3 724	3 735
Export	- 37	- 53	- 228	- 394	- 512	- 507	- 461	- 512	- 534
Final energy consumption	1 208	1 889	1 917	2 671	2 919	3 184	3 215	3 233	3 388
Industry	365	612	720	1 026	1 154	1 179	1 235	1 189	1 272
Transport	403	689	674	949	915	1 096	1 123	1 201	1 253
Residential	315	449	342	377	463	490	468	459	465
Commerce & public services	49	73	91	160	235	251	262	272	276
Others	76	66	91	159	152	168	127	112	122
Coal & Peat									
Primary energy supply	156	235	325	398	357	288	389	329	368
Indigenous production	151	233	218	219	210	162	178	170	155
Import	5		109	179	187	291	275	266	215
Export						- 1	- 1	- 1	- 2
Transformation sector	- 103	- 144	- 176	- 198	- 286	- 265	- 317	- 297	- 289
Power generation	- 103	- 144	- 176	- 198	- 286	- 265	- 317	- 297	- 289
Final energy consumption	53	91	151	237	70	28	74	31	41
Industry	53	91	151	237	70	28	74	31	41
Transport									
Residential									
Commerce & public services									
Others									
Coal & peat products									
Primary energy supply	3	3	2	49	278	205	170	215	441
Indigenous production									
Import	3	3	2	49	263	292	299	322	441
Export									
Transformation sector						- 48	- 24	- 25	- 27
Power generation						- 48	- 24	- 25	- 27
Final energy consumption	3	3	2	49	278	157	146	191	246
Industry	3	3	2	49	278	157	146	191	246
Transport									
Residential									
Commerce & public services									
Others									
Crude oil & NGL									
Primary energy supply	509	1 048	1 542	2 198	2 488	2 652	2 889	2 960	2 965
Indigenous production	92	113	122	538	766	778	840	819	793
Import	456	959	1 417	1 746	1 790	1 880	1 853	1 955	2 066
Export	- 35	- 33	- 23	- 146	- 67	- 6	- 69	- 73	- 66
Transformation sector	- 492	- 1 047	- 1 590	- 1 947	- 2 028	- 2 379	- 2 324	- 2 324	- 2 407
Petroleum refineries	- 492	- 1 047	- 1 590	- 1 947	- 2 028	- 2 379	- 2 324	- 2 324	- 2 407
Petroleum products									
Primary energy supply	246	283	- 289	- 379	- 594	- 704	- 609	- 663	- 727
Import	320	387	48	97	7	101	112	124	109
Export	- 1	- 19	- 204	- 246	- 439	- 491	- 385	- 433	- 461
Transformation sector	369	696	1 237	1 562	1 637	2 078	2 016	2 102	2 238
Power generation	- 102	- 227	- 94	- 97	- 11	- 8	- 5	- 3	- 2
Petroleum refineries	471	923	1 330	1 669	1 649	2 086	2 000	2 085	2 219
Final energy consumption	628	1 010	1 010	1 403	1 271	1 431	1 452	1 460	1 517
Industry	115	195	190	222	185	250	276	214	200
Transport	403	689	674	946	818	912	946	1 029	1 090
Residential	15	41	30	55	70	77	79	74	81
Commerce & public services	20	20	25	24	50	26	25	32	25
Others	76	66	91	156	148	166	126	111	120
Gas									
Primary energy supply	201	390	771	1 210	1 520	1 992	1 951	2 072	1 888
Indigenous production	201	390	695	864	1 047	1 440	1 412	1 105	1 082
Import			76	346	473	552	537	968	804
Export									
Transformation sector	- 179	- 299	- 561	- 888	- 1 046	- 1 069	- 1 133	- 1 493	- 1 083
Power generation	- 179	- 299	- 561	- 888	- 1 046	- 1 070	- 1 133	- 1 493	- 1 083
Final energy consumption	11	32	55	87	159	254	255	244	244
Industry	11	32	55	85	92	141	152	153	162
Transport				2	67	113	103	90	82
Residential									
Commerce & public services									
Others									
Electricity									
Power generation	159	288	346	476	574	664	676	668	675
Thermal	141	264	324	406	500	612	584	563	549
Hydro	18	24	22	21	20	14	13	17	28
Nuclear									
Others	0			49	55	38	78	87	98
Final energy consumption	138	256	317	435	536	653	681	693	706
Industry	65	118	145	203	228	277	284	291	289
Transport								1	1
Residential	44	85	106	92	120	149	159	161	163
Commerce & public services	29	53	65	136	184	225	237	240	251
Others			1	3	4	1	1	1	1

Major economic indicators of Thailand

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ¹	56.56	62.95	65.42	67.20	68.71	68.97	69.21	69.43
Gross domestic product ³								
Real term, billion USD (constant 2010)	142	218	284	341	395	408	425	442
GDP, billion USD (PPP, constant 2017)	402	618	806	969	1 120	1 159	1 206	1 256
Nominal, billion USD (current)	85	126	189	341	401	413	456	507
GDP per capita ³								
Real term (constant 2010 USD)	2 504	3 458	4 338	5 076	5 741	5 916	6 135	6 370
GDP, PPP (constant 2017 USD)	7 109	9 819	12 317	14 413	16 302	16 798	17 421	18 087
Nominal (current USD)	1 509	2 008	2 894	5 076	5 840	5 994	6 593	7 295
Nominal GDP & its components (billions of current THB) ¹								
Gross domestic product	2 184	5 070	7 614	10 808	13 743	14 593	15 487	16 366
Households and NPISHs final consumption expenditure	1 235	2 744	4 252	5 639	7 057	7 297	7 580	8 003
General government final consumption expenditure	205	688	1 040	1 708	2 353	2 461	2 521	2 643
Gross fixed capital formation	882	1 094	2 110	2 593	3 371	3 460	3 580	3 727
Stock change	21	36	206	147	-299	-381	-29	395
Exports of goods and services	745	3 287	5 208	7 186	9 296	9 786	10 327	10 616
Imports of goods and services	909	2 862	5 288	6 567	7 862	7 806	8 398	9 170
Real GDP & its components (billions of 1988 THB) ¹								
Gross Domestic Product	3 418	5 254	6 849	8 232	9 521	9 848	10 248	10 674
Households and NPISHs final consumption expenditure	1 899	2 855	3 859	4 314	4 910	5 051	5 207	5 445
General government final consumption expenditure	414	716	896	1 256	1 494	1 526	1 528	1 568
Gross fixed capital formation	1 547	1 169	1 885	2 004	2 351	2 419	2 461	2 554
Stock change	39	37	188	107	-112	-341	-67	260
Exports of goods and services	1 178	3 305	4 717	6 068	7 175	7 368	7 750	8 010
Imports of goods and services	1 449	2 908	4 867	5 666	6 478	6 414	6 813	7 377
Sectoral shares of Real GDP (%) ¹								
Agriculture, Fishery and Forestry	16.7	9.2	8.1	7.3	6.5	6.2	6.2	6.3
Industry	43.8	36.5	38.3	39.6	36.8	36.6	35.7	35.2
Services, etc.	N.A.	54.3	53.7	53.4	58.2	59.0	59.9	60.5
Industrial Production Index	N.A.	N.A.	N.A.	100.0	105.4	106.8	108.7	112.7
External trade (billions of current USD) ¹								
Exports, f.o.b.	23.1	69.0	110.9	193.3	214.3	215.4	236.6	253.0
Imports, c.i.f.	33.0	61.9	118.2	182.9	202.7	194.2	221.5	248.2
Balance of payments (billions of current USD) ²								
Trade balance	-6.8	11.7	3.4	26.7	26.1	35.8	32.6	22.4
Current account	-7.3	9.3	-7.6	11.5	27.8	43.4	44.0	28.5
Overall balance	1.8	-1.1	0.2	35.3	11.0	22.6	31.3	12.9
Foreign exchange rate (THB/USD) ¹	25.59	40.11	40.22	31.69	34.25	35.30	33.94	32.31
PPP conversion factor, GDP (THB/USD) ¹	8.95	11.03	11.35	12.19	12.64	12.73	12.84	12.73
Price Indices								
GDP Deflator (2002=100) ³	63.9	96.5	111.2	131.3	144.3	148.2	151.1	153.3
Producer Price Index (2010=100) ²	42.5	60.6	76.5	100.0	102.6	101.4	102.1	102.5
Consumer Price Index (2010=100) ²	49.8	77.4	86.6	100.0	110.3	110.6	111.3	112.5
Growth rate (%) ³								
Real GDP	11.2	4.5	4.2	7.5	3.1	3.4	4.1	4.2
Population	1.4	1.0	0.6	0.5	0.4	0.4	0.3	0.3
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices	3.5	3.9	9.1	9.4	-4.1	-1.2	0.7	0.4
Consumer prices	5.9	1.6	4.5	3.2	-0.9	0.2	0.7	1.1

Source ¹: *World Development Indicators*, World Bank

²: *International Financial Statistics*, International Monetary Fund

³: Calculated from ¹ and ² by ESTO

Note : N.A. means "not available"

: THB means Baht, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

Energy prices in the Republic of Thailand in 2018

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	32.48
Local Currency Unit		Baht

IMPORT PRICES

WHOLESALE PRICES

CONSUMER PRICES

	Unit	Amount		Unit	Amount		Unit	Amount
Coal and Coal Products			Coal and Coal Products			Coal and Coal Products		
Coking Coal			Coking Coal			Coking Coal		
Anthracite	Bath/tonne	4,506.00	Anthracite			Anthracite		
Other bituminous coal	Bath/tonne	2,685.00	Other bituminous coal			Other bituminous coal		
Sub-bituminous Coal	Bath/tonne	2,685.00	Sub-bituminous Coal			Sub-bituminous Coal		
Lignite	Bath/tonne	907.00	Lignite			Lignite		
Peat			Peat			Peat		
Patent Fuel			Patent Fuel			Patent Fuel		
Coke	Bath/tonne	17,183.00	Coke			Coke		
Coal Tar			Coal Tar			Coal Tar		
BKB/PB	Bath/tonne	1,707.00	BKB/PB			BKB/PB		
			Gas Works Gas			Gas Works Gas		
Oil and Oil Products			Oil and Oil Products			Oil and Oil Products		
Crude Oil			Crude Oil			Crude Oil		
Natural Gas Liquids			Natural Gas Liquids			Natural Gas Liquids		
Ethane			Ethane			Ethane		
LPG			LPG	Bath/kg	17.77	LPG	Bath/kg	11.49
Naphtha			Naphtha			Naphtha		
Motor Gasoline			Motor Gasoline	Bath/L	26.89	Motor Gasoline	Bath/litre	28.96
Aviation Gasoline			Aviation Gasoline			Aviation Gasoline		
Gasoline Type Jet Fuel			Gasoline Type Jet Fuel			Gasoline Type Jet Fuel		
Kerosene Type Jet Fuel			Kerosene Type Jet Fuel			Kerosene Type Jet Fuel		
Other Kerosene			Other Kerosene	Bath/L	22.65	Other Kerosene		
Gas/Diesel Oil			Gas/Diesel Oil	Bath/L	26.47	Gas/Diesel Oil	Bath/litre	28.35
Fuel Oil			Fuel Oil	Bath/L	15.32	Fuel Oil	Bath/litre	26.15
White Spirit SBP			White Spirit SBP			White Spirit SBP		
Lubricants			Lubricants			Lubricants		
Bitumen			Bitumen			Bitumen		
Paraffin Waxes			Paraffin Waxes			Paraffin Waxes		
Petroleum Coke			Petroleum Coke			Petroleum Coke		
Natural Gas			Natural Gas			Natural Gas		
Natural Gas			Natural Gas			Natural Gas		
Liquefied Natural Gas	USD/tonne	416.01	Liquefied Natural Gas			Liquefied Natural Gas		
Compressed Natural Gas			Compressed Natural Gas			Compressed Natural Gas		
Electricity			Electricity			Electricity		
Electricity			Electricity			Industrial		
						Commercial		
						Residential		
						Others		
Other Energy Products			Other Energy Products			Other Energy Products		

UNITED STATES

Energy balance table of the United States

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production	15 449		28 687						
Import	128	3	18 083	3 194	1 399	34	279	3	424
Export	-2 841	-30	-5 242	-9 196	-1 819		-466	-9	-2 689
International marine bunkers				-910					-297
International aviation bunkers				-1 054			-1 054		
Stock changes	712	5	-43	47	-35	-3	-4	-3	29
Total primary energy supply	13 447	-22	41 485	-7 919	-455	31	-1 245	-8	-2 533
Transfers			-4 246	4 532	144		2		63
Total transformation sector	-12 966	264	-37 426	36 408	16 363	418	3 706	16	10 337
Main activity producers	-12 266	-9		-324			-1	-3	-99
Autoproducers	-52	-14		-74					-2
Gas processing	-82								
Petroleum refineries			-37 637	36 806	16 363	418	3 707	19	10 439
Coal transformation	-566	287							
Other transformation			212						
Losses & own use	-1	-49		-1 341	-49		-2		-143
Discrepancy	33		426	118					101
Total final consumption	512	192	238	31 798	16 003	449	2 461	8	7 825
Total final energy consumption	512	192		26 794	16 003		2 461	8	7 641
Industry sector	495	192		884	13				605
Iron and steel	11	164		6					2
Chemical & petrochemical	74			99					64
Non-metallic minerals	202			60					17
Other industries	473	56		718	13				522
Transport sector				24 206	15 736		2 461		5 973
Domestic air transport				2 481	21		2 461		
Road				20 791	15 537				5 250
Rail				577					577
Inland waterways				357	177				146
Other transport									
Other sector	18			1 704	255			8	1 063
Residential				637				7	425
Commerce and public services	18			465	77			1	301
Agriculture				601	178				336
Non-specified others									
Non-energy			238	5 004		449			184
2017									
Indigenous production	15 624		24 738						
Import	169	2	18 544	3 076	1 313	60	349	8	367
Export	-2 378	-32	-3 302	-8 769	-1 595		-387	-13	-2 867
International marine bunkers				-971					-342
International aviation bunkers				-1 038			-1 038		
Stock changes	462	1	597	212	-4	1	7	1	125
Total primary energy supply	13 877	-30	40 577	-7 490	-286	61	-1 069	-4	-2 718
Transfers			-3 766	3 899	138		1	1	69
Total transformation sector	-13 523	251	-36 756	35 720	16 159	378	3 493	13	10 064
Main activity producers	-12 835	-9		-226				-1	-56
Autoproducers	-59	-12		-68					-2
Gas processing	-81								
Petroleum refineries			-36 968	36 013	16 159	378	3 493	15	10 122
Coal transformation	-548	273							
Other transformation			212						
Losses & own use	-1	-46		-1 325	-44		-2		-135
Discrepancy	184		130	312					213
Total final consumption	537	175	185	31 116	15 966	438	2 423	11	7 493
Total final energy consumption	537	175		26 224	15 966		2 423	11	7 297
Industry sector	517	175		769	12				553
Iron and steel	10	149		9					4
Chemical & petrochemical	78			77					67
Non-metallic minerals	204			70					22
Other industries	502	53		614	12				459
Transport sector				23 793	15 700		2 423		5 635
Domestic air transport				2 443	21		2 423		
Road				20 541	15 502				5 036
Rail				474					474
Inland waterways				335	177				125
Other transport									
Other sector	20			1 661	254			11	1 110
Residential				602				9	426
Commerce and public services	20			474	67			2	335
Agriculture				585	187				349
Non-specified others									
Non-energy			185	4 892		438			195

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				30 103	1 064	9 178	419	6 060			90 959	7 356
527	255		273	2 792				53	210		24 462	53
- 738	-1 656		-1 819	-3 549				-177	-50		-21 085	-177
- 613								-6			-916	-6
											-1 054	
86	-1		-22	319				-9			1 031	-9
- 738	-1 402		-1 567	29 665	1 064	9 178	419	5 921	160		93 398	7 217
- 14	2 485		1 851								285	
838	471	685	3 573	-11 187	-1 064	-9 178	-375	-2 193	15 962	477	-21 278	-3 473
- 111			-110	-10 424	-1 059	-9 178	-375	-1 874	15 266	477	-19 764	-3 176
- 1		-64	-7	-626	-5		-1	-319	696		-396	-297
				55							-28	
949	471	750	3 690								-831	
											-278	
				-192							20	
- 7	-9	-635	-496	-2 562				-5	-2 079	-217	-6 254	-5
			17	19				-2			593	-2
78	1 544	50	3 378	15 935			44	3 720	14 043	260	66 743	3 737
78	487		116	14 921			44	3 720	14 043	260	60 487	3 737
24	127		116	5 587				1 434	2 782	206	11 580	1 416
2	2			395					208	8	792	
3	8		25	2 339				13	438	126	3 089	5
3	2		39	365				18	119		764	18
16	116		52	2 488				1 403	2 017	72	7 227	1 394
34	3			898				1 567	44		26 716	1 567
											2 481	
	3			50				1 542	19		22 401	1 542
								20	25		623	20
34								5			362	5
				849							849	
21	357			8 436			44	719	11 217	55	22 191	754
	205			4 915			44	485	5 262		11 344	529
21	65			3 458				174	4 941	55	9 110	165
	86			63				60	162		886	60
									852		852	
	1 058	50	3 262	1 014							6 256	
				26 866	1 089	9 151	386	5 572			83 425	6 861
473	233		274	2 948				89	236		25 064	89
- 702	-1 489		-1 716	-3 116				-145	-34		-17 776	-145
- 628								-9			-980	-9
											-1 038	
66	18		-1	263				5			1 540	5
- 792	-1 238		-1 443	26 960	1 089	9 151	386	5 512	203		90 235	6 801
- 14	2 155		1 549								133	
890	485	679	3 559	-9 830	-1 089	-9 151	-375	-2 081	15 349	450	-21 034	-3 386
- 63			-105	-9 095	-1 083	-9 151	-375	-1 776	14 680	450	-19 419	-3 105
- 1		-57	-8	-599	-6			-306	669		-380	-281
				52							-29	
954	485	736	3 672								-954	
											-275	
				-188							23	
- 8	-10	-633	-493	-2 424				-6	-2 030	-205	-6 037	-6
			99	-207				7			426	7
76	1 393	46	3 272	14 499			11	3 432	13 522	245	63 723	3 416
76	352		99	13 493			11	3 432	13 522	245	57 639	3 416
23	83		99	5 219				1 269	2 802	194	10 945	1 251
2	3			353					196	7	724	
3	7			2 203				13	522	119	3 012	5
3	3		41	257				13	79		623	13
14	70		58	2 405				1 243	2 006	68	6 890	1 233
32	3			758				1 592	40		26 183	1 592
											2 443	
	3			48				1 568	14		22 171	1 568
								20	26		519	20
32								5			340	5
				710							710	
21	266			7 517			11	571	10 680	51	20 510	573
	167			4 341			11	355	4 945		10 254	366
21	49			3 113				165	4 862	51	8 685	156
	50			63				51	170		869	51
									703		703	
	1 040	46	3 173	1 007							6 085	

Major energy indicators of the United States

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	80 178	86 554	95 199	97 089	92 817	91 543	90 563	90 235	93 398
Indigenous production	69 191	69 472	69 810	68 292	72 200	84 639	80 163	83 425	90 959
Import	18 946	22 448	29 394	35 252	30 372	23 482	24 959	25 064	24 462
Export	-4 631	-4 303	-4 006	-4 433	-8 027	-12 748	-13 836	-17 776	-21 085
Final energy consumption	49 174	51 791	58 333	58 891	57 679	57 620	57 797	57 639	60 487
Industry	11 880	11 423	13 912	11 573	11 322	11 027	11 147	10 945	11 580
Transport	20 414	22 088	24 629	26 079	24 943	25 698	25 993	26 183	26 716
Residential	8 788	10 371	11 056	11 374	11 309	10 714	10 352	10 254	11 344
Commerce & public services	6 668	7 256	8 083	8 390	8 681	8 713	8 750	8 685	9 110
Others	1 424	654	654	1 474	1 423	1 468	1 555	1 571	1 737
Coal & Peat									
Primary energy supply	19 259	19 824	22 291	23 337	21 048	15 695	14 299	13 877	13 447
Indigenous production	22 706	22 181	22 477	23 667	22 267	18 057	14 589	15 624	15 449
Import	69	179	320	728	447	250	212	169	128
Export	-2 831	-2 368	-1 574	-1 188	-1 981	-1 818	-1 490	-2 378	-2 841
Transformation sector	-17 728	-19 605	-21 838	-21 786	-20 019	-14 914	-13 800	-13 523	-12 966
Power generation	-16 580	-18 562	-20 909	-17 818	-19 331	-14 233	-13 204	-12 894	-12 318
Final energy consumption	1 796	956	1 075	1 047	905	671	562	537	512
Industry	1 392	838	982	941	842	643	540	517	495
Transport									
Residential	62	71	56						
Commerce & public services	101	46	37	88	63	28	23	20	18
Others	240			18					
Coal & peat products									
Primary energy supply	5	18	64	40	-5	-35	2	-30	-22
Indigenous production									
Import	20	48	99	92	32	4	6	2	3
Export	-15	-20	-30	-46	-38	-22	-26	-32	-30
Transformation sector	578	324	283	487	282	235	215	251	264
Power generation		-99	-91	-3 244	-44	-35	-25	-22	-24
Final energy consumption	534	316	289	265	220	146	171	175	192
Industry	534	316	289	265	220	146	171	175	192
Transport									
Residential									
Commerce & public services									
Others									
Crude oil & NGL									
Primary energy supply	32 805	34 318	37 139	38 167	36 696	39 085	39 447	40 577	41 485
Indigenous production	18 110	16 657	15 307	13 504	14 553	24 384	23 452	24 738	28 687
Import	14 697	17 546	21 950	25 100	22 599	17 097	18 304	18 544	18 083
Export	-88	-95	-258	-206	-389	-1 896	-2 128	-3 302	-5 242
Transformation sector	-31 622	-32 535	-35 029	-35 689	-34 315	-35 612	-36 032	-36 756	-37 426
Petroleum refineries	-31 622	-32 535	-35 029	-35 689	-34 315	-35 814	-36 240	-36 968	-37 637
Petroleum products									
Primary energy supply	-1 118	-1 428	-666	735	-2 929	-6 029	-6 609	-7 490	-7 919
Import	2 606	1 751	3 175	4 937	3 490	3 129	3 129	3 076	3 194
Export	-1 540	-1 639	-1 858	-2 224	-4 422	-7 184	-7 843	-8 769	-9 196
Transformation sector	30 405	31 976	32 913	34 669	34 746	34 773	35 227	35 720	36 408
Power generation	-1 141	-634	-2 416	-1 396	-454	-372	-316	-294	-398
Petroleum refineries	31 561	32 610	35 329	36 065	35 200	35 145	35 542	36 013	36 806
Final energy consumption	24 205	24 930	27 542	29 179	26 694	26 080	26 236	26 224	26 794
Industry	1 853	1 121	1 074	1 472	1 265	811	846	769	884
Transport	19 753	21 277	23 844	25 126	23 258	23 505	23 648	23 793	24 206
Residential	1 104	1 214	1 336	1 205	878	655	592	602	637
Commerce & public services	892	682	697	699	640	488	557	474	465
Others	603	637	590	677	654	621	592	585	601
Gas									
Primary energy supply	18 353	21 246	22 933	21 236	23 282	27 068	27 335	26 960	29 665
Indigenous production	17 510	18 195	18 713	17 650	20 716	26 656	26 264	26 866	30 103
Import	1 472	2 754	3 675	4 223	3 639	2 633	2 912	2 948	2 792
Export	-83	-148	-233	-699	-1 095	-1 704	-2 205	-3 116	-3 549
Transformation sector	-3 711	-5 334	-5 687	-6 428	-7 699	-10 257	-10 508	-9 830	-11 187
Power generation	-3 758	-5 385	-5 732	-6 475	-7 749	-10 124	-10 372	-9 694	-11 049
Final energy consumption	12 108	13 075	14 342	12 480	12 972	13 469	13 385	13 493	14 921
Industry	4 602	4 695	5 774	4 210	4 601	5 097	5 258	5 219	5 587
Transport	645	686	636	593	683	695	728	758	898
Residential	4 295	4 735	4 868	4 716	4 646	4 539	4 279	4 341	4 915
Commerce & public services	2 565	2 959	3 065	2 884	2 981	3 078	3 058	3 113	3 458
Others				77	62	61	62	63	63
Electricity									
Power generation	11 530	12 810	14 493	15 368	15 676	15 469	15 479	15 349	15 962
Thermal	7 963	8 815	10 376	11 081	11 017	10 377	10 105	9 690	10 203
Hydro	983	1 131	912	981	944	904	971	1 089	1 064
Nuclear	2 202	2 570	2 872	2 919	3 020	2 989	3 024	3 020	3 029
Others	382	295	334	388	695	1 200	1 379	1 551	1 666
Final energy consumption	9 481	10 951	12 598	13 434	13 638	13 611	13 730	13 522	14 043
Industry	3 120	3 749	4 112	3 233	2 975	2 902	2 869	2 802	2 782
Transport	15	14	16	22	23	32	38	40	44
Residential	3 326	3 753	4 293	4 893	5 205	5 046	5 075	4 945	5 262
Commerce & public services	3 020	3 435	4 177	4 590	4 789	4 894	4 897	4 862	4 941
Others			1	694	646	737	851	872	1 014

Major economic indicators of the United States

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ¹¹	249.62	282.16	295.52	309.32	320.64	322.94	324.99	326.69
Gross domestic product ¹³								
Real term, billion USD (constant 2010)	9 001	12 620	14 332	14 992	16 727	17 001	17 404	17 913
GDP, billion USD (PPP, constant 2017)	10 110	14 175	16 098	16 839	18 769	19 063	19 485	20 056
Nominal, billion USD (current)	5 963	10 252	13 037	14 992	18 225	18 715	19 519	20 580
GDP per capita ¹³								
Real term (constant 2010 USD)	36 059	44 727	48 500	48 468	52 168	52 644	53 552	54 833
GDP, PPP (constant 2017 USD)	40 501	50 236	54 473	54 437	58 536	59 029	59 958	61 391
Nominal (current USD)	23 889	36 335	44 115	48 468	56 839	57 952	60 062	62 996
Nominal GDP & its components (billions of current USD) ¹¹								
Gross domestic product	5 963	10 252	13 037	14 992	18 219	18 707	19 485	20 529
Households and NPISHs final consumption expenditure	3 809	6 762	8 747	10 186	12 284	12 748	13 312	13 999
General government final consumption expenditure	948	1 438	1 963	2 510	2 616	2 671	2 757	2 904
Gross fixed capital formation	1 269	2 373	2 990	2 756	3 712	3 787	3 995	4 261
Stock change	15	55	58	54	132	27	30	55
Exports of goods and services	552	1 096	1 305	1 846	2 267	2 221	2 357	2 510
Imports of goods and services	630	1 471	2 026	2 360	2 787	2 739	2 932	3 148
Real GDP & its components (billions of 2010 USD) ¹¹								
Gross Domestic Product	9 814	13 760	15 627	16 346	18 219	18 505	18 915	19 469
Households and NPISHs final consumption expenditure	6 195	8 907	10 383	10 967	12 284	12 620	12 950	13 339
General government final consumption expenditure	2 002	2 245	2 517	2 762	2 616	2 663	2 679	2 723
Gross fixed capital formation	1 729	2 995	3 426	3 001	3 844	3 814	3 961	4 141
Stock change	21	78	63	57	132	23	32	48
Exports of goods and services	661	1 316	1 462	1 887	2 267	2 266	2 345	2 416
Imports of goods and services	715	1 736	2 178	2 288	2 787	2 842	2 976	3 106
Sectoral shares of Real GDP (%) ¹¹								
Agriculture, Fishery and Forestry	N.A.	1.2	1.2	1.0	1.0	1.1	1.0	1.0
Industry	N.A.	22.0	20.6	19.0	18.5	18.3	18.2	18.2
Services, etc.	N.A.	75.3	76.2	77.4	76.8	77.0	76.9	76.9
Industrial production index (2010=100) ¹²	68.2	101.2	105.8	100.0	110.6	108.4	110.9	115.3
External trade (billions of current USD) ¹¹								
Exports, f.o.b.	393.6	781.9	901.1	1278.5	1502.6	1451.0	1546.3	1664.0
Imports, c.i.f.	517.0	1259.3	1732.7	1969.2	2315.3	2250.2	2408.5	2614.2
Balance of payments (billions of current USD) ¹²								
Trade balance	-111.0	-446.8	-782.8	-648.7	-761.9	-749.8	-799.3	-880.3
Current account	-79.0	-401.9	-749.2	-432.0	-407.4	-394.9	-365.3	-449.7
Overall balance	68.8	275.0	302.7	306.6	-221.9	1.0	388.5	193.7
Foreign exchange rate (USD/USD) ¹¹	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PPP conversion factor, GDP (USD/USD) ¹¹	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Price Indices								
GDP Deflator (2010=100) ¹³	60.8	74.5	83.4	91.7	100.0	101.1	103.0	105.4
Producer Prices Index (2010=100) ¹²	62.9	71.8	85.2	100.0	108.0	108.4	111.0	114.2
Consumer Price Index (2010=100) ¹¹	59.9	79.0	89.6	100.0	108.7	110.1	112.4	115.2
Growth rate (%) ¹³								
Real GDP	1.9	4.1	3.5	2.6	2.9	1.6	2.2	2.9
Population	1.1	1.1	0.9	0.8	0.7	0.7	0.6	0.5
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices	3.6	5.8	7.3	6.8	-0.9	0.4	2.3	2.9
Consumer prices	5.4	3.4	3.4	1.6	0.1	1.3	2.1	2.4

Source ¹¹: *World Development Indicators*, World Bank

¹²: *International Financial Statistics*, International Monetary Fund

¹³: Calculated from ¹¹ and ¹² by ESTO

Note

: N.A. means "not available"

: USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

VIET NAM

Energy balance table of Viet Nam

	Coal and Peat	Coal and Peat products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2018									
Indigenous production	970		517						
Import	533		232	553	90		88	2	270
Export	-56		-166	-130	-9		-64		-24
International marine bunkers									
International aviation bunkers									
Stock changes	153		-94	-15	-6		-9		
Total primary energy supply	1 600		489	408	74		15	2	246
Transfers			-17	17					
Total transformation sector	-1 060		-472	454	218		19		182
Main activity producers	-1 060			-6					-1
Autoproducers									
Gas processing									
Petroleum refineries			-472	460	218		19		183
Coal transformation									
Other transformation									
Losses & own use									
Discrepancy				-9					
Total final consumption	541			870	293		34	2	428
Total final energy consumption	517			837	293		34	1	428
Industry sector	494			92					78
Iron and steel	37			7					4
Chemical & petrochemical	27			4					3
Non-metallic minerals	288			12					8
Other industries	284			69					62
Transport sector				552	265		34		244
Domestic air transport				34			34		
Road				460	265				196
Rail				2					2
Inland waterways				55					46
Other transport									
Other sector	23			192	28			1	106
Residential	23			50				1	
Commerce and public services				25					19
Agriculture				117	28				87
Non-specified others									
Non-energy	24			33					
2017									
Indigenous production	873		592						
Import	344		50	652	140		76	2	313
Export	-52		-291	-106	-11		-53		-23
International marine bunkers									
International aviation bunkers									
Stock changes	-2		-78	-7	-2		-6		
Total primary energy supply	1 162		274	538	127		18	2	290
Transfers			-14	14					
Total transformation sector	-791		-261	309	157		15		106
Main activity producers	-791			-1					
Autoproducers									
Gas processing									
Petroleum refineries			-261	310	157		15		106
Coal transformation									
Other transformation									
Losses & own use									
Discrepancy				-10					
Total final consumption	372			851	283		33	2	396
Total final energy consumption	350			821	283		33	2	396
Industry sector	317			90					77
Iron and steel	27			7					4
Chemical & petrochemical	14			4					3
Non-metallic minerals	198			11					8
Other industries	158			68					62
Transport sector				533	256		33		235
Domestic air transport				33			33		
Road				445	256				189
Rail				2					2
Inland waterways				53					44
Other transport									
Other sector	33			199	27			2	84
Residential	33			75				2	
Commerce and public services				26					19
Agriculture				98	27				65
Non-specified others									
Non-energy	21			30					

unit: Petajoules

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geothermal	Others	Electricity	Heat	Total	Total renewables
				348	299			490			2 624	789
29	38		36						11		1 330	
- 16	- 14		- 2					- 4	- 5		- 361	- 4
											44	
13	24		35	348	299			486		6	3 636	785
	17											
2	25		7	- 288	- 299			- 153	782		- 1 036	- 452
- 5				- 288	- 299			- 63	782		- 934	- 362
7	25		7								- 11	
								- 90			- 90	- 90
									- 98		- 98	- 98
			- 9								- 9	- 9
15	66		33	60				333	690		2 494	333
15	66			18				333	690		2 395	333
3	11			15				286	381		1 268	286
1	2			8					63		114	
	1								35		67	
1	2			5				27	41		372	27
1	6			2				259	242		857	259
9				3				5			561	5
											34	
				3				5			469	5
											2	
9											55	
2	55							42	309		566	42
	49							24	210		308	24
	6							4	79		107	4
2								14	20		151	14
			33	42							99	
				346	309			431			2 552	741
25	62		34						9		1 055	
- 11	- 7		- 1					- 2	- 6		- 458	- 2
											- 88	
13	55		33	346	309			429	3		3 062	739
	14											
5	20		6	- 275	- 309			- 108	700		- 736	- 417
- 1				- 275	- 309			- 54	700		- 731	- 363
6	20		6								49	
								- 54			- 54	- 54
									- 77		- 77	
			- 10								- 10	
18	89		29	71				321	626		2 241	321
18	89			30				321	626		2 149	321
3	9			28				270	344		1 048	270
1	2			10					55		99	
				8					31		56	
1	1			8				26	37		279	26
1	6			2				244	221		694	244
9				3				3			539	3
											33	
				3				3			451	3
											2	
9											53	
6	80							48	282		562	48
	73							33	195		337	33
	7							1	71		98	1
6								14	16		127	14
			29	41							92	

Major energy indicators of Viet Nam

petajoules

	1990	1995	2000	2005	2010	2015	2016	2017	2018
Total									
Primary energy supply	227	382	620	1 212	2 248	2 905	2 958	3 062	3 636
Indigenous production	243	568	1 078	2 025	2 560	2 829	2 553	2 552	2 624
Import	123	214	372	516	563	681	931	1 055	1 330
Export	- 131	- 411	- 781	- 1 259	- 892	- 489	- 403	- 458	- 361
Final energy consumption	175	321	494	1 022	1 538	2 107	2 023	2 149	2 395
Industry	72	130	195	376	658	1 104	958	1 048	1 268
Transport	59	106	158	289	422	452	502	539	561
Residential	20	45	80	265	365	416	328	337	308
Commerce & public services	14	26	44	70	69	106	95	98	107
Others	10	15	17	23	24	29	139	127	151
Coal & Peat									
Primary energy supply	93	139	183	297	617	1 070	1 147	1 162	1 600
Indigenous production	109	196	272	760	1 032	977	884	873	970
Import				2	27	162	309	344	533
Export	- 18	- 66	- 76	- 422	- 465	- 41	- 29	- 52	- 56
Transformation sector	- 37	- 30	- 48	- 89	- 203	- 530	- 799	- 791	- 1 060
Power generation	- 37	- 30	- 48	- 89	- 203	- 530	- 799	- 791	- 1 060
Final energy consumption	55	109	135	207	414	540	328	350	517
Industry	43	81	98	156	348	460	292	317	494
Transport	1								
Residential	8	20	30	36	50	61	36	33	23
Commerce & public services	2	4	6	14	15	18			
Others	3	3	1	1	1	1			
Coal & peat products									
Primary energy supply									
Indigenous production									
Import									
Export									
Transformation sector									
Power generation									
Final energy consumption									
Industry									
Transport									
Residential									
Commerce & public services									
Others									
Crude oil & NGL									
Primary energy supply			13		303	341	312	274	489
Indigenous production	115	326	707	793	670	766	662	592	517
Import						8	19	50	232
Export	- 112	- 326	- 657	- 766	- 347	- 392	- 292	- 291	- 166
Transformation sector					- 292	- 296	- 299	- 261	- 472
Petroleum refineries					- 292	- 296	- 299	- 261	- 472
Petroleum products									
Primary energy supply	115	197	325	497	453	404	490	538	408
Import	123	214	372	514	515	505	592	652	553
Export	- 1	- 19	- 47	- 17	- 77	- 53	- 74	- 106	- 130
Transformation sector	- 16	- 15	- 55	- 28	194	288	329	309	454
Power generation	- 16	- 15	- 55	- 28	- 49	- 5	- 10	- 1	- 6
Petroleum refineries					242	293	339	310	460
Final energy consumption	97	171	277	484	581	710	792	821	837
Industry	19	31	63	105	75	153	84	90	92
Transport	58	105	157	289	422	452	501	533	552
Residential	4	7	13	30	36	38	65	75	50
Commerce & public services	11	18	30	40	28	60	29	26	25
Others	6	10	14	20	20	7	112	98	117
Gas									
Primary energy supply		8	47	195	340	367	377	346	348
Indigenous production		8	47	248	340	367	377	346	348
Import									
Export				- 54					
Transformation sector		- 7	- 46	- 190	- 319	- 323	- 318	- 275	- 288
Power generation		- 7	- 46	- 190	- 319	- 323	- 318	- 275	- 288
Final energy consumption		1	1	4	21	45	21	30	18
Industry		1	1	4	21	44	20	28	15
Transport							1	3	3
Residential									
Commerce & public services									
Others									
Electricity									
Power generation	31	53	96	193	342	588	645	701	782
Thermal	12	15	43	129	242	381	414	390	479
Hydro	19	38	52	63	99	206	230	309	299
Nuclear									
Others	0					1	1	2	4
Final energy consumption	22	40	81	166	312	507	574	626	690
Industry	10	17	33	78	164	290	309	344	381
Transport			1						
Residential	9	18	37	70	119	181	187	195	210
Commerce & public services	2	4	8	16	26	27	65	71	79
Others	1	2	2	2	3	8	13	16	20

Major economic indicators of Viet Nam

	1990	2000	2005	2010	2015	2016	2017	2018
Population (millions) ^{*1}	67.99	79.91	83.83	87.97	92.68	93.64	94.60	95.54
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	29	61	85	116	155	164	175	188
GDP, billion USD (PPP, constant 2017)	114	236	330	448	597	634	677	725
Nominal, billion USD (current)	6	31	58	116	193	205	224	245
GDP per capita ^{*3}								
Real term (constant 2010 USD)	433	765	1 018	1 318	1 667	1 753	1 853	1 964
GDP, PPP (constant 2017 USD)	1 673	2 955	3 932	5 089	6 438	6 768	7 156	7 586
Nominal (current USD)	95	390	687	1 318	2 085	2 192	2 366	2 567
Nominal GDP & its components (billions of current VND) ^{*1}								
Gross domestic product	41 955	441 646	914 001	2 157 828	4 192 862	4 502 733	5 005 975	5 542 332
Households and NPISHs final consumption expenditure	35 559	293 507	598 567	1 436 289	2 849 540	3 086 298	3 405 750	3 745 063
General government final consumption expenditure	5 177	28 346	49 952	129 313	265 545	293 106	325 804	358 592
Gross fixed capital formation	N.A.	122 101	285 841	704 401	1 033 780	1 066 160	1 190 474	1 321 906
Stock change	N.A.	8 670	22 702	65 810	126 667	130 579	140 220	148 644
Exports of goods and services	15 120	238 142	582 214	1 553 687	3 764 320	4 215 636	5 085 742	5 865 550
Imports of goods and services	18 996	253 927	612 521	1 730 902	3 731 151	4 100 294	4 945 460	5 679 497
Real GDP & its components (billions of 2010 VND) ^{*1}								
Gross Domestic Product	548 308	1 138 111	1 588 646	2 157 828	2 875 856	3 054 470	3 262 548	3 493 399
Households and NPISHs final consumption expenditure	N.A.	732 706	1 022 157	1 436 289	1 913 547	2 053 236	2 204 149	2 364 170
General government final consumption expenditure	N.A.	59 998	84 251	129 313	182 270	196 013	210 410	223 624
Gross fixed capital formation	N.A.	243 269	412 327	704 401	832 235	914 777	995 904	1 095 283
Stock change	N.A.	15 311	31 434	65 810	87 574	94 346	98 451	103 812
Exports of goods and services	73 737	462 350	1 061 162	1 553 687	2 937 635	3 344 890	3 904 663	4 461 684
Imports of goods and services	91 438	455 760	1 049 910	1 730 902	3 073 334	3 543 103	4 163 134	4 696 315
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	34.0	24.8	21.6	18.4	16.1	15.3	14.8	14.3
Industry	24.9	35.1	38.1	32.1	34.2	34.6	35.0	35.6
Services, etc.	41.7	40.1	40.3	36.9	38.3	38.6	38.8	38.8
Industrial Production Index	N.A.	N.A.	N.A.	100.0	140.1	150.6	164.8	181.6
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	2.4	14.5	32.4	72.2	162.1	176.6	215.0	243.7
Imports, c.i.f.	2.8	15.6	36.8	84.8	165.6	174.8	212.9	236.9
Balance of payments (billions of current USD) ^{*1}								
Trade balance	N.A.	0.4	-2.4	-5.1	7.4	11.0	10.8	16.5
Current account	N.A.	1.1	-0.6	-4.3	-2.0	0.6	-1.6	5.9
Overall balance	N.A.	0.8	2.5	1.9	-1.1	11.4	18.4	14.4
Foreign exchange rate (VND/USD) ^{*1}	6537.60	14167.75	15858.92	18612.92	21697.57	21935.00	22370.09	22602.05
PPP conversion factor, GDP (VND/USD) ^{*1}	672.45	2781.04	3682.54	5822.00	7413.46	7315.61	7395.34	7470.36
Price Indices								
GDP Deflator (2010=100) ^{*3}	7.7	38.8	57.5	100.0	145.8	147.4	153.4	158.7
Producer Price Index (2010=100)	N.A.	N.A.	N.A.	100.0	140.1	150.6	164.8	181.6
Consumer Price Index (2010=100)	N.A.	48.1	59.9	100.0	144.6	148.4	153.6	159.1
Growth rate (%) ^{*3}								
Real GDP	5.1	6.8	7.5	6.4	6.7	6.2	6.8	7.1
Population	2.2	1.1	0.9	1.0	1.0	1.0	1.0	1.0
Price	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer prices	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Consumer prices	N.A.	-1.7	8.3	9.2	0.6	2.7	3.5	3.5

Source ^{*1}: *World Development Indicators*, World Bank

^{*2}: *International Financial Statistics*, International Monetary Fund

^{*3}: Calculated from ^{*1} and ^{*2} by ESTO

Note : N.A. means "not available"

: VND means Dong, USD means United States Dollar

: PPP means Purchasing Power Parity

: **Total population** is based on the *de facto* definition of population, which counts all residents regardless of legal status or citizenship.

The values shown are midyear estimates. (from WB)

APEC REGION

Primary energy supply table in 2018

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Primary energy									
Indigenous production	17 231	692	22 160	571	102 672	5	19 514	2 107	1 894
Import	2 229	16	3 533	1 151	31 669	1 365	2 164	16 999	13 542
Export	- 13 929	- 505	- 13 062	- 45	- 3 398	- 11	- 10 684	- 784	- 2 970
International marine bunkers	- 24		- 19	- 5	- 194	- 464		- 187	- 400
International aviation bunkers	- 200	- 4	- 37	- 28	- 207	- 288		- 304	- 222
Stock change	53	- 8	- 115	- 8	- 1 451	- 6	- 2 046	5	- 26
Total	5 360	191	12 459	1 636	129 092	600	8 948	17 836	11 818
Coal, peat, and coal & peat products									
Indigenous production	12 035		1 299	38	76 103		13 731	31	22
Import	13		230	274	5 033	287	135	4 805	3 341
Export	- 10 333		- 837	- 8	- 402		- 8 774	- 43	
Stock change	84		- 50	- 6	- 747	- 17	- 2 259	- 2	9
Total	1 798		641	298	79 987	270	2 833	4 791	3 372
Crude oil, NGL & petroleum products									
Indigenous production	576	246	11 185	17	7 927		1 696	17	34
Import	2 049	16	2 392	733	22 174	909	2 024	8 186	8 122
Export	- 554	- 224	- 9 141	- 31	- 2 796	- 9	- 506	- 741	- 2 970
International marine bunkers	- 24		- 19	- 5	- 194	- 464		- 187	- 400
International aviation bunkers	- 200	- 4	- 37	- 28	- 207	- 288		- 304	- 222
Stock change	- 31	- 7	- 45		- 704	11	213	- 10	56
Total	1 817	28	4 336	685	26 199	159	3 427	6 960	4 620
Gas									
Indigenous production	4 237	446	6 477	44	5 967		2 611	93	11
Import	168		808	145	4 442	123		3 950	2 078
Export	- 3 042	- 281	- 2 804	- 6	- 125		- 1 332		
Stock change		- 2	- 20					17	- 91
Total	1 363	163	4 461	183	10 284	123	1 279	4 060	1 998
Nuclear power									
Indigenous production			1 099		3 212			708	1 456
Hydro power									
Indigenous production	57		1 389	84	4 435		78	291	12
Geothermal, solar, etc									
Indigenous production	326		710	387	5 029	5	1 398	967	356

Primary energy supply table in 2017

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Primary energy									
Indigenous production	16 982	712	21 289	543	97 262	5	16 902	1 722	2 055
Import	2 090	19	3 587	1 143	28 704	1 347	2 310	17 556	13 237
Export	- 13 366	- 535	- 12 522	- 45	- 3 247	- 17	- 9 104	- 775	- 2 798
International marine bunkers	- 23		- 16	- 6	- 178	- 458		- 178	- 427
International aviation bunkers	- 187	- 3	- 27	- 26	- 195	- 279		- 296	- 211
Stock change	- 152	3	24	- 4	1 286	2	- 1 802	53	- 39
Total	5 343	196	12 335	1 605	123 632	600	8 306	18 082	11 817
Coal & coal products									
Indigenous production	12 268		1 294	41	72 262		11 355	32	29
Import	8		228	280	4 832	277	112	4 876	3 419
Export	- 10 248		- 773	- 17	- 433		- 7 064	- 36	
Stock change	- 167		- 14	3	1 481	- 14	- 2 014	2	10
Total	1 861		735	307	78 142	263	2 389	4 874	3 458
Crude oil, NGL & petroleum products									
Indigenous production	641	250	10 413	13	8 018		1 766	18	32
Import	1 896	19	2 382	716	20 157	899	2 194	8 519	7 992
Export	- 546	- 240	- 8 481	- 21	- 2 612	- 12	- 689	- 739	- 2 798
International marine bunkers	- 23		- 16	- 6	- 178	- 458		- 178	- 427
International aviation bunkers	- 187	- 3	- 27	- 26	- 195	- 279		- 296	- 211
Stock change	15	3	- 28	- 7	- 195	16	212	45	- 19
Total	1 796	28	4 244	669	24 994	166	3 484	7 369	4 568
Gas									
Indigenous production	3 696	463	6 360	43	5 516		2 600	107	13
Import	186		879	147	3 693	126		4 112	1 827
Export	- 2 572	- 295	- 2 956	- 7	- 132		- 1 343		
Stock change			65	- 1				5	- 30
Total	1 310	168	4 349	182	9 077	126	1 257	4 224	1 809
Nuclear power									
Indigenous production			1 105		2 707			359	1 619
Hydro power									
Indigenous production	58		1 420	77	4 313		67	302	10
Geothermal, solar, etc									
Indigenous production	319	0.0	696	370	4 446	5	1 113	904	351

Note: Gas = Natural gas/ LNG & town gas

Primary energy supply table in 2018 (Continued)

petajoules

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
4 205	6 622	649	240	1 003	1 403	62 138	26	411	3 160	90 959	2 624	340 285
2 374	4 306	359	112	500	1 580	1 116	7 473	5 189	3 735	24 462	1 330	125 204
- 2 465	- 3 077	- 92	- 153	- 442	- 204	- 30 479	- 3 565	- 773	- 534	- 21 085	- 361	- 108 620
- 18	- 35	- 13			- 3	- 492	- 2 009	- 49		- 916		- 4 828
- 104	- 183	- 54		- 50	- 68	- 239	- 365	- 122	- 245	- 1 054		- 3 776
15	- 72	9	- 3	57	- 60	- 253	22	- 30	47	1 031	44	- 2 793
4 007	7 562	858	196	1 067	2 648	31 792	1 581	4 686	6 162	93 398	3 636	345 532
70	286	76		6	260	10 065			155	15 449	970	130 596
868	262	13		12	581	707	20	1 649	656	131	533	19 548
	- 1	- 37		- 19	- 112	- 5 576		- 1	- 3	- 2 872	- 56	- 29 072
8	- 44	- 3		29	- 45	- 189		- 21		717	153	- 2 383
946	502	49		28	685	5 007	20	1 669	809	13 425	1 600	118 731
1 423	4 425	55	41	228	25	23 369		3	793	28 687	517	81 265
1 215	2 415	346	112	477	993	67	7 074	2 695	2 175	21 277	785	86 236
- 1 299	- 3 067	- 56	- 57	- 213	- 92	- 16 403	- 3 565	- 773	- 527	- 14 438	- 296	- 57 758
- 18	- 35	- 13			- 3	- 492	- 2 009	- 49		- 910		- 4 822
- 104	- 183	- 54		- 50	- 68	- 239	- 365	- 122	- 245	- 1 054		- 3 776
1	- 63	6	- 3	27	- 17	- 94	22	- 20	43	5	- 108	- 718
1 218	3 493	284	93	468	837	6 208	1 156	1 775	2 239	33 566	897	100 467
2 569	1 079	155	112	514	151	25 398		7	1 082	30 103	348	81 403
291	1 616					323	375	845	804	2 792		18 761
- 1 143			- 96	- 210		- 8 434				- 3 549		- 21 023
	35	6				34		12	2	319		312
1 717	2 729	161	16	304	151	17 321	375	840	1 888	29 665	348	79 430
149						2 246		302		9 178		18 350
95	117	95	3	111	34	688		16	28	1 064	299	8 896
48	565	267	84	144	934	372	26	83	1 102	6 479	490	19 770

Primary energy supply table in 2017 (Continued)

petajoules

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
4 386	6 903	670	257	1 003	1 377	59 840	27	354	3 213	83 425	2 552	321 480
2 077	3 939	348	111	530	1 448	1 124	8 160	5 169	3 724	25 064	1 055	122 742
- 2 411	- 3 066	- 104	- 172	- 502	- 221	- 28 928	- 4 255	- 725	- 512	- 17 776	- 458	- 101 538
- 16	- 33	- 12			- 4	- 492	- 2 042	- 51		- 980		- 4 916
- 108	- 166	- 52			- 66	- 226	- 347	- 119	- 169	- 1 038		- 3 516
- 3	- 36	16	- 4	46	34	- 805	- 32	- 5	- 135	1 540	- 88	- 101
3 926	7 540	866	192	1 075	2 568	30 513	1 512	4 633	6 121	90 235	3 062	334 160
79	276	69		8	264	9 304			170	15 624	873	123 950
803	288	10		16	492	721	38	1 667	587	171	344	19 167
- 16	- 3	- 35		- 10	- 136	- 5 050		- 1	- 1	- 2 410	- 52	- 26 286
2	- 29	4		17	29	- 220		6	- 212	462	- 2	- 655
868	531	48		31	648	4 755	38	1 660	544	13 848	1 162	116 164
1 455	4 721	70	43	230	26	22 985		3	819	24 738	592	76 834
982	2 148	338	111	500	950	77	7 748	2 673	2 078	21 620	702	84 701
- 1 089	- 3 056	- 69	- 65	- 263	- 84	- 15 963	- 4 255	- 723	- 506	- 12 071	- 397	- 54 679
- 16	- 33	- 12			- 4	- 492	- 2 042	- 51		- 971		- 4 907
- 108	- 166	- 52			- 66	- 226	- 347	- 119	- 169	- 1 038		- 3 516
- 6	- 22	9	- 4	21	2	64	- 28	- 15	75	810	- 85	863
1 217	3 593	283	85	489	824	6 446	1 075	1 798	2 298	33 087	812	99 325
2 727	1 112	175	126	523	135	24 323		9	1 105	26 866	346	76 245
293	1 495					302	372	828	968	2 948		18 175
- 1 292	- 1		- 107	- 229		- 7 853				- 3 116		- 19 903
	14	3		7		- 656	- 3	4	- 1	263		- 328
1 728	2 621	178	19	301	135	16 117	369	832	2 072	26 960	346	74 180
119						2 231		245		9 151		17 536
96	115	91	3	105	35	666		20	17	1 089	309	8 792
31	560	264	84	136	918	330	27	78	1 102	5 957	431	18 120

Final energy consumption table in 2018

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Total	3 260	40	7 699	1 146	75 375	283	6 074	10 420	5 501
Coal & coal products	129		108	10	22 435		589	853	373
Crude oil, NGL & petroleum products	1 696	27	3 193	639	18 275	95	3 237	4 657	1 856
Gas	480	1	2 025	65	6 850	26	692	1 207	938
Electricity	768	12	1 888	263	21 607	160	922	3 404	1 913
Others	187		486	170	6 209	2	633	300	421
Industry	939	6	1 919	443	42 277	12	2 125	3 442	2 067
Coal & coal products	128		108	10	18 632		589	845	353
Crude oil, NGL & petroleum products	163	6	257	151	3 199	3	225	717	153
Gas	258		639	36	3 572	1	683	479	315
Electricity	273	1	662	159	13 645	8	337	1 240	1 004
Others	117		253	88	3 229		291	161	242
Transport	1 423	19	2 855	397	13 373	86	2 548	2 954	1 472
Coal & coal products					72				
Crude oil, NGL & petroleum products	1 379	19	2 583	392	11 202	82	2 369	2 871	1 383
Gas	17		153	1	1 018			2	51
Electricity	21		29	4	579	3	1	63	11
Others	5		90		501		177	18	27
Agriculture	111	1	306	33	6 573		94	217	165
Coal & coal products					1 247				
Crude oil, NGL & petroleum products	102	1	228	19	2 230		94	182	100
Gas	1		39	1	220				
Electricity	8		37	9	2 506			12	60
Others			3	3	370			23	4
Residential & commercial	787	13	2 618	273	13 152	185	1 306	3 807	1 797
Coal & coal products					2 483			7	19
Crude oil, NGL & petroleum products	52	1	125	76	1 644	10	549	886	220
Gas	204	1	1 193	26	2 039	25	9	726	572
Electricity	466	11	1 160	91	4 877	148	584	2 090	838
Others	66		139	79	2 109	2	164	98	148

Final energy consumption table in 2017

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Total	3 210	38	7 421	1 103	72 701	281	5 557	10 723	5 470
Coal & coal products	119		107	12	23 815		345	873	339
Crude oil, NGL & petroleum products	1 656	26	3 108	623	17 815	95	3 124	4 855	1 898
Gas	480	1	1 869	62	5 534	26	649	1 225	928
Electricity	760	11	1 849	251	19 860	158	803	3 473	1 884
Others	196		488	156	5 677	2	635	297	421
Industry	925	6	1 888	424	40 498	12	1 812	3 508	2 026
Coal & coal products	118		107	12	19 266		345	866	318
Crude oil, NGL & petroleum products	150	6	259	151	2 983	3	274	762	150
Gas	260		611	34	2 511	1	634	474	313
Electricity	270	1	656	149	12 799	8	260	1 248	988
Others	127		256	78	2 938		299	158	257
Transport	1 396	19	2 754	383	12 974	87	2 328	2 990	1 492
Coal & coal products					81				
Crude oil, NGL & petroleum products	1 355	19	2 500	379	10 866	84	2 197	2 908	1 409
Gas	16		136	1	1 000			2	50
Electricity	21		28	3	511	3	1	63	10
Others	4		90		516		131	18	22
Agriculture	109	1	294	29	6 450		122	220	166
Coal & coal products					1 459				
Crude oil, NGL & petroleum products	101	1	220	18	2 276		122	184	105
Gas	1		36	1	202				
Electricity	7		35	7	2 180			12	58
Others			3	3	332			25	4
Residential & commercial	779	12	2 485	268	12 779	182	1 295	4 005	1 786
Coal & coal products	1				3 008			7	21
Crude oil, NGL & petroleum products	49	1	129	74	1 689	8	531	1 001	234
Gas	203	1	1 086	27	1 822	25	16	749	565
Electricity	462	11	1 130	91	4 370	147	542	2 151	828
Others	65		140	75	1 890	2	205	97	138

Note: Gas = Natural gas/ LNG & town gas

Final energy consumption table in 2018 (Continued)

petajoules

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
2 046	5 019	547	140	832	1 436	18 206	511	2 031	3 388	60 487	2 395	206 835
76	133	24		23	101	1 141	8	209	287	705	517	27 720
1 050	2 908	268	56	411	708	3 720	266	670	1 517	26 794	837	72 878
352	640	62		96	2	5 954	56	163	244	14 921	18	34 792
550	1 020	140	15	174	297	2 734	182	891	706	14 043	690	52 379
18	317	53	68	127	327	4 657		99	635	4 024	333	19 066
797	1 563	181	38	241	315	5 818	295	1 032	1 272	11 580	1 268	77 631
76	133	21		23	101	1 045	8	209	287	687	494	23 749
102	238	19	24	43	61	332	166	76	200	884	92	7 111
346	596	49		52	2	1 603	49	116	162	5 587	15	14 561
274	539	50	11	101	99	1 225	72	536	289	2 782	381	23 689
	56	42	3	21	51	1 613		95	334	1 640	286	8 521
881	2 230	224	26	363	512	4 229	106	502	1 253	26 716	561	62 729
												73
856	2 224	224	26	317	492	2 583	95	496	1 090	24 206	552	55 443
5	2			30		1 351			82	898	3	3 613
2	4					295	11	5	1	44		1 074
18				16	20				81	1 567	5	2 526
43	299	30	4	12	18	402	1	31	122	1 737	151	10 352
		2				2						1 251
40	141	16	4	8	9	151		20	120	601	117	4 185
		1				57				63		383
2	158	10		4	10	68	1	11	1	1 014	20	3 931
		1				124				60	14	602
325	926	112	72	216	590	7 757	108	466	741	20 454	415	56 123
		1				94				18	23	2 647
52	305	10	2	43	146	654	4	77	107	1 103	75	6 139
1	42	12		14		2 943	6	47		8 373		16 234
272	319	79	4	68	188	1 147	98	338	414	10 203	289	23 686
	260	10	66	91	257	2 920		4	220	757	28	7 417

Final energy consumption table in 2017 (Continued)

petajoules

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
1 983	4 903	552	139	831	1 418	17 525	504	2 025	3 233	57 639	2 149	199 407
75	139	24		22	126	1 120	8	252	222	712	350	28 661
1 071	2 857	264	56	433	684	3 820	264	684	1 460	26 224	821	71 838
293	617	69		90	2	5 260	54	150	244	13 493	30	31 077
527	979	140	15	167	280	2 739	179	870	693	13 522	626	49 787
16	311	54	68	120	325	4 586		69	614	3 688	321	18 045
731	1 564	186	38	231	332	6 261	290	1 004	1 189	10 945	1 048	74 918
75	139	20		22	126	1 013	8	252	222	693	317	23 919
112	268	18	24	39	62	664	162	74	214	769	90	7 235
286	574	55		56	2	1 591	48	105	153	5 219	28	12 954
257	531	50	11	97	92	1 220	72	508	291	2 802	344	22 654
	50	43	3	18	50	1 773		64	309	1 462	270	8 156
898	2 153	219	25	381	495	4 013	108	516	1 201	26 183	539	61 155
												81
874	2 147	219	25	339	475	2 467	98	511	1 029	23 793	533	54 227
6	2			29		1 267			90	758	3	3 359
2	4					279	10	5	1	40		982
16				14	19				81	1 592	3	2 506
28	281	31	4	18	22	389	1	27	112	1 571	127	10 004
		3				2						1 464
26	135	16	4	14	12	148		16	111	585	98	4 194
		1				56				63		360
2	146	11		4	9	65	1	11	1	872	16	3 437
		1				118				51	14	550
326	905	115	72	201	569	6 862	105	478	732	18 939	435	53 330
		1				105				20	33	3 196
59	306	11	2	41	135	541	4	83	106	1 076	101	6 182
1	41	13		5		2 347	6	45		7 453		14 404
267	298	79	4	66	178	1 175	95	345	401	9 807	266	22 714
	261	10	66	88	256	2 695		4	225	583	35	6 833

Demand & supply table of coal and peat in 2018

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Indigenous production	12 035		1 299	38	76 103		13 731	31	22
Import	13		230	274	5 033	287	135	4 805	3 341
Export	- 10 333		- 837	- 8	- 402		- 8 774	- 43	
Stock change	84		- 50	- 6	- 747	- 17	- 2 259	- 2	9
Primary energy supply	1 798		641	298	79 987	270	2 833	4 791	3 372
Main activity producers	- 1 574		- 452	- 279	- 46 289	- 270	- 2 244	- 2 646	- 2 240
Autoproducers			- 2		- 1 317			- 284	- 249
Coal transformation	- 55		- 42	- 3	- 7 366			- 794	- 486
Refining									
Gas processing					- 453				
Other transformation									
Final energy consumption	129		108	10	22 435		589	853	373

Demand & supply table of crude oil, NGL and petroleum products in 2018

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Indigenous production	576	246	11 185	17	7 927		1 696	17	34
Import	2 049	16	2 392	733	22 174	909	2 024	8 186	8 122
Export	- 554	- 224	- 9 141	- 31	- 2 796	- 9	- 506	- 741	- 2 970
Stock change	- 31	- 7	- 45		- 704	11	213	- 10	56
Primary energy supply	1 817	28	4 336	685	26 199	159	3 427	6 960	4 620
Main activity producers	- 8	- 1	- 57	- 12	- 112	- 3	- 161	- 277	- 65
Autoproducers	- 40		- 23	- 4	- 227			- 169	- 75
Coal transformation								- 19	
Refining	9	3	1 323	41	3 459		462	352	516
Gas processing		1				- 13		- 59	- 9
Other transformation							- 113	- 204	- 481
Final energy consumption	1 696	27	3 193	639	18 275	95	3 237	4 657	1 856

Demand & supply table of gas in 2018

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Indigenous production	4 237	446	6 477	44	5 967		2 611	93	11
Import	168		808	145	4 442	123		3 950	2 078
Export	- 3 042	- 281	- 2 804	- 6	- 125		- 1 332		
Stock change		- 2	- 20					17	- 91
Primary energy supply	1 363	163	4 461	183	10 284	123	1 279	4 060	1 998
Main activity producers	- 354	- 49	- 388	- 86	- 2 057	- 110	- 392	- 2 675	- 1 014
Autoproducers	- 161	- 6	- 259	- 5				- 136	- 73
Coal transformation									
Refining									
Gas processing		- 40			- 1 039	13	197	69	
Other transformation			- 154						
Final energy consumption	480	1	2 025	65	6 850	26	692	1 207	938

Note: Gas = Natural gas/ LNG

Demand & supply table of coal and peat in 2018 (continued)

Petajoules

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
70	286	76		6	260	10 065			155	15 449	970	130 596
868	262	13		12	581	707	20	1 649	656	131	533	19 548
	- 1	- 37		- 19	- 112	- 5 576		- 1	- 3	- 2 872	- 56	- 29 072
8	- 44	- 3		29	- 45	- 189		- 21		717	153	- 2 383
946	502	49		28	685	5 007	20	1 669	809	13 425	1 600	118 731
- 857	- 324	- 9			- 577	- 1 958	- 12	- 857	- 316	- 12 275	- 1 060	- 74 237
	- 3	- 7		- 5		- 751		- 382		- 66		- 3 066
	- 29	- 5				- 777		- 62		- 278		- 9 898
										- 82		- 535
76	133	24		23	101	1 141	8	209	287	705	517	27 720

Demand & supply table of crude oil, NGL and petroleum products in 2018 (continued)

Petajoules

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
1 423	4 425	55	41	228	25	23 369		3	793	28 687	517	81 265
1 215	2 415	346	112	477	993	67	7 074	2 695	2 175	21 277	785	86 236
- 1 299	- 3 067	- 56	- 57	- 213	- 92	- 16 403	- 3 565	- 773	- 527	- 14 438	- 296	- 57 758
1	- 63	6	- 3	27	- 17	- 94	22	- 20	43	5	- 108	- 718
1 218	3 493	284	93	468	837	6 208	1 156	1 775	2 239	33 566	897	100 467
- 9	- 287		- 7	- 5	- 30	- 40		- 68	- 2	- 324	- 6	- 1 475
- 6	- 57		- 28	- 9		- 293	- 5	- 19		- 74		- 1 030
												- 19
- 37	26	11	- 3	11	- 26	1 067	218	101	- 188	943	- 11	8 274
23	- 33											- 89
	- 1								21			- 779
1 050	2 908	268	56	411	708	3 720	266	670	1 517	26 794	837	72 878

Demand & supply table of gas in 2018 (continued)

Petajoules

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
2 569	1 079	155	112	514	151	25 398		7	1 082	30 103	348	81 403
291	1 616					323	375	845	804	2 792		18 761
- 1 143			- 96	- 210		- 8 434				- 3 549		- 21 023
	35	6				34		12	2	319		312
1 717	2 729	161	16	304	151	17 321	375	840	1 888	29 665	348	79 430
- 484	- 1 175	- 43	- 2	- 158	- 139	- 5 638	- 276	- 665	- 1 083	- 10 424	- 288	- 27 499
- 53	- 491	- 2	- 4	- 10		- 2 757	- 43	- 4		- 626		- 4 629
								3				3
- 265	1									55		- 1 009
		- 4				- 128				- 192		- 478
352	640	62		96	2	5 954	56	163	244	14 921	18	34 792

Demand & supply table of coal and peat in 2017

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Indigenous production	12 268		1 294	41	72 262		11 355	32	29
Import	8		228	280	4 832	277	112	4 876	3 419
Export	- 10 248		- 773	- 17	- 433		- 7 064	- 36	
Stock change	- 167		- 14	3	1 481	- 14	- 2 014	2	10
Primary energy supply	1 861		735	307	78 142	263	2 389	4 874	3 458
Main activity producers	- 1 641		- 580	- 290	- 43 482	- 263	- 2 043	- 2 809	- 2 235
Autoproducers			- 2		- 1 055			- 226	- 258
Coal transformation	- 58		- 34	- 4	- 7 997			- 804	- 498
Refining									
Gas processing					- 375				
Other transformation									
Final energy consumption	119		107	12	23 815		345	873	339

Demand & supply table of crude oil, NGL and petroleum products in 2017

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Indigenous production	641	250	10 413	13	8 018		1 766	18	32
Import	1 896	19	2 382	716	20 157	899	2 194	8 519	7 992
Export	- 546	- 240	- 8 481	- 21	- 2 612	- 12	- 689	- 739	- 2 798
Stock change	15	3	- 28	- 7	- 195	16	212	45	- 19
Primary energy supply	1 796	28	4 244	669	24 994	166	3 484	7 369	4 568
Main activity producers	- 10	- 1	- 58	- 16	- 104	- 4	- 192	- 406	- 61
Autoproducers	- 41		- 20	- 6	- 203			- 181	- 72
Coal transformation								- 19	
Refining	13	1	1 326	42	3 496		352	354	231
Gas processing		1				- 13		- 58	- 5
Other transformation							- 106	- 196	- 461
Final energy consumption	1 656	26	3 108	623	17 815	95	3 124	4 855	1 898

Demand & supply table of gas in 2017

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Indigenous production	3 696	463	6 360	43	5 516		2 600	107	13
Import	186		879	147	3 693	126		4 112	1 827
Export	- 2 572	- 295	- 2 956	- 7	- 132		- 1 343		
Stock change			65	- 1				5	- 30
Primary energy supply	1 310	168	4 349	182	9 077	126	1 257	4 224	1 809
Main activity producers	- 352	- 45	- 303	- 91	- 1 778	- 113	- 408	- 2 839	- 827
Autoproducers	- 151	- 6	- 259	- 4				- 137	- 70
Coal transformation									
Refining									
Gas processing		- 36			- 723	13	334	69	
Other transformation			- 126	- 2					
Final energy consumption	480	1	1 869	62	5 534	26	649	1 225	928

Note: Gas = Natural gas/ LNG

Demand & supply table of coal and peat in 2017 (Continued)

Petajoules

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
79	276	69		8	264	9 304			170	15 624	873	123 950
803	288	10		16	492	721	38	1 667	587	171	344	19 167
- 16	- 3	- 35		- 10	- 136	- 5 050		- 1	- 1	- 2 410	- 52	- 26 286
2	- 29	4		17	29	- 220		6	- 212	462	- 2	- 655
868	531	48		31	648	4 755	38	1 660	544	13 848	1 162	116 164
- 794	- 345	- 5		- 8	- 515	- 1 815	- 12	- 881	- 322	- 12 844	- 791	- 71 675
	- 4	- 8		- 2		- 680		- 319		- 71		- 2 624
	- 30	- 7				- 764		- 68		- 275		- 10 538
											- 81	- 456
75	139	24		22	126	1 120	8	252	222	712	350	28 661

Demand & supply table of crude oil, NGL and petroleum products in 2017 (Continued)

Petajoules

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
1 455	4 721	70	43	230	26	22 985		3	819	24 738	592	76 834
982	2 148	338	111	500	950	77	7 748	2 673	2 078	21 620	702	84 701
- 1 089	- 3 056	- 69	- 65	- 263	- 84	- 15 963	- 4 255	- 723	- 506	- 12 071	- 397	- 54 679
- 6	- 22	9	- 4	21	2	64	- 28	- 15	75	810	- 85	863
1 217	3 593	283	85	489	824	6 446	1 075	1 798	2 298	33 087	812	99 325
- 10	- 315		- 6	- 14	- 41	- 34		- 113	- 3	- 226	- 1	- 1 614
- 9	- 61		- 26	- 8		- 269	- 7	- 10		- 68		- 979
												- 19
- 1	18	2	- 2	12	- 22	1 191	225	87	- 239	908	49	8 043
23	- 32											- 84
	- 2			- 6					19			- 751
1 071	2 857	264	56	433	684	3 820	264	684	1 460	26 224	821	71 838

Demand & supply table of gas in 2017 (Continued)

Petajoules

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
2 727	1 112	175	126	523	135	24 323		9	1 105	26 866	346	76 245
293	1 495					302	372	828	968	2 948		18 175
- 1 292	- 1		- 107	- 229		- 7 853				- 3 116		- 19 903
	14	3		7		- 656	- 3	4	- 1	263		- 328
1 728	2 621	178	19	301	135	16 117	369	832	2 072	26 960	346	74 180
- 497	- 1 132	- 52	- 2	- 155	- 129	- 5 475	- 280	- 668	- 1 493	- 9 095	- 275	- 26 010
- 43	- 473	- 2	- 6	- 10		- 2 865	- 37	- 3		- 599		- 4 666
								2				2
- 365	1		2							52		- 653
						- 119				- 188		- 434
293	617	69		90	2	5 260	54	150	244	13 493	30	31 077

Power generation table in 2018

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea	Malaysia
Total	260 808	4 295	654 288	82 313	6 934 822	36 558	283 771	1 050 375	586 200	170 529
Thermal	216 366	4 292	119 754	44 237	4 810 595	36 458	235 410	768 524	426 856	142 220
Coal	157 711		50 530	29 867	4 575 877	23 037	160 013	338 795	258 286	77 286
Oil	4 838	47	6 110	1 287	10 750	264	17 951	51 820	13 027	1 048
Gas	53 817	4 245	63 114	13 084	223 968	13 157	57 447	377 909	155 542	63 886
Hydro	15 831		385 840	23 367	1 232 100	3	21 636	80 968	3 359	26 325
Nuclear			100 731		295 000			64 929	133 505	
Geothermal				214	125		14 019	2 524		
Others	28 611	3.1	47 963	14 494	597 002	97	12 706	133 430	22 480	1 985
Main activity producers	228 834	3 855	595 183	75 338	6 592 059	36 460	283 771	888 593	550 475	163 366
Thermal	195 495	3 852	100 034	42 901	4 698 723	36 458	235 410	698 878	393 878	136 046
Coal	157 711		50 326	29 867	4 474 018	23 037	160 013	306 799	240 131	77 286
Oil	816	47	4 164	848	737	264	17 951	31 376	5 848	511
Gas	36 968	3 805	45 544	12 187	223 968	13 157	57 447	360 703	147 900	58 249
Hydro	15 831		356 287	23 307	1 232 100		21 636	77 678	3 359	26 325
Nuclear			100 731		295 000			64 929	133 505	
Geothermal				214	125		14 019	2 318		
Others	17 508	3.1	38 131	8 916	366 111	2	12 706	44 790	19 732	996
Autoproducers	31 974	440	59 105	6 975	342 763	99		161 782	35 726	7 163
Thermal	20 871	440	19 720	1 336	111 872			69 646	32 978	6 174
Coal			204		101 859			31 996	18 155	
Oil	4 022		1 946	439	10 013			20 444	7 180	537
Gas	16 849	440	17 570	897				17 206	7 643	5 637
Hydro			29 553	60		3		3 290		
Nuclear										
Geothermal								206		
Others	11 103		9 832	5 579	230 891	95		88 640	2 748	989

Power generation table in 2017

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea	Malaysia
Total	257 771	4 159	658 074	79 417	6 495 143	37 010	254 620	1 040 612	562 693	167 382
Thermal	217 564	4 156	124 710	44 540	4 662 739	36 911	222 604	819 899	393 251	138 111
Coal	161 830		59 846	29 277	4 437 289	22 955	147 964	351 830	255 508	71 948
Oil	5 274	45	7 296	1 914	16 077	387	18 848	69 929	11 796	1 527
Gas	50 460	4 110	57 568	13 349	209 373	13 569	55 791	398 140	125 947	64 636
Hydro	16 037		392 536	21 315	1 189 840	3	18 632	82 854	2 820	26 062
Nuclear			101 112		248 070			32 912	148 427	
Geothermal	1			64			12 764	2 457		
Others	24 169	3.1	39 716	13 498	394 493	96	619	102 490	18 196	3 209
Main activity producers	228 830	3 726	595 029	73 050	5 771 987	36 913	254 620	907 928	529 041	158 727
Thermal	198 154	3 723	98 351	43 389	3 939 584	36 911	222 604	752 559	361 993	132 013
Coal	161 830		59 812	29 277	3 734 034	22 955	147 964	324 710	237 888	71 948
Oil	988	45	5 465	1 391	13 161	387	18 848	46 824	5 362	722
Gas	35 336	3 677	33 074	12 721	192 388	13 569	55 791	381 025	118 743	59 343
Hydro	16 037		362 251	21 268	1 189 840		18 632	80 598	2 820	26 057
Nuclear			101 112		248 070			32 912	148 427	
Geothermal	1			64			12 764	2 333		
Others	14 638	3.1	33 315	8 328	394 493	2	619	39 527	15 802	657
Autoproducers	28 941	433	63 045	6 367	723 156	97		132 684	33 652	8 655
Thermal	19 410	433	26 359	1 151	723 156			67 340	31 258	6 098
Coal			34		703 255			27 120	17 620	
Oil	4 286		1 831	523	2 916			23 105	6 434	805
Gas	15 124	433	24 494	628	16 985			17 115	7 204	5 293
Hydro			30 285	47		3		2 256		5
Nuclear										
Geothermal								124		
Others	9 531		6 401	5 170		94		62 963	2 394	2 552

Power generation table in 2018 (Continued)

GWh

Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
335 583	44 380	4 672	55 003	99 765	1 113 208	53 144	275 578	187 366	4 433 936	217 189	16 883 782
266 728	7 325	3 375	21 562	76 439	713 506	51 476	231 888	152 420	2 834 295	133 111	11 296 838
29 144	1 583		133	51 932	177 911	688	131 225	35 845	1 272 150	91 654	7 463 667
35 159	12	2 845	748	3 173	8 007	317	8 247	216	42 928	751	209 545
202 424	5 730	530	20 681	21 334	527 588	50 471	92 416	116 359	1 519 218	40 706	3 623 626
32 636	26 287	830	30 723	9 384	191 142		7 839	7 783	295 501	83 081	2 474 635
13 675					204 569		27 682		841 329		1 681 420
5 283	7 961	422		10 435	426			2	18 774		60 184
17 261	2 807	45	2 718	3 507	3 565	1 668	8 169	27 161	444 037	997	1 370 705
268 104	42 968	1 379	52 390	99 765	1 037 761	46 009	232 282	187 366	4 240 665	217 189	15 843 811
214 880	6 557	753	19 845	76 439	641 826	44 341	194 861	152 420	2 703 698	133 111	10 730 406
28 931	953		29	51 932	161 227	688	96 034	35 845	1 260 393	91 654	7 246 873
29 671	12	544	334	3 173	952	25	6 885	216	34 533	751	139 657
156 278	5 592	210	19 482	21 334	479 646	43 629	91 942	116 359	1 408 771	40 706	3 343 876
31 581	26 283	621	29 975	9 384	189 988		7 839	7 783	294 084	83 081	2 437 142
13 675					204 569		27 682		841 329		1 681 420
5 155	7 890			10 435	426			2	18 733		59 317
2 813	2 239	5	2 570	3 507	952	1 668	1 899	27 161	382 822	997	935 525
67 479	1 412	3 293	2 613		75 447	7 135	43 296		193 271		1 039 971
51 848	768	2 622	1 717		71 680	7 135	37 027		130 598		566 431
213	630		104		16 684		35 191		11 757		216 794
5 488		2 302	414		7 054	293	1 362		8 394		69 887
46 146	138	321	1 199		47 941	6 843	473		110 447		279 750
1 055	4	209	748		1 154				1 417		37 493
128	71	422							40		867
14 448	569	40	148		2 613		6 269		61 216		435 180

Power generation table in 2017 (Continued)

GWh

Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
322 062	44 163	4 523	53 091	94 370	1 092 171	52 387	270 279	185 510	4 258 232	195 749	16 127 948
259 562	8 271	3 177	21 596	71 182	700 204	50 764	232 100	156 380	2 691 535	109 278	10 968 533
31 054	1 212		779	46 847	174 569	679	125 925	35 782	1 321 421	67 558	7 344 274
38 498	6	2 484	1 118	3 787	6 975	366	12 760	334	32 411	700	232 533
190 010	7 053	694	19 699	20 547	518 660	49 719	93 415	120 264	1 337 703	41 020	3 391 726
31 981	25 183	877	29 060	9 611	185 013		8 780	4 832	302 362	85 940	2 433 738
10 883					203 143		22 446		838 861		1 605 854
5 945	7 907	420		10 270	435			1	18 726		58 990
13 691	2 802	49	2 435	3 308	3 376	1 623	6 953	24 297	406 748	531	1 060 833
246 921	42 709	1 325	50 458	94 370	858 849	46 193	234 246	185 510	4 117 150	195 749	14 619 587
197 006	7 384	622	20 433	71 182	470 793	44 570	201 100	156 380	2 593 201	109 278	9 649 359
30 752	550		650	46 847	129 484	679	98 491	35 782	1 313 144	67 558	6 505 017
32 228	6	409	1 018	3 787	839	23	11 647	334	24 947	700	169 168
134 026	6 828	214	18 765	20 547	340 470	43 868	90 962	120 264	1 255 111	41 020	2 975 173
31 039	25 183	667	28 379	9 611	183 780		8 780	4 832	300 711	85 940	2 396 427
10 883					203 143		22 446		838 861		1 605 854
5 795	7 838			10 270	435			1	18 726		58 226
2 198	2 304	36	1 646	3 308	698	1 623	1 920	24 297	365 651	531	909 722
75 141	1 454	3 197	2 633		233 322	6 194	36 032		141 082		1 508 361
62 556	887	2 555	1 163		229 411	6 194	31 000		98 334		1 319 174
302	662		129		45 085		27 434		8 277		839 257
6 270		2 075	100		6 136	343	1 113		7 464		63 365
55 984	225	480	934		178 190	5 851	2 453		82 592		416 553
942		209	681		1 233				1 651		37 312
150	69	420									764
11 493	498	13	789		2 678		5 032		41 097		151 111

Fuel consumption table for power generation in 2018

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea	Malaysia
Main activity producers	- 1 953	- 49	- 906	- 396	- 49 744	- 383	- 2 983	- 5 794	- 3 384	- 1 354
Coal	- 1 574		- 452	- 279	- 45 936	- 270	- 2 244	- 2 502	- 2 156	- 857
Coke					- 6			- 1		
Coke oven gas					- 347			- 39	- 21	
Blast furnace gas								- 99	- 55	
Crude oil & NGL					- 6			- 21		
LPG								- 9		
Refinery gas					- 28			- 61		
Naphtha					- 2					
Diesel oil	- 6	- 1	- 9	- 5	- 11	- 3	- 126	- 14	- 6	- 8
Fuel oil	- 1		- 21		- 6		- 35	- 132	- 59	- 1
Natural gas	- 354	- 49	- 388	- 86	- 2 057	- 110	- 392	- 2 675	- 1 014	- 484
Others	- 18		- 37	- 25	- 1 344		- 186	- 242	- 72	- 5
Autoproducers	- 230	- 6	- 357	- 174	- 1 249	- 2		- 678	- 405	- 71
Coal								- 172	- 151	
Coke										
Coke oven gas			- 2					- 16	- 16	
Blast furnace gas					- 1 088			- 92	- 66	
Crude oil & NGL										
LPG					- 2			- 7		
Refinery gas			- 13		- 79			- 65		
Naphtha					- 53				- 48	
Diesel oil	- 38		- 6	- 2	- 2			- 10		- 6
Fuel oil	- 1		- 2	- 2	- 25			- 40		
Natural gas	- 161	- 6	- 259	- 5				- 136	- 73	- 53
Others	- 30		- 76	- 165		- 2		- 139	- 52	- 11

Fuel consumption table for power generation in 2017

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea	Malaysia
Main activity producers	- 2 017	- 46	- 953	- 419	- 46 627	- 380	- 2 653	- 6 211	- 3 172	- 1 305
Coal	- 1 640		- 580	- 290	- 43 116	- 263	- 2 043	- 2 609	- 2 151	- 794
Coke								- 1		
Coke oven gas					- 366			- 46	- 20	
Blast furnace gas								- 148	- 57	
Crude oil & NGL					- 6			- 57		
LPG								- 9		
Refinery gas					- 31			- 73		
Naphtha					- 4					
Diesel oil	- 6	- 1	- 8	- 9	- 10	- 4	- 165	- 22	- 6	- 6
Fuel oil	- 1		- 24		- 7		- 26	- 196	- 54	- 4
Natural gas	- 352	- 45	- 303	- 91	- 1 778	- 113	- 408	- 2 839	- 827	- 497
Others	- 18		- 38	- 29	- 1 309		- 10	- 212	- 57	- 4
Autoproducers	- 221	- 6	- 360	- 175	- 1 043	- 3		- 629	- 409	- 59
Coal								- 162	- 162	
Coke										
Coke oven gas			- 2					- 10	- 15	
Blast furnace gas					- 900			- 48	- 65	
Crude oil & NGL										
LPG					- 2			- 7		
Refinery gas			- 11		- 76			- 75		
Naphtha					- 34				- 46	
Diesel oil	- 39		- 4	- 3	- 3			- 10		- 9
Fuel oil	- 1		- 2	- 3	- 28			- 43		
Natural gas	- 151	- 6	- 259	- 4				- 137	- 70	- 43
Others	- 30		- 82	- 165		- 3		- 134	- 51	- 6

Fuel consumption table for power generation in 2018 (Continued)

petajoules

Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
- 1 786	- 53	- 9	- 175	- 754	- 7 631	- 317	- 1 592	- 1 695	- 23 541	- 1 415	- 105 912
- 324	- 9			- 577	- 1 952	- 12	- 857	- 289	- 12 266	- 1 060	- 73 615
											- 7
									- 1		- 407
									- 8		- 163
											- 27
											- 9
											- 89
											- 2
- 34		- 1	- 2	- 16			- 3	- 1	- 99	- 1	- 348
- 253		- 5	- 3	- 15	- 40		- 65	- 1	- 111	- 5	- 753
- 1 175	- 43	- 2	- 158	- 139	- 5 638	- 276	- 665	- 1 083	- 10 424	- 288	- 27 499
	- 2		- 11	- 8		- 28	- 1	- 321	- 632	- 61	- 2 994
- 595	- 15	- 32	- 30	- 8	- 3 935	- 48	- 440	- 25	- 1 003		- 9 305
			- 5		- 612		- 338		- 52		- 1 329
	- 2				- 62		- 13		- 2		- 113
- 2	- 5				- 72		- 26		- 12		- 1 364
					- 20						- 20
- 4					- 2						- 14
						- 2	- 10		- 64		- 234
											- 101
- 5		- 6	- 6		- 64				- 2		- 148
- 11		- 22	- 3		- 163	- 3	- 4		- 1		- 277
- 491	- 2	- 4	- 10		- 2 757	- 43	- 4		- 626		- 4 629
- 82	- 6		- 7	- 8	- 183		- 46	- 25	- 243		- 1 075

Fuel consumption table for power generation in 2017 (Continued)

petajoules

Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
- 1 792	- 59	- 8	- 186	- 686	- 7 319	- 322	- 1 663	- 2 081	- 22 699	- 1 120	- 101 720
- 345	- 5		- 8	- 515	- 1 810	- 12	- 881	- 297	- 12 835	- 791	- 70 985
											- 1
									- 1		- 434
									- 8		- 213
											- 63
											- 9
											- 104
											- 4
- 24		- 1	- 10	- 17			- 5	- 2	- 56		- 353
- 291		- 5	- 4	- 24	- 34		- 108	- 1	- 63	- 1	- 844
- 1 132	- 52	- 2	- 155	- 129	- 5 475	- 280	- 668	- 1 493	- 9 095	- 275	- 26 010
	- 2		- 10	- 1		- 30	- 1	- 288	- 640	- 53	- 2 701
- 580	- 15	- 32	- 30	- 16	- 3 956	- 44	- 366	- 22	- 972		- 8 938
			- 2		- 539		- 277		- 59		- 1 201
	- 2				- 62		- 12		- 2		- 105
- 3	- 6				- 76		- 25		- 10		- 1 133
					- 21						- 21
- 2					- 1						- 12
					- 25	- 3	- 4		- 57		- 250
											- 81
- 7		- 5	- 5		- 66				- 2		- 155
- 14		- 21	- 2		- 123	- 4	- 2		- 1		- 245
- 473	- 2	- 6	- 10		- 2 865	- 37	- 3		- 599		- 4 666
- 80	- 6		- 11	- 16	- 177		- 43	- 22	- 242		- 1 068

Power generation capacity - total

MW

	1990	2010	2011	2012	2013	2014	2015	2016	2017	2018
Australia	38 451	60 068	61 939	64 246	64 026	66 557	66 353	65 559	66 455	68 902
Brunei Darussalam	307	889	895	915	917	920	923	923	993	1 007
Canada	104 141	132 375	132 959	132 598	132 598	140 340	148 150	144 023	147 629	148 682
Chile	5 099	16 231	17 549	18 153	18 515	20 513	22 431	25 798	26 310	27 512
China	137 891	962 180	1 064 550	1 144 750	1 247 280	1 370 190	1 525 270	1 650 509	1 777 085	1 899 660
Hong Kong, China	8 342	12 624	12 624	12 625	12 625	12 626	12 626	10 685	10 557	10 353
Indonesia	9 275	40 487	48 397	48 733	54 905	57 003	59 399	59 653	60 793	63 254
Japan	188 700	281 082	282 284	285 643	287 060	287 060	291 836	299 362	334 428	334 428
Korea	38 401	84 750	84 650	87 826	91 478	99 817	103 191	111 203	122 950	127 476
Malaysia	5 582	24 817	25 599	29 143	29 748	29 974	30 439	33 045	33 592	33 592
Mexico	27 371	62 290	61 600	62 136	63 611	66 238	67 333	72 334	74 431	76 921
New Zealand	7 176	9 457	9 765	9 615	9 622	9 704	9 455	9 288	9 305	9 267
Papua New Guinea	490	N.A.	N.A.	N.A.	N.A.	770	1 174	1 181	1 181	1 181
Peru	4 143	N.A.	N.A.	9 699	11 051	10 269	10 908	14 009	14 735	15 174
Philippines	6 869	13 319	16 162	17 025	17 325	17 944	18 695	21 423	22 728	22 728
Russia	213 400	222 935	222 984	232 685	239 423	259 020	257 075	257 967	258 844	260 199
Singapore	3 667	10 265	10 222	10 488	11 221	12 863	13 042	13 474	13 355	13 355
Chinese Taipei	17 819	49 036	48 961	48 655	49 126	48 750	49 143	50 493	49 753	52 680
Thailand	8 725	31 486	31 772	33 178	34 973	34 973	35 808	48 276	49 048	50 947
United States	733 589	1 040 980	1 055 278	1 067 878	1 065 092	1 073 438	1 062 691	1 092 400	1 100 333	1 119 130
Viet Nam	2 537	21 542	23 527	26 475	30 662	34 215	38 523	38 643	45 410	49 410

Power generation capacity - thermal power

MW

	1990	2010	2011	2012	2013	2014	2015	2016	2017	2018
Australia	30 130	49 028	49 626	50 459	49 509	49 977	49 710	47 786	46 013	46 311
Brunei Darussalam	307	888	894	914	915	919	922	922	992	1 006
Canada	31 201	40 424	38 939	34 660	34 660	34 174	40 946	35 076	37 429	37 322
Chile	2 421	10 050	10 871	11 125	10 838	12 324	13 616	15 736	15 600	15 973
China	101 845	706 630	768 520	819 170	862 380	894 420	970 460	1 060 944	1 104 946	1 143 670
Hong Kong, China	8 342	12 624	12 624	12 625	12 625	12 625	12 625	10 668	10 510	10 300
Indonesia	7 040	27 973	34 717	33 759	38 508	40 178	42 506	42 428	43 320	43 924
Japan	119 303	181 736	182 382	185 309	188 904	188 904	190 805	194 669	197 092	197 092
Korea	11 065	59 301	58 361	59 175	61 924	69 286	70 287	75 778	86 627	89 361
Malaysia	4 185	22 488	22 515	24 994	24 973	24 243	23 518	25 732	26 436	26 436
Mexico	18 155	47 736	47 070	46 707	48 047	48 797	49 421	53 047	54 388	54 388
New Zealand	2 296	2 929	3 138	2 988	2 738	2 661	2 389	2 221	2 209	2 216
Papua New Guinea	335	N.A.	N.A.	N.A.	N.A.	251	824	831	831	831
Peru	1 744	4 682	N.A.	5 828	7 414	6 464	6 464	8 328	9 004	9 154
Philippines	3 661	9 041	10 772	11 504	11 784	12 047	12 365	14 465	15 649	15 649
Russia	149 700	151 114	151 114	157 845	163 926	182 465	179 148	179 148	179 148	179 148
Singapore	3 667	10 261	10 216	10 478	10 964	12 607	12 726	13 092	13 243	13 243
Chinese Taipei	10 041	37 939	37 647	37 078	37 300	36 665	36 654	37 471	36 730	39 310
Thailand	6 451	25 109	25 145	28 859	30 119	30 119	30 719	38 685	38 685	39 365
United States	536 667	793 551	798 833	793 352	787 297	789 624	773 980	769 999	764 805	768 366
Viet Nam	1 362	13 338	13 338	13 778	15 931	18 751	21 822	21 855	25 777	27 970

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A. Definition of products

Coal

This section includes coal, i.e. solid fossil fuel consisting of carbonised vegetal matter, and coal products derived directly or indirectly from the various classes of coal by carbonisation or pyrolysis processes, by the aggregation of finely divided coal or by chemical reactions with oxidising agents, including water.

1. Anthracite

A high-rank, hard coal with a gross calorific value (moist, ash- free basis) greater than or equal to 24 MJ/kg and a Vitrinite mean random reflectance greater than or equal to 2.0 per cent.

2. Coking coal

A bituminous coal that can be used in the production of a coke capable of supporting a blast furnace charge.

3. Bituminous coal

A medium-rank hard coal with either a gross calorific value (moist, ash-free basis) not less than 24 MJ/kg and with a Vitrinite mean random reflectance less than 2%, or a gross calorific value (moist, ash-free basis) less than 24 MJ/kg provided that the Vitrinite mean random reflectance is equal to or greater than 0.6%.

4. Sub-bituminous coal

A brown coal with a gross calorific value (moist, ash-free basis) equal to or greater than 20 MJ/kg but less than 24 MJ/kg.

5. Lignite

A brown coal with a gross calorific value (moist, ash-free basis) less than 20 MJ/kg.

6. 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 forms for use as a fuel, sod peat and milled peat.

7. Patent fuel

A composition fuel made by moulding hard coal fines into briquette shapes with the addition of a binding agent.

8. Coke oven coke

Coke comprises coke oven coke and gas coke.

- **Coke oven coke:** the solid product obtained from carbonisation of coking coal at high temperature. Coke oven coke is low in moisture, and volatile matter and has the mechanical strength to support a blast furnace charge. It is used mainly in the iron and steel industry acting as heat source and chemical agent.
- **Gas coke:** a by-product from the carbonisation of bituminous coal for the manufacture of "gas works gas". Gas coke is used mainly for heating purposes.

9. Coal tar

The liquid by-product of the carbonisation of coal in coke ovens.

10. BKB/PB (Braunkohlenbriketts/Peat briquettes)

BKB is a composition fuel made of brown coal produced by briquetting under high pressure with or without the addition of a binding agent.

Peat briquette is a fuel comprising of small blocks of dried, highly compressed peat made without a binding agent.

11. Gas works gas

This group includes gases obtained from the carbonisation or gasification of carbonaceous material of fossil or biomass origins in gas works. The gases comprise: (a) gases obtained from carbonisation or gasification of coals, cokes, biomass or waste; and (b) substitute natural gas (a methane-rich gas) made from synthesis gas.

12. Coke oven gas

A gas produced from coke ovens during the manufacture of coke oven coke.

13. Blast furnace gas

The by-product gas of blast furnace operation

consisting mainly of nitrogen, carbon dioxide and carbon monoxide. The gas is recovered as it leaves the furnace. Its calorific value arises mainly from the carbon monoxide produced by the partial combustion of coke and other carbon bearing products in the blast furnace. It is used to heat blast air and as a fuel in the iron and steel industry. It may also be used by other nearby industrial plants. Note that where carbonised biomass (e.g, charcoal or animal meal) is used in blast furnaces, part of the carbon supply may be considered renewable.

14. Oxygen steel furnace gas

The by-product gas of the production of steel in a basic oxygen furnace. The gas is recovered as it leaves the furnace.

Oil

1. Crude oil

A mineral oil of fossil origin extracted by conventional means from underground reservoirs, and comprises liquid or near-liquid hydrocarbons and associated impurities such as sulphur and metals.

It exists in the liquid phase under normal surface temperature and pressure, and usually flows to the surface under the pressure of the reservoir. This is termed "conventional" extraction. Crude oil includes condensate from condensate fields, and "field" or "lease" condensate extracted with the crude oil.

2. Natural gas liquids (NGL)

Mixture of ethane, propane, butane (normal and iso), (iso) pentane and a few higher alkanes collectively referred to as pentanes plus.

NGL are produced in association with oil or natural gas. They are removed in field facilities or gas separation plants before sale of the gas. All of the components of NGL except ethane are either liquid at the surface or are liquefied for disposal.

3. Refinery feedstocks

Oils or gases from crude oil refining or the processing of hydrocarbons in the petrochemical industry which are destined for further processing in the refinery excluding blending. Typical feedstocks include naphthas, middle distillates, pyrolysis gasoline and heavy oils from vacuum distillation and petrochemical plants.

4. Additives/Oxygenates

Compounds added to or blended with oil products

to modify their properties (octane, cetane, cold properties, etc.) Examples of these products are: (a) oxygenates such as alcohols (methanol, ethanol) and ethers such as methyl tertiary butyl ether (MTBE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME); (b) esters such as (e.g., rapeseed or dimethylester, etc.) and (c) chemical compounds such as tetramethyllead (TML), tetraethyllead (TEL) and detergents. Some additives and oxygenates may be derived from biomass while others may be of hydrocarbon origin.

5. Biofuels

Fuels derived directly or indirectly from biomass.

- **Biogasoline:** liquid fuels derived from biomass and used in spark-ignition internal combustion engines.
- **Biodiesel:** liquid biofuels derived from biomass and used in diesel engines.
- **Bio-jet kerosene:** liquid biofuels derived from biomass and blended with or replacing jet kerosene.
- **Bioethanol:** ethanol produced from biomass and/or biodegradable fraction of waste;
- **Biomethanol:** methanol produced from biomass and/or the biodegradable fraction of waste;
- **Biodimethylether:** a diesel quality fuel produced from biomass and/or the biodegradable fraction of waste;
- **Bio-oil:** a pyrolysis oil fuel produced from biomass

6. Other hydrocarbons

These are non-conventional oil and hydrogen. Non-conventional oils refer to oils obtained by non-conventional production techniques, that is oils

which are extracted from reservoirs containing extra heavy oils or oil sands which need heating or treatment (e.g., emulsification) in situ before they can be brought to the surface for refining/processing. They also include oils extracted from oil sands, extra heavy oils, coal and oil shale which are at, or can be brought to the surface without treatment and require processing after mining (ex situ processing). Non-conventional oils may also be produced from natural gas. Hydrogen, although not a hydrocarbon, is included unless it is a component of another gas.

7. Refinery gas (not liquefied)

A mixture of non-condensable gases mainly consisting of hydrogen, methane, ethane and olefins obtained during distillation of crude oil or treatment of oil products (e.g., cracking) in refineries or from nearby petrochemical plants. It is used mainly as a fuel within the refinery.

8. Ethane

A naturally gaseous straight-chain hydrocarbon (C_2H_6). Ethane is obtained at gas separation plants or from the refining of crude oil. It is a valuable feedstock for petrochemical manufacture.

9. Liquefied petroleum gases (LPG)

Refers to liquefied propane (C_3H_8) and butane (C_4H_{10}) or mixtures of both. Commercial grades are usually mixtures of the gases with small amounts of propylene, butylene, isobutene and isobutylene stored under pressure in containers.

10. Naphtha

Refers to light or medium oils distilling between 30°C and 210°C which do not meet the specification for motor gasoline. The main uses for naphthas are as feedstock for high octane gasolines and the manufacture of olefins in the petrochemical industry.

11. Gasolines

Complex mixtures of volatile hydrocarbons distilling between approximately 25°C and 220°C and consisting of compounds in the C₄ to C₁₂ range.

- **Motor gasoline:** motor gasoline is a mixture of some aromatics (for example, benzene and toluene) and aliphatic hydrocarbons in the C₅ to C₁₂ range. The distillations range is 25°C to 220°C. Motor gasoline may also contain biogasoline products.
- **Aviation gasoline:** aviation gasoline is gasoline prepared especially for aviation piston engines with additives which assure performance under flight conditions. Aviation gasolines are predominantly alkylates (obtained by combining C₄ and C₅ isoparaffins with C₃, C₄ and C₅ olefins) with the possible addition of more aromatic components including toluene. The distillation range is 25°C to 170°C.
- **Gasoline-type jet fuel:** this includes all light hydrocarbon oils for use in aviation turbine power units, distilling between 100°C and 250°C. They are obtained by blending kerosene and gasoline or naphtha in such a way that the aromatic content does not exceed 25% in volume and the vapor pressure is between 13.7 kilopascal (kPa) and 20.6 kPa.

12. Kerosenes

Comprise kerosene-type jet fuel and other kerosene. This is a mixture of hydrocarbons in the range C₉ to C₁₆ distilling over the temperature interval 145°C to 300°C, but not usually above 250°C, and with a flash point above 38°C.

- **Kerosene type jet fuel:** this is a blend of kerosene suited to flight conditions with particular specifications, such as freezing point.

The specifications are set down by a small number of national standards committees, most notably, ASTM (US), MOD (UK), GOST (Russia).

- **Other kerosene:** kerosene used for heating, cooking, lighting, solvents and internal combustion engines. Other names of this product are burning oil, vaporising oil, power kerosene and illuminating oil.

13. Gas/Diesel oil (Distillate fuel oil)

Middle distillates, predominantly of carbon number range C₁₁ to C₂₅ and with a distillation range of 160°C to 420°C. This product comprises road diesel and heating or other gas oil.

14. Fuel oil

This comprises residual fuel oil and heavy fuel oil which is usually a blended product based on the residues from various refinery, distillation and cracking processes. Residual fuel oils A-5 have a distillation range of 350°C to 650°C and a kinematic viscosity in the range 6 to 55 centistokes (cSt) at 100°C. Their flash point is always above 60°C and their specific gravity is above 0.95.

15. White spirit and SBP

White spirit and special boiling point industrial spirits (SBP) are refined distillate intermediates with a distillation in the naphtha/kerosene range. They are mainly used for non-fuel purposes and sub-divided as: (a) white spirit - an industrial spirit with a flash point above 30°C and a distillation range of 135°C to 200°C; and (b) industrial spirit (SBP) - light oils distilling between 30°C and 200°C.

16. Lubricants

Oils, produced from crude oil, for which the principal use is to reduce friction between sliding surfaces and during metal cutting operations.

17. Bitumen

A solid, semi-solid or viscous hydrocarbon with a colloidal structure, being brown to black in color. It is obtained as a residue in the distillation of crude oil and by vacuum distillation of oil residues from atmospheric distillation. It should not be confused with the nonconventional primary extra heavy oils which may also be referred to as bitumen.

18. Paraffin waxes

Residues extracted when dewaxing lubricant oils. The waxes have a crystalline structure which varies in fineness according to the grade, and are colourless, odourless and translucent, with a melting point above 45°C.

19. Petroleum coke

A black solid obtained mainly by cracking and carbonising heavy hydrocarbon oils, tars and pitches.

It consists mainly of carbon (90 to 95 per cent) and has a low ash content. The two most important categories are "green coke" and "calcined coke". Green coke (raw coke) is the primary solid carbonisation product from high boiling hydrocarbon fractions obtained at temperatures below 630°C. It contains 4-15 per cent by weight of matter that can be released as volatiles during subsequent heat treatment at temperatures up to approximately 1330°C. Calcined coke is a petroleum coke or coal-derived pitch coke obtained by heat treatment of green coke to about 1330°C. It will normally have a hydrogen content of less than 0.1 per cent by weight.

20. Other products

Other products include products (including partly refined products) from the refining of crude oil and feedstocks which are not specified above.

Gas

1. Natural gas

A mixture of gaseous hydrocarbons, primarily methane, but generally also including ethane, propane and higher hydrocarbons in much smaller amounts and some noncombustible gases such as nitrogen and carbon dioxide.

- **Associated gas:** gas produced in association with crude oil.
- **Non-associated gas:** gas originating from fields producing hydrocarbons only in gaseous form.
- **Colliery gas:** gas recovered from coal mines.
- **Shale gas:** natural gas produced from

hydrocarbon rich shale formation. Shale gas is typically a dry gas primarily composed of methane (90% or more methane), but some formations do produce wet gas.

- **Coal seam gas:** Coal seam gas (also known as coal bed methane) is a form of natural gas extracted from coal seams.

2. LNG

Liquid natural gas is produced by liquefaction of natural gas, liquefied by reducing its temperature in order to simplify storage and transportation when production sites are remote from centres of consumption and pipeline transportation is not economically practicable.

New and renewable energy

1. Fuelwood

Fuelwood (in log, brushwood, pellet or chip form) obtained from natural or managed forests or isolated trees. Also included are wood residues used as fuel and in which the original composition of wood is retained. Charcoal and black liquor are excluded.

2. Woodwaste

Yard trash and types of waste typically generated by sawmills, plywood mills, and woodyards associated with the lumber and paper industry, such as wood residue, cutoffs, wood chips, sawdust, wood shavings, bark, wood refuse, wood-fired boiler ash, and plywood or other bonded materials that contain only phenolic-based glues or other glues that are approved specifically by the administrative authority.

3. Bagasse

The fuel obtained from the fibre which remains after juice extraction in sugar cane processing.

4. Charcoal

The solid residue from the carbonisation of wood or other vegetal matter through slow pyrolysis.

5. Other biomass

All other solid biomass products not specifically mentioned above. This includes agricultural wastes such as straw, rice husks, nut shells, poultry litter, crushed grape dregs, palm oil bunches, etc. The quantity of fuel used should be reported on a net calorific value basis.

6. Biogas

Gases arising from the anaerobic fermentation of biomass and the gasification of solid biomass (including biomass in wastes).

- **Landfill gas:** biogas from the anaerobic fermentation of organic matter in landfills.
- **Sewage sludge gas:** biogas from the anaerobic fermentation of waste matter in sewage plants.
- **Other biogas:** other biogases from anaerobic fermentation not elsewhere specified.

7. Industrial waste

Non-renewable waste which is combusted with heat recovery in plants other than those used for the incineration of municipal waste.

8. Municipal solid waste (renewables)

Household waste and waste from companies and public services that resembles household waste and which is collected at installations specifically designed for the disposal of mixed wastes with recovery of combustible liquids, gases or heat.

9. Liquid Biofuels

Liquids derived from biomass and used as fuels.

- **Biogasoline** refers to liquid fuels derived from biomass and used in spark- ignition internal combustion engines. Biogasoline may be blended with petroleum gasoline or used directly in engines. The blending may take place in refineries or at or near the point of sale.
- **Bioethanol** refers to ethanol produced from biomass.
- **Biodiesel** refers to liquid biofuels derived from biomass and used in diesel engines. Biodiesels may be blended with petroleum diesel or used directly in diesel engines.
- **Bio-jet kerosene** refers to liquid biofuels derived from biomass and blended with or

replacing jet kerosene.

10. Hydro

Electricity produced from devices driven by fresh, flowing or falling water.

11. Geothermal

Electricity and heat generation produced from geothermal plants.

12. Solar

- **Electricity from solar photovoltaics** refers to electricity produced by the direct conversion of solar radiation through photovoltaic processes in semiconductor devices (solar cells), including concentrating photovoltaic systems.
- **Heat from concentrating solar thermal** refers

to high temperature heat produced from solar radiation captured by concentrating solar thermal systems. The high temperature heat can be transformed to generate electricity, drive chemical reactions, or be used directly in industrial processes.

- **Heat from non-concentrating solar thermal** refers to low temperature heat produced from solar radiation captured by non-concentrating solar thermal systems.

13. Tide/wave/ocean

Electricity generation produced from tide / wave / ocean.

14. Wind energy

Electricity produced from devices driven by wind.

Electricity and heat

Electricity – electricity is an energy carrier with a wide range of application. It is used in almost all kinds of human activity ranging from industrial production, household use, agriculture, commerce for running machines, lighting and heating.

Heat – heat is an energy carrier primarily used for warming spaces and industrial processes. Heat energy reported in this publication includes district cooling energy. District cooling is the production and delivery of chilled water via insulated pipelines from central water chilling plants to various costumers.

Sources of electricity and heat:

1. Thermal

Electricity and heat generation from combustible fuels such as coal, oil and gas.

2. Hydro

Electricity generation from hydro plants, including pumped up (pumped storage) plants.

3. Nuclear

Electricity and heat generation from nuclear plants.

4. Geothermal

Electricity and heat generation from geothermal plants.

5. Renewable energy

Electricity and heat generation from solar, biomass, and waste and electricity generation from tide, wave, ocean and wind.

▫ Solar

- **Electricity:** quantity of electricity generated by solar photovoltaic and from solar thermal systems.
- **Heat:** solar energy exploited for hot water production by: Flat plate collectors, mainly of the thermosyphon type, for domestic hot water or for the seasonal heating of

swimming pools.

Note: Passive solar energy for the direct heating, cooling and lighting dwellings or other buildings is not included.

- **Tide, wave, ocean:** electricity generation produced from tide / wave / ocean energy.
- **Wind:** electricity produced from devices driven by wind.

- **Biomass:** electricity and heat produced by fuelwood, woodwaste, bagasse, other biomass, biogas and liquid biofuels.
- **Waste:** electricity and heat produced by industrial waste and municipal solid waste.

6. Others

Electricity and heat generation from other fuel sources such as fuel cells, etc.

B. Definition of flows

Supply sector

Domestic supply is defined as *indigenous production + from other sources + imports - exports - international marine bunkers - international aviation bunkers ± stock changes*.

1. Production

Production is defined as the capture, extraction or manufacture of fuels or energy in forms which are ready for general use. In energy statistics, two types of production are distinguished, primary and secondary. *Primary production* is the capture or extraction of fuels or energy from natural energy flows, the biosphere and natural reserves of fossil fuels within the national territory in a form suitable for use. Inert matter removed from the extracted fuels and quantities reinjected, flared or vented are not included. The resulting products are referred to as "primary" products. *Secondary production* is the manufacture of energy products through the process of transformation of primary fuels or energy. The quantities of secondary fuels reported as production include quantities lost through venting and flaring during and after production. In this manner, the mass, energy and carbon within the primary source(s) from which the fuels are manufactured may be balanced against the secondary fuels produced. Fuels, electricity and heat produced are usually sold but may be partly or entirely consumed by the producer.

There are a few specificities according to the fuels:

- **Oil:** production includes only marketable production, and excludes volumes returned to formation. Such production should include all crude oil, NGL, condensates and oil from shale and tar sand, etc. It should also include the

receipts of additives/ oxygentates by refineries and blending plants from outside the refinery sector.

- **Natural gas:** all dry marketable production is measured after purification and extraction of NGLs and sulphur. Quantities reinjected, vented or flared, are not included. Production includes quantities used within the natural gas industry; in gas extraction, pipeline systems and processing plants.

Calculation of production of hydro, geothermal, solar, wind, etc. and nuclear follows some conventions used by selected international organisations.

As regards the production of secondary energy in the basic energy statistics, production of secondary oil products represents the gross refinery output. Secondary coal products and gases represent the output from coke ovens, gas works, blast furnaces and other transformation processes. In the energy balances production of secondary products is zero and the gross refinery output is included in the transformation sector.

Production from other sources: production from other sources refers to both primary energy that has not been accounted for under production and secondary energy that has been accounted for in the production of another fuel. There are a few examples:

- additives and other hydrocarbons produced from coal, gas or renewables;
- oil and coal used in natural gas blending plants to adjust calorific value;

- recovered slurries, middling and other low grade coal products which cannot be classified according to the main categories of coal.

2. Imports and exports

Imports of energy products comprise all fuel and other energy products entering the national territory. Goods simply being transported through a country (goods in transit) and goods temporarily admitted are excluded but re-imports, which are domestic goods exported but subsequently readmitted, are included. The bunkering of fuel outside the reference territory by national merchant ships and civil aircraft engaged in international travel is excluded from imports. Fuels delivered to national merchant ships and civil aircraft which are outside of the national territory and are engaged in international travel should be classified as "international marine" or "aviation bunkers", respectively, in the country where such bunkering is carried out. Note that the "country of origin" of energy products should be recorded as a country from which goods were imported.

Exports of energy products comprise all fuel and other energy products leaving the national territory with the exception that exports exclude quantities of fuels delivered for use by merchant (including passenger) ships and civil aircraft, of all nationalities, during international transport of goods and passengers. Goods simply being transported through a country (goods in transit) and goods temporarily withdrawn are excluded but re-exports, foreign goods exported in the same state as previously imported, are included. Fuels delivered to foreign merchant ships and civil aircraft engaged in international travel are classified as "international marine" or "aviation bunkers", respectively. Note that "country of destination" of energy products (that is country of the last known destination as it is known

at the time of exportation) should be recorded as a country to which these products are exported to.

Quantities of crude oil and products imported or exported under processing agreements (i.e. refining on account) should be included. Crude oil and NGLs should be reported as coming from the economy of ultimate origin; refinery feedstocks and finished products should be reported as coming from the economy of last consignment. Any gas liquids (e.g. LPG) extracted during the regasification of imported liquefied natural gas should be included as imports. Petroleum products imported or exported directly by the petrochemical industry should be included.

Note: Imports or exports of ethanol (reported in the Additives/Oxygenate column) should relate to the quantities destined for fuel use.

- Re-exports of oil imported for processing within bonded areas should be included as an export of product from the processing economy to the final destination.

3. International marine bunkers

International marine bunkers are quantities of fuels delivered to merchant (including passenger) ships, of any nationality, for consumption during international voyages transporting goods or passengers. International voyages take place when the ports of departure and arrival are in different national territories. Fuels delivered for consumption by ships during domestic transportation, fishing or military uses are not included here. For the purposes of energy statistics, International marine bunkers are not included in exports. Consumption of warships should be included in final consumption under other sector, not elsewhere specified. Consumption by ships engaged in fishing and in transport in inland and coastal waters is not included.

4. International aviation bunkers

International aviation bunkers are quantities of fuels delivered to civil aircraft, of any nationality, for consumption during international flights transporting goods or passengers. International flights take place when the ports of departure and arrival are in different national territories. Fuels delivered for consumption by aircraft undertaking domestic or military flights are not included here. Fuels used by airlines for their road vehicles are excluded. The domestic/international split should be determined on the basis of departure and landing locations and not by the nationality of the airline.

5. Stock changes

Stocks are quantities of energy products that can be held and used to: (a) maintain service under conditions where supply and demand are variable in their timing or amount due to normal market fluctuations, or (b) supplement supply in the case of a supply disruption. Stocks used to manage a supply disruption may be called "strategic" or "emergency" stocks and are often held separately from stocks designed to meet normal market fluctuations. Stock changes are defined as the increase (stock build) or decrease (stock draw) in the quantity of stock over

the reporting period. They are calculated as a difference between the opening and closing stocks.

6. Transfers

This refers to products transferred and inter-product transfers. *Product transferred* refers to the reclassification (renaming) of products which is necessary when finished oil products are used as feedstock in refineries. *Interproduct transfers* refer to the movements of fuels between product categories because of reclassification of a product which no longer meets its original specification. The transferred product is often blended with its host. For example, quantities of kerosene may be reclassified as gas oil after blending with the latter in order to meet its winter diesel specification.

7. Statistical difference

This is the difference between calculated and observed gross inland deliveries. National Administrations sometimes obtain the data components of domestic availability from a variety of sources. Owing to differences in concepts, coverage, timing and definitions, observed and calculated gross inland deliveries are often not identical.

Transformation sector

Transformation is the process where the movement of part or all of the energy content of a product entering a process to one or more different products leaving the process (e.g. coking coal to coke, crude oil to petroleum products, and heavy fuel oil to electricity). The transformation can take place in various plants including: electricity plants, combined heat and power plants, heat plants, blast furnace/gas works, coke/patent fuel/BKB plants, petroleum refineries, petrochemical industry, liquefaction plants, and other plants.

1. Electricity plants

Electricity plants refer to plants producing only electricity. The electricity may be obtained directly from natural sources such as hydro, geothermal, wind, tidal, marine, solar energy or from fuel cells or from the heat obtained from the combustion of fuels or nuclear reactions.

2. Combined heat and power plants (CHP)

Combined heat and power plants refer to plants which produce both heat and electricity from at least

one generating unit in the plant. They are sometimes referred to as “co-generation” plants. Both main activity producer (formerly known as public) and autoproducer plants are included here.

3. Heat plants

Heat plants refer to plants (including heat pumps and electric boilers) designed to produce heat only for deliveries to third parties. Both main activity producer (formerly known as public) and autoproducer plants are included here. Deliveries of fuels for heat generated by an establishment for its own use are classified within the part of final consumption where they are consumed.

Heat plants also include district cooling plants. District cooling plants produce chilled-water for deliveries to third parties. Chilled water is used for air-conditioning.

4. Blast furnaces

Blast furnaces are furnaces which produce blast furnace gas as a by-product when making pig iron from iron ore. During the process, carbon, mainly in the form of coke, is added to the blast furnace to support and reduce the iron oxide charge and provide heat. Blast furnace gas comprises carbon monoxide and other gases formed during the heating and reduction process.

5. Gas works

Gas works plants are for the production of town gas/gas work gas by carbonisation (including gas produced by coke ovens and transferred to gas works gas), by total gasification with or without enrichment with oil products (LPG, residual fuel oil, etc.) and by reforming and simple mixing of gases and/or air.

6. Coke ovens

Coke ovens are facilities for the carbonisation of coal, principally coking coal, at high temperature. The transformation process provide for the production of coke and by-products such as coke oven gas and coal tar.

7. Patent fuel plants

Patent fuel plants are for the manufacturing of a composition fuel made of hard coal fines and addition of a binding agent.

8. BKB plants

BKB (brown coal briquettes) plants are for the manufacturing of a composition fuel made of lignite/brown coal (including dried lignite fines and dust) produced by briquetting under high pressure without the addition of a binding agent. This includes peat briquettes plants which produce a similar composition fuel using peat.

9. Petroleum refineries

Petroleum refineries are industrial plants which transform crude oil and other hydrocarbons into finished oil products. Typical finished products are liquefied petroleum gases, naphtha, motor gasoline, gas oils, aviation fuels and other kerosene, and fuel oils.

10. Petrochemical industry

Petrochemical industries are industrial plants which convert hydrocarbon feedstock into organic chemicals, intermediate compounds and finished products such as plastics, fibres, solvents and surfactants. Feedstock used by the plant is usually obtained from the refinery and includes naphtha, ethane, propane and middle distillate oils (for example, gas oil). Quantities of backflows or petroleum products returned from the

petrochemical sector, whether returned to refineries for further processing/blending or used directly. Note: energy use in the petrochemical sector is reported in the Energy sector, non-energy use is shown in the chemical/petrochemical industrial sector as non-energy.

11. Liquefaction plants

Liquefaction plants include diverse liquefaction processes, such as coal liquefaction plants and gas-to-liquid plants. Coal liquefaction plants are facilities where coal is used to produce liquid fuels suitable for transportation applications by the removal of carbon or addition of hydrogen, either directly or indirectly.

12. Natural gas blending plants

These are plants, separate from gas works, in which

substitute natural gas, petroleum gases or biogases are mixed with natural gas for distribution in the gas mains. Where blending of substitute natural gas with natural gas takes place within gas works the blending is considered part of the gas works process.

13. Charcoal production plants

Charcoal plants are facilities in which wood or other vegetal matter is carbonised through slow pyrolysis to produce charcoal.

14. Other transformation plants

Other transformation plants represent other energy transformation processes not already covered by the list of definition.

Energy sector

The energy sector covers ISIC Divisions 05, 06, 19 and 35. The energy sector includes the manufacture of chemical materials for atomic fission and fusion and the products of these processes. Fuels used in the manufacture of fuel briquettes and packaged fuel from coal or lignite and consumption in coke ovens and other transformation industries should also be reported here.

The energy sector is divided into the following sub-sectors: coal mines, patent fuel plants, coke ovens, gas work plants, natural gas blending plants, blast furnaces, BKB/PB plants, petroleum refineries, electricity, CHP and heat plants, liquefaction plants,

not elsewhere specified and distribution losses.

Fuels used by the energy industry to support the extraction (mining, oil and gas production) or transformation activity are reported in this category. For example: fuel used for heating, lighting, or operating pumps/compressors, or used as inputs fuel into furnaces or ovens. Note that quantities of fuels transformed into another energy form should be reported under the transformation sector. Consumption used in support of the operation of pipelines (oil, gas and coal slurry) should be reported in the transport sector.

Final energy consumption sector

The term final energy consumption (equal to the sum of the consumption in the end-use sectors: industry, transport, residential, commercial/public services, agriculture/ forestry, fishing and non-specified)

implies that energy used for transformation and for own use of the energy producing industries is excluded. Final consumption reflects for the most part deliveries to consumers. It does not include

consumption for non-energy purposes.

1. Industry sector

Industry sector covers all industrial undertakings as enumerated below. Sectors included are iron and steel; chemical including petrochemical; non-ferrous metals; non-metallic mineral products; transport equipment; machinery; mining (excluding energy producing industries) and quarrying; food processing, beverages and tobacco; pulp, paper and printing; wood and wood products (other than pulp and paper); construction; textile and leather; not elsewhere specified.

1.1 Iron and steel

Covers ISIC Group 241 and Class 2431. The consumption in coke ovens and blast furnaces are defined as part of transformation processes and energy industry own use.

1.2 Chemical including petrochemical

Refers to ISIC Division 20 and 21, excluding ISIC 2011. The consumption by plants manufacturing charcoal or enrichment/production of nuclear fuels is excluded, as these plants are considered part of the energy industries.

- Includes manufacture of basic chemicals, fertilisers and nitrogen compounds, plastics and synthetic rubber in primary forms (ISIC 201)
- Other chemical products (ISIC 202), Man-made fibers (ISIC 203)

1.3 Non-ferrous metals

Refers to ISIC Group 242 and Class 2432.

- Manufacture of precious and non-ferrous metals (ISIC 242)
- Casting of non-ferrous metals (ISIC Class 2432)

1.4 Non-metallic minerals products

Covers ISIC Division 23, i.e.: Glass, ceramic, cement

and other building materials industries.

- Manufacture of glass and glass products (ISIC 231)
- Non-metallic mineral products (ISIC 239) such as ceramics, tiles, baked clay products and cement

1.5 Transport equipment

Covers ISIC Division 29 and 30, i.e.:

- Manufacture of motor vehicles (ISIC 291) bodies for motor vehicles and semi-trailers (ISIC 292)
- Manufacture of parts and accessories for motor vehicles (ISIC 293)
- Building of ships and boats (ISIC 301)
- Manufacture of railway locomotives and rolling stock (ISIC 302)
- Manufacture of air and spacecraft and related machinery (ISIC 303)
- Manufacture of transport equipment not elsewhere classified (ISIC 309)

1.6 Machinery

Refers to Fabrication of metal products, machinery and equipment other than transport equipment. ISIC Division 25, 26, 27 and 28.

Includes manufacture of:

- Structural metal products, tanks, reservoirs and steam generators (ISIC 251)
- Weapons and ammunition (ISIC 252)
- Other fabricated metal products; metalworking service activities (ISIC 259)
- Electronic components and boards (ISIC 261)
- Computers and peripheral equipment (ISIC 262)
- Communication equipment (ISIC 263)
- Consumer electronics (ISIC 264)
- Measuring, testing, navigating and control equipment; watches and clocks (ISIC 265)
- Irradiation, electromedical and

electrotherapeutic equipment (ISIC 266)

- Optical instruments and photographic equipment (ISIC 267)
- Magnetic and optical media (ISIC 268)
- Electric motors, generators and transformers and electricity distribution and control apparatus (ISIC 271)
- Batteries and accumulators (ISIC 272)
- Wiring and wiring devices (ISIC 273)
- Electric lighting equipment (ISIC 274)
- Domestic appliances (ISIC 275)
- Other electrical equipment (ISIC 279)
- General purpose machinery (ISIC 281)
- Special purpose machinery (ISIC 282)

1.7 Mining (excluding energy producing industries) and quarrying

Refers to ISIC Divisions 13 and 14, i.e.:

- Mining of iron ores (ISIC 131)
- Mining of non-ferrous metal ores (ISIC 132)
- Quarrying of stone, sand and clay (ISIC 141)
- Mining and quarrying not elsewhere classified (ISIC 142)

1.8 Food, beverages and tobacco

Refers to ISIC Division 10, 11 and 12, i.e.:

- Processing and preserving of meat, fish, crustaceans and molluscs, fruit and vegetables (ISIC 101, 102, 103)
- Manufacture of vegetable and animal oils fats, dairy products (ISIC 104, 105)
- Manufacture of grain mill products, starches and starch products (ISIC 106)
- Manufacture of other food products (ISIC 107)
- Manufacture of prepared animal feeds (ISIC 108)
- Manufacture of beverages (ISIC 110)
- Manufacture of tobacco products (ISIC 120)

1.9 Pulp, paper and printing

Refers to ISIC Division 17 and 18. Includes

production of recorded media.

- Manufacture of paper and paper products (ISIC 170)
- Printing and service activities related to printing (ISIC 181)
- Reproduction of recorded media (ISIC 182)

1.10 Wood and wood products (other than pulp and paper)

Refers to ISIC Division 16, i.e.:

- Sawmill and planing of wood (ISIC 161)
- Manufacture of products of wood, cork, straw and plaiting materials (ISIC 162)

1.11 Construction

Refers to ISIC Division 41, 42 and 43, i.e.:

- Construction of buildings (ISIC 410)
- Construction of roads and railways (ISIC 421)
- Construction of utility projects (ISIC 422)
- Construction of other civil engineering projects (ISIC 429)
- Demolition and site preparation (ISIC 431)
- Electrical, plumbing and other construction installation activities (ISIC 432)
- Building completion and finishing (ISIC 433)
- Other specialised construction activities (ISIC 439)

1.12 Textile and leather

Refers to ISIC Divisions 13, 14 and 15, i.e.:

- Spinning, weaving and finishing of textiles (ISIC 131)
- Manufacture of other textiles (ISIC 139)
- Manufacture of wearing apparel except fur apparel (ISIC 141)
- Manufacture of articles of fur (ISIC 142)
- Manufacture of knitted and crocheted fabrics and apparel (ISIC 143)
- Tanning and dressing of leather; manufacture of luggage, handbags, saddlery and harness;

dressing and dyeing of fur (ISIC 151)

- Manufacture of footwear (ISIC 152)

1.13 Not elsewhere specified

If your economy's industrial classification does not correspond to the above ISIC, please estimate the breakdown by industry and include in "not elsewhere specified" only consumption in sectors which is not covered above. This covers ISIC Division 22, 31 and 32, i.e.: manufacture of

- Rubber products (ISIC 221)
- Plastic products (ISIC 222)
- Furniture (ISIC 310)
- Jewelry, bijouterie and related articles (ISIC 321)
- Musical instruments (ISIC 322)
- Sports goods (ISIC 323)
- Games and toys (ISIC 324)
- Medical and dental instruments and supplies (ISIC 325)
- Others manufacturing not elsewhere classified (ISIC 329)

2. Transport sector

All transport activities irrespective of the economic sector in which the activity occurs. Refers to ISIC Divisions 49, 50 and 51.

2.1 Domestic air transport

Refers to domestic aircraft - commercial, private, agricultural, etc. include oil used for purposes other than flying, e.g. bench-testing of engines. Military use of aviation fuels also should be excluded here.

2.2 Road

Transport by road vehicles. It includes agricultural highway use, but excludes motor gasoline used in stationary engines (included in the other sector) and diesel oil for non-highway use in tractors (included in agriculture). Lubricants for use in road vehicles should be included here. Bitumen for use in road

surfacing and gas oil used in engines at construction sites should not be included here but should be included in the industry subsector "construction" below.

2.3 Rail

Refers to rail traffic, including industrial railways.

2.4 Inland waterways

Refers to water vessels navigating in inland waterways and coastal shipping. For example: small craft, barges, and those coastal ships which do not travel for international transportation.

2.5 Pipeline transport

Refers to transport of goods through pipelines.

2.6 Not elsewhere specified

Transport activities not included elsewhere.

3. Other sector

Other sector covers commercial and public services, residential, agriculture, fishing and other final consumption not elsewhere classified.

3.1 Commercial and public services

These refer to business and offices in the public and private sectors. ISIC Divisions 01, 02, 03, 33, 36-39, 45-99, ISIC Class 8422.

3.2 Residential

Refers to all households including "households with employed persons." ISIC Division 97 and 98.

3.3 Agriculture

Refers to agriculture, hunting and forestry by ISIC as follows: ISIC Divisions 01 and 02.

3.4 Fishing

Refers to aquaculture and fisheries, covering the use of fishery resources from marine, brackish or

freshwater environments, with the goal of capturing or gathering fish, crustaceans, mollusks and other marine organisms and products (e.g. aquatic plants, pearls, sponges, etc.) Also included are activities that are normally integrated in the process of production for own account (e.g. seeding oysters for pearl production). ISIC Division 03.

3.5 Not elsewhere specified

Report activities not included elsewhere, please specify. This category includes military use.

3.6 Non-energy use

Refers to use of energy products as raw materials in the different sectors; that is, not consumed as a fuel

or transformed into another fuel. Example: in industry, coal used to make methanol or ammonia.

This is further classified into:

- **Chemical (incl. the petrochemical sector):** Non-energy use of coal includes uses as feedstocks to produce fertiliser and as feedstocks for other petrochemical products.
- **Transport sector:** Non-energy use in all transport sub sectors.
- **Other sector:** Non-energy use in commercial and public services, residential, agriculture and not elsewhere specified.

C. Energy prices

Energy prices are in either local currency units or in US dollars.

Table 1. Import prices

These are import prices based on CIF. These prices are obtained by dividing the value by the volume in foreign trade. Value and volume are recorded by customs administrations for each tariff position. Values recorded at the import stage include cost, insurance and freight (CIF) but exclude import duties.

These are import prices of coal and coal products; crude oil, NGL and petroleum products; electricity and other products including biofuels and other renewable energy products.

The average local currency exchange rate to the US dollar and local currency unit are also required in this table.

Table 2. Wholesale prices

Table 2 contains wholesale prices. These are the

prices that a buyer pays for large volume purchases whether for own consumption or retail. Examples are prices paid by electricity distribution companies to electricity generators or suppliers.

Prices are either in local currency units or in US dollars.

Table 3. Consumer prices

These are the prices paid by end-use consumers such as motorists buying fuel in filling stations, household electricity bills, coal briquette prices in supermarkets, etc. The prices may also be in local currency units or in US dollars.

Electricity prices are prices charged to the industrial, commercial, residential rates and rates to other consumers. Commercial sector include the government services and streetlights. Others include agriculture and other sectors not included in industrial, commercial and residential.

D. Definition of columns and rows of the energy balance table

1. Unit

For the purpose of presenting its energy balances APEC has adopted kcal and Joules. 10^7 kcal or 41.868 gigajoules (GJ) is equivalent to one ton of oil equivalent (toe). This quantity of energy is, within a few percent, equal to the net heat content of one ton of crude oil.

2. Conversion (from original to TOE)

The EGEDA secretariat has adopted specific factors supplied by the member economies for each flow or use. The balances are expressed in term of "net" heat value. The difference between the "net" and "gross" heat value for each fuel is the latent heat in

condensation of the water vapor produced during combustion of the fuel. For coal and oil, net heat value is 5 percent less than gross, for most forms of natural and manufactured gas the difference is 9-10 percent, while for electricity there is no difference. The use of net heat value is consistent with the practice of the Statistical Offices of the European Communities and the United Nations.

3. Layout

The energy balances are presented in tabular format: columns for the various sources of energy and rows for the different origins and uses.

Columns

Across the top of the table from left to right, there are thirteen columns with the following headings:

Column 1: Coal and peat include all primary coal, such as anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite and peat.

Column 2: Coal and peat products include all fuels derived from coal including patent fuel, coke oven coke, gas coke, briquettes, coal tar, coke oven gas, blast furnace gas, other recovered gases and peat products.

Column 3: Crude Oil & NGL comprise crude oil, refinery feedstocks and natural gas liquids. Natural LPG is included in LPG.

Columns 4 to 13: Petroleum products (column 4) comprises motor gasoline, naphtha, jet fuel, kerosene, gas/diesel oil, residual fuel oil, LPG, refinery gas and other petroleum products such as: aviation gasoline, ethane, white spirit, lubricants, bitumen, paraffin waxes and petroleum coke

(columns 5 to 13). The definitions of these products are in Appendix A.

Column 14: Gas includes natural gas and LNG (excluding natural gas liquids).

Column 15: Hydro shows the energy content of the electricity produced in hydro power plants. Hydro output includes output from pumped storage plants.

Column 16: Nuclear shows the primary heat equivalent of the electricity produced by a nuclear power plant with an average thermal efficiency of 33 percent.

Column 17: Geothermal, solar, etc. shows the primary heat equivalent of the electricity produced in geothermal plants with an average thermal efficiency of 10 percent, and the energy content of electricity produced in non-thermal power plants such as photovoltaic, wind, tide wave etc.

Column 18: Others includes wood, wood waste,

black liquor, industrial and municipal waste and biomass (power generation from other fuel sources such as defined in "others" is included here).

Column 19: Electricity shows final consumption and trade in electricity (which is accounted at the same heat value as electricity in final consumption; i.e. 1 GWh = 0.0036 Petajoules (PJ)).

Column 20: Heat includes heat production from

public combined heat and power plants (CHP), from autoproducer's heat that is sold to a third party (e.g. to a network).

Column 21: Total = the total of columns 1 to 11.

Column 22: Total renewables = the sum of hydro, geothermal, solar, wind, solid and liquid biofuels, and the renewable portions of industrial wastes and municipal solid wastes.

Rows

The categories on the left hand side of the table have the following functions.

Row 1: Indigenous production shows only production of primary energy, i.e. hard coal, lignite, crude oil, NGL, natural gas, hydro and nuclear, geothermal, etc. electricity and others.

Row 2/3: Imports and exports comprise amounts having crossed the boundaries of the economy whether or not customs clearance has taken place.

Row 4/5: International marine and aviation bunkers cover those quantities delivered to sea-going ships and international flights of all flags. Consumption by ships and planes engaged in transport in inland and coastal waters is not included.

Row 6: Stock changes are treated as follows: a decrease in stocks, shown in the table as a positive number, is added to supply and an increase in stocks, shown as a negative number, is deducted from supply. Producers', importers', energy transformation industries' and large users' stocks are included.

Row 7: Total primary energy supply (TPES) are made up of *indigenous production (row 1) + imports (row 2) – exports (row 3) – international marine and aviation bunkers (row 4/5) and ± stock changes (row 6)*.

Row 8: Transfers refer to interproduct transfers, product transferred, liquid products from gas separation and recycled products as defined in Appendix B.

Row 9: Total transformation sector is made up of *main activity producer (row 10) + autoproducers (row 11) + gas processing (row 12) + petroleum refineries (row 13) + coal transformation (row 14) + other transformation (row 15)*.

Row 10: Main activity producer, column 1 to 9 show primary and secondary fuel input to public utilities' plants as negative entries. Gross electricity produced (including power stations' own consumption) appears as a positive quantity in column 11, "electricity". Transformation losses appear in the "total", column 12, as a negative number.

Row 11: Autoproducers, columns 1 to 9 show primary and secondary fuel input to electricity generation of autoproducers as negative entries. An autoproducer is an establishment which, in addition to its main activities, generates electricity wholly or partially for its own use, such as industries, railways, refineries etc. Total gross electricity produced appears as a positive quantity in column 10, "electricity". Transformation losses appear in the "total", column 12 as a negative number.

Row 12: Where there is a production of gas at gas-to-liquid facilities, the treatment is similar to that for electricity generation, with the quantity produced appearing as a positive figure in column 5 "gas", input as negative entries in column 1 (coal), 2 (coal products), 4 (petroleum products) and 5 (natural gas input) and conversion losses appearing in the "total" column.

Row 13: The row petroleum refineries shows the transformation of crude oil, NGL and condensate to petroleum products.

Row 14: Coal transformation shows the transformation of coal from primary to secondary fuels and from secondary to tertiary fuels (hard coal to coke, coke to blast furnace gas, brown coal to BKB, etc.)

Row 15: Other transformation: contains the energy feedstocks and outputs of petrochemical industry, biofuel processing, charcoal processing and other transformation processes that are not classified elsewhere.

Row 16: Loss & own use: own use contains the primary and secondary energy consumed by transformation industries for heating, traction and lighting purposes. These are shown as negative figures. Included here are, for example, the coal mines' own use of energy, energy use in refineries, electricity plants' own consumption (which includes gross electricity consumed for pumped storage), and energy used for oil and gas extraction (which also includes consumption for the pipeline system). Loss include losses in gas distribution, electricity transmission, and coal transport.

Row 17: Discrepancy is a category which includes the sum of the unexplained statistical differences for individual fuels.

Row 18: Total final consumption (TFC) is the sum of

total final energy consumption (TFEC) in row 19 and non-energy use in row 36.

Row 19: Total final energy consumption (TFEC) is the sum of consumption by the different end-use sectors (row 20, 25, 31).

Row 20: Consumption of the industry sector (energy used for transport by industry is not included here but reported under transport).

Row 21: Iron and steel covers ISIC Group 241 and Class 2431. Report pulverised coal injection (PCI) into blast furnaces under blast furnaces, Transformation sector. To avoid double counting, fuels used in blast furnaces should be reported in the transformation sector.

Row 22: Chemical & petrochemical refers to ISIC Division 20 and 21.

Includes manufacture of basic chemicals (ISIC 201)

Other chemical products (ISIC 202), Man-made fibers (ISIC 203)

Row 23: Non-metallic minerals covers ISIC Division 23, i.e.: Glass, ceramic, cement and other building materials industries.

Manufacture of glass and glass products (ISIC 231)

Non-metallic mineral products (ISIC 239) such as ceramics, tiles, baked clay products and cement

Row 24: Other industries cover consumption of all other manufacturing industries, mining, quarrying and constructions.

Row 25: The transport sector includes all fuels for transport, except international marine bunkers. It includes transport in the industry sector and covers road, railway, domestic air transport, inland waterways (including small craft, fishing vessels and coastal shipping not included under marine bunkers) and non-specified transport.

Row 26: Domestic air transport refers to domestic aircraft - commercial, private, agricultural, etc. include oil used for purposes other than flying, e.g. bench-testing of engines. Military use of aviation fuels also should be excluded here.

Row 27: Road covers transport by road vehicles. It includes agricultural highway use, but excludes motor gasoline used in stationary engines (included in the other sector) and diesel oil for non-highway use in tractors (included in agriculture). Lubricants for use in road vehicles should be included here. Bitumen for use in road surfacing and gas oil used in engines at construction sites should not be included here but should be included in the industry subsector "construction".

Row 28: Rail refers to rail traffic, including industrial railways.

Row 29: Inland waterways refers to water vessels navigating in inland waterways and coastal shipping. For example: small craft, barges, and those coastal ships which do not travel for international transportation.

Row 30: Non-specified transport covers pipeline transport and other transport activities not included elsewhere.

Row 31: Other sectors cover agriculture, residential, commercial and public services and non-specified consumption.

Row 32: Refers to all households including "households with employed persons." ISIC Division 97 and 98.

Row 33: These refer to business and offices in the public and private sectors.

Row 34: Consumption of the agriculture sector.

Row 35: Other shows non-specified use which may include military use.

Row 36: Non-energy use covers use of coal, gas and petroleum products such as white spirit, paraffin waxes, lubricants, bitumen and other products. Petroleum coke is shown as non-energy use only when there is evidence of such use; otherwise it is shown under energy use in industry or other sectors. This covers all oil including naphtha, except the other petroleum products listed above, and gas used as petrochemical feedstock. Gas used as raw material for chemical products such as methanol and ammonia/urea is also included.

E. Conversion factors

1. Coal

Coal has separate factors for production, imports, exports, inputs to power plants, coal used in coke ovens, and coal used in industry. Each economy's individual conversion factors are applied.

2. Crude oil

The conversion factors of each economy are applied as shown in the table of conversion factors.

3. Petroleum products

The conversion factors of each economy are applied.

4. Gas

To convert the gross heat content of a gas to its net heat content, the following multiplying factors were used:

Natural gas	0.9
Gas works gas	0.9
Coke oven gas	0.9
Blast furnace gas	1.0

5. Electricity

Figures for electricity production, trade, and final consumption are calculated using the energy content of the electricity, i.e. at a rate of 1 TWh = 3.6 PJ. Hydro-electricity production (excluding pumped storage) and electricity produced by other non-

thermal means (wind, tide, photovoltaic, etc.) are accounted for similarly using 1 TWh = 3.6 PJ. However, the primary energy value ascribed to nuclear power plants is calculated from the gross generation by assuming that only 33% of the primary energy content appears as electricity, i.e. 1 TWh = (3.6/0.33) PJ. In the case of electricity produced from geothermal heat the primary value is calculated using 1 TWh = (3.6/0.1) PJ.

6. Heat

Information on heat is supplied in net kilocalories. 10¹⁰ kilocalories = 1 ktoe = 0.041868 PJ

7. Others

The conversion factors used for other energy, such as wood, wood waste, black liquor, etc. are those that are provided by each economy. In cases where the member economies cannot provide a conversion factor, the CA used the following net calorific values:

Fuel wood and wood waste	3 702 kcal/kg
Bagasse	1 959 kcal/kg
Charcoal	6 898 kcal/kg
Industrial waste	3 344 kcal/kg
Municipal solid waste	3 344 kcal/kg
Other biomass	2 986 kcal/kg

Average net calorific values of energy products in 2018

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Coal									
Anthracite	26 700		26 381			29 299		27 246	20 218
Coking coal	28 500		25 007	29 724				28 076	28 010
Other bituminous coal	25 700		27 226	22 306	22 513	26 370	24 618	25 050	23 697
Sub-bituminous coal	18 478		17 897						21 353
Lignite	9 800		14 019						
Peat									
Coal Products									
Patent fuels									19 385
Coke oven coke	27 000		27 457	28 591	28 469			29 181	28 889
Coal tar	35 714			38 841	33 494			35 393	37 000
Coal briquettes	20 995				17 796		19 845		
Crude oil and NGL									
Crude oil	43 282	45 000	42 790	43 203	41 868		5 862	42 048	42 203
Natural gas liquids	45 410	45 636	45 220	48 127			5 862	45 290	
Refinery feedstocks	43 282						5 862	42 500	47 164
Additives/oxygenates			25 120	22 651			5 862		44 079
Other hydrocarbons			41 868	35 198	41 868		5 862		
Petroleum products									
Refinery gas	48 100	47 600	48 100	48 100	46 055			48 100	48 100
Ethane	49 400								
LPG	47 700	46 151	47 300	47 300	50 242	45 544	5 862	47 700	47 700
Motor gasoline	44 600	44 749	44 800	44 800	43 124	42 776	5 862	44 600	44 600
Aviation gasoline	44 600		44 800	44 800			5 862	44 600	44 600
Gasoline-type jet fuel									
Kerosene-type jet fuel	44 500	44 581	44 600	44 600	43 124	42 966	5 862	44 500	44 500
Other kerosene	42 900	44 581	43 800	43 800	43 124	44 053	5 862	42 900	42 900
Gas/diesel oil	42 600	43 379	42 600	43 300	42 705	42 496	5 862	42 600	42 600
Fuel oil	42 600		40 200	40 200	41 868	41 500	5 862	42 600	42 600
Naphtha	43 200		45 000	45 000	38 418	44 129	5 862	43 200	43 200
White spirit SBP					38 418				
Lubricants		41 801			38 418		5 862		
Bitumen		40 001			38 418				
Paraffin wax					38 418				
Petroleum coke	33 800		32 000	32 000	30 773			33 800	33 800
Other products	40 000	46 151	40 000	40 000	38 979		5 862	40 000	40 000
Natural gas									
Natural gas		37 645			37 259	38 542	36 031		
New and renewables									
Fuel wood and wood waste									
Bagasse									
Charcoal				28 232		29 300		29 300	
Other biomass									
Industrial waste									
Municipal solid waste									
Biogasoline	26 800		26 800					26 800	
Biodiesel	36 800		36 800			37 800	40 570	36 800	
Other liquid biofuels									

Note: The Net Calorific Values are used to convert the unit of each product to tons of oil equivalent (toe). 1 toe = 41.868 TJ

Some economies reported data in energy units (TJ, ktoe, mboe). Therefore, the calorific value were calculated.

Average Net Calorific Values of Energy Products in 2018 (continued)

											kJ/kg (kJ/m ³ for Natural Gas)
Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam
	26 607					29 000		28 240	31 401	30 464	23 446
	29 040	29 753				28 500		27 882	27 633	28 246	
	25 875	26 561			22 098	25 362	25 800	23 664	26 377	26 745	
	19 869	20 220						19 556		19 028	
	11 364	16 303				14 918			10 467	13 968	
						9 965					
	28 523	29 500				29 015		27 842		28 865	
	37 970										
	18 000								26 377		
	43 509	43 080	42 370			42 077		37 681	42 239	42 901	42 705
	41 397	45 782	42 370			41 910			49 225	46 315	45 636
	42 350	43 884								43 538	
	34 055							37 681		37 863	
	41 868								49 225	51 004	
	48 100	48 100						37 522		48 100	
									46 905	49 400	
	47 300	47 700	47 698					27 779	49 403	47 300	45 636
	44 800	44 600	44 606					32 657	42 490	44 800	43 961
	44 800	44 600								44 800	
	44 600	44 500	44 517					33 494	43 015	44 600	43 124
			42 846					35 588	42 643	43 800	43 124
	42 600	42 600	43 063					35 169	43 158	42 600	42 705
	40 200	42 600	44 047					40 193	42 134	40 200	41 449
	45 000		43 967					32 657		45 000	
								37 681			
								40 193			42 140
								41 868			41 800
								37 681			
	32 000	33 800						34 332		32 000	
	40 000	40 000	40 206					37 681	41 868	40 000	41 449
			38 365	36 389	34 436			37 688	36 098		37 681
	30 800		30 800			30 800					
		29 657						22 169	29 673	32 021	26 800
								35 169	42 424	42 179	
										21 583	

F. Currency codes

Code	Currency	Economy
AUD	Australian dollar	Australia
BND	Brunei dollar	Brunei Darussalam
CAD	Canadian dollar	Canada
CLP	Chilean peso	Chile
CNY	yuan renminbi	China
HKD	Hong Kong dollar	Hong Kong, China
IDR	rupiah	Indonesia
JPY	yen	Japan
KRW	won	Korea
MYR	Malaysian ringgit	Malaysia
MXN	Mexican peso	Mexico
NZD	New Zealand dollar	New Zealand
PGK	kina	Papua New Guinea
PEN	nuevo sol	Peru
PHP	Philippine peso	Philippines
RUB	Russian ruble	Russia
SGD	Singapore dollar	Singapore
TWD	New Taiwan dollar	Chinese Taipei
THB	baht	Thailand
USD	US dollar	United States
VND	dong	Viet Nam