



**Asia-Pacific
Economic Cooperation**

Advancing Free Trade
for Asia-Pacific **Prosperity**

APEC Energy Statistics 2017

APEC Energy Working Group

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PREFACE

The APEC Energy Statistics 2017 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; 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 2017 and 2016 and Energy Prices for 2017. 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 2017. The objective is to report the most recently updated data.

APEC Energy Statistics 2017 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 share of renewable energy in total final energy consumption. It is prepared in close cooperation with member economies.

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TABLE OF CONTENTS

1 BACKGROUND INFORMATION ON APEC ENERGY STATISTICS	1
Energy data.....	2
APEC energy data and APEC energy goals.....	2
Standardisation.....	7
Energy balance table	8
Other tables.....	8
Notes on member economies	8
Socio-economic data.....	9
APEC energy database.....	9
2 OVERVIEW OF THE APEC ENERGY SITUATION	11
Background	12
APEC and the world	12
Energy supply trends in APEC.....	14
Power generation.....	16
Energy demand trends in APEC.....	18
CO ₂ emissions.....	21
APEC goals.....	21
Energy balance table	23
3 ENERGY BALANCE AND OTHER TABLES BY MEMBER ECONOMY	25
Australia.....	27
Brunei Darussalam.....	33
Canada	39
Chile.....	45
China	51
Hong Kong, China.....	57
Indonesia.....	63
Japan	69
Korea	75
Malaysia.....	81
Mexico	87
New Zealand.....	93
Papua New Guinea	99
Peru.....	105
Philippines.....	111
Russia.....	117
Singapore.....	123

Chinese Taipei.....	129
Thailand	135
United States.....	141
Viet Nam.....	147
APEC Region	153
Primary energy supply	154
Final energy consumption	156
Demand and supply: 2017	158
Demand and supply: 2017	160
Power generation	162
Fuel consumption for power generation	164
Power generation capacity	166
APPENDICES	169
A. Definition of products.....	171
B. Definition of flows.....	179
C. Energy prices	188
D. Definition of columns and rows of the energy balance table.....	189
E. Conversion factors	193
F. Currency codes	196

List of Tables and Figures

Table 1-1a ● Energy products in the APEC energy database.....	4
Table 1-1b ● Energy flows in the APEC energy database.....	5
Table 1-2 ● Efficiency of primary electricity generation.....	7
Table 2.1 ● APEC energy balance table (Mtoe), 2017.....	22
Figure 2.1 ● World population, 1990 and 2017.....	12
Figure 2.2 ● World GDP (constant USD), 1990 and 2017.....	13
Figure 2.3 ● World total primary energy supply, 1990 and 2017.....	13
Figure 2.4 ● TPES, Population and GDP in APEC, 2017 relative shares.....	13
Figure 2.5 ● Total primary energy supply, 1990-2017.....	14
Figure 2.6 ● Primary energy mix, 1990-2017.....	15
Figure 2.7 ● Primary energy mix by region, 2017.....	15
Figure 2.8 ● APEC Indigenous production, 1990-2017.....	15
Figure 2.9 ● Primary energy intensity by region, 1990-2017.....	15
Figure 2.10 ● APEC energy self-sufficiency, 1990-2017.....	16
Figure 2.11 ● Net imports by region, 1990-2017.....	16
Figure 2.12 ● Power generation by type, 1990-2017.....	17
Figure 2.13 ● Power generation mix by region, 2017.....	17
Figure 2.14 ● Total final energy consumption in APEC by sector, 1990-2017.....	18
Figure 2.15 ● Total final energy consumption in APEC by region by sector, 2017.....	19
Figure 2.16 ● Total final energy consumption by energy source, 1990 and 2017.....	20
Figure 2.17 ● Energy consumption per capita, 2017.....	20
Figure 2.18 ● Final energy intensity by region, 1990-2017.....	21
Figure 2.19 ● CO ₂ Emission in the APEC region, 1990-2017.....	21

1 Background information on APEC energy statistics

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 27th 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	Nuclear
Other bituminous coal	Motor gasoline	New and renewable energy
Sub-bituminous coal	Aviation gasoline	Geothermal electricity
Anthracite	Naphtha	Solar photovoltaic
Lignite	Jet fuel	Tide, wave and ocean
Peat	Gasoline type jet fuel	Wind
Coal products	Kerosene type jet fuel	Geothermal heat
Coke oven coke	Other kerosene	Solar heat
Coke oven gas	Gas/diesel oil	Wood straw pellets/briquettes
Blast furnace gas	Fuel oil	Fuelwood
Other recovered gases	LPG	Wood waste
Patent fuel	Refinery gas	Bagasse
Coal tar	Ethane	Rise husks
BKB/PB	White spirit SBP	Straw
Gas works gas	Lubricants	Charcoal
Crude Oil & NGL	Bitumen	Other vegetal and agricultural wastes
Crude oil	Paraffin waxes	Other primary solid biomass
Natural gas liquids	Petroleum coke	Biogases
Refinery feedstocks	Other petroleum products	Industrial wastes
Additives / oxygenates	Gas	Municipal solid wastes
Other hydrocarbons	Natural gas	Black liquor
	LNG	Liquid biofuels
		Electricity
		Heat¹

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

Indigenous production	Total transformation sector	Total final energy consumption
Imports	Main activity producer	Industry sector
Exports	Electricity plants	Iron and steel
International marine bunkers	CHP plants	Chemical including petrochemicals
International aviation bunkers	Heat plants	Non-ferrous metals
Stock changes	District cooling plants	Non-metallic minerals
Total primary energy supply	Autoproducer	Transportation equipment
Transfers	Electricity plants	Machinery
Recycled products	CHP plants	Mining and quarrying
Inter-product transfers	Heat plants	Food, beverages and tobacco
Products transferred	District cooling plants	Pulp, paper and printing
Gas separation	Gas Processing	Wood and wood products
	Gas works	Construction
	Liquefaction	Textiles and leather
	Re-gasification	Non-specified Industry
	Natural gas blending plants	Transport sector
	Gas-to-liquid plants	Domestic air transport
	Refineries	Road
	Coal transformation	Rail
	Coke ovens	Inland waterways
	Blast furnaces	Pipeline transport
	Patent fuel plants	Non-specified transport
	BKB/PB plants	Other sector
	Liquefaction (coal to oil)	Commerce and public services
	Petrochemical industry	Residential
	Biofuel processing	Agriculture
	Charcoal processing	Fishing
	Non-specified transformation	Non-specified others
	Losses and own-use	Non-energy use
	Own-use	Transformation sector
	Transmission and distribution losses	Industry sector
		Transport sector
		Other sector

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 to end of January 2019. In principle, all 21 APEC members are expected to submit annual data by this deadline. Six economies were able to submit the five energy questionnaires on time. These are Brunei Darussalam; Chile; Indonesia; Korea; Chinese Taipei and Viet Nam. 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.

All data were collected by August 2019. However, the data from Hong Kong, China were still preliminary.

Final data were submitted in September 2019.

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 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 2017, 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 2017 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.

The APEC energy balance table consists of two tables, quoted in ktoe (10^{10} kilocalories) and in petajoules (PJ equivalent to 10^{15} joules).

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 shows information that constitute 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; Australia's energy statistics are accounted by fiscal year (1 July - 30 June).

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 2017. 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, but are prepared by ESTO.

The data are obtained from the *World Development Indicators* of the World Bank and *The International Financial Statistics Yearbook* of the International Monetary Fund (IMF). 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 the member economies' local currency, ESTO provides GDP estimates in constant dollar values, as well as Chinese Taipei's GDP in PPP, constant 2011 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 APEC Energy Situation

Background

This Overview gives a detailed look on the energy situation in APEC in 2017. The first part provides an analysis the total APEC as compared with the world. For a better understanding of the terms used in the Overview chapter, definitions of terms were also provided in the Appendices. Specific analyses mostly referred here were by region. In view of the big differences in the scales with the other APEC economies China, Russia and the US, were considered as regions in the analyses. Hence, 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

Started in 2016 edition, an analysis on the APEC goals was also included: i.e. energy intensity reduction goal and the RE doubling goal. In doing so, several improvements were done in the time series data to reflect disaggregation of renewable energy.

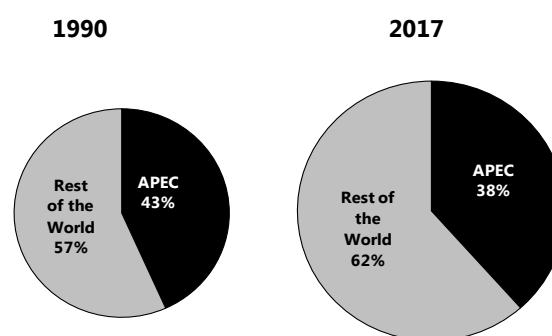
APEC and the world

The following briefly describes APEC in terms of population, GDP and total primary energy supply (TPES) as compared with the world in 2017 and over the period 1990 to 2017.

Population growth in APEC continued at a slowing pace with 0.7% annual growth rate maintained since 2003 and a compounded annual growth rate (CAGR) of 0.9% between 1990 to 2017. In 2017, population in APEC reached 2.89 billion people. Among the regions, Oceania posted the highest growth rate with 1.8% in 2017 compared with 2016; followed by other Americas (1.3%) then South-east Asia (1.1%). The sluggish growth had resulted to the decline of APEC's share—from 43% in 1990 to 38% in 2017—in the world's population (Figure 2.1).

Similar trend was also observed in the population of the rest of the world over the last two decades—1.6% CAGR from 1990 to 2017. It grew 1.4% from 2016 to reach 4.63 billion inhabitants in 2017.

Figure 2.1 • World population, 1990 and 2017

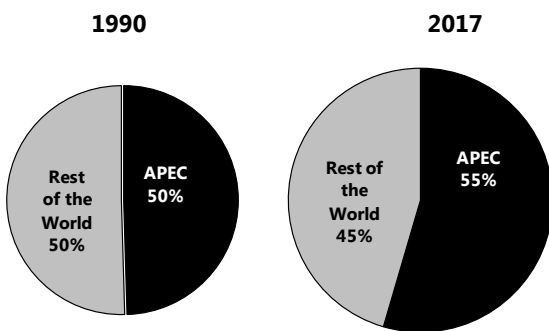


Sources: World Bank, DGBAS (Chinese Taipei data), ESTO analysis

In terms of GDP, APEC economy continued to outstrip the rest of the world with a 4.1% increase from 2016 to reach 63 660 billion USD (PPP, constant 2011 USD) in 2017. Giving the APEC's share of the world's GDP one percentage point more than the 2016 level—55% in 2017. The rest of the world grew by only 3.4% during the same period. China and

South-East Asia were the huge contributors in the economic growth in APEC with 6.8% and 5.2%, respectively from 2016 to 2017. The third highest, which was previously Oceania, was attributed to other northeast Asia growing 2.8% in 2017 from 2016 level. Among the Southeast Asian member economies, Viet Nam; the Philippines and Malaysia remarkably grew in 2017 compared with 2016 at 6.8%, 6.7% and 5.9%, respectively. (Figure 2.2).

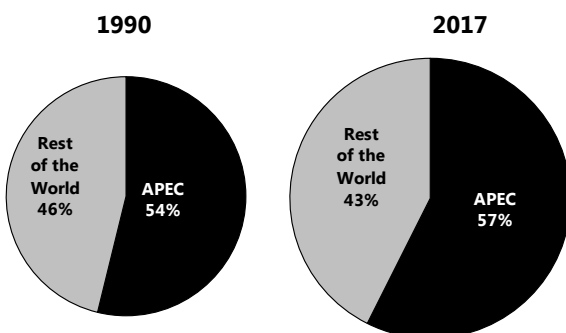
Figure 2.2 • World GDP PPP (constant 2011 USD), 1990 and 2017



Sources: World Bank, ESTO analysis

A similar trend was seen in terms of total primary energy supply with APEC accounting for more than 50% of the world's total primary energy supply (TPES) in 2017 (Figure 2.3). The CAGR of APEC TPES between 1990 and 2017 was maintained at 2.0%, whilst the rest of the world had 1.4% CAGR over the same period.

Figure 2.3 • World total primary energy supply, 1990 and 2017

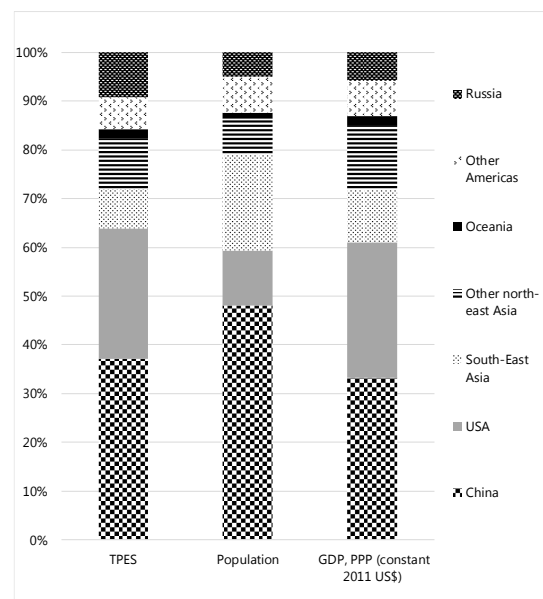


Sources: APEC data, IEA, ESTO analysis

TPES of APEC continued to bounce back with 1.7% growth to reach 8 021 Mtoe in 2017, after posting negative in 2015 (-0.4%) and sluggishly in 2016 (0.3%). The remarkable 3.4% recovery of China (from -0.6% in 2016) in 2017 together with the expansion of primary energy supply in Southeast Asia (3.2%) and Russia (2.5%), offset the contraction posted by Oceania (-0.7%) and the US (-0.4%) and the sluggish growths from other Americas (0.6%) and other north-east Asia (0.5%).

In terms of the relative shares of GDP (PPP, constant 2011 USD), population and TPES in APEC, China and the US continued to dominate in 2017, while shares of the other economies varied from one another (Figure 2.4). In terms of TPES, the top three regions in 2017 were China (21%), the US (15%) and other north-east Asia (6%). The combined amount of these three regions was equivalent to the TPES of the rest of the world (43%). The same regions topped APEC GDP (PPP, constant 2011 USD) with the following shares: China (18%), the US (15%) and other north-east Asia (7%), while the rest of the world's share in 2017 was 45%.

Figure 2.4 • TPES, Population and GDP in APEC, 2017 relative shares



Sources: APEC data, IEA and World Bank, DGBAS, ESTO analysis

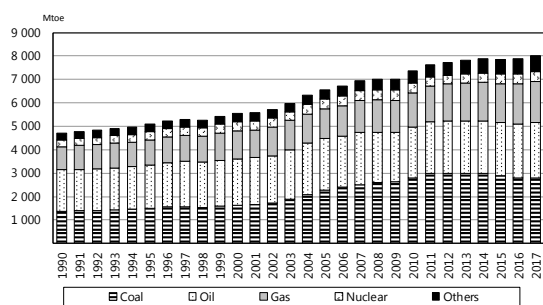
Key energy trends in APEC from 1990 to 2017 are described in the following sections.

Energy supply trends in APEC

Total primary energy supply

After slowing down for the last three years, total primary energy supply (TPES) in APEC started to pick-up again at 1.7% to reach 8 021 Mtoe in 2017. This was more than double the energy requirement since 1990, with CAGR maintained at 2.0%. All fuel types posted positive growth rates in 2017 compared with 2016 including coal that had shown negative trends for the last three years. The increase from 2016 TPES levels can be attributed mostly with the significant uptick in other fuels (geothermal, solar and other renewables) (5.3%) and nuclear (2.1%) and gas (2.0%) in 2017 (Figure 2.5). By region, China's recovery outpaced Russia in 2017 compared with 2016. South-East Asia can also be attributed to the significant increase of TPES in APEC in 2017, while primary energy supply in the US continued its contraction since 2015.

Figure 2.5 • Total primary energy supply, 1990-2017



Sources: APEC data, ESTO analysis

Coal (35%) remained the dominant fuel in APEC in 2017. After sliding for the last three years it bounced back with 0.5% increase from the 2016 level to reach 2 810 Mtoe in 2017. This can be attributed mostly to the significant increase in South-East Asia (6.2%). Coal's compounded annual growth rate (CAGR) between 1990 and 2017 was 2.7%.

Oil was the second largest fuel in APEC in 2017 with its share of APEC TPES remained unchanged since 2011 at 29% with 1.1% CAGR between 1990 to 2017. It grew 1.7% to reach 2 353 Mtoe in 2017 from 2016. South East Asia (5.8%) and China (4.8%) were the main drivers in the increase of APEC total oil supply.

The third largest fuel in APEC in 2017 was gas with 22% share (1 748 Mtoe) of the TPES. The CAGR between 1990 to 2017 was maintained at 2.1%.

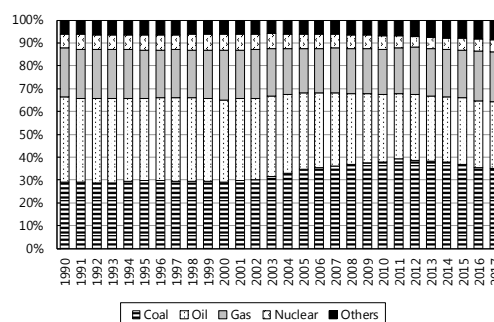
Other fuel (hydro, geothermal, solar and wind energy) collectively grew by 5.3% in 2017 from the 2016 level and drove the increase in TPES. Although the share from the TPES was minimal (9% in 2017), these fuels have been growing steadily since 1990 with 3.2% CAGR between 1990 and 2017.

Nuclear, has been fluctuating for the last 10 years but still grew 2.1% in 2017 from the 2016 level.

Primary energy mix by region

Fossil fuels has been dominating APEC's primary energy mix since 1990 with 87% share on average of TPES in 2017 (Figure 2.6). Each fuel sources however have different shares of attribution from each region. More than 60% of APEC coal supply were from China, The US has 37% share of APEC oil supply while more than 50% of APEC gas supply was attributed to Russia.

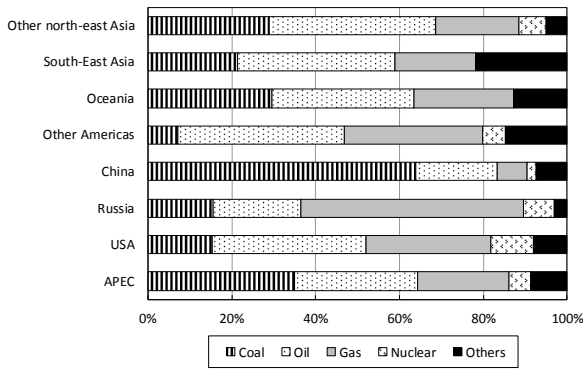
Figure 2.6 • Primary energy mix, 1990-2017



Sources: APEC data, ESTO analysis

Similarly in the remaining regions: other Americas, other north-east Asia, South-East Asia and Oceania, oil remained the common major fuel, comprising more than one-third of their respective primary energy mixes in 2017 (Figure 2.7).

Figure 2.7 • Primary energy mix by region, 2017



Sources: APEC data, ESTO analysis

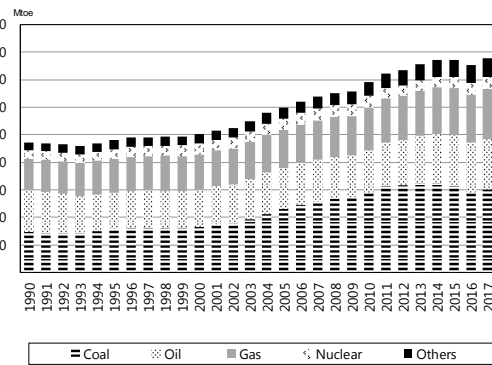
While most of these regions consisted of either coal or gas as the second or third major fuel, renewables was the second and third largest in South-East Asia and other America’s energy mixes in 2017 with 22% and 15%, respectively. Other fuels or renewables include traditional biomass, which is used widely in the rural areas.

Indigenous production

After decreasing in 2016, indigenous energy production recovered with a significant 3.4% surge owing to the significant increases in all fuel sources. Specifically, the huge production of other fuels (689 Mtoe or 5.2% increase from 2016) followed by gas (4.6%) and coal (3.3%) all redounded to the surge of domestic production in APEC in 2017. The CAGR between 1990 and 2017 of indigenous production was maintained at 1.9% (Figure 2.8).

More than 30% of APEC production in 2017 came from China followed by US (26%) and Russia (18%) and the rest of the regions collectively accounted for a quarter of APEC’s total production.

Figure 2.8 • APEC Indigenous production, 1990-2017

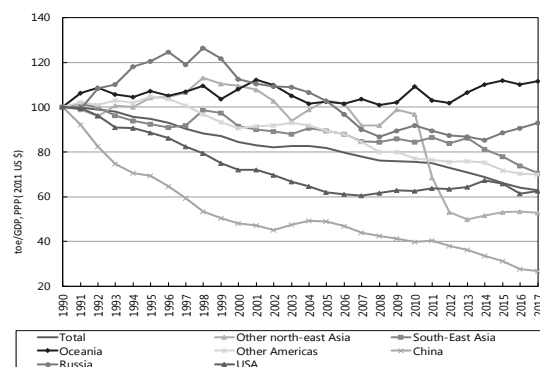


Sources: APEC data, ESTO analysis

Primary energy intensity

Primary energy intensity [Total primary energy supply/GDP (PPP, constant 2011 USD)] in APEC has been improving constantly. Note that the primary energy intensity analysed here is different from the APEC energy intensity goal, which is discussed in another section. The primary energy intensity in 2017 was 126 toe/million USD (constant 2011 PPP), a 2.3% reduction over the previous year’s primary energy intensity level and 37% improvement over the 1990 level [(200 toe/million USD (constant 2011 PPP)]. On regional level, most regions had shown primary energy intensity improvement in 2017 compared with 2016. China’s primary energy intensity had the biggest improvement with 3.2%, followed next by Oceania, then US with 3.0% and 2.5%, respectively (Figure 2.9).

Figure 2.9 • Primary energy intensity by region, 1990-2017

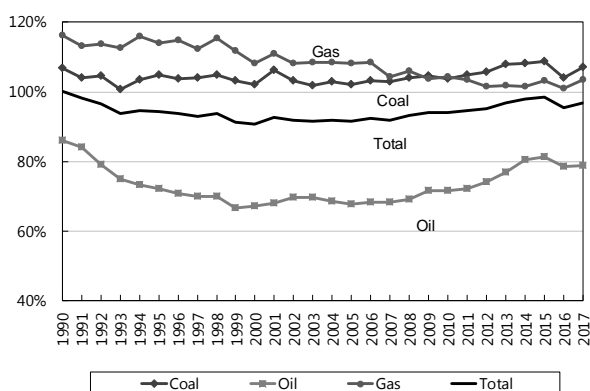


Sources: APEC data (TPES) and World Bank (GDP), ESTO analysis

Self-sufficiency

Although the self-sufficiency ratio (*Indigenous production/Total primary energy supply*) has been fluctuating, APEC had been self-sufficient over the years. The overall self-sufficiency level of APEC in 2017 was 97%, 3.4% higher than the 2016 level. The self-sufficiency ratio of coal and gas continued to be the highest at 107% and 104%, respectively. Oil sufficiency ratio was the lowest (79%) among all fuels in APEC in 2017 (Figure 10).

Figure 2.10 • APEC energy self-sufficiency, 1990-2017

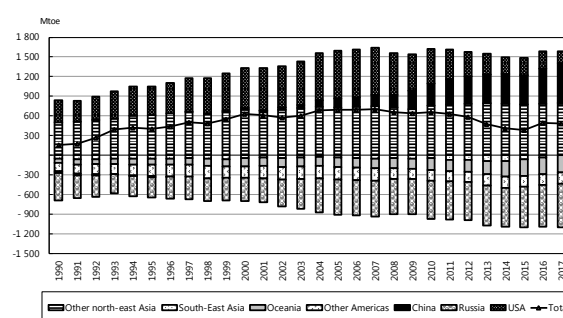


Sources: APEC data, ESTO analysis

Net imports by region

APEC region as a whole is a net importer, although its net imports (*Imports – Exports*) dropped 2.3% to reach 483 Mtoe in 2017 compared with 2016. Conversely, total imports increased significantly by 4.2% in 2017 (2 914 Mtoe) compared with 2016. The CAGR of net imports between the periods 1990 to 2017 was 4.4%. On regional level, other north-east Asia, China, the US and for the first time South-East Asia were net-importers in 2017, while the other regions in APEC remained net exporters, the biggest was still Russia (Figure 2.11).

Figure 2.11 • Net imports by region, 1990-2017



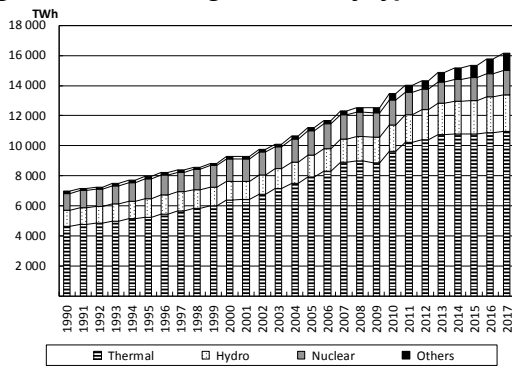
Sources: APEC data, ESTO analysis

Power generation

Electricity demand in APEC increased 2.3% in 2017 compared with 2016 or equivalently 16 155 TWh. The growth in total electricity production in 2017 was driven mainly by the surge of power generation from renewables (geothermal, solar, and wind), growing from 777 GWh in 2016 to 939 GWh in 2017 (20.8%). Regionally, electricity production in China and South-East Asia considerably grew with 5.7% and 3.8% in 2017, respectively, compared with 2016 electricity generation level. Electricity production in APEC has more than doubled since 1990 bringing its CAGR to 3.2% from 1990 to 2017. (Figure 2.12).

Significant increases from other fuels (biomass and others), hydro and nuclear were likewise noted in 2017 with 4.2%, 3.1% and 2.1%, respectively. Notable to these growths were from industrial wastes in view of huge electricity generated from this source in China. The rise in electricity generation from hydro on the other hand was due in part by the surges in South-east Asia. Fossil fuels continued to dominate total electricity generation in APEC in 2017 with 68% of the total. Fossil fuel mixes were comprised of coal (45%), gas (21%) and oil (1%). Hydropower and nuclear remained the second and third largest sources of electricity in 2017 with 15% and 10% shares of APEC power generation, respectively.

Figure 2.12 • Power generation by type, 1990-2017

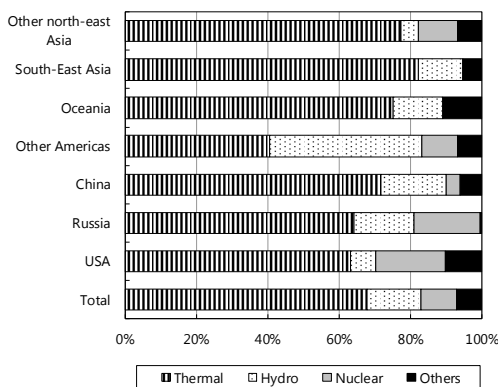


Sources: APEC data, ESTO analysis

Power generation mix by region

Power generation mix by region varied in 2017 but fossil fuels remained the bulk of their respective power generation. Most of them had more than 50% with South-East Asia having the largest amount (79%), then other north-east Asia (77%), Oceania (75%), China (72%), Russia (64%) and US 63%. Conversely, in other Americas, hydro dominated its power generation 43%, although fossil fuel came close with 40% of its total power generation. (Figure 2.13).

Figure 2.13 • Power generation mix by region, 2017



Sources: APEC data, ESTO analysis

In terms of growth, China mainly drove electricity generation in APEC with a robust 5.7% yield to reach 6 495 GWh in 2017. Electricity generation sourced from industrial waste showed strong momentum with more than twenty-fold increase from 2016 to 2017.

South-East Asia likewise drove APEC power generation in 2017 with a substantial 3.8% uptick from the 2016 level. This was due in part by remarkable increases in hydro and other fuels, 27.3% and 12.0%, respectively.

Power generation in 2017 in other north-east Asia (0.8%), Oceania (0.7%) and Russia (0.3%) were slower compared with 2016, notably Oceania and Russia (1.5% and 2.2%, respectively in 2016). Power generation in other Americas experienced a 0.5% drop in 2017 from the 2016 level, due mostly to the contraction in other fuels (-20.1%), coal (-5.5%) and gas (-3.0%). Coal and gas comprised 11% and 26%, respectively of other Americas electricity output in 2017.

Finally, growth of power generation in the US has constantly been fluctuating. After a significant increase in 2010, it has started to taper off in 2011. In 2017 it posted 0.8% drop to 4 263 MWh after slightly increasing in 2016. This was due in part to the decline in most of the region’s fuel used for power generation, except hydro and geothermal. Specifically, the significant drop were from gas (-5.7%) and coal (-2.4%) which comprised one-third each of the region’s fuel input to power generation.

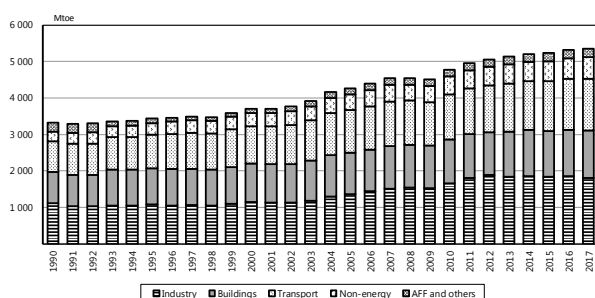
Energy demand trends in APEC

Total final energy consumption by sector

In 2017, total final energy consumption in APEC increased but slower compared with 2016. After a 1.3% recovery in 2016 TFEC fell one percentage point (0.3%) to 4 767 Mtoe in 2017. Its CAGR between 1990 and 2017 was maintained at 1.7%. Relatedly, total final consumption [TFC (non-energy use included)] rose slightly (0.7%) to reach 5 351 Mtoe in 2017 from 5 313 in 2016, and 1.8% CAGR from 1990-2017.

In 2017, in terms of TFC (non-energy excluded), sectoral shares were unchanged — industry continued to be the leading consuming sector (35%) followed by buildings (combined residential and commercial sub-sector) and agriculture sub-sector (29%) then transport sector (27%) and lastly, non-energy use (11%) (Figure 2.14).

Figure 2.14 • Total final consumption in APEC by sector, 1990-2017



Sources: APEC data, ESTO analysis

With data improvements, the industry grew only 0.9% in 2016 and not 1.4% as previously reported. Then in 2017, the sector experienced downtrend from 1 855 Mtoe in 2016 to 1 802 Mtoe or equivalently -2.9%. This was due in part by the significant decline in industry consumption in China—which has the lion’s share in APEC industry—and also in part due to the decrease in coal consumption—the largest fuel used in industry. The decrease in industry sector reflected a lower CAGR between 1990 and 2017 (1.8% from 2.0% between 1990 and 2016).

Conversely, the buildings and agriculture sectors showed an upward movement with 2.7% to reach 1 301 Mtoe in 2017. The residential and agriculture sub-sectors can be attributed to the increase with 3.5% and 2.6%, respectively.

The transport sector meanwhile registered growth at 1.9% in 2017. The same rate was observed in 2016 due to data updates and improvements and not 2.8% as previously reported. Nevertheless, the increase can still be attributed mostly to the continued

increasing purchasing power of consumers, especially in South-East Asia.

Non-energy consumption, which was mostly used as feedstock to petro-chemical industry, had been growing faster than all the other fuels. In 2017, it went up 4.5% to 584 Mtoe from the 2016 level. China and the US contributed largely to the APEC non-energy consumption with 31% and 25% shares, respectively of the total.

Total final energy consumption by region

In 2017, there was a structural change on the trends on energy consumption across APEC region. (Figure 2.15). The growth in the total final energy consumption (TFEC) in 2017 against 2016 was driven by South-East Asia—outpacing Russia and China—as the region continued its economic growth. In terms of share, the major energy consuming regions namely China, US and Russia, dominated the energy consumption in 2017. Other north-east Asia, tied-up with Russia in the third slot both with 9% share of the APEC TFEC. Together, these regions accounted for more than 80% of the total final energy consumption in APEC. As in the past, China accounted for the largest chunk of APEC final industry consumption (54%), while US was attributed for more than 40% of the consumption in the transport sector and almost 40% of the consumption in the buildings sector.

While industry continued to dominate China’s energy consumption, the sector continued slowing down as the region moved towards service-oriented economy. From the previous year’s dwindling growth (0.9%), energy consumption in the industry sector went down 5.7% to 970 Mtoe in 2017. The transport (5.6%) and buildings (5.5%) sectors of China however, showed upward trends but not enough to offset the decline in industry sector in 2017 that resulted to the final energy consumption to slide 1.3% from 2016 to 2017. US likewise posted negative trend (-0.4%) in

2017 which can be mostly attributed to the decreases of consumption in most of the region’s sectors, such as industry (-1.8%), buildings (-0.9%) and agriculture and other (-1.7%) sectors. Energy consumption in the transport sector (45%) formed the bulk of the region’s total energy consumption but the sector’s increase (0.6%) was not enough to boost its final energy consumption. The decline in US final consumption may somehow be attributed to the continued energy efficiency improvement in the region.

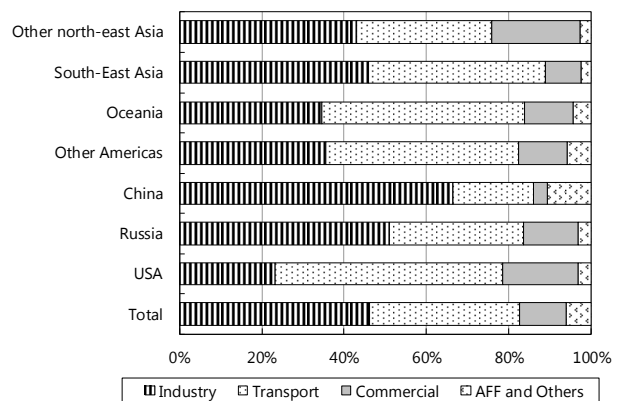
Other north-east Asia and Russia both comprised 9% of APEC TFEC and both regions’ consumption structure were almost the same in 2017. Both regions comprised 36% of its respective total final energy consumption, although Russia’s building consumption occupied 39% of its final energy consumption while north-east Asia’s was 35% in 2017. Consumption trends were likewise the same as both regions’ final energy consumption in 2017 compared with 2016 was driven by buildings sector, although Russia’s (8.0%) building consumption growth was faster than north-East Asia’s (1.8%).

South-East Asia accounting for 8% of the APEC TFEC was the main driver of energy consumption in 2017 due mostly to the increases in its three major sectors—transport (6.9%), buildings (4.3%) and industry (2.5%). The region’s continued economic growth redounded to the significant increase of its final energy consumption to 4.3% in 2017 from the 2016 level. Other Americas comprising 7.0% of APEC TFEC likewise posted significant growths in most of its sectors in 2017, which brought its final consumption to grow 2.0% in 2017 compared with 2016.

Finally, Oceania posted 1.1% increase in 2017 driven mostly by the increase in the transport sector (2.6%) which comprised the largest share of its final energy

consumption (39%).

Figure 2.15 • Total final energy consumption in APEC by region by sector, 2017



Sources: APEC data, ESTO analysis

Final energy consumption by energy source

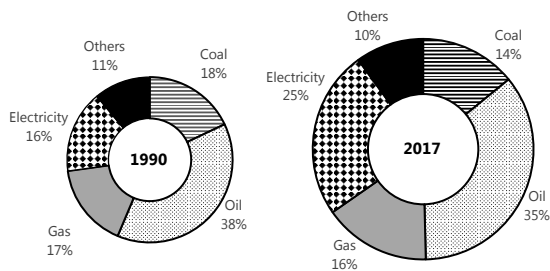
The structure and trends of the final energy consumption by energy source in APEC remained unchanged in 2017, but the significant uptick (5.4%) in gas consumption drove the overall consumption in APEC (Figure 2.16).

Oil continued to occupy the lion’s share of APEC TFEC, increasing 1.7% in 2017, a bit higher compared with 2016. This can be attributed to the increasing demand for fuel in the transport sector in most of the regions in 2017.

Electricity and all other fuel (renewables, heat and others) both grew 2.6% in 2017 from the 2016 level. This can be attributed to the significant increasing demand for space heating and cooling in the buildings sector.

Coal consumption which has been continuously sliding since 2013 further dropped 12.4% in 2017 compared with 2016 level.

Figure 2.16 • Total final energy consumption by energy source, 1990 and 2017



Sources: APEC data, ESTO analysis

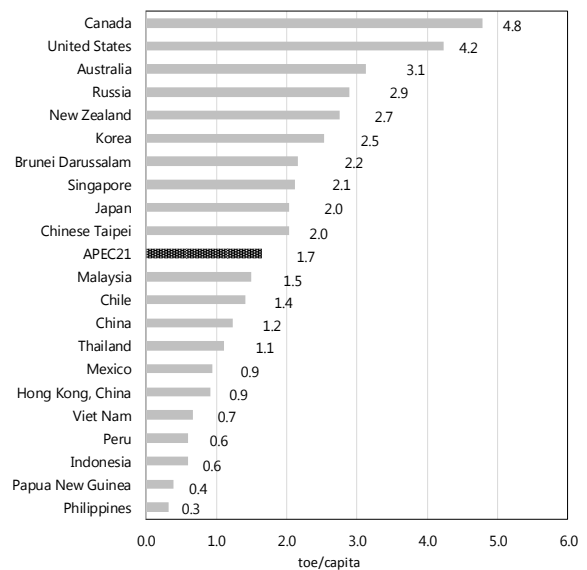
Final energy consumption per capita

The region's diverse grouping includes some of the world's most energy-intensive (Canada and the United States) and also the least energy-intensive (Papua New Guinea; Peru and the Philippines) economies.

The order of final energy per capita in APEC in 2017 from among the top energy users was unchanged, but there were movements for some economies following APEC average per capita of 1.7 tonnes of oil equivalent (toe). (Figure 2.17).

The top three economies, were still comprised of Canada (4.8 toe), the US (4.2 toe) and Australia (3.1 toe). While China and South-East Asia were the significant drivers of APEC TFEC in 2017, the two regions' final energy per capita remained well below the APEC average—both at 1.2 toe. Although there were changes in the order compared with 2016 level, seven economies have final energy per capita below one toe in 2017, which ranged from 0.3 toe to 0.9 toe.

Figure 2.17 • Energy consumption per capita, 2017

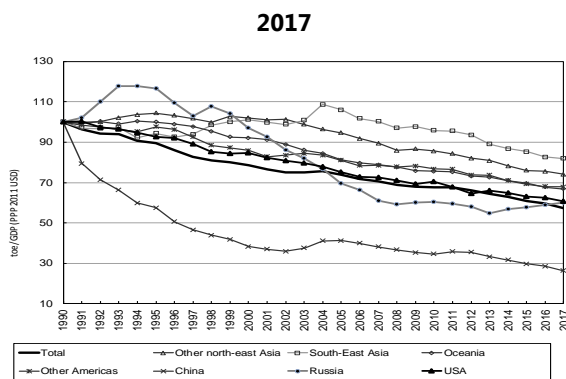


Sources: APEC data (TFEC), World Bank (Population), DGBAS (CT data), ESTO analysis

Final energy intensity

Final energy intensity [*Total final energy consumption/GDP* (PPP, constant 2011 USD)] in APEC continued to show improvement for the last two decades. Between the periods 1990 and 2017, energy intensity was estimated to reduce by 42.6% or 2.0% CAGR. Final energy intensity in 2017, reached 74.9 toe/million USD (constant 2011 PPP) representing a 3.6% improvement from the 2016 final energy intensity level of 77.7 toe/million USD (constant 2011 PPP) (Figure 2.18). The top three regions with significant final intensity reduction over the previous year were China (-7.6%), US (-2.6%) and Russia (2.0%). Note that a separate discussion on APEC energy intensity reduction goal was also prepared, which compared energy intensity reduction with 2005 level.

Figure 2.18 • Final energy intensity by region, 1990-

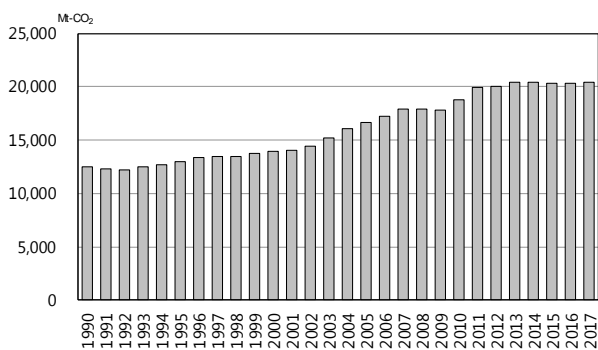


Sources: APEC data (TFEC), World Bank (GDP), ESTO analysis

CO₂ emissions

In this year’s version of CO₂ emissions analysis, the unit were changed to metric ton-CO₂ as compared with 2016 using metric ton-Carbon unit. These were based on the 2017 submissions from seven member economies, namely: Canada; Hong Kong, China; Japan; Korea; Chinese Taipei; Thailand and Russia and the CO₂ emissions of the other economies estimated using the 2017 energy balance tables. Despite efforts to increase renewables and the huge decline of oil for power generation, CO₂ emissions from fuel combustion in APEC was estimated to reach 20 404 Mt-CO₂ in 2017. This represented a slight increase of 0.2% from 20 353 Mt-CO₂ in 2016. The CAGR over the period 1990 to 2017 was 1.8%.

Figure 2.19 • CO₂ Emission in the APEC region, 1990-2017



Sources: APEC data, ESTO analysis

APEC goals

Energy intensity goal

In 2011, APEC Leaders set an aspirational goal to reduce energy intensity by 45% by 2035, against the 2005 level. After reporting three different energy intensity measures using IEA data, agreement was reached at EWG53 in March 2017 to analyse final energy (excluding non-energy) intensity, using APEC data. GDP was taken from World Bank Indicators using PPP, constant 2011 USD.

Since 2011, the progress has been regularly reported to the EWG and later in 2017 at EGEEC meeting.

In 2017, final energy intensity (excluding non-energy) has shown remarkable improvement—from the 2005 final intensity level of 96 toe/million USD (constant 2011 PPP), intensity was reduced to 75 toe/ million USD (constant 2011 PPP) or equivalent to 22.3% reduction from the 2005 level. 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

On 2 September 2014 at a forum in Beijing, China, Energy Ministers representing Asia-Pacific Economic Cooperation (APEC) made a joint statement in which they agreed to “aspire to the goal of ‘doubling the share of renewables’ in the APEC energy mix, including in power generation, from 2010 levels by 2030”. To attain this target, member economies will need to enhance cooperation and promote innovation in renewable energy (RE) technologies.

APEREC in collaboration with EGNRET was also instructed to keep track of RE doubling goal. The EGEDA Chair has been presenting the development of the RE doubling goal since 2017. Likewise, in that year traditional and modern biomass were defined in

APEC Overview 2017, as follows.

Traditional biomass includes biomass used for residential, commercial and agriculture sectors. Much of the biomass used in these sectors are heating (residential), cooking (residential and commercial) and crop drying (agriculture). This definition is applied to all APEC member economies, both OECD and non-OECD. Although, some argument can be made for counting most biomass as modern in some economies, it seems unlikely that any economy would try to increase the biomass share in the residential sector, because of the human health effects of burning biomass.

All other renewables (hydro, geothermal, etc) including biogas and wood pellets are considered modern renewables, although most likely data on wood pellets are not available.

Half of the municipal solid waste being used in power plants is assumed to be renewables.

With this definition, it was estimated that RE share from total final energy consumption expanded from 6.1% in 2010 to 8.4% in 2017. Assuming this increasing trend continues, APEC RE share in 2030 from the final energy demand will meet the target share and will reach 12.6%—0.4% more than the target.

Substantial progress was achieved in the use of modern renewables from 2010 to 2017, because of falling costs and government support, such as feed-in tariffs, auctions, and renewable portfolio standards. But this does not mean that APEC will stop its efforts in increasing use of RE, as more can be done to identify economy-specific barriers, and formulate policy responses as part of a comprehensive roadmap.

Energy balance table

This section presents the 2017 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 2017 APEC EBT featured the category “Other” (column 9) from the fuel types and “Other sector” (row 20) in the flow.

The category “Other” consisted mainly of waste and commercial renewable energy, such resources being used to generate electricity and directly consumed in the industrial sector and the residential/commercial sector. While “Other sector” is the aggregated term used for residential and commercial, agriculture and all other sectors. In the analysis on energy demand trends, this was referred to as “buildings and agriculture sector”. Total final energy consumption consisted mainly of industry, transport and other sector, while total final consumption included non-energy. Non-energy comprised 11% of the total final consumption.

In terms of final energy consumption, oil and petroleum products accounted for 36% of the total, followed by electricity (25%), coal (14%), gas (16%), others (5%) and heat (4%) (*total may not add up to details due to rounding-off*).

In both power generation and TPES, coal was the major fuel, 61% and 35%, respectively.

Table 2.1 • APEC Energy balance table (Mtoe), 2017

	1 Coal	2 Coal products	3 Crude Oil, NGL and condensate	4 Petroleum products	5 Gas	6 Hydro	7 Nuclear	8 Geothermal, solar, etc	9 Others	10 Electricity	11 Heat	12 Total
1 Indigenous production	3 005		1 853		1 811	210	419	119	361			7 777
2 Import	448	11	1 452	566	421				5	11		2 914
3 Export	- 625	- 10	- 644	- 660	- 476				- 5	- 11		-2 430
4 International marine bunkers				- 123								- 123
5 International aviation bunkers				- 90								- 90
6 Stock change	- 27	7	2	- 2	- 8				1			- 26
7 Total primary energy supply	2 802	8	2 663	- 310	1 748	210	419	119	362	1		8 021
8 Main activity producer	-1 488	- 9	- 2	- 36	- 601	- 206	- 419	- 107	- 72	1 271	132	-1 536
9 Autoproducer	- 213	- 43	- 1	- 23	- 121	- 3		- 8	- 25	119	122	- 196
10 Gas processing	- 10			- 2	9							- 2
11 Petroleum refineries				2 448								- 89
12 Coal transformation	- 516	244										- 272
13 Other transformation			25	- 18	- 11				-6 280			- 10
14 Losses & own-use	- 37	- 17	- 10	- 91	- 170				- 1	- 215	- 38	- 579
15 Discrepancy	22	- 1	- 13	15	- 19					4	- 2	6
16 Total final consumption	561	182	12	2 108	836			4	258	1 178	214	5 352
17 Total final energy consumption	511	162	1	1 692	748			4	258	1 178	214	4 767
18 Industry sector	405	158	1	190	316				83	537	113	1 802
19 Transport sector	2			1 259	80				61	23		1 426
20 Other sector	104	4		244	352			4	114	618	101	1 540
20.1 Residential & commercial	70	3		146	344			3	106	535	93	1 301
20.2 Agriculture	15			54	4				6	20	3	101
20.3 Other	19			44	5				2	62	5	137
21 Non-energy	50	20	11	415	88							584

Source: APEC data, ESTO analysis

Australia

Energy balance table of Australia

	Coal	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production	293 104		15 316						
Import	69	120	16 656	28 627	5 413		4 932		15 687
Export	-244 465	- 227	-10 751	-2 284	- 174		- 59		- 90
International marine bunkers				- 559					- 48
International aviation bunkers				-4 477			-4 477		
Stock changes	-4 697	5	28	345	148	- 8	- 14		176
Total primary energy supply	44 011	- 102	21 249	21 652	5 387	- 8	382		15 725
Transfers			- 328	3 801					
Total transformation sector	-41 789	1 461	-23 368	20 879	8 699	328	2 982	7	6 315
Main activity producers	-39 182	- 4		- 361					- 281
Autoproducers				- 854					- 807
Gas processing									
Petroleum refineries			-23 368	22 094	8 699	328	2 982	7	7 403
Coal transformation	-2 607	1 465							
Other transformation									
Losses & own use		- 922	- 58	-4 009				- 26	-2 563
Discrepancy	- 139	3	2 520	1 319	776	- 317	- 318	35	139
Total final consumption	2 083	440	15	43 642	14 862	3	3 046	16	19 616
Total final energy consumption	2 083	440	15	39 527	14 862		3 046	11	19 616
Industry sector	2 072	439	15	3 564	8			3	2 951
Iron and steel	13	230		19					11
Chemical & petrochemical	141	14		104				1	100
Non-metallic minerals	378	3		156					24
Other industries	1 540	192	15	3 285	8			2	2 816
Transport sector				32 374	14 676		3 046		13 806
Domestic air transport				3 098	52		3 046		
Road				27 391	14 316				12 294
Rail				1 116	2				1 113
Inland waterways				580	293				233
Other transport				189	13				166
Other sector	11	1		3 589	178			8	2 859
Residential		1		355					
Commerce and public services	11			817				8	671
Agriculture				2 417	178				2 188
Non-specified others									
Non-energy				4 115		3		5	
2016									
Indigenous production	292 031		17 566						
Import	19	143	16 293	27 400	5 171		4 706		15 156
Export	-251 555	- 344	-11 668	-1 777	- 60		- 1		- 45
International marine bunkers				- 546					- 47
International aviation bunkers				-4 095			-4 095		
Stock changes	3 665	- 9	231	- 504	- 137	- 6	- 39		- 221
Total primary energy supply	44 160	- 210	22 422	20 478	4 974	- 6	571		14 843
Transfers			- 364	4 245					
Total transformation sector	-42 398	1 473	-24 065	21 628	9 187	351	2 884	9	6 554
Main activity producers	-39 849	- 11		- 276					- 207
Autoproducers				- 946					- 896
Gas processing									
Petroleum refineries			-24 197	22 850	9 187	351	2 884	9	7 657
Coal transformation	-2 549	1 484							
Other transformation			132						
Losses & own use		- 893	- 59	-3 869				- 19	-2 373
Discrepancy	264	2	2 081	555	218	- 342	- 371	27	- 160
Total final consumption	2 026	372	15	43 037	14 379	3	3 084	17	18 864
Total final energy consumption	2 026	372	15	38 754	14 379		3 084	12	18 864
Industry sector	2 020	371	15	3 599	7			3	2 845
Iron and steel	22	214		17					10
Chemical & petrochemical	134	14		96				1	92
Non-metallic minerals	370	3		202					25
Other industries	1 494	140	15	3 284	7			2	2 718
Transport sector				31 715	14 208		3 084		13 331
Domestic air transport				3 135	51		3 084		
Road				26 739	13 856				11 859
Rail				1 069	2				1 066
Inland waterways				576	287				230
Other transport				196	12				176
Other sector	6	1		3 440	164			9	2 688
Residential		1		403					
Commerce and public services	6			789				8	654
Agriculture				2 248	164			1	2 034
Non-specified others									
Non-energy				4 283		3		5	

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				87 821	1 379		2 152	5 382			405 154	8 823
218	583		1 794	4 924							50 396	
- 307	-1 377		- 277	-61 431							-319 158	
- 511											- 559	
											-4 477	
- 16	42		17								-4 319	
- 616	- 752		1 534	31 314	1 379		2 152	5 382			127 037	8 823
	1 750		2 051								3 473	
620	590	869	469	-12 006	-1 379		-1 778	-1 144	22 165		-36 959	-4 301
- 23			- 57	-8 409	-1 379		-1 139	- 420	19 723		-31 171	-2 938
- 12			- 35	-3 597			- 639	- 724	2 442		-3 372	-1 363
655	590	869	561								-1 274	
											-1 142	
- 54	- 7	- 869	- 490	-7 192					-4 050		-16 231	
189	121		694	821			1				4 525	
139	1 702		4 258	12 937			375	4 238	18 115		81 845	4 522
139	1 470		383	12 222			375	4 238	18 115		77 015	4 522
76	182		344	6 975				2 960	6 457		22 482	2 870
3	1		4	277					294		833	
3				1 429				86	347		2 121	
8	89		35	1 084				50	396		2 067	50
62	92		305	4 185				2 824	5 420		17 461	2 820
55	786		5	372				100	504		33 350	100
											3 098	
	781			84				100			27 575	100
	1								279		1 395	
54											580	
1	4		5	288					225		702	
8	502		34	4 875			375	1 178	11 154		21 183	1 552
	355			3 563			365	1 165	5 093		10 542	1 529
8	96		34	1 288			10	13	5 891		8 030	23
	51			24					170		2 611	
	232		3 875	715							4 830	
				70 879	1 292		1 939	5 146			388 853	8 283
317	535		1 515	5 399							49 254	
- 174	-1 231		- 266	-43 394							-308 738	
- 499											- 546	
											-4 095	
23	- 95		- 29								3 383	
- 333	- 791		1 220	32 884	1 292		1 939	5 146			128 111	8 283
	1 873		2 372								3 881	
480	648	875	640	-12 138	-1 292		-1 583	- 901	22 035		-37 241	-3 776
- 18			- 51	-9 247	-1 292		-1 089	- 326	19 964		-32 126	-2 707
- 27			- 23	-2 772			- 494	- 575	2 071		-2 716	-1 069
525	648	875	714								-1 347	
											-1 065	
				- 119							13	
- 44	- 12	- 875	- 546	-6 092					-3 836		-14 749	
126	327		730	-1 504					- 1		1 397	
229	2 045		4 416	13 150			356	4 245	18 198		81 399	4 506
229	1 792		394	12 399			356	4 245	18 198		76 365	4 506
162	230		352	7 240				2 850	6 645		22 740	2 757
3	1		3	304					277		834	
3				1 502				101	347		2 194	12
7	133		37	1 180				59	388		2 202	59
149	96		312	4 254				2 690	5 633		17 510	2 686
60	1 029		3	285				161	524		32 685	161
											3 135	
	1 024			93				161			26 993	161
	1								296		1 365	
59											576	
1	4		3	192					228		616	
7	533		39	4 874			356	1 234	11 029		20 940	1 588
	403			3 564			346	1 176	5 089		10 579	1 521
7	81		39	1 256			10	58	5 789		7 908	67
	49			54					151		2 453	
	253		4 022	751							5 034	

Major energy indicators of Australia

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	86 140	92 512	108 111	113 483	127 302	126 614	128 111	127 037
Indigenous production	157 528	186 905	233 561	265 171	323 357	382 499	388 853	405 154
Import	14 397	20 848	26 384	31 107	42 932	48 280	49 254	50 396
Export	-78 918	-110 080	-153 518	-179 859	-228 871	-297 992	-308 738	-319 158
Final energy consumption	52 701	58 038	65 155	67 238	72 136	76 383	76 365	77 015
Industry	19 318	21 053	23 790	22 263	22 718	23 375	22 740	22 482
Transport	21 112	23 079	25 657	27 143	29 990	32 320	32 685	33 350
Residential	7 489	8 310	9 061	9 286	10 253	10 490	10 579	10 542
Commerce & public services	3 481	4 145	5 041	6 236	6 972	7 829	7 908	8 030
Others	1 301	1 451	1 606	2 310	2 203	2 369	2 453	2 611
Coal & coal products								
Primary energy supply	34 887	37 497	48 149	51 036	50 470	42 921	43 950	43 909
Indigenous production	106 102	127 823	164 578	201 579	246 564	298 581	292 031	293 104
Import				14	42	167	162	189
Export	-67 267	-88 595	-121 425	-150 990	-190 390	-254 000	-251 899	-244 692
Transformation sector	-30 334	-33 878	-42 600	-46 695	-46 880	-39 676	-40 925	-40 328
Power generation	-28 924	-32 383	-41 187	-45 461	-44 832	-38 758	-39 860	-39 186
Final energy consumption	4 381	4 461	4 131	3 763	2 530	2 343	2 398	2 523
Industry	4 170	4 287	3 996	3 510	2 423	2 336	2 391	2 511
Transport	73	86	88	181	94	1	0	0
Residential	7	7	2	3		1	1	1
Commerce & public services	87	81	45	69	13	5	6	11
Others								
Crude oil & NGL								
Primary energy supply	33 075	35 285	36 577	33 972	31 910	25 849	22 422	21 249
Indigenous production	29 026	28 364	33 910	25 673	25 537	18 088	17 566	15 316
Import	10 210	17 597	22 315	21 376	22 095	20 224	16 293	16 656
Export	-5 855	-10 372	-19 365	-13 190	-15 150	-12 727	-11 668	-10 751
Transformation sector	-30 676	-34 705	-37 538	-34 076	-32 017	-28 097	-24 065	-23 368
Petroleum refineries	-30 676	-34 705	-37 538	-34 076	-32 017	-28 178	-24 197	-23 368
Petroleum products								
Primary energy supply	-1 872	-2 732	-2 423	2 939	9 706	16 591	20 478	21 652
Import	4 187	3 251	4 069	9 717	15 943	23 103	27 400	28 627
Export	-3 446	-2 857	-3 463	-3 296	-2 439	-1 902	-1 777	-2 284
Transformation sector	31 064	35 479	37 685	33 524	30 770	25 498	21 628	20 879
Power generation	-946	-792	-525	-825	-1 393	-1 364	-1 222	-1 215
Petroleum refineries	32 061	36 318	38 256	34 380	32 172	26 862	22 850	22 094
Final energy consumption	25 488	27 464	30 629	32 242	35 255	38 442	38 754	39 527
Industry	2 884	2 950	3 545	3 071	3 155	3 863	3 599	3 564
Transport	20 874	22 634	25 063	26 282	29 123	31 310	31 715	32 374
Residential	378	366	350	294	366	368	403	355
Commerce & public services	256	287	313	493	624	781	789	817
Others	1 096	1 227	1 358	2 102	1 987	2 120	2 248	2 417
Gas								
Primary energy supply	14 790	16 743	19 275	18 972	28 440	33 156	32 884	31 314
Indigenous production	17 140	24 999	28 540	31 355	44 480	57 733	70 879	87 821
Import					4 852	4 786	5 399	4 924
Export	-2 350	-8 256	-9 265	-12 383	-20 892	-29 363	-43 394	-61 431
Transformation sector	-3 888	-3 873	-4 356	-5 682	-9 763	-11 961	-12 138	-12 006
Power generation	-3 471	-3 561	-4 060	-5 406	-9 763	-11 888	-12 019	-12 006
Final energy consumption	8 382	9 897	11 119	11 763	11 864	12 710	12 399	12 222
Industry	5 686	6 489	7 166	7 654	7 421	7 711	7 240	6 975
Transport	10	189	305	364	289	268	285	372
Residential	1 934	2 281	2 564	2 777	3 102	3 488	3 564	3 563
Commerce & public services	751	937	1 084	966	1 049	1 214	1 256	1 288
Others	1	1		2	3	29	54	24
Electricity								
Power generation	13 269	14 861	18 048	19 638	21 725	21 611	22 039	22 165
Thermal	12 052	13 493	16 633	18 238	20 096	19 047	19 164	19 008
Hydro	1 217	1 366	1 407	1 317	1 161	1 146	1 292	1 379
Nuclear								
Others	0	2	8	83	468	1 418	1 583	1 778
Final energy consumption	11 111	12 454	14 853	16 270	18 058	18 171	18 198	18 115
Industry	5 090	5 596	6 622	6 367	7 060	6 588	6 645	6 457
Transport	155	170	201	297	316	494	524	504
Residential	3 314	3 625	4 193	4 716	5 215	5 097	5 089	5 093
Commerce & public services	2 348	2 840	3 589	4 684	5 254	5 772	5 789	5 891
Others	204	223	248	206	213	220	151	170

Major economic indicators of Australia

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	17.07	18.07	19.15	20.39	22.03	23.82	24.19	24.60
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	638	717	884	1 037	1 194	1 369	1 408	1 441
GDP, billion USD (PPP, constant 2011)	489	550	678	795	915	1 049	1 079	1 104
Nominal, billion USD (current)	315	367	383	704	1 194	1 220	1 236	1 352
GDP per capita ^{*3}								
Real term (constant 2010 USD)	37 400	39 673	46 170	50 835	54 176	57 469	58 189	58 557
GDP, PPP (constant 2011 USD)	28 669	30 412	35 393	38 969	41 530	44 054	44 606	44 888
Nominal (current USD)	18 473	20 286	20 014	34 537	54 176	51 241	51 083	54 970
Nominal GDP & its components (billions of current AUD) ^{*1}								
Gross domestic product	404	495	661	922	1 301	1 624	1 662	1 765
Households and NPISHs final consumption expenditure	223	286	384	531	731	929	968	1 001
General government final consumption expenditure	70	89	118	162	234	293	310	328
Gross fixed capital formation	112	124	172	250	353	425	421	422
Stock change	5	4	2	4	-3	1	1	2
Exports of goods and services	61	89	128	168	258	325	320	374
Imports of goods and services	69	98	143	194	271	349	357	363
Real GDP & its components (billions of 2013 AUD) ^{*1}								
Gross Domestic Product	782	878	1 083	1 270	1 462	1 676	1 724	1 765
Households and NPISHs final consumption expenditure	418	469	578	702	833	952	978	1 001
General government final consumption expenditure	147	166	198	231	268	300	312	328
Gross fixed capital formation	158	172	233	305	387	438	423	422
Stock change	7	4	3	8	-2	1	1	2
Exports of goods and services	91	136	194	220	264	332	354	374
Imports of goods and services	72	93	139	202	286	347	347	363
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	3.3	2.7	3.4	3.2	3.0	2.8	2.5	2.7
Industry	28.5	27.1	26.0	25.3	25.1	24.9	24.4	23.5
Services, etc.	61.5	64.8	64.7	65.9	66.2	66.1	66.6	67.0
Industrial production index (2010=100) ^{*2}	74.6	78.6	93.2	97.5	100.0	N.A.	N.A.	N.A.
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	39.8	53.1	63.9	106.1	212.6	187.7	192.5	231.1
Imports, c.i.f.	42.0	61.3	71.5	125.3	201.6	208.8	196.2	228.8
Balance of payments (billions of current USD) ^{*2}								
Trade balance	0.5	-4.2	-4.9	-14.3	11.3	-19.0	-5.8	10.5
Current account	-15.5	-18.7	-15.5	-43.3	-44.7	-57.0	-41.0	-35.8
Overall balance	1.3	0.3	-2.1	6.0	-0.5	-1.4	5.9	13.2
Foreign exchange rate (AUD/USD) ^{*1}	1.28	1.35	1.72	1.31	1.09	1.33	1.35	1.30
PPP conversion factor, GDP (AUD/USD) ^{*1}	1.39	1.38	1.38	1.46	1.55	1.55	1.56	1.54
Price Indices								
GDP Deflator (2017=100) ^{*3}	51.7	56.3	61.0	72.6	89.0	96.9	96.4	100.0
Producer Price Index (2010=100) ^{*2}	66.4	72.9	75.9	86.7	100.0	107.5	109.8	111.6
Consumer Price Index (2010=100) ^{*2}	59.8	67.6	74.4	86.3	100.0	112.0	113.5	115.7
Growth rate (%) ^{*3}								
Real GDP	3.6	3.8	3.9	3.2	2.1	2.3	2.8	2.3
Population	1.5	1.2	1.2	1.3	1.6	1.4	1.6	1.7
Price								
Producer prices	6.0	3.6	7.1	6.0	1.9	0.3	2.1	1.6
Consumer prices	7.3	4.6	4.5	2.7	2.9	1.5	1.3	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	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production			5 961.2						
Import			.	454.9	227.5		31.6		195.9
Export			-5 740.4						
International marine bunkers									
International aviation bunkers				- 75.6			- 75.6		
Stock changes			80.7	- 11.6	- 8.1		- 1.8		- 1.6
Total primary energy supply			301.4	367.7	219.4		- 45.8		194.3
Transfers									
Total transformation sector			- 301.4	246.4	77.6		48.9	6.2	94.6
Main activity producers				- 13.					- 13.
Autoproducers									
Gas processing				19.2					
Petroleum refineries			- 301.4	240.2	77.6		48.9	6.2	107.6
Coal transformation									
Other transformation									
Losses & own use									
Discrepancy				14.9	4.7		- 3.1		14.
Total final consumption				629.1	301.6		6.2	302.9	
Total final energy consumption				629.1	301.6		6.2	302.9	
Industry sector									
Iron and steel				137.				6.2	130.9
Chemical & petrochemical									
Non-metallic minerals									
Other industries				137.				6.2	130.9
Transport sector									
Domestic air transport				448.4	301.6				146.8
Road				448.4	301.6				146.8
Rail									
Inland waterways									
Other transport									
Other sector									
Residential				43.6					25.3
Commerce and public services				18.6					0.2
Agriculture									
Non-specified others				25					25
Non-energy									
2016									
Indigenous production			6 459.2						
Import			.	371.	184.7		27.		159.4
Export			-6 125.6						
International marine bunkers									
International aviation bunkers				- 77.5			- 77.5		
Stock changes			29.1	14.8	5.2		2	0.0	7.5
Total primary energy supply			362.7	308.3	189.8		- 48.3	0.0	166.9
Transfers									
Total transformation sector			- 258.9	271.2	93.9		47.	6	103.6
Main activity producers				- 12.6					- 12.6
Autoproducers									
Gas processing				20.5					
Petroleum refineries			- 258.9	263.2	93.9		47.	6	116.2
Coal transformation									
Other transformation									
Losses & own use									
Discrepancy			- 104	- 8.1	4.6		1.3	0.0	- 13.3
Total final consumption				571.4	288.3		6	257.2	
Total final energy consumption				556.4	288.3		6	242.3	
Industry sector									
Iron and steel				102.2				6	96.
Chemical & petrochemical									
Non-metallic minerals									
Other industries				102.2				6	96.
Transport sector									
Domestic air transport				434.4	288.3				146.1
Road				434.4	288.3				146.1
Rail									
Inland waterways									
Other transport									
Other sector									
Residential				19.9					
Commerce and public services				19.9					
Agriculture									
Non-specified others									
Non-energy				14.9					15

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				11 050.6			0.1				17 011.9	0.1
											454.9	
				-7 035.							-12 775.3	
			0.0								-75.6	
											69.	
				4 015.7			0.1				4 684.9	0.1
19			-19									
			19	-2 085.4					357.5		-1 783.	-0.1
				-1 082.1			-0.1		320.3		-774.9	-0.1
				-150.1					37.2		-112.8	
			19	-853.3							-834.1	
											-61.2	
				-1 221.1					-87.6		-1 308.7	
	-0.7		0.0	-241.6					0.0		-226.7	
18.4				467.5					270.		1 366.5	
18.4				19.5					270.		918.5	
									13.8		150.9	
									2.3		2.3	
									11.6		148.6	
											448.4	
											448.4	
18.4				19.5					256.1		319.3	
18.4				19.5					110.2		148.2	
									146.0		146.0	
											25	
				448.							448.	
				11 128.8			0.1				17 588.2	0.1
											371.	
				-7 537.7							-13 663.3	
			0.0	33.6							-77.5	
											77.4	
				3 624.8			0.1				4 295.8	0.1
20.5				-1 704.7					408.1		-1 284.5	-0.1
				-1 170.			-0.1		367.3		-815.4	-0.1
				-160.5					40.8		-119.7	
20.5				-374							-353.6	
											4.3	
				-1 001.7					-127.7		-1 129.4	
	-0.6			-362.2							-474.	
19.7				556.2					280.3		1 407.9	
19.7				17.					280.3		853.8	
									14.2		116.4	
									2.8		2.8	
									11.4		113.6	
											434.4	
											434.4	
19.7				17.					266.1		303.	
19.7				17.					119.2		156.	
									147.		147.	
				539.2							554.1	

Major energy indicators of Brunei Darussalam

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	1 277	2 777	3 284	3 107	3 280	4 156	4 296	4 685
Indigenous production	16 493	19 699	21 573	23 135	20 508	18 503	17 588	17 012
Import	15	23	15	38	126	314	371	455
Export	-15 165	-16 790	-18 342	-19 912	-17 403	-14 574	-13 663	-12 775
Final energy consumption	381	551	582	660	805	909	854	919
Industry	61	90	70	65	130	140	116	151
Transport	193	270	280	344	395	456	434	448
Residential	103	117	113	140	158	155	156	148
Commerce & public services	23	75	118	111	122	158	147	146
Others								25
Coal & coal 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	112	298	658	546	622	425	363	301
Indigenous production	8 109	9 345	10 768	11 656	8 753	6 696	6 459	5 961
Import								
Export	-7 971	-8 965	-10 212	-11 036	-8 289	-6 366	-6 126	-5 740
Transformation sector	-339	-398	-563	-611	-587	-425	-259	-301
Petroleum refineries	-339	-398	-563	-611	-587	-425	-259	-301
Petroleum products								
Primary energy supply	-28	-50	-50	-41	17	230	308	368
Import	15	23	15	38	126	314	371	455
Export	-4		-1			-8		
Transformation sector	361	492	495	485	508	387	271	246
Power generation	-3	-4	-5	-8	-10	-11	-13	-13
Petroleum refineries	355	480	487	477	501	379	263	240
Final energy consumption	247	350	341	406	519	598	556	629
Industry	41	65	46	46	109	124	102	137
Transport	193	270	280	344	395	456	434	448
Residential	12	15	15	17	16	18	20	19
Commerce & public services								
Others								25
Gas								
Primary energy supply	1 193	2 529	2 675	2 603	2 641	3 501	3 625	4 016
Indigenous production	8 383	10 354	10 805	11 479	11 755	11 807	11 129	11 051
Import								
Export	-7 190	-7 825	-8 130	-8 877	-9 114	-8 199	-7 538	-7 035
Transformation sector	-532	-935	-1 070	-1 245	-1 342	-1 391	-1 705	-2 085
Power generation	-532	-935	-1 070	-1 245	-1 342	-1 391	-1 331	-1 232
Final energy consumption	33	38	29	26	28	20	17	19
Industry								
Transport								
Residential	33	38	29	26	28	20	17	19
Commerce & public services								
Others								
Electricity								
Power generation	112	208	272	312	362	401	408	358
Thermal	112	208	272	312	362	401	408	357
Hydro								
Nuclear								
Others	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3
Final energy consumption	101	162	212	227	257	292	280	270
Industry	20	24	25	19	21	17	14	14
Transport								
Residential	57	63	70	97	115	118	119	110
Commerce & public services	23	75	118	111	122	158	147	146
Others								

Major economic indicators of Brunei Darussalam

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	0.26	0.30	0.33	0.37	0.39	0.41	0.42	0.42
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	9.59	11.21	11.97	13.26	13.71	13.64	13.30	13.48
GDP, billion USD (PPP, constant 2011)	21.91	25.59	27.34	30.30	31.31	31.15	30.38	30.78
Nominal, billion USD (current)	3.52	4.73	6.00	9.53	13.71	12.93	11.40	12.13
GDP per capita ^{*3}								
Real term (constant 2010 USD)	37 081	37 713	35 931	36 329	35 269	32 869	31 685	31 753
GDP, PPP (constant 2011 USD)	84 693	86 139	82 068	82 977	80 556	75 074	72 370	72 524
Nominal (current USD)	13 607	15 934	18 013	26 105	35 269	31 164	27 156	28 572
Nominal GDP & its components (billions of current BND) ^{*1}								
Gross domestic product	6.4	6.7	10.3	15.9	18.7	17.8	15.7	16.7
Households and NPISHs final consumption expenditure	1.7	2.5	2.6	3.6	2.8	3.5	3.3	3.4
General government final consumption expenditure	1.4	1.8	2.7	2.9	4.1	4.5	4.1	4.4
Gross fixed capital formation	1.2	2.5	1.3	1.8	4.4	6.2	5.4	5.8
Stock change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exports of goods and services	3.9	4.0	7.0	11.1	12.6	9.3	7.8	8.3
Imports of goods and services	2.4	3.7	3.7	4.3	5.2	5.8	5.9	6.0
Real GDP & its components (billions of 2013 BND) ^{*1}								
Gross Domestic Product	13.1	15.3	16.3	18.1	18.7	18.6	18.1	18.4
Households and NPISHs final consumption expenditure	1.4	1.7	1.8	2.4	2.8	3.4	3.3	3.5
General government final consumption expenditure	2.2	2.5	2.7	2.9	4.1	4.5	4.2	4.5
Gross fixed capital formation	2.8	4.3	2.5	3.1	4.4	6.4	5.7	6.1
Stock change	0.0	0.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Exports of goods and services	10.8	14.5	15.3	16.4	12.6	10.5	10.3	10.0
Imports of goods and services	2.8	4.5	3.5	4.0	5.2	5.9	6.0	6.1
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	0.6	0.5	0.7	0.9	0.7	0.9	0.8	0.8
Industry	82.7	85.0	83.2	80.0	68.7	63.4	63.1	63.2
Services, etc.	25.2	24.0	24.8	26.3	30.6	35.8	38.0	37.9
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	2.4	3.9	6.2	8.9	6.4	4.9	5.6
Imports, c.i.f.	1.0	2.1	1.1	1.5	2.5	3.2	2.7	3.1
Balance of payments (billions of current USD) ^{*2}								
Trade balance	N.A.	N.A.	N.A.	4.83	6.2	2.9	2.2	2.4
Current account	N.A.	N.A.	N.A.	4.03	5.0	2.2	1.5	2.0
Overall balance	N.A.	N.A.	N.A.	3.94	0.2	-2.4	-4.9	0.5
Foreign exchange rate (BND/USD) ^{*1}	1.81	1.42	1.72	1.66	1.36	1.37	1.38	1.38
PPP conversion factor, GDP (BND/USD) ^{*1}	1.14	1.14	1.06	0.94	0.88	0.81	0.79	0.77
Price Indices								
GDP Deflator (2010=100) ^{*3}	48.8	43.9	63.4	87.7	100.0	95.6	86.8	91.1
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}	78.1	90.9	95.0	95.5	100.0	100.1	99.6	100.4
Growth rate (%) ^{*3}								
Real GDP	1.09	4.48	2.85	0.39	2.60	-0.57	-2.47	1.33
Population	2.89	2.65	2.13	1.58	1.23	1.25	1.18	1.11
Price								
Producer prices	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Consumer prices	2.15	5.97	1.56	1.24	0.36	-0.35	-0.51	0.83

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 2017

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	55.93
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	BND/L	0.18
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	8.28
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	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production	30 529		249 208						
Import	4 642	554	45 605	11 507	3 720	17	2 509	75	1 098
Export	-18 470	-28	-180 618	-24 129	-8 725	-635	-962	-4	-7 723
International marine bunkers				-375					-89
International aviation bunkers				-637			-637		
Stock changes	-367	158	-319	-322	23	12	-30	10	-160
Total primary energy supply	16 334	684	113 876	-13 956	-4 982	-606	880	81	-6 874
Transfers			-10 441	14 366	4 859	-95	-47		348
Total transformation sector	-15 726	1 126	-95 124	93 988	35 600	1 880	5 960	791	32 465
Main activity producers	-13 777			-1 409	-27				-201
Autoproducers		-7		-472					-104
Gas processing									
Petroleum refineries			-98 006	95 869	35 627	1 880	5 960	791	32 770
Coal transformation	-1 949	1 133							
Other transformation			2 882						
Losses & own use				-16 134		-32		-13	-2 111
Discrepancy	429	-184	-8 311	11 271	347	1 184	-833	-402	1 535
Total final consumption	1 037	1 626		89 535	35 824	2 331	5 960	457	25 363
Total final energy consumption	1 001	1 579		71 681	35 824		5 960	457	25 363
Industry sector	993	1 579		5 853	800		20	15	3 699
Iron and steel	178	1 533							
Chemical & petrochemical				508					6
Non-metallic minerals	338	22							
Other industries	477	24		5 345	800		20	15	3 693
Transport sector				55 049	33 230		5 437		15 391
Domestic air transport				5 429	44		5 385		
Road				46 202	33 158				12 769
Rail				1 914					1 914
Inland waterways				1 367					651
Other transport				137	28		52		57
Other sector	8			10 779	1 794		503	442	6 273
Residential	8			1 659				56	1 187
Commerce and public services				3 961	551		503	373	1 592
Agriculture				5 159	1 243			13	3 494
Non-specified others									
Non-energy	36	47		17 854		2 331			
2016									
Indigenous production	30 025		225 603						
Import	3 919	642	52 174	13 305	4 050	1	2 849	107	2 049
Export	-18 060	-29	-170 759	-21 447	-7 821	-570	-521		-6 753
International marine bunkers				-325					-90
International aviation bunkers				-634			-634		
Stock changes	573	-113	690	697	84	53	4	-7	278
Total primary energy supply	16 457	500	107 708	-8 404	-3 687	-516	1 698	100	-4 516
Transfers			-9 234	13 354	5 587	-250	83		770
Total transformation sector	-16 392	1 096	-91 276	90 063	34 031	4 183	4 815	809	30 028
Main activity producers	-14 472			-1 637	-28				-196
Autoproducers		-7		-468					-99
Gas processing									
Petroleum refineries			-94 405	92 168	34 059	4 183	4 815	809	30 323
Coal transformation	-1 920	1 103							
Other transformation			3 129						
Losses & own use				-16 563		-34		-9	-3 083
Discrepancy	872	-68	-7 198	14 112	294	1 344	-814	-441	2 481
Total final consumption	937	1 528		92 562	36 225	4 727	5 782	459	25 680
Total final energy consumption	911	1 506		71 952	36 225		5 782	459	25 680
Industry sector	905	1 506		5 616	795		21	21	3 616
Iron and steel	178	1 434							
Chemical & petrochemical				456					
Non-metallic minerals	312	46							
Other industries	415	26		5 160	795		21	21	3 616
Transport sector				55 556	33 582		5 257		15 762
Domestic air transport				5 244	40		5 204		
Road				46 905	33 514				13 120
Rail				1 907					1 907
Inland waterways				1 358					674
Other transport				142	28		53		61
Other sector	6			10 780	1 848		504	438	6 302
Residential	6			1 840				60	1 365
Commerce and public services				3 872	514		504	366	1 590
Agriculture				5 068	1 334			12	3 347
Non-specified others									
Non-energy	26	22		20 610		4 727			

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				153 431	33 752	26 346	2 826	13 557			509 649	49 928
809	281		2 998	20 081				1 316	851		84 556	1 316
-2 834	-163		-3 083	-71 045				-1 186	-6 199		-301 675	-1 186
-286											-375	
											-637	
-42	-37		-98	-1 603							-2 453	
-2 353	81		-183	100 864	33 752	26 346	2 826	13 687	-5 348		289 065	50 058
-284	3 857	6 952	-1 224								3 925	
3 883	1 722	2 783	8 904	-16 566	-33 752	-26 346	-2 785	-1 915	56 603	566	-39 931	-38 388
-608			-573	-7 883	-31 148	-26 346	-2 598	-917	51 660	544	-31 874	-34 599
-59		-256	-53	-5 838	-2 604		-187	-998	4 943	22	-5 141	-3 789
4 550	1 722	3 039	9 530								-2 137	
											-816	
											37	
-88	-326	-10 228	-3 336	-2 845				-2	-10 597		-58 691	-2
356	-2 261	493	10 852	-31 958			2	10	3 085		1 557	
1 514	3 073		15 013	47 595			43	11 780	43 743	566	195 925	11 676
1 514	2 007		556	44 523			43	11 780	43 743	566	174 916	11 676
567	196		556	14 683				6 597	15 400	512	45 617	6 450
				2 011				1	763	1	4 487	1
				3 750					1 598	264	5 612	
17			485	777				147	674		2 466	
550	196		71	8 145				6 449	12 365	247	33 052	6 449
716	275			3 416				2 166	675		61 306	2 166
											5 429	
	275			45				2 166	104		48 517	2 166
											1 914	
716											1 367	
											4 079	
231	1 536			26 424			43	3 017	27 668	54	67 993	3 060
7	409			14 170				3 002	14 428		33 267	3 002
35	907			11 420				15	10 262	34	25 692	15
189	220			834					831		6 824	
							43		2 147	20	2 210	43
	1 066		14 457	3 072							21 009	
				148 484	33 284	26 354	2 944	13 049			479 743	49 071
749	276		3 224	17 013				959	800		88 812	959
-2 903	-155		-2 724	-68 767				-1 241	-6 316		-286 619	-1 241
-235											-325	
											-634	
173	124		-12	-1 617							230	
-2 216	245		488	95 113	33 284	26 354	2 944	12 767	-5 516		281 207	48 789
-151	3 490	6 172	-2 347								4 120	
3 230	1 316	3 476	8 175	-17 731	-33 284	-26 354	-2 901	-3 160	57 310	619	-42 010	-39 281
-670			-743	-8 412	-30 625	-26 354	-2 742	-427	51 581	597	-32 491	-33 730
-51		-268	-50	-6 230	-2 659		-159	-2 733	5 729	22	-6 505	-5 551
3 951	1 316	3 744	8 968								-2 237	
											-817	
											40	
-65	-362	-9 915	-3 095	-3 089				-2	-9 892		-57 054	-2
588	-1 894	267	12 287	-30 597			-1	-2	-1 116	-1	5 831	
1 386	2 795		15 508	46 018			42	9 603	40 786	618	192 094	9 503
1 386	1 912		508	42 895			42	9 603	40 786	618	168 313	9 503
484	171		508	14 198				4 874	14 482	551	42 132	4 732
				1 789				1	758	1	4 161	1
				3 812					1 840	262	5 914	
17			439	753				142	631		2 340	
467	171		69	7 844				4 731	11 253	288	29 717	4 731
684	271			3 673				1 712	594		61 535	1 712
											5 244	
	271			39				1 712	72		48 728	1 712
											1 907	
684											1 358	
											4 298	
218	1 470			25 024			42	3 017	25 710	67	64 646	3 059
6	409			13 169				3 002	14 116		32 133	3 002
41	857			10 967				15	9 947	47	24 848	15
171	204			888					862		6 818	
							42		785	20	847	42
	883		15 000	3 123							23 781	

Major energy indicators of Canada

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	211 279	233 863	253 575	273 480	260 058	281 303	281 207	289 065
Indigenous production	276 457	351 959	374 899	401 955	398 394	472 114	479 743	509 649
Import	46 403	45 268	72 057	87 201	84 057	87 116	88 812	84 556
Export	-105 726	-164 961	-199 761	-217 084	-228 032	-275 558	-286 619	-301 675
Final energy consumption	146 772	159 141	171 548	173 252	167 883	170 753	168 313	174 916
Industry	47 238	51 257	55 248	51 046	42 433	43 588	42 132	45 617
Transport	43 121	47 760	52 143	54 639	58 551	61 291	61 535	61 306
Residential	31 441	32 412	32 850	33 202	33 064	34 188	32 133	33 267
Commerce & public services	21 725	23 878	27 107	25 632	23 229	24 898	24 848	25 692
Others	3 247	3 834	4 200	8 733	10 606	6 788	7 665	9 034
Coal & coal products								
Primary energy supply	24 261	25 320	31 610	29 662	22 481	18 068	16 957	17 018
Indigenous production	37 928	40 847	34 408	34 554	33 945	30 770	30 025	30 529
Import	9 547	6 943	15 049	12 813	7 945	5 294	4 561	5 196
Export	-21 443	-23 589	-19 268	-17 039	-20 156	-18 206	-18 089	-18 498
Transformation sector	-21 234	-21 745	-28 069	-24 344	-20 300	-15 907	-15 296	-14 600
Power generation	-19 973	-20 790	-26 965	-23 345	-19 099	-15 131	-14 479	-13 784
Final energy consumption	2 888	3 185	3 322	3 418	3 022	2 521	2 417	2 580
Industry	2 836	3 130	3 285	3 376	2 991	2 515	2 411	2 572
Transport								
Residential	39	54	36	42	31	6	6	8
Commerce & public services	4	1	1					
Others								
Crude oil & NGL								
Primary energy supply	82 797	84 201	96 683	102 822	104 076	115 717	107 708	113 876
Indigenous production	94 146	113 456	128 429	142 939	167 161	226 353	225 603	249 208
Import	27 134	30 484	46 942	49 110	42 349	51 575	52 174	45 605
Export	-37 811	-60 517	-78 447	-86 853	-103 906	-161 959	-170 759	-180 618
Transformation sector	-85 549	-84 182	-95 345	-100 524	-95 324	-90 046	-91 276	-95 124
Petroleum refineries	-85 890	-84 189	-95 287	-102 318	-98 129	-93 410	-94 405	-98 006
Petroleum products								
Primary energy supply	-6 284	-7 019	-9 580	-7 801	-7 793	-10 998	-8 404	-13 956
Import	7 671	6 648	7 363	15 698	12 942	11 958	13 305	11 507
Export	-11 855	-12 334	-14 893	-21 821	-20 463	-22 686	-21 447	-24 129
Transformation sector	82 856	84 123	93 893	99 821	97 146	88 750	90 063	93 988
Power generation	-3 795	-2 032	-2 419	-3 539	-2 085	-2 101	-2 105	-1 881
Petroleum refineries	86 651	86 155	96 312	103 360	99 231	90 851	92 168	95 869
Final energy consumption	57 471	58 714	64 819	69 117	70 132	71 691	71 952	71 681
Industry	6 787	5 750	6 457	5 968	5 095	5 520	5 616	5 853
Transport	39 943	42 370	46 863	49 794	54 569	55 395	55 556	55 049
Residential	4 659	3 446	3 249	3 127	2 723	1 899	1 840	1 659
Commerce & public services	4 076	4 615	5 463	6 348	3 540	3 827	3 872	3 961
Others	2 006	2 533	2 787	3 880	4 205	5 050	5 068	5 159
Gas								
Primary energy supply	54 744	67 112	74 259	81 158	75 696	87 641	95 113	100 864
Indigenous production	88 579	130 253	148 361	154 611	129 425	139 150	148 484	153 431
Import	521	552	1 329	7 833	18 730	16 555	17 013	20 081
Export	-33 044	-64 726	-82 681	-87 402	-79 151	-66 007	-68 767	-71 045
Transformation sector	-2 448	-5 752	-8 813	-9 910	-14 285	-18 201	-17 731	-16 566
Power generation	-1 869	-4 324	-7 357	-8 174	-11 552	-14 862	-14 642	-13 721
Final energy consumption	39 932	46 614	49 340	43 397	39 237	44 647	42 895	44 523
Industry	16 856	18 321	19 319	13 921	12 693	14 490	14 198	14 683
Transport	2 897	5 057	4 758	4 299	2 464	3 593	3 673	3 416
Residential	11 359	13 553	13 861	13 899	13 227	14 825	13 169	14 170
Commerce & public services	8 322	9 191	10 816	10 853	10 285	10 898	10 967	11 420
Others	498	492	586	425	568	841	888	834
Electricity								
Power generation	41 456	48 160	52 081	53 360	51 932	57 316	57 320	56 603
Thermal	9 659	10 848	14 962	14 180	13 145	13 169	12 429	11 373
Hydro	25 519	28 889	30 832	31 125	30 216	32 868	33 290	33 752
Nuclear	6 275	8 415	6 261	7 915	7 797	8 756	8 698	8 694
Others	2	8	27	139	775	2 524	2 902	2 783
Final energy consumption	35 944	38 406	41 403	44 158	44 455	40 547	40 786	43 743
Industry	14 440	15 889	17 482	18 013	15 104	14 625	14 482	15 400
Transport	281	333	389	366	351	527	594	675
Residential	11 163	11 316	11 886	12 983	13 814	14 456	14 116	14 428
Commerce & public services	9 317	10 061	10 820	8 369	9 394	10 104	9 947	10 262
Others	743	807	826	4 427	5 792	835	1 647	2 978

Major economic indicators of Canada

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	27.69	29.30	30.69	32.24	34.00	35.70	36.11	36.54
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	1 012	1 102	1 342	1 524	1 614	1 795	1 815	1 869
GDP, billion USD (PPP, constant 2011)	868	945	1 151	1 307	1 384	1 540	1 557	1 603
Nominal, billion USD (current)	594	604	742	1 170	1 614	1 553	1 527	1 647
GDP per capita ^{*3}								
Real term (constant 2010 USD)	36 558	37 600	43 724	47 257	47 450	50 280	50 264	51 151
GDP, PPP (constant 2011 USD)	31 355	32 249	37 502	40 532	40 698	43 124	43 111	43 871
Nominal (current USD)	21 449	20 613	24 185	36 278	47 450	43 495	42 280	45 070
Nominal GDP & its components (billions of current CAD) ^{*1}								
Gross domestic product	693	829	1 102	1 417	1 662	1 986	2 024	2 138
Households and NPISHs final consumption expenditure	388	464	603	773	950	1 151	1 188	1 244
General government final consumption expenditure	157	180	211	271	358	416	426	443
Gross fixed capital formation	151	153	217	310	391	475	465	487
Stock change	- 3	9	11	11			- 1	18
Exports of goods and services	174	300	488	522	484	629	632	665
Imports of goods and services	173	274	426	467	515	678	681	714
Real GDP & its components (billions of 2010 CAD) ^{*1}								
Gross Domestic Product	1 043	1 135	1 382	1 570	1 662	1 849	1 870	1 925
Households and NPISHs final consumption expenditure	541	582	698	818	950	1 066	1 090	1 128
General government final consumption expenditure	263	265	279	312	358	369	376	384
Gross fixed capital formation	207	200	269	355	391	422	404	416
Stock change	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Exports of goods and services	228	339	515	536	484	586	594	600
Imports of goods and services	199	264	392	461	515	593	593	618
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}	81.1	91.4	111.9	113.1	100.0	109.4	107.9	110.0
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	127.6	192.2	276.6	360.5	387.5	410.0	390.0	420.8
Imports, c.i.f.	123.2	168.4	244.8	322.4	402.7	429.4	413.2	442.2
Balance of payments (billions of current USD) ^{*2}								
Trade balance	9.4	25.6	44.4	50.6	-9.4	-19.3	-19.5	-19.2
Current account	-20.3	-5.1	18.5	21.9	-58.2	-55.4	-49.1	-46.4
Overall balance	2.5	-1.2	8.0	2.7	3.8	9.7	6.1	-5.0
Foreign exchange rate (CAD/USD) ^{*1}	1.17	1.37	1.49	1.21	1.03	1.28	1.33	1.30
PPP conversion factor, GDP (CAD/USD) ^{*1}	1.29	1.27	1.27	1.26	1.30	1.34	1.34	1.34
Price Indices								
GDP Deflator (2010=100) ^{*3}	66.5	73.0	79.8	90.3	100.0	107.4	108.2	111.0
Producer Price Index (2010=100) ^{*2}	71.2	83.5	90.0	94.2	100.0	111.7	110.6	112.0
Consumer Price Index (2010=100) ^{*2}	67.3	75.2	81.9	91.9	100.0	106.5	105.7	106.6
Growth rate (%) ^{*3}								
Real GDP	0.2	2.7	5.2	3.2	3.1	0.7	1.1	3.0
Population	1.5	1.0	0.9	0.9	1.1	0.7	1.1	1.2
Price								
Producer prices	0.3	7.4	4.3	1.6	1.5	0.4	-1.0	1.3
Consumer prices	4.8	2.1	2.7	2.2	1.8	-0.9	-0.7	0.8

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	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production	982		299						
Import	6 688		8 911	8 191	566	173	665	16	5 424
Export	- 370	- 36		- 499	- 43				- 24
International marine bunkers				- 136					
International aviation bunkers				- 617			- 617		
Stock changes	70	2	- 13	- 147	- 47	- 18	- 14	- 4	- 47
Total primary energy supply	7 370	- 34	9 197	6 792	476	155	34	12	5 353
Transfers			810	- 784	- 87	- 236		- 40	- 120
Total transformation sector	-7 266	237	-10 076	9 396	3 274	80	627	169	2 902
Main activity producers	-6 929			- 375					- 206
Autoproducers				- 141					- 70
Gas processing									
Petroleum refineries			-10 115	9 912	3 274	80	627	169	3 178
Coal transformation	- 337	237							
Other transformation			39						
Losses & own use		- 143		- 297					
Discrepancy	113	11	69	107	- 113	1	- 122		118
Total final consumption	217	71	15 214	3 550	539	141	8 253		
Total final energy consumption	217	71	14 874	3 550	539	141	8 253		
Industry sector	215	71	3 608	1	40	12	2 757		
Iron and steel		61	8				7		
Chemical & petrochemical									
Non-metallic minerals	5		216				3		
Other industries	210	10	3 384	1	40	12	2 747		
Transport sector			9 055	3 549	495	8	4 764		
Domestic air transport			514	9	495		10		
Road			8 118	3 540		8	4 542		
Rail			43				43		
Inland waterways			380				169		
Other transport									
Other sector	2		2 211		4	121	732		
Residential			1 060			117			
Commerce and public services			711		4	4	486		
Agriculture			214				99		
Non-specified others	2		226				147		
Non-energy				340					
2016									
Indigenous production	1 014		256						
Import	6 637		8 607	8 456	490	145	641		5 764
Export	- 349	- 100		- 445	- 24				- 59
International marine bunkers				- 130					
International aviation bunkers				- 584			- 584		
Stock changes	- 148	49	46	- 91	1	- 15	- 39		- 69
Total primary energy supply	7 154	- 51	8 909	7 206	467	130	18		5 636
Transfers			919	- 872	- 67	- 182		- 60	- 116
Total transformation sector	-7 321	266	-10 124	8 914	3 186	52	588	168	2 495
Main activity producers	-6 955			- 641					- 443
Autoproducers				- 121					- 68
Gas processing				- 2					
Petroleum refineries			-10 124	9 678	3 186	52	588	168	3 006
Coal transformation	- 366	266							
Other transformation									
Losses & own use		- 152		- 326					- 1
Discrepancy	303	9	296	- 128	- 61		- 91	- 2	14
Total final consumption	136	72	14 794	3 525	515	106	8 028		
Total final energy consumption	136	72	14 490	3 525	515	106	8 028		
Industry sector	135	72	3 884	1	43	11	2 925		
Iron and steel		64	8				7		
Chemical & petrochemical									
Non-metallic minerals	4		239				8		
Other industries	131	8	3 637	1	43	11	2 910		
Transport sector			8 726	3 524	469	5	4 489		
Domestic air transport			477	5	469		3		
Road			7 877	3 518		5	4 316		
Rail			44				44		
Inland waterways			328	1			126		
Other transport									
Other sector	1		1 880		3	90	614		
Residential			1 000			86	1		
Commerce and public services			620		3	4	421		
Agriculture									
Non-specified others	1		260				192		
Non-energy				304					

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				1 030	1 833		745	8 086			12 975	10 664
25	1 183		139	3 505							27 295	
- 278	- 81		- 73	- 177					- 3		- 1 085	
- 136											- 136	
											- 617	
- 52	7		28	- 13				11			- 90	11
- 441	1 109		94	4 345	1 833		745	8 097	- 3		38 342	10 675
	- 37		- 264								26	
1 042	322	243	737	- 2 299	- 1 833		- 694	- 4 754	6 828		- 10 461	- 7 281
- 10	- 2		- 157	- 2 168	- 1 829		- 694	- 697	6 193		- 6 499	- 3 220
- 71				- 107	- 4			- 3 933	635		- 3 550	- 3 937
1 123	324	243	894								- 203	
											- 100	
											- 109	- 124
- 37	- 17	- 243		- 230				- 14	- 626		- 1 310	- 14
118	110		- 5	- 120			- 1	133	- 197		115	
682	1 487		562	1 696			50	3 462	6 002		26 712	3 511
682	1 487		222	1 482			50	3 462	6 002		26 158	3 511
348	228		222	801				1 650	3 578		9 923	1 649
	1			5					53		127	
				74					18		92	
1	2		210	10					42		273	
347	225		12	712				1 650	3 465		9 431	1 649
213	26			17					83		9 155	
											514	
2	26			17					42		8 177	
									39		82	
211											380	
									2		2	
121	1 233			664			50	1 812	2 341		7 080	1 862
	943			480				1 780	1 081		4 401	1 780
10	207			162				21	1 103		1 997	21
37	78			21				6	144		385	6
74	5			1			50	5	13		297	55
			340	214							554	
				1 013	2 001		480	7 782			12 546	10 263
40	1 209		167	3 656				1			27 357	1
- 313	- 14		- 35	- 303							- 1 197	
- 130											- 130	
											- 584	
14	35		- 18	- 18				- 11			- 173	- 11
- 389	1 230		114	4 348	2 001		480	7 772			37 819	10 253
	- 41		- 406								47	
1 103	282	233	807	- 2 131	- 2 001		- 438	- 4 258	6 819		- 10 274	- 6 697
- 15			- 183	- 2 071	- 1 987		- 438	- 1 060	6 219		- 6 933	- 3 485
- 53				- 64	- 14			- 3 132	600		- 2 731	- 3 146
	- 2			4							2	
1 171	284	233	990								- 446	
											- 100	
											- 66	- 66
- 77	- 15	- 233		- 201				- 16	- 548		- 1 243	- 16
27	- 47		32	- 321				217	- 238		138	
664	1 409		547	1 695			42	3 715	6 033		26 487	3 755
664	1 409		243	1 436			42	3 715	6 033		25 924	3 755
380	281		243	819				1 942	3 750		10 602	1 940
	1			5					51		128	
				124					4		128	
	2		229	10				11	27		291	10
380	278		14	680				1 931	3 668		10 055	1 930
207	32			24					85		8 835	
											477	
6	32			24					40		7 941	
									41		85	
201											328	
									4		4	
77	1 096			593			42	1 773	2 198		6 487	1 815
	913			464				1 748	1 169		4 381	1 748
14	178			129				25	1 022		1 796	25
63	5						42		7		310	42
			304	259							563	

Major energy indicators of Chile

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	14 009	18 343	25 171	28 365	30 854	35 515	37 819	38 342
Indigenous production	7 929	8 303	8 581	9 338	9 214	12 084	12 546	12 975
Import	7 238	10 949	18 633	22 240	22 924	25 067	27 357	27 295
Export	- 212	- 111	- 889	-1 748	- 626	- 855	-1 197	-1 085
Final energy consumption	10 175	14 274	17 984	19 410	22 836	24 784	25 924	26 158
Industry	3 407	4 829	6 642	7 281	8 710	10 488	10 602	9 923
Transport	3 045	4 560	5 666	6 158	7 142	8 460	8 835	9 155
Residential	3 120	4 112	4 862	4 908	5 325	3 972	4 381	4 401
Commerce & public services	478	637	623	927	1 367	1 606	1 796	1 997
Others	125	136	191	136	292	258	310	682
Coal & coal products								
Primary energy supply	2 496	2 341	3 071	2 702	4 465	6 560	7 103	7 336
Indigenous production	1 451	690	243	269	254	1 262	1 014	982
Import	1 132	1 501	2 943	2 441	3 809	5 676	6 637	6 688
Export		- 13	- 27	- 27		- 366	- 449	- 406
Transformation sector	-1 850	-1 614	-2 332	-1 934	-3 981	-6 684	-7 055	-7 029
Power generation	-1 678	-1 394	-2 082	-1 715	-3 856	-6 556	-6 955	-6 929
Final energy consumption	581	604	597	581	406	211	208	288
Industry	524	566	585	565	401	208	207	286
Transport								
Residential	8	6		1				
Commerce & public services	1	1	3	3		3		
Others	31	31	9	12	5		1	2
Crude oil & NGL								
Primary energy supply	6 572	8 404	10 176	10 894	9 266	8 958	8 909	9 197
Indigenous production	1 166	680	427	355	611	296	256	299
Import	5 561	7 800	9 975	10 539	8 658	8 699	8 607	8 911
Export								
Transformation sector	-6 279	-8 155	-10 014	-11 242	-9 895	-10 322	-10 124	-10 076
Petroleum refineries	-6 279	-8 155	-10 014	-11 242	-9 895	-10 322	-10 124	-10 115
Petroleum products								
Primary energy supply	- 103	952	301	665	5 743	6 336	7 206	6 792
Import	545	1 648	1 941	3 787	7 341	7 559	8 456	8 191
Export	- 212	- 41	- 862	-1 721	- 626	- 489	- 445	- 499
Transformation sector	5 757	7 637	9 284	10 087	7 115	9 148	8 914	9 396
Power generation	- 476	- 506	- 457	- 988	-1 754	- 761	- 762	- 516
Petroleum refineries	6 277	8 184	9 742	11 084	8 874	9 909	9 678	9 912
Final energy consumption	5 310	7 965	9 105	9 383	11 791	13 729	14 490	14 874
Industry	1 338	2 076	2 050	2 073	3 034	3 933	3 884	3 608
Transport	3 021	4 537	5 639	6 105	7 087	8 340	8 726	9 055
Residential	753	1 083	1 088	880	932	823	1 000	1 060
Commerce & public services	123	174	160	227	463	423	620	711
Others	75	95	168	98	275	210	260	440
Gas								
Primary energy supply	1 142	1 145	5 208	6 798	4 469	3 981	4 348	4 345
Indigenous production	1 410	1 432	1 598	1 606	1 547	846	1 013	1 030
Import			3 672	5 275	3 007	3 133	3 656	3 505
Export		- 57					- 303	- 177
Transformation sector	- 13	- 13	-1 660	-2 724	-1 740	-1 938	-2 131	-2 299
Power generation	- 62	- 74	-1 652	-2 710	-1 752	-1 940	-2 135	-2 275
Final energy consumption	207	254	1 015	1 268	1 648	1 384	1 436	1 482
Industry	2	10	670	777	1 101	771	819	801
Transport	6	6	8	31	18	27	24	17
Residential	171	204	266	357	398	442	464	480
Commerce & public services	28	34	71	88	129	140	129	162
Others				15	2	4		22
Electricity								
Power generation	1 580	2 410	3 447	4 514	5 197	6 483	6 820	6 828
Thermal	812	827	1 854	2 235	3 301	4 139	4 381	4 350
Hydro	768	1 584	1 592	2 278	1 868	2 054	2 002	1 833
Nuclear								
Others				1	29	290	438	645
Final energy consumption	1 330	2 080	3 160	4 154	4 707	5 760	6 033	6 002
Industry	872	1 423	2 208	2 800	3 083	3 633	3 750	3 578
Transport	18	17	19	22	37	93	85	83
Residential	372	542	531	712	805	1 011	1 169	1 081
Commerce & public services	60	88	388	609	775	1 014	1 022	1 103
Others	8	10	14	11	7	9	7	157

Major economic indicators of Chile

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	13.27	14.38	15.34	16.18	17.06	17.97	18.21	18.47
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	79	115	145	182	219	265	269	272
GDP, billion USD (PPP, constant 2011)	119	174	218	275	330	400	407	412
Nominal, billion USD (current)	33	73	78	123	219	244	250	278
GDP per capita ^{*3}								
Real term (constant 2010 USD)	5 933	8 004	9 420	11 225	12 808	14 722	14 771	14 749
GDP, PPP (constant 2011 USD)	8 970	12 101	14 241	16 970	19 363	22 257	22 331	22 297
Nominal (current USD)	2 494	5 107	5 074	7 599	12 808	13 574	13 748	15 037
Nominal GDP & its components (billions of current CLP) ^{*1}								
Gross domestic product	10 096	29 142	42 005	68 832	111 509	159 553	169 470	180 211
Households and NPISHs final consumption expenditure	6 246	18 230	26 906	40 528	65 037	101 221	107 417	113 566
General government final consumption expenditure	985	2 864	5 075	7 280	13 502	20 732	23 362	25 246
Gross fixed capital formation	2 421	7 504	8 833	15 248	24 035	37 934	38 545	37 994
Stock change	199	559	457	- 215	1 768	17	- 887	917
Exports of goods and services	3 281	8 342	12 825	27 643	42 089	46 871	47 722	51 407
Imports of goods and services	2 953	7 676	12 091	21 652	34 923	47 221	46 690	48 918
Real GDP & its components (billions of 2010 CLP) ^{*1}								
Gross Domestic Product	42 735	62 458	78 419	98 564	118 578	143 545	145 943	147 809
Households and NPISHs final consumption expenditure	21 402	33 836	43 078	54 733	71 982	90 567	92 960	95 721
General government final consumption expenditure	7 227	8 756	10 186	12 073	15 520	18 453	19 776	20 648
Gross fixed capital formation	5 119	9 803	11 693	18 821	25 610	32 452	32 018	31 152
Stock change	N.A.	N.A.	710	- 281	1 589	29	- 717	734
Exports of goods and services	11 180	18 369	27 009	37 060	40 623	43 778	43 999	43 493
Imports of goods and services	5 568	11 399	15 357	24 598	36 576	41 778	42 142	44 128
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	3.9	3.7	3.5	3.9	3.7	3.5	3.5	3.5
Industry	42.7	41.8	41.9	36.5	32.3	30.4	29.8	29.4
Services, etc.	47.9	48.9	49.8	51.8	55.7	57.7	58.2	58.5
Industrial production index (2010=100) ^{*2}	N.A.	...	78.4	98.1	100.0	111.7	109.7	110.3
External trade (billions of current USD) ^{*1}								
Exports, f.o.b	8.4	16.0	19.2	41.3	71.1	62.0	60.7	69.2
Imports, c.i.f.	7.9	15.9	18.5	32.7	59.2	62.4	58.8	65.1
Balance of payments (billions of current USD) ^{*2}								
Trade balance	1.3	1.4	2.2	11.3	15.9	3.4	4.9	7.4
Current account	-0.5	-1.3	-0.9	1.8	3.1	-5.6	-4.0	-6.0
Overall balance	2.4	1.0	-0.1	2.7	3.9	0.5	0.4	-4.0
Foreign exchange rate (CLP/USD) ^{*1}	304.90	396.77	539.59	559.77	510.25	654.12	676.96	648.83
PPP conversion factor, GDP (CLP/USD) ^{*1}	N.A.	331.15	362.56	387.36	373.25	447.26	463.37	461.25
Price Indices								
GDP Deflator (2013=100) ^{*3}	23.6	46.7	53.6	69.8	94.0	111.2	116.1	121.9
Producer Price Index (2010=100) ^{*2}	N.A.	N.A.	N.A.	1.4	100.0	93.9	90.5	100.0
Consumer Price Index (2010=100) ^{*2}	30.0	57.3	73.7	83.7	100.0	118.4	122.9	125.6
Growth rate (%) ^{*3}								
Real GDP	3.3	8.9	5.3	5.7	5.8	2.3	1.7	1.3
Population	1.7	1.5	1.2	1.0	1.0	1.2	1.3	1.4
Price								
Producer prices	N.A.	N.A.	N.A.	N.A.	23.0	-6.8	-3.7	10.5
Consumer prices	26.0	8.2	3.8	3.1	1.4	4.3	3.8	2.2

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"

: 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	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production	1770 059		198 550						
Import	118 435	12	419 462	61 971	16	6 118	3 826	44	762
Export	-4 755	-5 520	-4 861	-57 261	-10 559	-24	-13 797		-17 537
International marine bunkers				-10 177					-514
International aviation bunkers				-9 564			-9 564		
Stock changes	16 323	9 356	-17 018	-7 075	-265	-292	128	22	-451
Total primary energy supply	1900 061	3 847	596 134	-22 106	-10 807	5 803	-19 406	66	-17 739
Transfers									
Total transformation sector	-1401 911	133 744	-584 915	549 925	133 207	41 296	43 324	1 484	179 514
Main activity producers	-828 735	-1 293	-142	-2 843					-244
Autoproducers	-185 826	-34 344		-4 333		-922			-60
Gas processing	-7 836	-11		-57					
Petroleum refineries			-584 773	557 158	133 208	42 219	43 324	1 484	179 818
Coal transformation	-379 515	169 392							
Other transformation									
Losses & own use	-36 123	-6 212	-3 442	-3 434	-421			-9	-2 396
Discrepancy	24 108	-425	-7 112	-547	58	22	-91	25	20
Total final consumption	486 134	130 954	665	523 837	122 038	47 121	23 826	1 566	159 400
Total final energy consumption	436 585	112 141	665	417 432	121 942	2 681	23 826	1 549	159 236
Industry sector	336 255	108 872	665	86 434	8 273	2 681		222	16 431
Iron and steel	54 818	78 096		1 213	68			1	611
Chemical & petrochemical	25 402	10 725	656	51 564	239	2 681		18	645
Non-metallic minerals	133 225	7 099	4	8 643	246			10	2 859
Other industries	122 810	12 952	5	25 015	7 719	1		193	12 317
Transport sector	1 788	41		236 222	89 931		23 826		114 448
Domestic air transport				24 984			23 826		380
Road				166 932	80 982				84 484
Rail	1 691	41		3 212	71				3 109
Inland waterways	98			24 692	1 900				17 180
Other transport				16 402	6 978				9 295
Other sector	98 541	3 229		94 775	23 738			1 326	28 357
Residential	45 962	2 381		38 984				284	
Commerce and public services	18 840	484		1 424				116	
Agriculture	14 604	261		18 257	2 365			16	15 778
Non-specified others	19 135	102		36 110	21 373			910	12 580
Non-energy	49 550	18 813		106 406	95	44 440		17	164
2016									
Indigenous production	1716 648		203 663						
Import	112 180	24	381 007	54 896	209	6 147	3 604	28	934
Export	-5 149	-6 940	-2 941	-53 526	-9 734	-68	-13 742		-15 711
International marine bunkers				-9 671					-420
International aviation bunkers				-8 614			-8 614		
Stock changes	61 021	10 381	-17 428	570	-1 572	-284	-176	-27	2 941
Total primary energy supply	1884 701	3 466	564 301	-16 345	-11 097	5 794	-18 928	1	-12 256
Transfers									
Total transformation sector	-1368 570	134 973	-553 554	521 249	128 192	39 121	40 514	1 661	174 078
Main activity producers	-794 612	-1 358	-131	-3 351					-298
Autoproducers	-178 291	-33 481		-3 875	-1				-62
Gas processing	-5 932	-13							
Petroleum refineries			-553 423	528 475	128 193	39 121	40 514	1 661	174 437
Coal transformation	-389 734	169 824							
Other transformation									
Losses & own use	-32 176	-6 361	-3 608	-3 769	-470			-17	-2 421
Discrepancy	80 231	18 341	-3 775	219	378	-98	-458	-57	753
Total final consumption	564 187	150 419	3 365	501 354	117 002	44 817	21 128	1 588	160 154
Total final energy consumption	519 297	124 285	3 097	399 107	116 854	1 722	21 128	1 564	159 803
Industry sector	415 557	120 255	3 097	81 862	8 368	1 722		267	16 318
Iron and steel	55 414	72 998		1 302	86			2	611
Chemical & petrochemical	80 947	24 165	3 078	46 652	266	1 722		27	670
Non-metallic minerals	138 793	8 036	2	8 838	279			16	2 933
Other industries	140 403	15 057	17	25 070	7 738	1		222	12 103
Transport sector	2 012	22		226 094	85 097		21 128		114 894
Domestic air transport				22 204			21 128		371
Road				165 379	77 529				86 608
Rail	1 922	22		3 264	73				3 160
Inland waterways	90			21 183	1 713				16 576
Other transport				14 063	5 782				8 179
Other sector	101 728	4 008		91 152	23 389			1 296	28 592
Residential	46 036	3 097		35 737				272	
Commerce and public services	20 168	442		1 291				115	
Agriculture	14 375	361		17 684	2 311			23	15 258
Non-specified others	21 149	108		36 440	21 078			885	13 334
Non-energy	44 890	26 134	267	102 247	148	43 095		24	350

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				134 691	102 326	64 649	33 690	82 201			2386 166	190 819
13 568	23 063		14 573	84 229					552		684 662	
-11 089	-1 587		-2 670	-3 145					-1 674		-77 218	
-9 663											-10 177	
											-9 564	
- 662	71		-5 627								1 585	
-7 846	21 547		6 275	215 775	102 326	64 649	33 690	82 201	-1 122		2975 454	190 819
18 731	36 058	17 946	78 365	-43 278	-102 326	-64 649	-33 690	-39 804	558 582	109 568	-918 754	-148 456
- 434		- 737	-1 427	-32 722	-102 326	-64 649	-33 690	-39 480	496 391	62 274	-547 214	-148 131
- 402	- 48	-1 807	-1 094	-9 786					62 191	47 294	-124 804	
	- 57			- 770							-8 674	
19 567	36 163	20 490	80 886								-27 615	
											-210 123	
											- 325	- 325
- 235	- 16	- 88	- 270	-24 720				- 325			-178 824	- 145
- 85	- 3	- 119	- 374	-5 362				- 145	-92 509	-12 240	9 066	34
10 565	57 586	17 738	83 996	142 415				42 252	464 951	95 732	1886 941	42 252
10 203	53 307	17 511	27 176	138 430				42 252	464 951	95 732	1708 188	42 252
3 369	10 771	17 511	27 176	66 554				6 384	300 933	63 956	970 053	6 384
21	143	2	367	5 343				719	45 249	5 009	190 447	719
624	9 084	17 508	20 765	20 546				784	44 051	28 541	182 269	784
1 558	848	1	3 121	9 481				265	28 424	334	187 474	265
1 166	696		2 924	31 184				4 616	183 209	30 072	409 862	4 616
6 544	1 473			23 948				12 916	12 195		287 109	12 916
777	1										24 984	
44	1 422			21 695				12 916	2 795		204 338	12 916
19	13								6 787		11 730	
5 605	7										24 789	
98	31			2 253					2 612		21 268	
290	41 064			47 929				22 952	151 824	31 776	451 026	22 952
	38 700			37 915				16 748	78 015	25 396	245 402	16 748
151	1 157			5 201				628	21 729	1 776	50 083	628
13	85			101				4 069	10 106	32	47 430	4 069
125	1 122			4 712				1 508	41 973	4 572	108 111	1 508
362	4 279	227	56 820	3 985							178 753	
11 744	20 142		12 089	123 461	99 999	55 584	25 685	75 088			2300 128	175 299
-9 856	-1 588		-2 827	66 408					532		615 047	
-9 251				-3 007					-1 626		-73 188	
											-9 671	
											-8 614	
64	- 192		- 183								54 545	
-7 299	18 362		9 079	186 862	99 999	55 584	25 685	75 088	-1 094		2878 246	175 299
16 663	34 042	17 189	69 790	-38 739	-99 999	-55 584	-25 685	-35 853	528 254	103 085	-890 422	-136 122
- 945		- 621	-1 487	-30 802	-99 999	-55 584	-25 685	-35 853	466 186	58 133	-523 053	-136 122
- 951	- 44	-1 687	-1 131	-8 551					62 068	44 952	-117 178	
				614							-5 331	
18 558	34 086	19 497	72 408								-24 948	
											-219 910	
- 352	- 24	- 156	- 328	-18 762				- 191	-88 412	-11 061	-164 340	- 191
- 135	- 285	- 26	146	-6 781				- 59	- 5	-1 944	86 228	
8 876	52 095	17 007	78 687	122 579				38 986	438 743	90 080	1909 713	38 986
8 233	48 685	16 766	24 352	117 849				38 986	438 743	90 080	1731 446	38 986
4 171	9 897	16 766	24 352	52 778				6 001	288 393	60 518	1028 462	6 001
29	218	5	352	4 718				623	45 422	4 853	185 331	623
972	8 060	16 753	18 183	17 065				668	41 922	26 756	241 252	668
1 812	899	2	2 897	7 512				304	27 417	311	191 212	304
1 359	720	7	2 920	23 484				4 406	173 632	28 598	410 668	4 406
3 738	1 236			21 463				11 490	10 763		271 843	11 490
703	1										22 204	
40	1 202			19 411				11 490	2 477		198 757	11 490
19	12								5 987		11 195	
2 889	6										21 273	
87	15			2 052					2 299		18 414	
323	37 552			43 608				21 494	139 587	29 563	431 141	21 494
	35 465			34 369				15 735	72 417	23 571	230 962	15 735
172	1 003			4 856				725	19 985	1 680	49 147	725
10	82			97				3 656	9 390	31	45 594	3 656
141	1 002			4 287				1 378	37 795	4 281	105 438	1 378
643	3 410	241	54 335	4 730							178 267	

Major energy indicators of China

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	670 604	880 401	951 575	1675 880	2417 577	2871 498	2878 246	2975 454
Indigenous production	727 356	897 770	940 131	1527 261	2127 952	2435 811	2300 128	2386 166
Import	8 966	35 541	96 589	184 223	384 330	506 276	615 047	684 662
Export	-41 394	-45 825	-63 126	-46 779	-51 339	-58 337	-73 188	-77 218
Final energy consumption	529 268	542 427	546 068	940 533	1347 825	1693 415	1731 446	1708 188
Industry	340 151	341 281	324 116	581 099	863 100	1019 599	1028 462	970 053
Transport	29 736	38 776	70 374	124 325	181 599	265 362	271 843	287 109
Residential	105 852	98 296	86 212	126 755	162 132	214 688	230 962	245 402
Commerce & public services	6 645	7 674	13 542	24 696	32 941	47 135	49 147	50 083
Others	46 883	56 400	51 824	83 658	108 053	146 630	151 032	155 541
Coal & coal products								
Primary energy supply	531 471	685 012	674 742	1246 807	1767 491	1963 528	1888 167	1903 908
Indigenous production	564 536	707 708	717 761	1231 421	1700 910	1872 340	1716 648	1770 059
Import	1 205	972	1 294	15 615	94 723	87 327	112 204	118 447
Export	-10 381	-21 888	-39 122	-18 529	-12 623	-9 859	-12 089	-10 276
Transformation sector	-162 644	-313 747	-395 355	-750 240	-1008 963	-1200 553	-1233 597	-1268 168
Power generation	-154 949	-257 955	-331 072	-601 102	-809 882	-979 326	-1007 742	-1050 198
Final energy consumption	383 824	344 942	245 180	426 028	591 631	653 655	643 583	548 726
Industry	249 330	233 105	169 172	324 641	490 687	544 696	535 812	445 127
Transport	11 099	6 820	4 603	4 194	3 098	2 419	2 034	1 829
Residential	75 023	77 505	48 585	57 047	51 675	49 888	49 133	48 342
Commerce & public services	5 744	5 513	8 258	14 830	16 665	20 822	20 610	19 325
Others	21 999	21 999	14 564	25 316	29 507	35 830	35 993	34 103
Crude oil & NGL								
Primary energy supply	117 706	147 949	213 830	300 892	428 766	540 935	564 301	596 134
Indigenous production	138 306	150 044	163 000	181 353	203 014	214 556	203 663	198 550
Import	2 923	17 090	70 265	126 817	237 682	335 483	381 007	419 462
Export	-23 990	-18 227	-10 306	-8 067	-3 030	-2 866	-2 941	-4 861
Transformation sector	-111 069	-144 194	-204 043	-290 848	-418 764	-532 184	-553 554	-584 915
Petroleum refineries	-109 612	-143 534	-203 053	-290 405	-418 694	-531 992	-553 423	-584 773
Petroleum products								
Primary energy supply	-3 246	7 885	7 145	16 868	-1 146	-8 237	-16 345	-22 106
Import	4 671	17 424	24 897	41 360	48 262	52 617	54 896	61 971
Export	-7 016	-5 192	-10 056	-16 579	-30 461	-41 120	-53 526	-57 261
Transformation sector	92 371	122 926	180 911	261 416	386 043	498 338	521 249	549 925
Power generation	-14 510	-17 035	-15 124	-16 493	-9 291	-6 802	-7 226	-7 176
Petroleum refineries	107 277	140 477	196 294	278 052	395 335	505 139	528 475	557 158
Final energy consumption	72 523	99 416	155 176	232 697	304 306	390 888	399 107	417 432
Industry	33 546	35 434	56 626	69 282	86 854	80 583	81 862	86 434
Transport	17 558	30 109	61 723	110 593	156 840	222 428	226 094	236 222
Residential	2 979	7 069	11 043	16 207	18 655	30 892	35 737	38 984
Commerce & public services	101	363	926	1 501	1 318	1 318	1 291	1 424
Others	18 338	26 441	24 859	35 113	40 639	55 667	54 124	54 366
Gas								
Primary energy supply	13 616	15 972	21 413	41 250	84 848	147 510	186 862	215 775
Indigenous production	13 616	15 972	24 206	43 892	85 248	120 083	123 461	134 691
Import					3 186	30 315	66 408	84 229
Export			-2 794	-2 642	-3 586	-2 888	-3 007	-3 145
Transformation sector	-343	488	7 361	15 403	-6 160	-8 599	-38 739	-43 278
Power generation	-894	-933	-3 614	-9 668	-19 053	-33 604	-39 353	-42 508
Final energy consumption	12 964	8 415	19 695	44 510	61 277	109 575	117 849	138 430
Industry	11 052	6 118	15 217	31 922	26 319	47 953	52 778	66 554
Transport	44	60	358	2 740	8 641	20 120	21 463	23 948
Residential	1 742	2 053	3 722	8 019	21 534	32 737	34 369	37 915
Commerce & public services	18	49	331	1 017	2 424	4 637	4 856	5 201
Others	108	135	67	812	2 358	4 128	4 384	4 813
Electricity								
Power generation	53 423	87 628	116 582	215 022	361 816	500 053	528 254	558 582
Thermal	42 525	70 135	96 015	176 313	289 518	368 852	381 596	401 232
Hydro	10 898	16 390	19 128	34 143	62 107	97 203	102 630	102 326
Nuclear		1 104	1 439	4 566	6 354	14 688	18 343	21 334
Others					3 837	19 311	25 685	33 690
Final energy consumption	42 210	65 923	89 091	171 345	296 693	415 501	438 743	464 951
Industry	31 098	46 969	60 643	118 156	205 710	279 867	288 393	300 933
Transport	911	1 568	2 418	3 701	6 317	9 680	10 763	12 195
Residential	4 135	8 648	12 487	24 809	44 072	65 061	72 417	78 015
Commerce & public services	655	1 715	3 601	6 470	11 111	18 250	19 985	21 729
Others	5 411	7 023	9 943	18 208	29 484	42 643	47 186	52 079

Major economic indicators of China

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	1 135.19	1 204.86	1 262.65	1 303.72	1 337.71	1 371.22	1 378.67	1 386.40
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	828	1 476	2 232	3 562	6 087	8 892	9 491	10 132
GDP, billion USD (PPP, constant 2011)	1 733	3 089	4 673	7 457	12 743	18 607	19 854	21 224
Nominal, billion USD (current)	395	734	1 211	2 286	6 087	11 016	11 138	12 144
GDP per capita ^{*3}								
Real term (constant 2010 USD)	729	1 225	1 768	2 732	4 550	6 484	6 884	7 308
GDP, PPP (constant 2011 USD)	1 526	2 564	3 701	5 719	9 526	13 570	14 401	15 309
Nominal (current USD)	348	610	959	1 753	4 550	8 033	8 079	8 759
Nominal GDP & its components (billions of current CNY) ^{*1}								
Gross domestic product	1 887	6 134	10 028	18 732	41 212	68 599	74 006	82 075
Households and NPISHs final consumption expenditure	944	2 807	4 699	7 523	14 606	26 598	29 344	31 796
General government final consumption expenditure	257	813	1 668	2 622	5 294	9 629	10 647	11 919
Gross fixed capital formation	464	2 036	3 353	7 581	18 583	30 150	31 808	34 937
Stock change	192	399	100	172	1 083	1 133	1 105	1 459
Exports of goods and services	257	1 101	2 095	6 337	10 849	14 710	14 618	16 385
Imports of goods and services	201	1 001	1 857	5 316	9 344	12 475	12 920	14 927
Real GDP & its components (billions of 2015 CNY) ^{*1}								
Gross Domestic Product	6 386	11 386	17 221	27 481	46 963	68 599	73 221	78 168
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	34.5	23.6	18.5	13.9	10.1	8.4	8.1	7.9
Industry	28.3	35.2	37.2	39.0	40.7	41.1	40.9	40.6
Services, etc.	47.1	44.7	46.3	47.9	49.3	50.5	50.9	51.5
Industrial production index (2010=100) ^{*2}	9.3	20.9	34.0	57.1	100.0	146.7	155.5	0.0
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	62.1	148.8	249.2	762.0	1577.8	2273.5	2097.6	2263.3
Imports, c.i.f.	53.3	132.1	225.1	660.0	1396.2	1679.6	1587.9	1843.8
Balance of payments (billions of current USD) ^{*2}								
Trade balance	N.A.	N.A.	N.A.	694.9	1486.4	2 143	1 990	2 216
Current account	N.A.	N.A.	N.A.	132.4	237.8	304.2	202.2	195.1
Overall balance	N.A.	N.A.	N.A.	227.7	524.7	-130.0	-214.2	304.6
Foreign exchange rate (CNY/USD) ^{*1}	4.78	8.35	8.28	8.19	6.77	6.23	6.64	6.76
PPP conversion factor, GDP (CNY/USD) ^{*1}	2.44	3.83	3.70	3.49	3.61	3.82	3.85	3.83
Price Indices								
GDP Deflator (2015=100) ^{*4}	29.6	53.9	58.2	68.2	87.8	100.0	101.1	105.0
Producer Price Index (2000=100) ^{*3}	101.3	111.8	100.0	102.0	102.6	92.2	95.9	103.4
Consumer Price Index (2010=100) ^{*2}	40.4	74.1	81.0	86.5	100.0	114.9	117.2	119.1
Growth rate (%) ^{*3}								
Real GDP ^{*4}	3.9	10.9	8.5	11.4	10.6	6.9	6.7	6.8
Population ^{*4}	1.5	1.1	0.8	0.6	0.5	0.5	0.5	0.6
Price ^{*4}								
Producer prices	-12.2	-3.8	5.3	-1.1	11.5	-3.4	4.0	7.8
Consumer prices	3.1	16.8	0.3	1.8	3.2	1.4	2.0	1.6

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	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production									
Import	6 615			21 463	498	257	6 343	4	6 060
Export				- 290	- 12				- 111
International marine bunkers				-10 930					-2 959
International aviation bunkers				-6 664			-6 664		
Stock changes	- 343			393	- 1	42	327		- 180
Total primary energy supply	6 272			3 971	485	299	6	4	2 809
Transfers									
Total transformation sector	-6 272			- 400		- 299			- 100
Main activity producers	-6 272			- 100					- 100
Autoproducers									
Gas processing				- 299		- 299			
Petroleum refineries									
Coal transformation									
Other transformation									
Losses & own use									
Discrepancy				-1 293	108				-1 401
Total final consumption				2 278	593		6	4	1 308
Total final energy consumption				2 278	593		6	4	1 308
Industry sector									
Iron and steel				81	4		3	1	72
Chemical & petrochemical									
Non-metallic minerals									
Other industries				81	4		3	1	72
Transport sector									
Domestic air transport				2 000	589		4		1 122
Road				4			4		
Rail				1 818	551				982
Inland waterways				178	38				140
Other transport									
Other sector									
Residential				197				4	114
Commerce and public services				54					
Agriculture				142				3	114
Non-specified others									
Non-energy									
2016									
Indigenous production									
Import	7 030			20 414	531	257	6 417	5	5 623
Export				- 368	- 9				- 97
International marine bunkers				-9 104					-2 632
International aviation bunkers				-6 303			-6 303		
Stock changes	- 334			- 927	- 32	71	- 108		- 417
Total primary energy supply	6 695			3 712	490	329	5	5	2 477
Transfers									
Total transformation sector	-6 695			- 420		- 329			- 91
Main activity producers	-6 695			- 91					- 91
Autoproducers									
Gas processing				- 329		- 329			
Petroleum refineries									
Coal transformation									
Other transformation									
Losses & own use									
Discrepancy				- 979	103				-1 082
Total final consumption				2 314	593		5	5	1 305
Total final energy consumption				2 314	593		5	5	1 305
Industry sector									
Iron and steel				76	3		2	1	69
Chemical & petrochemical									
Non-metallic minerals									
Other industries				76	3		2	1	69
Transport sector									
Domestic air transport				2 033	590		3		1 121
Road				3			3		
Rail				1 852	552				980
Inland waterways				179	38				140
Other transport									
Other sector									
Residential				204				4	115
Commerce and public services				58					
Agriculture				146				4	115
Non-specified others									
Non-energy									

Major energy indicators of Hong Kong, China

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	8 905	10 563	13 587	14 064	13 734	14 092	14 443	14 339
Indigenous production				30	348	97	109	111
Import	13 041	22 621	20 893	25 231	32 220	31 135	31 474	32 178
Export	-2 163	-8 118	-1 540	-1 763	- 726	- 803	- 471	- 405
Final energy consumption	4 907	6 519	8 804	6 690	6 697	6 737	6 762	6 715
Industry	1 515	1 394	1 759	554	384	306	289	300
Transport	1 459	2 390	3 687	2 334	2 153	2 099	2 108	2 078
Residential	688	983	1 158	1 300	1 395	1 388	1 415	1 385
Commerce & public services	1 235	1 737	2 188	2 503	2 765	2 941	2 950	2 952
Others	10	15	11			2	1	
Coal & coal products								
Primary energy supply	6 006	5 751	4 124	6 869	6 224	6 695	6 695	6 272
Indigenous production								
Import	5 360	5 466	3 635	6 825	6 503	7 044	7 030	6 615
Export	- 1	- 1	- 2					
Transformation sector	-5 996	-5 742	-4 121	-6 869	-6 224	-6 695	-6 695	-6 272
Power generation	-5 996	-5 742	-4 121	-6 869	-6 224	-6 695	-6 695	-6 272
Final energy consumption	10	8	4					
Industry								
Transport								
Residential								
Commerce & public services								
Others	8	8	4					
Crude oil & NGL								
Primary energy supply								
Indigenous production								
Import								
Export								
Transformation sector								
Petroleum refineries								
Petroleum products								
Primary energy supply	3 054	4 269	5 853	4 552	3 203	3 434	3 712	3 971
Import	7 682	16 476	13 547	15 405	21 531	20 122	20 414	21 463
Export	-2 007	-7 989	-1 436	-1 377	- 498	- 701	- 368	- 290
Transformation sector	- 490	- 696	- 684	- 756	- 354	- 328	- 420	- 400
Power generation	- 127	- 170	- 37	- 38	- 37	- 62	- 91	- 100
Petroleum refineries								
Final energy consumption	2 567	3 530	5 186	2 665	2 398	2 307	2 314	2 278
Industry	919	911	1 334	204	97	80	76	81
Transport	1 459	2 390	3 687	2 210	2 086	2 023	2 033	2 000
Residential	120	165	114	113	81	60	58	54
Commerce & public services	69	64	50	137	134	144	146	142
Others								
Gas								
Primary energy supply		23	2 834	2 055	3 553	2 953	3 028	3 017
Indigenous production					325			
Import		31	2 834	2 055	3 227	2 953	3 028	3 017
Export								
Transformation sector		- 23	-2 834	-2 055	-2 551	-2 352	-2 419	-2 402
Power generation		- 23	-2 834	-2 055	-2 551	-2 352	-2 419	-2 402
Final energy consumption	280	406	485	567	676	601	610	615
Industry					22	27	25	26
Transport								
Residential	159	231	283	332	374	316	327	324
Commerce & public services	121	175	203	235	279	258	259	265
Others								
Electricity								
Power generation	2 489	2 401	2 694	3 325	3 297	3 268	3 289	3 182
Thermal	2 489	2 401	2 694	3 325	3 296	3 267	3 288	3 182
Hydro								
Nuclear								
Others	0.0	0.0	0.0	0.0	0.3	0.4	0.4	0.6
Final energy consumption	2 050	2 574	3 129	3 444	3 604	3 782	3 793	3 773
Industry	596	483	424	350	265	200	188	190
Transport				123	61	71	70	75
Residential	409	587	762	856	940	1 012	1 030	1 006
Commerce & public services	1 045	1 498	1 935	2 116	2 338	2 500	2 505	2 502
Others		7	8					

Major economic indicators of Hong Kong, China

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	5.70	6.16	6.67	6.81	7.02	7.29	7.34	7.39
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	104	135	153	189	229	264	270	281
GDP, billion USD (PPP, constant 2011)	154	199	227	279	338	391	399	415
Nominal, billion USD (current)	77	145	172	182	229	309	321	342
GDP per capita ^{*3}								
Real term (constant 2010 USD)	18 251	21 894	23 016	27 689	32 550	36 261	36 821	37 949
GDP, PPP (constant 2011 USD)	26 974	32 358	34 017	40 923	48 108	53 592	54 420	56 088
Nominal (current USD)	13 486	23 497	25 757	26 650	32 550	42 432	43 735	46 220
Nominal GDP & its components (billions of current HKD) ^{*1}								
Gross domestic product	599	1 119	1 338	1 412	1 776	2 398	2 491	2 663
Households and NPISHs final consumption expenditure	344	696	784	812	1 090	1 593	1 650	1 785
General government final consumption expenditure	41	90	125	131	157	231	248	261
Gross fixed capital formation	157	338	355	302	387	537	535	576
Stock change	6	46	14	- 5	38	- 21	0.4	11
Exports of goods and services	703	1 412	1 686	2 506	3 647	4 698	4 658	5 026
Imports of goods and services	652	1 462	1 627	2 333	3 543	4 641	4 601	4 997
Real GDP & its components (billions of 2013 HKD) ^{*1}								
Gross Domestic Product	960	1 243	1 414	1 739	2 108	2 438	2 491	2 586
Households and NPISHs final consumption expenditure	611	847	925	1 014	1 266	1 618	1 650	1 741
General government final consumption expenditure	107	145	166	184	206	240	248	255
Gross fixed capital formation	230	348	366	394	459	536	535	551
Stock change	10	68	22	- 7	51	- 21	0.4	13
Exports of goods and services	830	1 485	1 913	3 027	3 983	4 626	4 658	4 931
Imports of goods and services	793	1 588	1 926	2 854	3 851	4 561	4 601	4 905
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	N.A.	N.A.	N.A.	N.A.	0.1	0.1	0.1	0.1
Industry	N.A.	N.A.	11.6	7.9	6.5	7.4	7.5	7.2
Services, etc.	N.A.	N.A.	84.4	88.8	90.2	89.4	89.5	89.3
Industrial production index (2010=100) ^{*2}	126.1	129.6	105.3	112.0	100.0	100.6	101.6	102.6
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	82.4	173.9	202.7	292.1	400.7	510.6	516.7	550.3
Imports, c.i.f.	84.7	196.1	214.0	300.2	441.4	559.4	547.3	589.9
Balance of payments (billions of current USD) ^{*2}								
Trade balance	N.A.	N.A.	20.5	31.1	3.3	-22.9	-16.7	-22.9
Current account	N.A.	N.A.	7.5	21.6	16.0	10.3	12.7	15.9
Overall balance	N.A.	N.A.	12.5	0.4	12.2	30.0	0.8	38.2
Foreign exchange rate (HKD/USD) ^{*1}	7.79	7.74	7.79	7.78	7.77	7.75	7.76	7.79
PPP conversion factor, GDP (HKD/USD) ^{*1}	5.36	7.23	6.84	5.63	5.64	6.38	6.45	6.41
Price Indices								
GDP Deflator (2016=100) ^{*3}	62.4	90.1	94.6	81.2	84.3	98.4	100.0	103.0
Producer Price Index (2010=100) ^{*2}	N.A.	91.0	87.7	86.3	100.0	100.4	101.8	105.6
Consumer Prices Index (2010=100) ^{*2}	57.0	89.6	95.9	89.5	100.0	122.9	125.9	127.8
Growth rate (%) ^{*3}								
Real GDP	3.8	2.4	7.7	7.4	6.8	2.4	2.2	3.8
Population	0.3	2.0	0.9	0.4	0.7	0.9	0.6	0.8
Price								
Producer prices	N.A.	2.8	0.2	0.8	6.0	-2.7	1.3	3.8
Consumer prices	10.4	9.1	-3.7	0.8	2.3	3.0	2.4	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"

: 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 2017

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		Unit	Amount
Coal and Coal Products			Coal and Coal Products			Coal and Coal Products		
Coking Coal			Coking Coal			Coking Coal		
Anthracite	HKD/tonne	-	Anthracite			Anthracite		
Other bituminous coal	HKD/tonne	583.96	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	HKD/kg	4.50	LPG			LPG	HKD/kg	25.75
Naphtha			Naphtha			Naphtha		
Motor Gasoline	HKD/L	3.73	Motor Gasoline			Motor Gasoline (regular)	HKD/L	13.96
Aviation Gasoline			Aviation Gasoline			Aviation Gasoline		
Gasoline Type Jet Fuel			Gasoline Type Jet Fuel			Gasoline Type Jet Fuel		
Kerosene Type Jet Fuel	HKD/L	3.19	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	HKD/L	2.46	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	HKD/kg	3.72	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		
						Commercial		
						Residential		
						Others		
Other Energy Products			Other Energy Products			Other Energy Products		
Gas oil, diesel oil and naphtha	HKD/L	3.26				Environmental diesel oil (road)	HKD/L	11.87

Indonesia

Energy balance table of Indonesia

	Coal	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production	271 214		51 443						
Import	2 665		21 032	28 299	13 422		1 461		5 415
Export	-175 072		-15 249	-2 020			- 2		- 1
International marine bunkers									
International aviation bunkers									
Stock changes	-41 754		-1 282	3 739	1 288		- 110	- 270	2 057
Total primary energy supply	57 054		55 944	30 018	14 710		1 350	- 270	7 472
Transfers			- 949	815					
Total transformation sector	-48 822	14	-55 533	37 310	10 821		2 847	749	12 626
Main activity producers	-48 804			-3 072					-2 297
Autoproducers									
Gas processing				573					
Petroleum refineries			-55 533	42 065	10 821	2 256	2 847	749	14 923
Coal transformation	- 18	14							
Other transformation				-2 256		-2 256			
Losses & own use				- 83	- 51			- 1	- 26
Discrepancy			538	2 049					2 050
Total final consumption	8 232	14		70 109	25 480		4 196	479	22 121
Total final energy consumption	8 232	14		63 100	25 480		4 196	479	22 121
Industry sector	8 232			6 042				27	3 990
Iron and steel	176								
Chemical & petrochemical									
Non-metallic minerals	3 445								
Other industries	4 610			6 042				27	3 990
Transport sector				44 962	25 197		4 196		15 532
Domestic air transport				4 198	2		4 196		
Road				40 727	25 195				15 532
Rail									
Inland waterways				37					
Other transport									
Other sector		14		12 096	283			451	2 599
Residential		14		8 639				410	
Commerce and public services				825				23	575
Agriculture									
Non-specified others				2 631	283			19	2 024
Non-energy				7 009					
2016									
Indigenous production	268 244		46 682						
Import	2 293		21 979	19 984	11 138		778		4 381
Export	-194 704		-18 595	-4 073	- 1		- 2		
International marine bunkers									
International aviation bunkers									
Stock changes	-22 590		5 728	2 796	1 514		39	- 341	1 323
Total primary energy supply	53 243		55 795	18 707	12 651		815	- 341	5 704
Transfers			-1 497	1 060					
Total transformation sector	-44 353	14	-53 684	38 485	10 565		2 836	805	14 247
Main activity producers	-44 335			-5 058					-4 060
Autoproducers									
Gas processing									
Petroleum refineries			-53 684	45 174	10 565	1 632	2 836	805	18 307
Coal transformation	- 18	14							
Other transformation				-1 632		-1 632			
Losses & own use				- 89	- 46			- 1	- 39
Discrepancy			- 614	- 808					
Total final consumption	8 891	14		57 356	23 170		3 651	462	19 912
Total final energy consumption	8 891	14		53 486	23 170		3 651	462	19 912
Industry sector	8 891			4 538				26	3 341
Iron and steel	229								
Chemical & petrochemical									
Non-metallic minerals	3 705								
Other industries	4 957			4 538				26	3 341
Transport sector				40 789	22 710		3 651		14 407
Domestic air transport				3 653	2		3 651		
Road				37 115	22 708				14 407
Rail									
Inland waterways				21					
Other transport									
Other sector		14		8 159	460			436	2 164
Residential		14		5 186				396	
Commerce and public services				632				22	478
Agriculture									
Non-specified others				2 341	460			18	1 686
Non-energy				3 870					

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				62 326	1 602		10 980	52 939			450 505	65 521
735	6 519		747						96		52 092	
- 511			-1 506	-30 113				- 182			-222 635	- 182
1 130	- 356							637			-38 659	637
1 353	6 162		- 758	32 213	1 602		10 980	53 395	96		241 302	65 977
	815										- 134	
894	1 606		7 767	-4 899	-1 602		-10 980	- 224	21 897		-62 839	-12 806
- 775				-9 704	-1 602		-10 980	- 224	21 897		-52 489	-12 806
	573			4 805							5 377	
1 669	1 033		7 767								-13 469	
											- 3	
											-2 256	
- 4				-6 359					-2 699		-9 140	
				-3 070					- 105		- 588	
2 243	8 582		7 009	17 885				53 171	19 189		168 601	53 171
2 243	8 582			14 720				53 171	19 189		158 427	53 171
1 900	124			14 345				6 767	6 212		41 599	6 767
				654							830	
				6 579							6 579	
				1 050							4 495	
1 900	124			6 062				6 767	6 212		29 694	6 767
37								3 766	20		48 748	3 766
											4 198	
								3 766			44 493	3 766
									20		20	
37											37	
306	8 458			375				42 638	12 957		68 080	42 638
	8 230			212				42 423	8 123		59 412	42 423
	228			164				215	4 833		6 037	215
306											2 631	
			7 009	3 165							10 174	
297	3 366		24	64 161	1 606		9 166	52 867			442 728	63 640
- 363			-3 706	-30 962					60		44 316	
											-248 333	
297	- 56		20								-14 066	
231	3 310		-3 662	33 199	1 606		9 166	52 867	60		224 644	63 640
	1 060										- 436	
1 067	625		8 340	-6 174	-1 606		-9 166	- 224	21 321		-55 387	-10 997
- 998				-11 073	-1 606		-9 166	- 224	21 321		-50 142	-10 997
				4 899							4 899	
2 065	625		8 340								-8 510	
											- 3	
											-1 632	
- 3				-7 499					-2 742		-10 329	
			- 808	-2 195					- 63		-3 680	
1 296	4 995		3 870	17 331				52 643	18 576		154 812	52 643
1 296	4 995			13 918				52 643	18 576		147 528	52 643
1 098	72			13 533				6 846	5 860		39 667	6 846
				640							869	
				7 203							7 203	
				1 029							4 734	
1 098	72			4 661				6 846	5 860		26 861	6 846
21								3 120	19		43 928	3 120
											3 653	
								3 120			40 235	3 120
									19		19	
21											21	
177	4 923			385				42 678	12 697		63 933	42 678
	4 790			212				42 462	8 053		55 927	42 462
	133			173				216	4 644		5 665	216
177											2 341	
			3 870	3 414							7 284	

Major energy indicators of Indonesia

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	101 630	127 294	141 204	173 211	201 283	222 241	224 644	241 302
Indigenous production	174 756	223 336	229 927	264 316	352 048	448 263	442 728	450 505
Import	10 254	15 881	23 217	38 034	35 499	45 377	44 316	52 092
Export	-79 162	-105 128	-108 499	-127 228	-183 468	-266 310	-248 333	-222 635
Final energy consumption	65 052	77 915	103 085	119 348	138 268	150 790	147 528	158 427
Industry	19 687	24 180	38 300	43 981	52 810	46 806	39 667	41 599
Transport	7 136	10 782	14 097	20 153	28 159	38 887	43 928	48 748
Residential	35 501	39 187	45 274	48 560	50 322	55 435	55 927	59 412
Commerce & public services	977	1 674	2 624	3 327	4 212	5 730	5 665	6 037
Others	1 750	2 093	2 791	3 327	2 764	3 933	2 341	2 631
Coal & coal products								
Primary energy supply	4 042	5 468	13 136	24 314	39 502	51 047	53 243	57 054
Indigenous production	6 342	24 607	45 300	89 801	161 797	271 401	268 244	271 214
Import	365	379	82	58	32	1 769	2 293	2 665
Export	-2 529	-18 415	-34 375	-65 144	-122 398	-215 120	-194 704	-175 072
Transformation sector	-2 602	-3 292	-8 071	-15 097	-20 237	-41 209	-44 339	-48 807
Power generation	-2 600	-3 289	-8 066	-15 094	-20 233	-41 207	-44 335	-48 804
Final energy consumption	1 440	2 175	5 066	9 218	19 265	9 838	8 905	8 246
Industry	1 431	2 160	5 048	9 204	19 248	9 832	8 891	8 232
Transport								
Residential	13	15	17	13	16	6	14	14
Commerce & public services								
Others								
Crude oil & NGL								
Primary energy supply	47 843	57 395	57 044	54 858	53 461	53 236	55 795	55 944
Indigenous production	85 509	94 760	77 743	58 069	58 714	50 463	46 682	51 443
Import	6 848	10 265	11 647	17 526	14 977	20 247	21 979	21 032
Export	-42 713	-44 712	-33 111	-23 659	-19 922	-17 039	-18 595	-15 249
Transformation sector	-46 308	-55 425	-53 367	-52 986	-50 440	-51 868	-53 684	-55 533
Petroleum refineries	-46 308	-55 425	-53 367	-52 986	-50 440	-51 868	-53 684	-55 533
Petroleum products								
Primary energy supply	-7 528	-8 562	-3 349	10 184	13 700	21 726	18 707	30 018
Import	3 041	5 238	11 488	20 450	20 489	23 361	19 984	28 299
Export	-8 287	-11 025	-8 501	-5 832	-4 230	-3 983	-4 073	-2 020
Transformation sector	33 612	40 959	42 644	34 859	32 472	37 773	38 485	37 310
Power generation	-3 960	-2 611	-4 370	-8 211	-7 817	-4 290	-5 058	-3 072
Petroleum refineries	37 912	44 212	47 553	44 576	42 173	43 186	45 174	42 065
Final energy consumption	21 111	26 770	35 701	41 722	42 674	55 202	53 486	63 100
Industry	6 271	6 681	9 030	9 025	6 706	7 667	4 538	6 042
Transport	7 136	10 768	14 093	20 149	27 944	37 459	40 789	44 962
Residential	5 438	6 545	8 879	8 155	4 589	5 114	5 186	8 639
Commerce & public services	515	684	908	1 065	671	1 028	632	825
Others	1 750	2 093	2 791	3 327	2 764	3 933	2 341	2 631
Gas								
Primary energy supply	18 467	29 927	27 946	33 104	37 195	34 897	33 199	32 213
Indigenous production	44 100	60 903	60 459	65 696	74 114	65 065	64 161	62 326
Import								
Export	-25 633	-30 976	-32 512	-32 592	-36 919	-30 168	-30 962	-30 113
Transformation sector	-1 132	-6 863	-11 674	-12 249	-16 045	-9 940	-6 174	-4 899
Power generation	-750	-6 454	-5 577	-3 595	-10 028	-10 221	-11 073	-9 704
Final energy consumption	2 770	4 248	12 166	15 063	15 763	16 975	13 918	14 720
Industry	2 770	4 176	11 781	14 995	15 483	16 564	13 533	14 345
Transport		14						
Residential			212	43	149	216	212	212
Commerce & public services		59	173	26	131	195	173	164
Others								
Electricity								
Power generation	2 777	4 618	7 825	10 922	14 505	20 097	21 321	21 897
Thermal	2 192	3 707	6 736	9 432	12 198	18 050	18 796	19 194
Hydro	488	720	861	922	1 501	1 182	1 606	1 602
Nuclear								
Others	97	190	228	568	805	865	919	1 101
Final energy consumption	2 383	4 279	6 866	9 205	12 726	17 445	18 576	19 189
Industry	1 218	2 126	2 925	3 651	4 385	5 511	5 860	6 212
Transport			4	5	8	18	19	20
Residential	774	1 467	2 628	3 542	5 145	7 627	8 053	8 123
Commerce & public services	391	685	1 309	2 008	3 188	4 290	4 644	4 833
Others								

Major economic indicators of Indonesia

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	181.41	196.93	211.51	226.29	241.83	258.38	261.55	264.65
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	310	437	453	571	755	988	1 038	1 090
GDP, billion USD (PPP, constant 2011)	839	1 184	1 228	1 547	2 045	2 677	2 811	2 954
Nominal, billion USD (current)	106	202	165	286	755	861	932	1 015
GDP per capita ^{*3}								
Real term (constant 2010 USD)	1 708	2 220	2 144	2 524	3 122	3 824	3 968	4 120
GDP, PPP (constant 2011 USD)	4 626	6 014	5 807	6 837	8 458	10 359	10 748	11 161
Nominal (current USD)	585	1 026	780	1 263	3 122	3 332	3 563	3 837
Nominal GDP & its components (billions of current IDR) ^{*1}								
Gross domestic product	195 597	454 514	1 389 770	2 774 281	6 864 133	11 526 333	12 401 729	13 587 213
Households and NPISHs final consumption expenditure	124 184	279 876	856 798	1 785 596	3 858 822	6 621 880	7 171 523	7 788 168
General government final consumption expenditure	18 649	35 584	90 780	224 981	618 178	1 123 750	1 181 613	1 234 554
Gross fixed capital formation	59 758	129 218	275 881	655 854	2 127 841	3 782 012	4 040 202	4 370 575
Stock change	4 217	9 090	33 283	39 975	129 095	144 179	158 867	210 636
Exports of goods and services	53 409	119 593	569 490	945 122	1 667 918	2 438 993	2 367 365	2 743 062
Imports of goods and services	50 046	125 657	423 318	830 083	1 537 720	2 394 879	2 273 528	2 605 237
Real GDP & its components (billions of 2010 IDR) ^{*1}								
Gross Domestic Product	2 816 408	3 974 421	4 121 726	5 192 501	6 864 133	8 982 517	9 434 613	9 912 704
Households and NPISHs final consumption expenditure	1 510 655	2 141 923	2 527 173	3 078 760	3 858 822	4 980 431	5 231 670	5 492 417
General government final consumption expenditure	260 623	306 313	285 633	423 592	618 178	775 398	774 305	790 789
Gross fixed capital formation	870 587	1 333 805	1 060 872	1 513 165	2 127 841	2 911 356	3 041 585	3 228 763
Stock change	5 273 750	8 170 047	-7 109 153	-7 157 321	129 095	112 848	133 400	126 884
Exports of goods and services	458 032	794 926	883 948	1 231 826	1 667 918	2 004 467	1 971 183	2 146 803
Imports of goods and services	477 155	902 592	782 932	1 183 138	1 537 720	1 862 939	1 818 133	1 964 602
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	19.6	16.0	16.5	15.3	13.9	13.0	12.8	12.7
Industry	42.1	45.8	47.7	45.8	42.8	41.0	40.5	40.2
Services, etc.	N.A.	N.A.	34.2	36.9	40.7	42.8	43.1	43.3
Industrial production index (2010=100) ^{*2}	43.3	69.3	74.3	88.3	100.0	126.1	131.2	137.4
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	25.7	45.4	65.4	87.0	157.8	150.4	144.7	168.8
Imports, c.i.f.	21.8	40.6	43.6	75.7	135.7	142.7	135.7	157.0
Balance of payments (billions of current USD) ^{*2}								
Trade balance	5.4	6.5	25.0	17.6	31.0	14.0	15.3	18.8
Current account	-3.0	-6.4	8.0	0.3	5.1	-17.5	-17.0	-16.2
Overall balance	1.5	3.8	0.1	-2.0	31.7	-0.7	12.4	12.5
Foreign exchange rate (IDR/USD) ^{*1}	1 842.81	2 248.61	8 421.78	9 704.74	9 090.43	13 389.41	13 308.33	13 380.83
PPP conversion factor, GDP (IDR/USD) ^{*1}	846.02	1 111.55	2 233.12	3 072.64	4 006.52	4 876.61	4 985.66	5 067.60
Price Indices								
GDP Deflator (2010=100) ^{*3}	6.9	11.4	33.7	53.4	100.0	128.3	131.4	137.1
Producer Price Index (2010=100) ^{*2}	9.9	13.3	39.1	59.3	100.0	130.8	131.8	132.8
Consumer Price Index (2010=100) ^{*2}	12.7	19.4	44.0	68.7	100.0	132.3	137.0	142.2
Growth rate (%) ^{*3}								
Real GDP	7.2	8.2	4.9	5.7	6.2	4.9	5.0	5.1
Population	1.8	1.6	1.4	1.3	1.3	1.3	1.2	1.2
Price								
Producer prices	10.0	11.4	12.5	16.6	4.9	0.0	0.8	0.8
Consumer prices	7.8	9.4	3.7	10.5	5.1	6.4	3.5	3.8

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"
: 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 2017

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	13,436
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	157.56	Other bituminous coal	USD/tonne	85.92	Other bituminous coal	USD/BOE	13.51
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	51.19	Crude Oil		
Natural Gas Liquids			Natural Gas Liquids			Natural Gas Liquids		
Ethane			Ethane			Ethane		
LPG			LPG			LPG - 12kg	USD/BOE	0.10
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	131.10
						Commercial	USD/BOE	149.99
						Residential	USD/BOE	127.15
						Others		
Other Energy Products			Other Energy Products			Other Energy Products		

Japan

Energy balance table of Japan

	Coal	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production	774		441						
Import	115 611	897	158 758	44 687	961	21 591	1 342	1 608	525
Export	- 2	- 860		-17 658	-2 951	- 5	-2 201	- 431	-8 651
International marine bunkers				-4 247					- 172
International aviation bunkers				-7 070			-7 070		
Stock changes		56	1 414	- 334	83	- 201	- 65	- 395	139
Total primary energy supply	116 383	93	160 613	15 378	-1 907	21 385	-7 994	782	-8 159
Transfers			- 988	866	106	725	- 84	- 104	- 45
Total transformation sector	-106 469	14 868	-158 836	144 602	41 714	9 988	12 222	13 026	45 657
Main activity producers	-61 719	-5 106	-1 362	-8 240		- 4		- 41	- 514
Autoproducers	-4 085	-1 502	- 1	-4 757		- 1		- 45	- 246
Gas processing				-1 384					
Petroleum refineries			-161 960	164 095	41 714	13 594	12 222	13 112	46 417
Coal transformation	-40 665	21 476		- 451					
Other transformation			4 487	-4 661		-3 601			
Losses & own use	- 264	-2 747	- 67	-5 907		- 22			- 35
Discrepancy	390	- 505	- 448	-4 143	- 643	-1 617	21	35	593
Total final consumption	10 040	11 709	274	150 796	39 270	30 459	4 165	13 739	38 011
Total final energy consumption	10 040	11 268	23	117 090	39 270	7 185	4 165	12 994	37 861
Industry sector	10 024	11 164	23	20 195		7 185		1 141	4 724
Iron and steel	2 334	9 549		1 373				103	256
Chemical & petrochemical	2 715	1 124	23	11 002		7 185		117	337
Non-metallic minerals	3 160	265		2 023				80	596
Other industries	1 815	226		5 797				841	3 535
Transport sector	1			68 780	39 270		3 490		22 971
Domestic air transport				3 492	2		3 490		
Road				61 997	39 268				21 822
Rail	1			162					162
Inland waterways				3 129					987
Other transport									
Other sector	15	104		28 115			675	11 853	10 166
Residential				12 931				8 185	
Commerce and public services	15	104		10 520			675	3 065	6 131
Agriculture				3 365				602	2 747
Non-specified others				1 299				1	1 288
Non-energy		441	251	33 706		23 274		745	150
2016									
Indigenous production	751		445						
Import	115 033	1 426	163 611	40 719	662	19 531	694	1 090	406
Export	- 1	- 717		-18 490	-2 434	- 39	-2 866	- 478	-8 280
International marine bunkers				-4 537				- 100	- 191
International aviation bunkers				-6 753			-6 753		
Stock changes		- 53	1 483	304	- 20	246	3	108	- 201
Total primary energy supply	115 783	656	165 539	11 243	-1 792	19 738	-8 922	620	-8 266
Transfers			- 990	865	78	745	83	- 354	- 10
Total transformation sector	-106 121	14 368	-164 516	148 509	42 093	11 269	13 243	13 087	45 563
Main activity producers	-60 140	-5 352	-2 398	-9 865		- 3		- 43	- 539
Autoproducers	-5 077	-1 526	- 1	-4 707		- 1		- 50	- 277
Gas processing				-1 236					
Petroleum refineries			-166 881	169 768	42 093	15 122	13 243	13 180	46 379
Coal transformation	-40 904	21 246		- 505					
Other transformation			4 764	-4 946		-3 849			
Losses & own use	- 290	-2 793	- 56	-6 524		- 20		- 1	- 34
Discrepancy	476	- 831	139	-3 521	- 509	-2 249	- 10	62	632
Total final consumption	9 848	11 400	116	150 572	39 870	29 483	4 394	13 414	37 885
Total final energy consumption	9 847	10 973	19	118 031	39 870	7 018	4 394	12 669	37 735
Industry sector	9 837	10 883	19	20 687		7 018		1 116	4 896
Iron and steel	2 369	9 210		1 470				98	261
Chemical & petrochemical	2 672	1 155	19	10 928		7 018		123	375
Non-metallic minerals	3 055	283		2 168				77	657
Other industries	1 741	235		6 121				818	3 603
Transport sector	1			69 394	39 870		3 429		22 964
Domestic air transport				3 430	1		3 429		
Road				62 642	39 869				21 810
Rail	1			162					162
Inland waterways				3 160					992
Other transport									
Other sector	9	90		27 950			965	11 553	9 875
Residential				12 060				7 615	
Commerce and public services	9	90		11 101			965	3 346	5 702
Agriculture				3 310				591	2 705
Non-specified others				1 479				1	1 468
Non-energy	1	427	97	32 541		22 465		745	150

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				2 562	7 124	8 575	7 765	14 022			41 263	22 791
2 201	12 236		4 223	98 214				1 183			419 350	1 183
-2 453	- 98		- 868								-18 520	
-4 053			- 22								-4 247	
											-7 070	
92	33		- 20	120							1 256	
-4 213	12 171		3 313	100 896	7 124	8 575	7 765	15 205			432 032	23 974
- 193	- 435		896								- 122	
9 789	2 344	4 309	5 553	-68 736	-7 124	-8 575	-7 405	-8 480	91 145	488	-114 522	-18 930
-4 776	- 210	-1 561	-1 134	-67 366	-6 930	-8 575	-3 261	-5 178	78 348	402	-88 987	-12 075
-1 045	- 167	-2 233	-1 020	-3 026	- 194		-4 144	-3 287	12 883		-8 113	-6 840
	-1 317	- 67		1 656				- 3			269	- 3
15 610	5 098	8 170	8 158								2 135	
			- 451								-19 640	
	-1 060							- 12	- 86	86	- 186	- 12
- 948	- 254	-4 447	- 201	-1 156				- 74	-7 677	- 16	-17 908	- 74
705	-2 030	138	-1 345	-1 012			- 1	- 429	- 588	63	-6 673	
5 140	11 796		8 216	29 992			359	6 222	82 880	535	292 807	4 671
4 636	7 690		3 289	29 768			359	6 222	82 880	535	258 185	4 671
2 470	1 403		3 272	11 400			1	3 795	29 784		86 386	2 772
171	349		494	2 468				34	6 090		21 848	
1 052	441		1 870	2 266				143	4 778		22 051	
498	82		767	764				663	1 526		8 401	133
749	531		141	5 902			1	2 955	17 390		34 086	2 639
2 142	907			51				420	1 501		70 753	420
											3 492	
	907			51				420			62 468	420
									1 501		1 664	
2 142											3 129	
24	5 380		17	18 317			358	2 007	51 595	535	101 046	1 479
	4 746			9 210			270	8	23 498	27	45 944	279
24	625			9 105			70	1 429	27 815	508	49 566	1 158
	9		7	1			8		246		3 620	8
			10	1			10	570	36		1 916	34
504	4 106		4 927	224							34 622	
				2 449	6 757	4 706	6 992	12 825			34 925	20 902
2 305	12 011		4 020	99 216				924			420 929	924
-3 118	- 86		-1 189								-19 208	
-4 226			- 20								-4 537	
											-6 753	
32	64		72	30							1 764	
-5 007	11 989		2 883	101 695	6 757	4 706	6 992	13 749			427 120	21 826
- 54	- 506		883								- 125	
10 387	1 937	5 054	5 876	-72 351	-6 757	-4 706	-6 615	-7 116	90 609	486	-114 210	-16 883
-6 704	- 425	- 904	-1 247	-70 803	-6 512	-4 706	-3 118	-3 843	78 038	399	-88 300	-10 688
- 997	- 175	-2 192	-1 015	-3 055	- 245		-3 497	-3 258	12 658		-8 708	-6 180
	-1 163	- 73		1 507				- 3			268	- 3
18 088	4 797	8 223	8 643								2 887	
			- 505								-20 163	
	-1 097							- 12	- 87	87	- 194	- 12
- 865	- 338	-5 077	- 189	-1 501				- 97	-8 047	- 11	-19 319	- 97
838	-1 348	23	-960	910			- 1	- 462	- 897	56	-4 131	
5 299	11 734		8 493	28 753			376	6 074	81 665	531	289 335	4 555
4 758	8 078		3 509	28 510			376	6 074	81 665	531	256 026	4 555
2 566	1 599		3 492	11 245			1	3 680	29 467		85 819	2 708
165	330		616	2 457				34	6 004		21 544	
1 124	366		1 922	2 180				125	4 811		21 890	
478	145		811	761				627	1 554		8 448	122
799	758		143	5 847			1	2 894	17 098		33 937	2 586
2 168	963			61				387	1 501		71 344	387
											3 430	
	963			61				387			63 090	387
									1 501		1 664	
2 168											3 160	
24	5 516		17	17 204			375	2 007	50 697	531	98 863	1 460
	4 445			8 779			287	8	22 977	27	44 138	295
24	1 064			8 423			70	1 378	27 466	504	49 041	1 123
	7		7	2			8		222		3 542	8
			10				10	621	32		2 142	34
541	3 656		4 984	243							33 309	

Major energy indicators of Japan

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	438 664	493 170	518 176	522 253	501 368	432 062	427 120	432 032
Indigenous production	74 499	97 422	104 866	102 174	101 531	32 030	34 925	41 263
Import	382 849	419 829	435 503	446 038	427 726	428 423	420 929	419 350
Export	-5 073	-11 526	-6 334	-10 167	-17 930	-19 010	-19 208	-18 520
Final energy consumption	254 377	284 677	296 583	298 483	277 185	257 614	256 026	258 185
Industry	108 299	108 567	103 682	103 353	93 326	86 503	85 819	86 386
Transport	68 365	82 156	85 661	81 186	75 940	71 949	71 344	70 753
Residential	38 010	45 166	48 735	50 315	50 022	44 089	44 138	45 944
Commerce & public services	33 113	42 579	51 805	56 665	51 880	49 663	49 041	49 566
Others	6 590	6 209	6 700	6 964	6 017	5 410	5 684	5 536
Coal & coal products								
Primary energy supply	76 706	83 910	97 009	110 457	115 438	119 071	116 439	116 476
Indigenous production	4 469	3 535	1 537	648	594	737	751	774
Import	73 504	83 084	97 454	111 376	115 223	118 882	116 459	116 508
Export	-1 353	-2 481	-1 867	-1 179	-472	-550	-718	-862
Transformation sector	-49 758	-56 292	-67 914	-81 035	-84 956	-92 671	-91 753	-91 601
Power generation	-27 046	-36 125	-46 676	-60 616	-64 448	-72 971	-72 095	-72 412
Final energy consumption	26 513	24 094	20 567	22 321	22 362	21 323	20 820	21 308
Industry	26 443	24 051	20 563	22 315	22 309	21 243	20 720	21 188
Transport	1	1	1	1	1	1	1	1
Residential	48	38						
Commerce & public services	4	4	3	5	52	79	99	119
Others								
Crude oil & NGL								
Primary energy supply	204 478	229 301	219 925	215 671	185 389	168 146	165 539	160 613
Indigenous production	556	737	636	750	695	469	445	441
Import	207 015	231 219	221 246	215 618	184 546	166 453	163 611	158 758
Export								
Transformation sector	-197 629	-225 237	-214 909	-213 849	-181 673	-166 213	-164 516	-158 836
Petroleum refineries	-181 312	-215 666	-214 359	-213 245	-183 558	-165 744	-166 881	-161 960
Petroleum products								
Primary energy supply	45 779	35 637	35 098	27 469	17 295	15 457	11 243	15 378
Import	60 012	54 262	53 230	51 059	44 971	44 521	40 719	44 687
Export	-3 720	-9 045	-4 467	-8 988	-17 458	-18 460	-18 490	-17 658
Transformation sector	142 694	178 687	181 847	181 638	161 419	148 083	148 509	144 602
Power generation	-33 893	-28 519	-21 554	-21 005	-15 685	-14 796	-14 572	-12 997
Petroleum refineries	183 736	217 441	213 975	212 048	185 114	169 150	169 768	164 095
Final energy consumption	144 640	163 629	166 329	155 616	130 346	119 217	118 031	117 090
Industry	38 535	40 483	37 171	32 463	24 109	20 926	20 687	20 195
Transport	66 919	80 539	84 038	79 475	74 072	70 024	69 394	68 780
Residential	13 721	15 972	17 386	16 491	14 616	12 124	12 060	12 931
Commerce & public services	19 189	20 805	21 950	21 460	12 597	11 641	11 101	10 520
Others	6 276	5 830	5 784	5 727	4 952	4 502	4 789	4 664
Gas								
Primary energy supply	44 120	53 162	65 629	70 650	85 881	100 212	101 695	100 896
Indigenous production	1 918	2 047	2 286	2 894	3 210	2 377	2 449	2 562
Import	42 293	51 207	63 465	67 861	82 653	97 838	99 216	98 214
Export								
Transformation sector	-29 809	-34 829	-44 447	-43 376	-56 521	-70 673	-72 351	-68 736
Power generation	-33 696	-38 968	-47 878	-45 552	-58 098	-72 149	-73 858	-70 392
Final energy consumption	13 340	17 956	21 163	26 017	28 707	28 541	28 510	29 768
Industry	4 398	6 488	7 320	10 400	10 910	11 030	11 245	11 400
Transport		3	25	85	100	71	61	51
Residential	7 375	8 582	9 005	9 374	9 180	8 606	8 779	9 210
Commerce & public services	1 565	2 881	4 812	6 157	8 516	8 834	8 423	9 105
Others	2	2	1	1	1		2	2
Electricity								
Power generation	74 093	83 991	90 734	94 550	100 105	90 695	90 712	91 145
Thermal	48 982	51 886	55 482	61 175	67 234	78 696	77 720	75 686
Hydro	7 560	6 775	7 228	6 616	7 207	7 492	6 758	7 124
Nuclear	17 395	25 048	27 696	26 209	24 788	812	1 553	2 830
Others	155	282	328	550	876	3 696	4 681	5 505
Final energy consumption	65 762	74 952	83 633	88 122	89 030	81 641	81 665	82 880
Industry	36 425	35 254	35 983	35 023	32 534	29 656	29 467	29 784
Transport	1 445	1 613	1 597	1 625	1 569	1 509	1 501	1 501
Residential	15 668	19 549	21 510	23 807	25 739	23 020	22 977	23 498
Commerce & public services	11 965	18 274	24 280	27 405	28 906	27 190	27 466	27 815
Others	259	262	263	262	282	266	254	282

Major economic indicators of Japan

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	123.54	125.44	126.84	127.77	128.07	127.14	126.99	126.79
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	4 704	5 064	5 349	5 672	5 700	5 989	6 025	6 141
GDP, billion USD (PPP, constant 2011)	3 778	4 067	4 296	4 556	4 578	4 810	4 840	4 933
Nominal, billion USD (current)	3 133	5 449	4 888	4 755	5 700	4 389	4 927	4 860
GDP per capita ^{*3}								
Real term (constant 2010 USD)	38 074	40 369	42 170	44 394	44 508	47 103	47 444	48 439
GDP, PPP (constant 2011 USD)	30 582	32 425	33 872	35 658	35 750	37 834	38 108	38 907
Nominal (current USD)	25 359	43 440	38 532	37 218	44 508	34 524	38 794	38 332
Nominal GDP & its components (billions of current JPY) ^{*1}								
Gross domestic product	453 609	512 542	526 706	524 133	500 354	531 320	535 986	545 122
Households and NPISHs final consumption expenditure	232 097	274 165	286 589	291 543	288 956	300 612	298 644	302 491
General government final consumption expenditure	61 445	78 736	88 761	94 958	97 527	105 297	106 575	107 235
Gross fixed capital formation	154 814	151 421	144 237	128 942	106 724	126 403	124 981	129 928
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	45 984	55 960	73 444	75 237	93 571	87 113	96 891
Imports of goods and services	42 834	39 505	48 432	65 533	67 929	95 797	81 806	91 795
Real GDP & its components (billions of 2010 JPY) ^{*1}								
Gross Domestic Product	412 882	444 501	469 529	497 914	500 354	525 685	528 887	539 087
Households and NPISHs final consumption expenditure	227 331	251 889	264 495	281 531	288 956	297 357	296 996	300 365
General government final consumption expenditure	62 493	74 466	84 075	92 698	97 527	104 742	106 240	106 521
Gross fixed capital formation	137 927	133 132	132 791	126 838	106 724	123 477	123 090	126 725
Stock change	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Exports of goods and services	30 336	36 716	47 915	64 609	75 237	85 005	86 460	92 338
Imports of goods and services	39 930	47 358	55 725	67 235	67 929	85 345	83 963	86 840
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	N.A.	1.4	1.5	1.1	1.1	1.0	0.9	0.9
Industry	N.A.	31.1	30.2	29.2	28.4	28.3	28.5	30.8
Services, etc.	N.A.	68.1	69.6	70.7	70.2	70.2	69.8	67.7
Industrial production index (2010=100) ^{*2}	103.9	98.6	103.2	105.9	100.0	97.3	97.0	101.1
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	287.6	443.1	479.2	594.9	769.8	624.8	644.9	698.1
Imports, c.i.f.	235.4	335.9	379.5	515.9	694.1	648.0	607.6	671.9
Balance of payments (billions of current USD) ^{*2}								
Trade balance	N.A.	N.A.	118.0	107.0	108.5	-40.8	-20.2	-23.4
Current account	N.A.	N.A.	130.7	170.1	220.9	-4.6	8.4	18.8
Overall balance	N.A.	N.A.	32.1	38.6	12.9	12.3	-13.8	-11.5
Foreign exchange rate (JPY/USD) ^{*1}	144.79	94.06	107.77	110.22	87.78	121.04	108.79	112.17
PPP conversion factor, GDP (JPY/USD) ^{*1}	209.91	197.43	176.47	142.94	121.03	108.96	109.25	108.57
Price Indices								
GDP Deflator (2010=100) ^{*3}	109.9	115.3	112.2	105.3	100.0	101.1	101.3	101.1
Producer Price Index (2010=100) ^{*2}	107.7	103.6	99.5	97.2	100.0	102.7	99.1	101.4
Consumer Price Index (2010=100) ^{*2}	94.5	101.1	102.7	100.4	100.0	103.6	103.5	104.0
Growth rate (%) ^{*3}								
Real GDP	4.9	2.7	2.8	1.7	4.2	1.2	0.6	1.9
Population	0.3	0.4	0.2	0.0	0.0	-0.1	-0.1	-0.2
Price								
Producer prices	1.5	-0.8	0.0	1.7	-0.1	-2.3	-3.5	2.3
Consumer prices	3.1	-0.1	-0.7	-0.3	-0.7	0.8	-0.1	0.5

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"

: 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 2017

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	111.06
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	16 251	Coking Coal			Coking Coal		
Anthracite			Anthracite			Anthracite		
Other bituminous coal	JPY/tonne	11 375	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	39 822	Crude Oil			Crude Oil		
Natural Gas Liquids			Natural Gas Liquids			Natural Gas Liquids		
Ethane			Ethane			Ethane		
LPG	JPY/tonne	57 814	LPG	JPY/kg	150.7	LPG	JPY/m ³	762.4
Naphtha	JPY/kL	39 822	Naphtha	JPY/kL	38 652	Naphtha		
Motor Gasoline	JPY/kL	46 164	Motor Gasoline	JPY/kL	117 943	Motor Gasoline (regular)	JPY/L	136
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	JPY/kL	55 005	Other Kerosene	JPY/kL	64 080	Other Kerosene	JPY/L	88.3
Gas/Diesel Oil	JPY/kL	51 495	Gas/Diesel Oil	JPY/kL	95 298	Gas/Diesel Oil	JPY/L	115
Fuel Oil			Fuel Oil	JPY/kL	52 203	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	48 544	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	23.10
						Others		
Other Energy Products			Other Energy Products			Other Energy Products		

Korea

Energy balance table of Korea

	Coal	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production	688		754						
Import	81 437	231	152 837	38 036	138	24 303		4	276
Export			- 368	-66 455	-10 256	-5 363	-16 095	- 702	-23 973
International marine bunkers				-10 207					-1 311
International aviation bunkers				-5 040			-5 040		
Stock changes	242		- 184	-280	- 13	236	- 190	59	112
Total primary energy supply	82 367	231	153 039	-43 946	-10 131	19 176	-21 325	- 639	-24 896
Transfers			- 790	887	397	- 263	- 91	506	448
Total transformation sector	-78 878	7 427	-152 441	144 066	19 561	25 647	23 302	2 789	47 248
Main activity producers	-51 378	-2 013		-1 450					- 148
Autoproducers	-3 872	-2 299		-1 719		-1 101			
Gas processing				- 110					- 1
Petroleum refineries			-164 455	158 349	19 561	36 481	23 302	2 789	47 397
Coal transformation	-23 628	11 739							
Other transformation			12 014	-11 004		-9 733			
Losses & own use		-2 971		-6 413				- 2	- 59
Discrepancy	505	- 78	192	2 738	118	1 346	- 99	-178	140
Total final consumption	3 994	4 609		97 332	9 945	45 906	1 787	2 476	22 881
Total final energy consumption	3 994	4 096		45 336	9 945		1 787	2 476	22 881
Industry sector	3 994	3 597		3 583				64	1 201
Iron and steel	1 355	3 366		86					1
Chemical & petrochemical	14			640				8	34
Non-metallic minerals	2 363			490				2	138
Other industries	262	231		2 367				54	1 028
Transport sector				33 663	9 944		1 309	2	18 725
Domestic air transport				1 316	3		1 309		4
Road				31 826	9 941				18 330
Rail				96					96
Inland waterways				424				2	294
Other transport				1					1
Other sector		499		8 090	1		478	2 410	2 955
Residential		499		3 667				1 811	938
Commerce and public services				1 925			9	346	321
Agriculture				287				98	158
Non-specified others				2 211	1		469	155	1 538
Non-energy		513		51 996		45 906			
2016									
Indigenous production	768		689						
Import	81 131	235	149 275	40 536	172	24 620		3	272
Export			- 522	-63 752	-9 499	-6 041	-14 917	- 272	-23 893
International marine bunkers				-10 557					-1 225
International aviation bunkers				-4 923			-4 923		
Stock changes	- 667		- 927	- 22	- 65	- 230	- 264	10	292
Total primary energy supply	81 232	235	148 515	-38 718	-9 392	18 349	-20 104	- 259	-24 554
Transfers			-3 496	3 533	784	2 152	162	245	274
Total transformation sector	-76 109	7 362	-145 278	135 789	18 404	21 958	21 541	2 676	46 540
Main activity producers	-46 546	-1 957		-3 198				- 107	- 92
Autoproducers	-5 482	-2 248		-1 591		-1 279			
Gas processing				- 106					
Petroleum refineries			-155 876	150 979	18 404	32 505	21 541	2 783	46 632
Coal transformation	-24 081	11 567							
Other transformation			10 598	-10 295		-9 268			
Losses & own use		-3 083		-7 533				- 4	- 14
Discrepancy	- 91	- 116	259	1 009	64	744	94	-113	- 105
Total final consumption	5 032	4 398		94 080	9 860	43 203	1 693	2 545	22 141
Total final energy consumption	5 032	3 825		44 698	9 860		1 693	2 545	22 141
Industry sector	5 032	3 267		3 578				86	1 300
Iron and steel	1 281	3 032		77					2
Chemical & petrochemical	84			521				19	40
Non-metallic minerals	2 681			558				5	132
Other industries	986	235		2 422				62	1 126
Transport sector				32 985	9 859		1 229	3	17 927
Domestic air transport				1 238	2		1 229		7
Road				31 187	9 857			3	17 520
Rail				99					99
Inland waterways				459					299
Other transport				2					2
Other sector		558		8 135	1		464	2 456	2 914
Residential		558		3 537				1 821	864
Commerce and public services				2 358			6	509	473
Agriculture				341				107	200
Non-specified others				1 899	1		458	19	1 377
Non-energy		573		49 382		43 203			

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				305	242	38 674	1 060	7 315		52	49 090	4 718
6 056	7 249		10	43 626							316 167	
-2 506	-239		-7 321								-66 823	
-8 896											-10 207	
											-5 040	
-244	-193		-47	-717				1			-938	1
-5 590	6 817		-7 358	43 214	242	38 674	1 060	7 316		52	282 249	4 719
-585	365	455	-345								97	
8 745	2 233	3 947	10 594	-21 408	-242	-38 674	-835	-2 572	48 373	5 678	-89 506	-2 683
-1 302				-19 747	-242	-38 674	-764	-1 352	45 489	2 004	-68 127	-2 234
			-618	-1 661			-71	-1 220	2 884	3 674	-4 284	-449
	-109										-110	
10 047	3 159	4 401	11 212								-6 106	
											-11 889	
	-817	-454									1 010	
-1 386	-256	-4 402	-308	-142					-4 842	-168	-14 536	
460	35		916	504			-1	-3	1 460	-477	4 840	
1 644	9 194		3 499	22 168			224	4 741	44 991	5 085	183 144	2 035
1 644	6 592		11	22 168			224	4 741	44 991	5 085	130 635	2 035
1 128	1 179		11	7 482			5	3 222	23 597	2 900	48 380	704
11	74			1 547				8	4 687	5	11 054	
360	238			1 083				397	4 463	1 888	8 485	12
322	18		10	544				702	1 108	3	5 210	3
435	849		1	4 308			5	2 115	13 339	1 004	23 631	689
131	3 552			1 186				528	246		35 623	528
											1 316	
4	3 551			1 186				528	4		33 544	528
									242		338	
127	1										424	
											1	
385	1 861			13 500			219	991	21 148	2 185	46 632	803
225	693			9 398			48	156	5 722	1 882	21 372	203
110	1 139			4 099			143	766	14 052	303	21 288	503
26	5			3			28	69	1 126		1 513	97
24	24								248		2 459	
	2 602		3 488								52 509	
				138	245	42 209	818	6 512		52	51 431	4 300
7 175	8 260		34	39 608							310 785	
-1 990	-187		-6 953								-64 274	
-9 332											-10 557	
											-4 923	
358	-89		-34	1 567							-49	
-3 789	7 984		-6 953	41 313	245	42 209	818	6 512		52	282 413	4 300
-607	396	292	-165								37	
7 566	1 542	5 246	10 316	-20 548	-245	-42 209	-628	-2 274	48 038	5 245	-90 857	-2 458
-2 999				-19 312	-245	-42 209	-574	-1 264	45 039	1 597	-68 669	-1 986
			-312	-1 236			-54	-1 010	2 999	3 648	-4 974	-472
	-106										-106	
10 565	2 557	5 246	10 746								-4 897	
											-12 514	
	-909		-118								303	
-1 603	-144	-5 537	-231	-86					-4 712	-151	-15 565	
350	-319	-1	295	853				-1	1 152	-386	2 679	
1 917	9 459		3 262	21 532			190	4 237	44 478	4 760	178 707	1 840
1 917	6 504		38	21 532			190	4 237	44 478	4 760	128 752	1 840
1 339	815		38	7 509			5	2 808	22 819	2 801	47 819	609
13	62			1 487				8	4 437	5	10 327	
462				1 095				340	4 120	1 799	7 959	10
371	14		36	533				675	1 107	3	5 557	2
493	739		2	4 394			5	1 785	13 155	994	23 976	597
172	3 795			1 201				495	231		34 912	495
											1 238	
12	3 795			1 201				495			32 883	495
									231		330	
160											459	
											2	
406	1 894			12 822			185	934	21 428	1 959	46 021	736
114	738			8 856			39	140	5 914	1 694	20 738	179
243	1 127			3 963			122	731	14 138	265	21 577	469
31	3			3			24	63	1 190		1 621	88
18	26								186		2 085	
	2 955		3 224								49 955	

Major energy indicators of Korea

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	92 913	144 751	188 159	210 288	250 031	272 675	282 413	282 249
Indigenous production	22 622	21 145	34 439	42 977	44 947	51 400	51 431	49 090
Import	73 943	150 499	206 676	211 300	266 854	299 794	310 785	316 167
Export	-3 794	-15 749	-40 939	-35 740	-45 795	-62 776	-64 274	-66 823
Final energy consumption	58 181	87 683	102 078	110 081	119 324	125 884	128 752	130 635
Industry	19 260	29 217	38 471	39 058	44 973	48 078	47 819	48 380
Transport	14 572	24 258	26 265	29 185	29 945	33 858	34 912	35 623
Residential	12 942	9 633	15 037	18 410	19 861	19 038	20 738	21 372
Commerce & public services	8 694	18 542	17 210	19 224	20 499	20 931	21 577	21 288
Others	2 713	6 033	5 095	4 204	4 046	3 979	3 706	3 972
Coal & coal products								
Primary energy supply	25 383	26 609	41 949	49 658	73 454	80 836	81 467	82 598
Indigenous production	7 576	2 465	3 637	1 261	959	785	768	688
Import	15 725	28 150	39 138	46 930	72 948	81 128	81 366	81 668
Export								
Transformation sector	-13 184	-17 321	-33 631	-44 398	-61 116	-67 549	-68 747	-71 451
Power generation	-5 976	-11 854	-27 059	-36 331	-52 433	-56 364	-56 233	-59 562
Final energy consumption	11 719	7 407	9 071	7 748	9 139	10 253	8 857	8 090
Industry	3 054	6 042	8 505	6 794	8 284	9 598	8 299	7 591
Transport								
Residential	2 121	1 365	566	954	855	655	558	499
Commerce & public services								
Others								
Crude oil & NGL								
Primary energy supply	43 239	89 909	126 493	118 805	120 994	140 996	148 515	153 039
Indigenous production			670	534	698	658	689	754
Import	42 672	89 240	125 809	117 338	121 571	142 110	149 275	152 837
Export		-25	-99	-3	-481	-346	-522	-368
Transformation sector	-42 522	-90 179	-122 803	-118 650	-117 960	-138 155	-145 278	-152 441
Petroleum refineries	-42 522	-91 711	-127 979	-123 967	-124 969	-147 910	-155 876	-164 455
Petroleum products								
Primary energy supply	6 496	1 216	-27 453	-26 318	-25 876	-38 318	-38 718	-43 946
Import	12 842	24 835	24 630	20 895	33 027	37 602	40 536	38 036
Export	-3 794	-15 724	-40 840	-35 737	-45 314	-62 430	-63 752	-66 455
Transformation sector	39 028	80 577	112 575	111 117	111 104	130 784	135 789	144 066
Power generation	-4 511	-9 891	-8 044	-6 469	-5 078	-4 240	-4 789	-3 169
Petroleum refineries	43 539	91 946	125 624	123 422	123 460	144 507	150 979	158 349
Final energy consumption	36 935	60 545	54 846	49 268	43 905	43 523	44 698	45 336
Industry	10 881	13 856	10 973	7 969	5 896	3 420	3 578	3 583
Transport	14 485	24 120	26 090	28 626	28 401	32 085	32 985	33 663
Residential	1 916	2 536	3 878	3 181	2 982	3 035	3 537	3 667
Commerce & public services	7 065	14 498	9 277	5 915	3 447	2 354	2 358	1 925
Others	2 588	5 535	4 628	3 577	3 179	2 629	2 240	2 498
Gas								
Primary energy supply	2 726	8 324	17 010	27 376	38 636	39 347	41 313	43 214
Indigenous production				441	485	169	138	305
Import	2 681	8 261	17 071	26 111	39 290	38 944	39 608	43 626
Export								
Transformation sector	-2 037	-4 168	-5 757	-11 076	-17 641	-19 172	-20 548	-21 408
Power generation	-2 037	-4 168	-5 757	-11 076	-18 005	-19 172	-20 548	-21 408
Final energy consumption	674	3 998	10 929	15 986	20 585	20 503	21 532	22 168
Industry	73	534	2 882	4 167	7 092	7 413	7 509	7 482
Transport				324	1 023	1 164	1 201	1 186
Residential	465	2 686	6 230	8 374	8 940	8 171	8 856	9 398
Commerce & public services	136	778	1 806	3 096	3 526	3 752	3 963	4 099
Others			11	25	4	3	3	3
Electricity								
Power generation	9 062	15 578	24 813	33 357	42 718	47 218	48 058	48 373
Thermal	3 966	9 576	15 096	20 406	29 485	32 364	33 254	34 533
Hydro	547	237	345	316	317	185	245	242
Nuclear	4 548	5 764	9 371	12 623	12 779	14 170	13 932	12 762
Others			2	12	137	500	628	835
Final energy consumption	8 114	14 039	22 624	30 752	38 637	42 590	44 478	44 991
Industry	4 968	8 002	12 931	15 819	19 616	22 560	22 819	23 597
Transport	87	138	175	224	188	191	231	246
Residential	1 525	2 434	3 190	4 374	5 270	5 486	5 914	5 722
Commerce & public services	1 409	3 175	5 872	9 733	12 700	13 094	14 138	14 052
Others	125	290	456	602	863	1 259	1 376	1 374

Major economic indicators of Korea

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	42.87	45.09	47.01	48.18	49.55	51.01	51.25	51.47
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	363	544	710	895	1 094	1 269	1 306	1 346
GDP, billion USD (PPP, constant 2011)	499	747	976	1 230	1 504	1 744	1 795	1 850
Nominal, billion USD (current)	279	556	562	898	1 094	1 383	1 415	1 531
GDP per capita ^{*3}								
Real term (constant 2010 USD)	8 465	12 055	15 105	18 568	22 087	24 871	25 484	26 152
GDP, PPP (constant 2011 USD)	11 633	16 566	20 757	25 517	30 352	34 178	35 020	35 938
Nominal (current USD)	6 516	12 333	11 948	18 640	22 087	27 105	27 608	29 743
Nominal GDP & its components (billions of current KRW) ^{*1}								
Gross domestic product	197 712	428 927	635 185	919 797	1 265 308	1 564 124	1 641 786	1 730 399
Households and NPISHs final consumption expenditure	98 050	219 890	341 442	480 170	636 713	771 239	798 729	832 235
General government final consumption expenditure	22 252	44 609	72 019	122 175	183 109	234 766	249 167	265 347
Gross fixed capital formation	74 594	161 492	200 825	283 859	385 924	458 420	487 274	538 517
Stock change	3 732	5 804	8 416	11 976	19 264	-6 105	-7 013	- 784
Exports of goods and services	50 100	111 236	222 371	338 574	625 309	709 122	694 216	745 646
Imports of goods and services	51 249	115 174	209 219	316 177	585 010	600 239	581 662	652 157
Real GDP & its components (billions of 2010 KRW) ^{*1}								
Gross Domestic Product	419 518	628 442	820 844	1 034 338	1 265 308	1 466 788	1 509 755	1 555 995
Households and NPISHs final consumption expenditure	253 472	379 260	456 116	546 548	636 713	707 493	725 362	744 284
General government final consumption expenditure	73 124	91 609	110 085	140 003	183 109	212 022	221 514	229 101
Gross fixed capital formation	166 803	271 819	283 424	338 300	385 924	434 381	458 831	498 476
Stock change	7 585	7 020	13 196	13 002	19 265	13 781	-8 162	- 696
Exports of goods and services	62 785	125 174	250 691	410 113	625 309	803 746	824 330	840 020
Imports of goods and services	101 122	204 252	278 478	413 372	585 010	721 740	755 861	808 986
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	4.7	3.6	3.0	2.5	2.2	2.0	1.9	1.8
Industry	31.5	31.4	31.0	32.8	34.6	34.7	34.9	35.4
Services, etc.	54.1	55.4	55.4	54.5	53.6	53.5	53.3	52.8
Industrial production index (2010=100) ^{*2}	22.9	34.5	53.6	71.6	100.0	108.4	110.4	113.8
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	65.0	125.1	172.3	284.4	466.4	526.8	495.4	573.7
Imports, c.i.f.	69.8	135.1	160.5	261.2	425.2	436.5	406.2	478.5
Balance of payments (billions of current USD) ^{*2}								
Trade balance	-3.7	-7.0	15.4	32.5	47.9	120.3	116.5	113.6
Current account	-2.8	-10.2	10.2	12.2	28.0	105.1	97.9	75.2
Overall balance	-1.1	7.2	23.8	19.4	26.9	11.7	7.6	4.4
Foreign exchange rate (KRW/USD) ^{*1}	707.76	771.27	1130.96	1024.12	1156.06	1131.16	1160.43	1130.42
PPP conversion factor, GDP (KRW/USD) ^{*1}	518.34	685.42	823.90	879.37	907.53	959.68	961.14	962.00
Price Indices								
GDP Deflator (2010=100) ^{*3}	47.1	68.3	77.4	88.9	100.0	106.6	108.7	111.2
Producer Price Index (2010=100) ^{*2}	56.4	65.8	79.1	86.9	100.0	100.9	99.1	102.5
Consumer Price Index (2010=100) ^{*2}	44.6	60.2	73.1	86.2	100.0	109.8	110.9	113.1
Growth rate (%) ^{*3}								
Real GDP	9.8	9.6	8.9	3.9	6.5	2.8	2.9	3.1
Population	1.0	1.0	0.8	0.2	0.5	0.5	0.5	0.4
Price								
Producer prices	4.2	4.7	2.1	2.1	3.8	-4.0	-1.8	3.5
Consumer prices	8.6	4.5	2.3	2.8	2.9	0.7	1.0	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"

: 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 the Republic of Korea in 2017

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	1,130.48
Local Currency Unit		KRW

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	184.31	Coking Coal			Coking Coal		
Anthracite	USD/tonne	133.23	Anthracite			Anthracite		
Other bituminous coal	USD/tonne	83.61	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	53.36	Crude Oil			Crude Oil		
Natural Gas Liquids			Natural Gas Liquids			Natural Gas Liquids		
Ethane			Ethane			Ethane		
LPG	USD/bbl	41.07	LPG	KRW/kg	-	LPG	KRW/kg	-
Naphtha	USD/bbl	54.16	Naphtha			Naphtha		
Motor Gasoline			Motor Gasoline	KRW/L	1,379.95	Motor Gasoline	KRW/L	1,491.30
Aviation Gasoline	USD/bbl	158.67	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	62.81	Other Kerosene	KRW/L	650.03	Other Kerosene	KRW/L	853.08
Gas/Diesel Oil	USD/bbl	68.67	Gas/Diesel Oil	KRW/L	1,161.41	Gas/Diesel Oil	KRW/L	1,282.53
Fuel Oil	USD/bbl	54.62	Fuel Oil	KRW/L	564.74	Fuel Oil	KRW/L	619.75
White Spirit SBP	USD/bbl	-	White Spirit SBP	KRW/L		White Spirit SBP		
Lubricants	USD/bbl	-	Lubricants			Lubricants		
Bitumen			Bitumen	KRW/kg	404.45	Bitumen		
Paraffin Waxes			Paraffin Waxes			Paraffin Waxes		
Petroleum Coke			Petroleum Coke			Petroleum Coke		
Natural Gas			Natural Gas			Natural Gas		
Natural Gas			Natural Gas	KRW/MJ	12.47	Natural Gas	KRW/MJ	-
Liquefied Natural Gas	USD/tonne	416.01	Liquefied Natural Gas			Liquefied Natural Gas	KRW/MJ	13.82
Compressed Natural Gas			Compressed Natural Gas			Compressed Natural Gas		
Electricity			Electricity			Electricity		
Electricity			Electricity			Industrial	KRW/kWh	107.41
						Commercial	KRW/kWh	130.42
						Residential	KRW/kWh	108.50
						Others		
Other Energy Products			Other Energy Products			Other Energy Products		

Malaysia

Energy balance table of Malaysia

	Coal	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production	1 883		34 746						
Import	19 168		10 204	12 180	5 146		1 204		5 163
Export	- 523		-14 960	-7 624	- 281		-1 329	- 60	-5 130
International marine bunkers				- 390					- 92
International aviation bunkers				-2 527			-2 527		
Stock changes	31		- 297	131	49		3	4	65
Total primary energy supply	20 559		29 693	1 770	4 914		-2 649	- 56	6
Transfers			-1 961	1 960					
Total transformation sector	-18 845		-27 234	24 155	8 248		3 252	61	9 980
Main activity producers	-18 845			- 319					- 165
Autoproducers				- 46					- 46
Gas processing				410				51	320
Petroleum refineries			-27 234	24 110	8 248		3 252	10	9 871
Coal transformation									
Other transformation									
Losses & own use				- 201					
Discrepancy	88		- 498	- 420	241				- 739
Total final consumption	1 802			27 265	13 402		603	5	9 247
Total final energy consumption	1 802			25 270	13 402		603	5	9 247
Industry sector	1 802			2 423	109			2	1 694
Iron and steel									
Chemical & petrochemical									
Non-metallic minerals	1 802								
Other industries				2 423	109			2	1 694
Transport sector				20 949	13 293		603		7 039
Domestic air transport				603			603		
Road				20 346	13 293				7 039
Rail									
Inland waterways									
Other transport									
Other sector				1 898				3	515
Residential				605				3	
Commerce and public services				925					151
Agriculture				97					92
Non-specified others				271					271
Non-energy				1 995					
2016									
Indigenous production	1 521		35 208						
Import	17 160		10 881	14 429	8 546		1 449		3 894
Export	- 15		-16 627	-7 362	- 457		-1 067	- 76	-4 801
International marine bunkers				- 297					- 1
International aviation bunkers				-2 384			-2 384		
Stock changes	244		70	557	274		100	13	101
Total primary energy supply	18 910		29 532	4 943	8 363		-1 903	- 63	- 808
Transfers			-1 997	1 995					
Total transformation sector	-17 090		-27 506	20 539	5 041		2 546	78	9 944
Main activity producers	-17 090			- 247					- 148
Autoproducers				- 225					- 225
Gas processing				475				74	337
Petroleum refineries			-27 506	20 536	5 041		2 546	4	9 981
Coal transformation									
Other transformation									
Losses & own use				- 230					
Discrepancy	- 37		- 30	661	24			- 9	602
Total final consumption	1 783			27 908	13 427		644	6	9 739
Total final energy consumption	1 783			25 948	13 427		644	6	9 739
Industry sector	1 783			2 685	182			3	1 749
Iron and steel									
Chemical & petrochemical									
Non-metallic minerals	1 783								
Other industries				2 685	182			3	1 749
Transport sector				20 366	13 181		644		6 541
Domestic air transport				644			644		
Road				19 722	13 181				6 541
Rail									
Inland waterways									
Other transport									
Other sector				2 896	65			3	1 449
Residential				1 128				3	
Commerce and public services				787					538
Agriculture				384					379
Non-specified others				598	65				533
Non-energy				1 960					

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				51 258	2 286		28	1 247			91 448	3 561
226	441			6 555					1		48 108	
- 617	- 208			-33 432				- 239	- 97		-56 875	- 239
- 297											- 390	
											-2 527	
- 11	21							32			-103	32
- 699	253			24 381	2 286		28	1 040	- 96		79 662	3 354
	1 960										- 1	
1 569	871	174		-9 528	-2 286		- 28	- 780	14 395		-20 151	-3 094
- 155				-10 475	-2 285		- 28	- 67	13 651		-18 369	-2 381
				-1 078				- 713	744		-1 093	- 714
	40			2 704							3 114	
1 724	831	174									-3 123	
											- 679	
- 27		- 174							-1 482		-1 683	
- 331	410			3				119			- 709	119
512	3 494			14 855				379	12 817		57 119	379
512	1 499			6 176				379	12 817		46 445	379
479	138			6 023					6 358		16 607	
											1 802	
479	138			6 023					6 358		14 804	
14				130				379	39		21 498	379
											603	
14				130				379			20 855	379
									39		39	
19	1 361			23					6 419		8 340	
	602			1					2 609		3 215	
14	759			22					3 760		4 707	
5									50		147	
											271	
	1 995			8 679							10 674	
				52 446	1 722		27	719			91 643	2 468
51	490			6 295					3		48 768	
- 605	- 355			-30 739				- 85	- 60		-54 888	- 85
- 296											- 297	
											-2 384	
38	30							- 35			837	- 35
- 811	164			28 002	1 722		27	599	- 57		83 678	2 347
	1 995										- 1	
1 379	1 349	201		-12 629	-1 722		- 27	- 210	13 473		-25 172	-1 959
- 99				-11 698	-1 722		- 27	- 65	12 938		-17 911	-1 813
				- 965				- 145	535		- 801	- 146
	64			1 019							1 494	
1 478	1 284	201									-6 970	
											- 985	
- 29		- 201		- 985					-1 030		-5 777	
40	4			-4 516							594	
579	3 513			10 855				389	12 386		53 321	389
579	1 552			5 488				389	12 386		45 994	389
568	184			5 283					5 819		15 571	
											1 783	
568	184			5 283					5 819		13 788	
1				184				389	29		20 968	389
											644	
1				184				389			20 294	389
									29		29	
10	1 368			21					6 538		9 455	
	1 125								2 677		3 805	
5	244			21					3 814		4 621	
5									47		430	
											598	
	1 960			5 367							7 327	

Major energy indicators of Malaysia

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	18 839	34 258	47 891	65 537	69 814	83 498	83 678	79 662
Indigenous production	46 434	62 233	75 589	93 535	83 339	94 198	91 643	91 448
Import	8 206	9 416	15 617	23 505	37 554	46 090	48 768	48 108
Export	-35 118	-35 769	-41 376	-50 064	-49 341	-55 241	-54 888	-56 875
Final energy consumption	11 801	19 444	26 283	34 444	36 981	43 214	45 994	46 445
Industry	5 297	9 548	11 507	15 618	14 280	13 727	15 571	16 607
Transport	4 882	6 894	10 804	13 590	14 677	21 039	20 968	21 498
Residential	1 063	1 578	1 654	2 183	2 655	3 108	3 805	3 215
Commerce & public services	559	978	2 214	2 951	4 296	4 446	4 621	4 707
Others		446	104	101	1 074	894	1 028	419
Coal & coal products								
Primary energy supply	1 355	1 612	2 308	6 822	14 601	17 506	18 910	20 559
Indigenous production	70	85	242	430	1 511	1 612	1 521	1 883
Import	1 424	1 588	1 943	6 612	13 073	16 040	17 160	19 168
Export	-28	-50	-19	-44	-62	-156	-15	-523
Transformation sector	-813	-957	-1 495	-5 541	-12 951	-15 616	-17 090	-18 845
Power generation	-813	-957	-1 495	-5 541	-12 951	-15 616	-17 090	-18 845
Final energy consumption	513	712	991	1 348	1 826	1 777	1 783	1 802
Industry	513	712	991	1 348	1 826	1 777	1 783	1 802
Transport								
Residential								
Commerce & public services								
Others								
Crude oil & NGL								
Primary energy supply	8 827	18 734	22 256	26 704	24 950	26 360	29 532	29 693
Indigenous production	30 629	37 149	32 445	37 556	34 653	34 018	35 208	34 746
Import	1 047	1 315	7 218	8 031	7 760	8 387	10 881	10 204
Export	-22 949	-19 833	-17 254	-18 994	-17 125	-16 103	-16 627	-14 960
Transformation sector	-8 783	-16 159	-21 673	-24 339	-22 487	-24 559	-27 506	-27 234
Petroleum refineries	-8 783	-16 159	-21 673	-24 339	-22 487	-24 559	-27 506	-27 234
Petroleum products								
Primary energy supply	1 602	1 614	-1 166	-36	2 920	4 256	4 943	1 770
Import	5 734	6 512	6 456	7 530	9 751	13 993	14 429	12 180
Export	-3 460	-3 637	-6 291	-6 192	-5 351	-8 235	-7 362	-7 624
Transformation sector	6 840	11 100	17 742	18 881	16 452	20 827	20 539	24 155
Power generation	-2 989	-2 338	-783	-573	-540	-431	-473	-365
Petroleum refineries	9 829	13 306	18 462	19 280	16 850	21 081	20 536	24 110
Final energy consumption	9 092	14 496	17 700	20 839	21 842	25 106	25 948	25 270
Industry	3 481	6 157	5 398	5 614	4 176	2 185	2 685	2 423
Transport	4 882	6 894	10 800	13 585	14 658	20 628	20 366	20 949
Residential	707	958	675	783	712	673	1 128	605
Commerce & public services	22	41	723	756	1 246	767	787	925
Others		446	104	101	1 050	854	982	368
Gas								
Primary energy supply	6 712	11 766	23 892	31 547	26 789	33 570	28 002	24 381
Indigenous production	15 392	24 468	42 300	55 032	46 620	56 466	52 446	51 258
Import				1 332	6 970	7 669	6 295	6 555
Export	-8 680	-12 248	-17 812	-24 817	-26 801	-30 565	-30 739	-33 432
Transformation sector	-2 123	-10 075	-18 527	-23 617	-17 660	-20 382	-12 629	-9 528
Power generation	-1 141	-6 375	-12 036	-13 114	-13 576	-14 306	-12 663	-11 553
Final energy consumption	481	861	2 329	5 313	4 320	4 573	5 488	6 176
Industry	473	853	2 313	5 285	4 284	4 550	5 283	6 023
Transport							184	130
Residential	4	4	4	5	6	1		1
Commerce & public services	4	4	12	23	30	22	21	22
Others								
Electricity								
Power generation	1 979	3 339	5 528	8 087	10 296	12 911	13 473	14 395
Thermal	1 636	2 807	4 927	7 570	9 748	11 690	11 724	12 081
Hydro	343	532	601	517	547	1 197	1 722	2 286
Nuclear								
Others					1	23	27	28
Final energy consumption	1 715	3 375	5 263	6 944	8 993	11 369	12 386	12 817
Industry	830	1 826	2 805	3 371	3 994	5 215	5 819	6 358
Transport			4	5	18	23	29	39
Residential	352	616	975	1 395	1 937	2 434	2 677	2 609
Commerce & public services	533	933	1 478	2 172	3 020	3 657	3 814	3 760
Others					24	40	47	50

Major economic indicators of Malaysia

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	18.03	20.49	23.19	25.69	28.21	30.27	30.68	31.11
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	82	129	163	205	255	330	344	365
GDP, billion USD (PPP, constant 2011)	190	299	378	477	593	769	801	848
Nominal, billion USD (current)	44	89	94	144	255	297	297	315
GDP per capita ^{*3}								
Real term (constant 2010 USD)	4 537	6 278	7 007	7 974	9 041	10 912	11 220	11 721
GDP, PPP (constant 2011 USD)	10 557	14 607	16 304	18 555	21 036	25 390	26 106	27 272
Nominal (current USD)	2 442	4 336	4 044	5 587	9 041	9 799	9 671	10 118
Nominal GDP & its components (billions of current MYR) ^{*1}								
Gross domestic product	119	222	356	544	821	1 159	1 231	1 353
Households and NPISHs final consumption expenditure	62	107	156	240	395	626	675	749
General government final consumption expenditure	16	28	36	62	103	152	155	165
Gross fixed capital formation	39	97	90	121	184	303	317	342
Stock change	- 1		6	1	8	- 11	1	4
Exports of goods and services	89	209	427	614	714	817	834	966
Imports of goods and services	86	218	359	494	583	729	751	872
Real GDP & its components (billions of 2010 MYR) ^{*1}								
Gross Domestic Product	263	414	524	660	821	1 064	1 109	1 174
Households and NPISHs final consumption expenditure	120	178	207	287	395	557	590	631
General government final consumption expenditure	29	43	49	79	103	144	145	153
Gross fixed capital formation	71	161	128	141	184	274	281	298
Stock change	1	6	12	- 1	8	- 1		1
Exports of goods and services	154	325	494	641	714	772	782	855
Imports of goods and services	126	300	371	493	583	681	689	764
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	21.6	13.7	11.9	11.0	10.1	8.9	8.1	8.2
Industry	48.9	50.2	51.8	49.4	40.5	38.8	38.8	38.4
Services, etc.	31.0	37.3	37.7	40.6	48.5	51.0	51.7	52.0
Industrial production index (2010=100) ^{*2}	31.6	52.9	78.4	100.0	100.0	121.5	126.5	132.1
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	29.5	73.9	98.2	141.6	198.6	199.2	189.7	217.7
Imports, c.i.f.	29.3	77.7	82.0	114.3	164.6	176.0	168.4	194.8
Balance of payments (billions of current USD) ^{*2}								
Trade balance	2.5	-0.1	20.7	33.0	38.4	27.9	24.5	27.3
Current account	-0.9	-8.6	8.5	20.0	25.6	9.1	7.1	9.0
Overall balance	0.9	-1.0	2.2	10.2	19.6	-5.8	7.3	7.9
Foreign exchange rate (MYR/USD) ^{*1}	2.70	2.50	3.80	3.79	3.22	3.91	4.15	4.30
PPP conversion factor, GDP (MYR/USD) ^{*1}	1.50	1.57	1.62	1.55	1.59	1.65	1.66	1.69
Price Indices								
GDP Deflator (2010=100) ^{*3}	45.2	53.7	68.1	82.4	100.0	108.9	111.0	115.2
Producer Price Index (2010=100) ^{*2}	50.4	59.5	69.0	82.4	100.0	102.2	101.1	107.9
Consumer Price Index (2010=100) ^{*2}	56.8	69.0	80.5	87.8	100.0	112.8	115.1	119.6
Growth rate (%) ^{*3}								
Real GDP	9.0	9.8	8.9	5.3	7.4	5.1	4.2	5.9
Population	2.9	2.6	2.4	2.0	1.7	1.4	1.4	1.4
Price								
Producer prices	0.7	5.5	3.1	6.9	5.6	-7.5	-1.1	6.7
Consumer prices	2.6	3.5	1.5	3.0	1.6	2.1	2.1	3.9

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 2017

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	4.0034
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			Anthracite			Anthracite		
Other bituminous coal			Other bituminous coal			Other bituminous coal		
Sub-bituminous Coal	MYR/tonne	332.15	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	MYR/tonne	1 627.14	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	MYR/tonne	1 525.09	Natural Gas			Natural Gas		
Liquefied Natural Gas	MYR/tonne	1 844.05	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		

Mexico

Energy balance table of Mexico

	Coal	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production	6 581		112 770						
Import	6 059	814	623	50 692	23 232	516	2 099		12 902
Export	- 2	- 67	-65 061	-7 918		-1 870			- 195
International marine bunkers				- 794					- 724
International aviation bunkers				-3 977	- 9		-3 968		
Stock changes	- 696		- 583	69	- 11		- 13		188
Total primary energy supply	11 942	747	47 749	38 072	23 212	-1 354	-1 882		12 171
Transfers			-5 731	6 667		- 119			
Total transformation sector	-9 442	398	-47 020	35 273	11 465	2 568	2 007		10 607
Main activity producers	-8 245			-7 535					- 585
Autoproducers		- 87		-1 466					- 168
Gas processing				- 775					
Petroleum refineries			-47 106	45 105	11 465	2 624	2 007		11 360
Coal transformation	-1 197	485							
Other transformation			86	- 56		- 56			
Losses & own use		- 385		-4 341					- 708
Discrepancy	130	23	5 002	-2 692	972	49	- 125		-3 443
Total final consumption	2 630	783		72 979	35 649	1 144			18 627
Total final energy consumption	2 630	702		68 223	35 649	26			18 627
Industry sector	2 630	702		6 408		26			1 318
Iron and steel		701		134					17
Chemical & petrochemical				381		26			136
Non-metallic minerals	171			2 869					7
Other industries	2 459	1		3 024					1 158
Transport sector				51 280	35 649				14 151
Domestic air transport				14	14				
Road				49 923	35 635				12 831
Rail				672					672
Inland waterways				671					648
Other transport									
Other sector				10 535					3 158
Residential				5 756					
Commerce and public services				1 550					45
Agriculture				3 229					3 113
Non-specified others									
Non-energy		81		4 756		1 118			
2016									
Indigenous production	6 960		124 685						
Import	4 884	753	511	42 559	22 035	254	1 629		9 453
Export	- 1		-65 726	-9 334		-2 197			- 762
International marine bunkers				- 896					- 812
International aviation bunkers				-3 715	- 10		-3 705		
Stock changes	- 213		- 133	- 16	- 300		- 35		306
Total primary energy supply	11 630	753	59 337	28 598	21 725	-1 943	-2 111		8 185
Transfers			-6 073	7 083		- 254	- 45	44	
Total transformation sector	-10 331	402	-57 597	42 980	14 513	3 166	2 086		11 129
Main activity producers	-9 066			-6 624					- 501
Autoproducers		- 123		-1 522					- 152
Gas processing				- 328					
Petroleum refineries			-57 697	51 521	14 513	3 233	2 086		11 782
Coal transformation	-1 265	525							
Other transformation			100	- 67		- 67			
Losses & own use		- 377		-5 503					- 718
Discrepancy	- 255	30	4 333	2 084	553	- 18	70		980
Total final consumption	1 044	808		75 242	36 791	951		44	19 576
Total final energy consumption	1 044	723		70 436	36 791	21		44	19 576
Industry sector	1 044	723		7 065		21			1 887
Iron and steel		721		109					24
Chemical & petrochemical				438		21			141
Non-metallic minerals	165			3 050					7
Other industries	879	2		3 468					1 715
Transport sector				52 822	36 791				14 594
Domestic air transport				14	14				
Road				51 260	36 777				13 069
Rail				672					672
Inland waterways				876					853
Other transport									
Other sector				10 549				44	3 095
Residential				5 814				44	
Commerce and public services				1 565					45
Agriculture				3 170					3 050
Non-specified others									
Non-energy		85		4 806		930			

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				26 566	2 750	2 836	4 295	9 083			164 881	16 107
2 153	6 312		3 478	35 705					185		94 078	
-5 652	-201			-14					-155		-73 217	
-69			-1								-794	
											-3 977	
-156	61			341							-869	
-3 724	6 172		3 477	62 598	2 750	2 836	4 295	9 083	30		180 102	16 107
	4 301		2 485								936	
4 576	-260	2 809	1 501	-38 281	-2 750	-2 836	-4 034	-1 916	27 693		-42 915	-8 679
-6 950				-27 026	-2 669	-2 836	-3 155		22 277		-29 189	-5 824
-342	-54		-902	-11 289	-81		-879	-1 916	5 416		-10 302	-2 855
	-775			34							-741	
11 868	569	2 809	2 403								-2 001	
											-712	
											30	
-736		-2 809	-88	-10 855					-5 243		-20 824	
582	-280		-447	1 670			-2	4	901		5 036	
698	9 933		6 928	15 132			259	7 171	23 381		122 335	7 430
698	9 892		3 331	14 736			259	7 171	23 381		117 102	7 430
675	1 058		3 331	13 721			14	1 192	12 680		37 347	1 206
41	7		69	3 179					462		4 476	
76	18		125	2 821					527		3 729	
62	3		2 797	1 112					986		5 138	
496	1 030		340	6 609			14	1 192	10 705		24 004	1 206
23	1 457			47					93		51 420	
											14	
	1 457			47							49 970	
									93		765	
23											671	
	7 377			968			245	5 979	10 608		28 335	6 224
	5 756			709			153	5 979	5 086		17 683	6 132
	1 505			259			92		2 035		3 936	92
	116								995		4 224	
									2 492		2 492	
	41		3 597	396							5 233	
				30 433	2 639	2 753	4 343	8 668			180 481	15 637
1 448	5 147		2 593	35 554					192		84 453	
-6 201	-174			-22					-169		-75 252	
-83			-1								-896	
											-3 715	
-85	-44		142	216							-146	
-4 921	4 929		2 734	66 181	2 639	2 753	4 343	8 668	23		184 925	15 637
	4 723		2 615								1 010	
5 782	198	3 665	2 441	-35 978	-2 640	-2 753	-4 100	-1 745	27 564		-44 198	-8 472
-6 123				-26 805	-2 563	-2 753	-3 329		22 889		-28 251	-5 892
-584	-85		-701	-9 407	-77		-771	-1 745	4 675		-8 970	-2 580
	-328			234							-94	
12 489	611	3 665	3 142								-6 176	
											-740	
											33	
-1 068		-3 665	-52	-12 275					-5 292		-23 447	
985	91		-577	-3 669	1			-1	951		3 474	
778	9 941		7 161	14 259			243	6 922	23 246		121 764	7 165
778	9 900		3 326	13 760			243	6 922	23 246		116 374	7 165
755	1 076		3 326	12 753			12	914	12 548		35 059	926
41			44	3 007					462		4 299	
76	19		181	2 851					505		3 794	
68	3		2 972	1 345					1 005		5 565	
570	1 054		129	5 550			12	914	10 576		21 401	926
23	1 414			23					98		52 943	
											14	
	1 414			23							51 283	
									98		770	
23											876	
	7 410			984			231	6 008	10 600		28 372	6 239
	5 770			733			140	6 008	5 070		17 765	6 148
	1 520			251			91		2 063		3 970	91
	120								975		4 145	
									2 492		2 492	
	41		3 835	499							5 390	

Major energy indicators of Mexico

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	123 688	131 788	150 824	180 595	178 538	184 889	184 925	180 102
Indigenous production	195 543	203 993	229 310	263 505	222 538	189 585	180 481	164 881
Import	5 832	8 770	25 704	31 696	47 983	70 674	84 453	94 078
Export	-75 752	-78 030	-98 046	-111 296	-88 337	-72 235	-75 252	-73 217
Final energy consumption	74 219	78 050	87 956	100 075	109 911	114 487	116 374	117 102
Industry	25 752	25 304	27 845	30 833	32 768	35 356	35 059	37 347
Transport	28 306	30 353	35 844	44 235	51 086	51 096	52 943	51 420
Residential	15 749	17 324	18 024	17 682	17 802	17 773	17 765	17 683
Commerce & public services	1 481	2 803	3 407	3 412	3 546	3 988	3 970	3 936
Others	2 931	2 266	2 836	3 913	4 709	6 274	6 637	6 716
Coal & coal products								
Primary energy supply	4 127	5 760	6 881	12 156	13 255	11 440	12 383	12 689
Indigenous production	3 742	4 522	5 680	7 081	8 005	5 774	6 960	6 581
Import	241	876	1 991	4 855	5 191	5 287	5 637	6 873
Export	-6	-1	-3	-3	-77	-2	-1	-69
Transformation sector	-2 608	-4 641	-5 673	-9 191	-9 270	-9 691	-9 929	-9 044
Power generation	-1 725	-3 744	-4 758	-8 394	-8 333	-8 883	-9 189	-8 332
Final energy consumption	938	806	763	2 677	3 902	3 769	1 767	3 332
Industry	938	806	763	2 677	3 902	3 769	1 767	3 332
Transport								
Residential								
Commerce & public services								
Others								
Crude oil & NGL								
Primary energy supply	82 375	85 252	77 250	91 983	77 940	69 437	59 337	47 749
Indigenous production	153 283	157 596	171 190	197 518	155 255	130 949	124 685	112 770
Import	237	244	370	333	324	401	511	623
Export	-70 838	-72 394	-93 388	-105 790	-77 691	-62 281	-65 726	-65 061
Transformation sector	-74 376	-76 302	-69 910	-78 497	-71 731	-65 754	-57 597	-47 020
Petroleum refineries	-74 443	-76 484	-69 957	-78 579	-71 851	-65 964	-57 697	-47 106
Petroleum products								
Primary energy supply	-1 585	-2 302	12 081	10 045	16 491	20 911	28 598	38 072
Import	4 934	6 092	20 843	18 814	29 792	34 669	42 559	50 692
Export	-4 741	-5 280	-4 431	-5 138	-9 666	-9 728	-9 334	-7 918
Transformation sector	53 177	54 092	41 965	53 933	53 163	49 263	42 980	35 273
Power generation	-15 118	-16 308	-23 246	-16 187	-10 602	-7 607	-8 146	-9 001
Petroleum refineries	68 366	71 760	66 404	71 244	64 663	57 796	51 521	45 105
Final energy consumption	44 459	47 523	54 747	62 294	67 738	67 985	70 436	68 223
Industry	7 445	6 559	7 478	7 324	5 888	6 254	7 065	6 408
Transport	28 237	30 269	35 744	44 125	50 975	50 981	52 822	51 280
Residential	6 573	7 668	7 635	6 882	6 585	6 020	5 814	5 756
Commerce & public services	540	1 336	1 733	1 536	1 506	1 600	1 565	1 550
Others	1 664	1 691	2 157	2 427	2 784	3 130	3 170	3 229
Gas								
Primary energy supply	23 127	24 873	35 483	46 108	54 238	64 662	66 181	62 598
Indigenous production	22 757	23 603	33 386	38 459	42 582	34 366	30 433	26 566
Import	370	1 458	2 408	7 684	12 642	30 175	35 554	35 705
Export		-188	-207	-211	-787	-25	-22	-14
Transformation sector	-3 432	-4 384	-9 799	-19 348	-28 674	-34 107	-35 978	-38 281
Power generation	-3 432	-5 387	-10 723	-20 221	-29 313	-34 596	-36 212	-38 315
Final energy consumption	11 637	11 525	11 721	10 958	12 515	13 451	13 760	14 736
Industry	10 827	10 829	11 118	10 038	11 521	12 397	12 753	13 721
Transport			5	16	9	17	23	47
Residential	810	523	451	731	768	776	733	709
Commerce & public services		173	147	173	217	261	251	259
Others								
Electricity								
Power generation	9 962	13 093	17 688	21 566	23 696	26 721	27 569	27 693
Thermal	7 249	9 511	13 622	17 624	19 319	21 758	22 559	22 504
Hydro	2 019	2 367	2 849	2 383	3 193	2 650	2 640	2 750
Nuclear	253	726	707	929	506	996	909	936
Others	441	489	510	630	678	1 317	1 461	1 503
Final energy consumption	8 613	10 275	12 496	16 310	18 546	22 138	23 246	23 381
Industry	4 590	5 885	7 106	9 402	10 552	12 037	12 548	12 680
Transport	69	84	95	94	102	98	98	93
Residential	1 753	2 447	3 106	3 657	4 187	4 814	5 070	5 086
Commerce & public services	934	1 284	1 510	1 671	1 780	2 045	2 063	2 035
Others	1 267	575	679	1 486	1 925	3 144	3 467	3 487

Major economic indicators of Mexico

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	83.94	91.66	98.90	106.01	114.09	121.86	123.33	124.78
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	654	707	915	983	1 058	1 223	1 259	1 285
GDP, billion USD (PPP, constant 2011)	1 140	1 233	1 595	1 713	1 844	2 132	2 194	2 240
Nominal, billion USD (current)	261	360	708	877	1 058	1 171	1 078	1 158
GDP per capita ^{*3}								
Real term (constant 2010 USD)	7 791	7 718	9 254	9 271	9 271	10 037	10 207	10 298
GDP, PPP (constant 2011 USD)	13 580	13 452	16 130	16 159	16 160	17 495	17 791	17 949
Nominal (current USD)	3 112	3 928	7 158	8 278	9 271	9 606	8 739	9 282
Nominal GDP & its components (billions of current MXN) ^{*1}								
Gross domestic product	735	2 311	6 694	9 563	13 366	18 551	20 117	21 921
Households and NPISHs final consumption expenditure	514	1 531	4 548	6 563	8 735	12 163	13 191	14 307
General government final consumption expenditure	62	198	637	1 006	1 573	2 288	2 418	2 573
Gross fixed capital formation	132	378	1 438	1 980	2 885	4 178	4 612	4 850
Stock change	39	107	98	136	162	140	169	183
Exports of goods and services	137	558	1 701	2 905	3 970	6 412	7 464	8 250
Imports of goods and services	146	512	1 809	3 058	4 152	6 790	7 860	8 646
Real GDP & its components (billions of 2013 MXN) ^{*1}								
Gross Domestic Product	9 241	9 997	12 933	13 887	14 948	17 284	17 789	18 157
Households and NPISHs final consumption expenditure	5 779	6 254	8 398	10 026	10 052	11 346	11 775	12 142
General government final consumption expenditure	1 300	1 437	1 657	1 679	1 853	2 075	2 129	2 150
Gross fixed capital formation	1 810	1 578	2 780	2 774	3 163	3 744	3 782	3 723
Stock change	90	208	156	176	172	142	156	150
Exports of goods and services	1 349	1 946	3 104	3 979	4 381	5 910	6 129	6 370
Imports of goods and services	1 132	1 561	3 477	4 363	4 647	5 927	6 100	6 478
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	3.9	3.8	3.2	3.2	3.3	3.1	3.1	3.2
Industry	36.8	34.7	36.3	35.2	32.9	31.2	30.4	29.7
Services, etc.	55.2	57.7	56.7	57.8	59.9	61.6	62.2	62.8
Industrial production index (2010=100) ^{*2}	69.2	72.3	95.8	100.2	100.0	109.6	110.0	109.7
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	40.7	79.5	166.4	214.2	298.3	380.6	373.9	409.4
Imports, c.i.f.	43.5	74.4	179.5	228.2	310.2	405.3	397.5	432.2
Balance of payments (billions of current USD) ^{*2}								
Trade balance	-4.4	2.2	-8.4	-7.7	-2.9	-14.6	-13.1	-11.0
Current account	-7.5	-1.6	-18.8	-9.1	-4.8	-30.9	-24.2	-20.1
Overall balance	1.0	-12.1	6.6	6.2	43.5	-9.2	8.3	8.8
Foreign exchange rate (MXN/USD) ^{*1}	2.81	6.42	9.46	10.90	12.64	15.85	18.66	18.93
PPP conversion factor, GDP (MXN/USD) ^{*1}	1.48	3.29	6.75	7.65	8.72	9.43	9.68	10.17
Price Indices								
GDP Deflator (2013=100) ^{*3}	8.0	23.1	51.8	68.9	89.4	107.3	113.1	120.7
Producer Price Index (2010=100) ^{*2}	11.9	25.7	57.7	77.8	100.0	117.9	124.6	133.2
Consumer Price Index (2010=100) ^{*2}	11.8	26.4	63.3	80.5	100.0	119.4	122.8	130.2
Growth rate (%) ^{*3}								
Real GDP ^{*3}	5.2	-6.3	4.9	2.3	5.1	3.3	2.9	2.1
Population ^{*3}	1.9	1.7	1.5	1.4	1.4	1.2	1.2	1.2
Price ^{*2}								
Producer prices	21.7	38.6	7.8	4.7	4.2	2.9	5.7	6.9
Consumer prices	26.7	35.0	9.5	4.0	4.2	2.7	2.8	6.0

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"

: 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	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production	1 653		1 660						
Import	235		5 489	2 580	1 077		283		996
Export	- 832		-1 400	- 245	- 45				- 32
International marine bunkers				- 288					- 39
International aviation bunkers				-1 234			-1 234		
Stock changes	108		34	173	83		15		57
Total primary energy supply	1 164		5 783	986	1 115		- 936		982
Transfers			- 198	206			- 2	2	- 8
Total transformation sector	- 578	90	-5 690	5 578	1 415		1 298		1 975
Main activity producers	- 129			- 1					- 1
Autoproducers	- 6	- 177							
Gas processing									
Petroleum refineries			-5 690	5 579	1 415		1 298		1 976
Coal transformation	- 443	267							
Other transformation									
Losses & own use	- 70	- 50		- 353					
Discrepancy	13	- 1	105	225	77		- 39		190
Total final consumption	529	39		6 642	2 607		321	2	3 139
Total final energy consumption	529	39		6 311	2 607		321	2	3 139
Industry sector	438	39		438	4				355
Iron and steel		39							
Chemical & petrochemical									
Non-metallic minerals	47								
Other industries	391			438	4				355
Transport sector				5 227	2 560		321	2	2 302
Domestic air transport				333	10		321	2	
Road				4 761	2 550				2 205
Rail				36					36
Inland waterways				97					61
Other transport									
Other sector	91			646	43				482
Residential	6			85	1				3
Commerce and public services	23			175	14				123
Agriculture	62			330	26				302
Non-specified others				56	2				54
Non-energy				331					
2016									
Indigenous production	1 631		1 834						
Import	230		5 574	2 634	1 056		215		1 051
Export	- 859		-1 574	- 221					- 49
International marine bunkers				- 301					- 49
International aviation bunkers				-1 115			-1 115		
Stock changes	151		- 60	- 82	- 9		- 2		- 39
Total primary energy supply	1 153		5 774	915	1 047		- 902		963
Transfers			- 189	197			- 2	2	- 8
Total transformation sector	- 547	88	-5 684	5 756	1 582		1 232		1 982
Main activity producers	- 111			- 1					- 1
Autoproducers	- 4	- 168							
Gas processing									
Petroleum refineries			-5 684	5 757	1 582		1 232		1 983
Coal transformation	- 432	256							
Other transformation									
Losses & own use	- 58	- 50		- 334					
Discrepancy	- 35	- 1	99	- 140	- 78		- 30		3
Total final consumption	513	37		6 394	2 551		298	2	2 940
Total final energy consumption	513	37		6 020	2 551		298	2	2 940
Industry sector	453	37		452	9				367
Iron and steel		37							
Chemical & petrochemical									
Non-metallic minerals	52								
Other industries	401			452	9				367
Transport sector				4 909	2 496		298	2	2 070
Domestic air transport				310	10		298	2	
Road				4 455	2 486				1 962
Rail				47					47
Inland waterways				97					61
Other transport									
Other sector	60			659	46				503
Residential	7			78	1				3
Commerce and public services	24			154	11				109
Agriculture	29			362	32				328
Non-specified others				65	2				63
Non-energy				374					

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				4 179	2 165		5 076	1 283			16 016	8 500
- 154	16		208								8 304	
- 249	- 14										- 2 477	
											- 288	
- 4			22	67							- 1 234	
- 407	2		230	4 246	2 165		5 076	1 283			382	
	206		8								20 703	8 500
443		303	144	- 1 285	- 2 165		- 4 872	- 195	3 802	20	8	
				- 1 244	- 2 165		- 4 825	- 45	3 677		- 5 295	- 7 208
				- 41			- 47	- 150	125	20	- 4 732	- 7 035
443		303	144								- 276	- 173
											- 111	
											- 176	
		- 303	- 50	- 242					- 427		- 1 142	
- 2		- 1	83				1		- 29	- 20	377	
36	206		331	2 802			205	1 088	3 346		14 651	1 292
36	206			1 656			205	1 088	3 346		13 174	1 292
	79			1 310			113	917	1 191		4 446	1 030
				53					116		208	
				685					35		720	
				47					24		118	
	79			525			113	917	1 016		3 400	1 030
36	6							3	5		5 235	3
											333	
	6							3			4 764	3
36											36	
									5		97	
											5	
	121			346			92	168	2 150		3 493	259
	81			145			16	163	1 049		1 464	178
	38			170			60	5	819		1 252	65
	2			31			16		215		654	16
									67		123	
			331	1 146							1 477	
				4 230	2 229		5 048	1 231			16 203	8 481
- 164	27		285								8 438	
- 252	- 57										- 2 654	
											- 301	
1			- 33	- 21							- 1 115	
- 415	- 30		252	4 209	2 229		5 048	1 231			- 12	
	197		8								20 559	8 481
471		284	205	- 1 054	- 2 229		- 4 841	- 211	3 752	22	8	
				- 1 019	- 2 229		- 4 795	- 43	3 631		- 4 948	- 7 254
				- 35			- 46	- 168	121	22	- 4 567	- 7 067
471		284	205								- 278	- 187
											73	
											- 176	
- 20	26	- 284	- 50	- 221					- 421		- 1 084	
36	193		- 41	- 22			1		12	- 22	- 108	
36	193		374	2 912			208	1 020	3 343		14 427	1 228
	76			1 662			208	1 020	3 343		12 803	1 228
				1 316			115	852	1 186		4 411	967
				52					120		209	
				744					33		777	
				33					25		110	
	76			487			115	852	1 008		3 315	967
36	7							3	5		4 917	3
											310	
	7							3			4 458	3
36											47	
											97	
									5		5	
	110			346			93	165	2 152		3 475	258
	74			137			16	160	1 052		1 450	176
	34			174			61	5	815		1 233	66
	2			35			16		218		660	16
									67		132	
			374	1 250							1 624	2 165

Major energy indicators of New Zealand

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	12 866	14 925	17 136	16 957	18 403	20 677	20 559	20 703
Indigenous production	11 561	12 687	14 336	12 894	16 915	16 590	16 203	16 016
Import	3 812	5 106	5 942	7 403	7 200	7 848	8 438	8 304
Export	-1 697	-2 053	-2 590	-2 487	-4 293	-2 976	-2 654	-2 477
Final energy consumption	9 142	10 272	11 305	11 986	12 044	12 743	12 803	13 174
Industry	3 621	3 902	4 237	4 077	4 103	4 361	4 411	4 446
Transport	2 956	3 645	4 061	4 539	4 566	4 815	4 917	5 235
Residential	1 212	1 244	1 369	1 452	1 477	1 480	1 450	1 464
Commerce & public services	814	881	947	1 142	1 147	1 238	1 233	1 252
Others	539	600	691	776	751	849	792	777
Coal & coal products								
Primary energy supply	1 185	1 137	1 107	2 194	1 313	1 367	1 153	1 164
Indigenous production	1 423	2 160	2 074	3 164	3 138	1 935	1 631	1 653
Import	1		11	562	134	220	230	235
Export	-239	-969	-1 116	-1 667	-1 708	-977	-859	-832
Transformation sector	-311	-348	-484	-1 517	-637	-628	-459	-488
Power generation	-169	-206	-381	-1 390	-499	-458	-283	-312
Final energy consumption	673	642	516	573	600	607	550	568
Industry	542	519	433	483	513	528	490	477
Transport		2						
Residential	29	28	25	20	12	9	7	6
Commerce & public services	38	70	44	43	32	23	24	23
Others	23	23	14	27	43	47	29	62
Crude oil & NGL								
Primary energy supply	4 374	5 105	5 430	5 213	5 480	5 950	5 774	5 783
Indigenous production	1 966	1 886	1 944	1 084	2 746	2 159	1 834	1 660
Import	3 293	4 167	4 723	4 828	5 233	5 446	5 574	5 489
Export	-965	-1 053	-1 263	-636	-2 453	-1 804	-1 574	-1 400
Transformation sector	-4 879	-5 210	-5 204	-5 170	-5 360	-5 809	-5 684	-5 690
Petroleum refineries	-4 879	-5 210	-5 204	-5 170	-5 360	-5 809	-5 684	-5 690
Petroleum products								
Primary energy supply	-865	42	278	904	705	818	915	986
Import	518	939	1 208	2 013	1 832	2 182	2 634	2 580
Export	-493	-31	-211	-184	-132	-195	-221	-245
Transformation sector	4 968	4 888	5 265	5 424	5 368	5 852	5 756	5 578
Power generation	-6	-14		-1	-1		-1	-1
Petroleum refineries	4 974	4 902	5 265	5 425	5 369	5 852	5 757	5 579
Final energy consumption	3 708	4 483	4 999	5 677	5 482	5 876	6 020	6 311
Industry	284	301	336	426	346	419	452	438
Transport	2 894	3 606	4 055	4 533	4 556	4 806	4 909	5 227
Residential	12	54	49	67	69	71	78	85
Commerce & public services	168	145	119	150	128	141	154	175
Others	350	377	440	501	383	439	427	386
Gas								
Primary energy supply	3 872	3 827	5 059	3 228	3 728	4 090	4 209	4 246
Indigenous production	3 872	3 827	5 056	3 228	3 855	4 044	4 230	4 179
Import								
Export								
Transformation sector	-1 990	-1 381	-1 899	-1 719	-1 745	-1 210	-1 054	-1 285
Power generation	-1 240	-1 048	-1 899	-1 719	-1 745	-1 210	-1 054	-1 285
Final energy consumption	1 497	1 565	1 675	1 056	1 230	1 614	1 662	1 656
Industry	1 228	1 282	1 338	705	920	1 242	1 316	1 310
Transport	57	31			1	1		
Residential	75	96	156	141	129	146	137	145
Commerce & public services	94	112	136	166	148	190	174	170
Others	43	44	45	44	32	35	35	31
Electricity								
Power generation	2 775	3 101	3 375	3 688	3 855	3 800	3 753	3 802
Thermal	598	548	1 012	1 358	1 081	809	644	766
Hydro	1 994	2 368	2 101	2 006	2 127	2 110	2 229	2 165
Nuclear								
Others	183	186	262	324	647	881	880	871
Final energy consumption	2 457	2 650	2 938	3 264	3 449	3 409	3 343	3 346
Industry	986	1 095	1 192	1 317	1 301	1 196	1 186	1 191
Transport	5	6	6	6	5	5	5	5
Residential	877	905	968	1 045	1 093	1 079	1 052	1 049
Commerce & public services	459	496	588	703	778	818	815	819
Others	130	148	184	193	272	311	285	282

Major economic indicators of New Zealand

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	3.33	3.67	3.86	4.13	4.35	4.60	4.69	4.79
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	84	98	113	138	147	169	175	181
GDP, billion USD (PPP, constant 2011)	80	94	108	132	140	162	168	173
Nominal, billion USD (current)	45	63	54	115	147	177	188	203
GDP per capita ^{*3}								
Real term (constant 2010 USD)	25 126	26 673	29 374	33 370	33 692	36 770	37 319	37 678
GDP, PPP (constant 2011 USD)	24 038	25 517	28 102	31 924	32 233	35 178	35 703	36 046
Nominal (current USD)	13 639	17 192	14 113	27 752	33 692	38 560	40 027	42 260
Nominal GDP & its components (billions of current NZD) ^{*1}								
Gross domestic product	76	96	120	163	203	254	270	285
Households and NPISHs final consumption expenditure	46	56	69	95	118	146	156	164
General government final consumption expenditure	14	16	20	29	40	47	49	51
Gross fixed capital formation	16	22	25	40	40	58	62	66
Stock change		1	1	1	1	1	2	2
Exports of goods and services	20	28	43	46	62	71	71	79
Imports of goods and services	20	26	39	48	57	68	69	76
Real GDP & its components (billions of 2010 NZD) ^{*1}								
Gross Domestic Product	116	136	157	191	203	235	243	251
Households and NPISHs final consumption expenditure	65	73	85	107	118	138	146	152
General government final consumption expenditure	24	25	28	35	40	44	44	46
Gross fixed capital formation	19	25	29	44	40	55	57	59
Stock change	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Exports of goods and services	27	37	47	55	62	72	73	75
Imports of goods and services	22	29	36	53	57	73	77	82
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	12.7	12.0	11.7	10.7	8.6	9.3	9.1	8.9
Industry	22.8	22.3	20.9	20.5	19.1	18.4	18.3	18.2
Services, etc.	57.5	58.5	60.0	61.0	64.4	64.1	64.3	64.7
Industrial production index (2010=100) ^{*2}	74.5	85.0	90.3	102.0	100.0	102.4	104.4	106.5
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	9.4	13.6	13.3	21.7	31.4	34.4	33.7	38.1
Imports, c.i.f.	9.5	14.0	13.9	26.2	30.6	36.6	36.1	40.1
Balance of payments (billions of current USD) ^{*2}								
Trade balance	N.A.	N.A.	0.5	-3.0	2.0	-1.4	-1.9	-1.6
Current account	N.A.	N.A.	-1.7	-8.0	-3.4	-4.7	-4.0	-5.6
Overall balance	N.A.	N.A.	0.7	3.3	1.0	-6.4	5.8	-2.2
Foreign exchange rate (NZD/USD) ^{*1}	1.68	1.52	2.20	1.42	1.39	1.43	1.44	1.41
PPP conversion factor, GDP (NZD/USD) ^{*1}	1.56	1.49	1.51	1.60	1.59	1.63	1.62	1.61
Price Indices								
GDP Deflator (2010=100) ^{*3}	65.6	70.8	76.2	85.1	100.0	108.4	111.0	113.7
Producer Price Index (2010=100) ^{*2}	61.4	66.2	73.1	82.1	100.0	105.1	105.6	110.4
Consumer Price Index (2010=100) ^{*2}	64.7	71.7	77.0	87.0	100.0	107.9	108.6	110.7
Growth rate (%) ^{*3}								
Real GDP	0.2	4.7	2.9	3.3	1.5	3.6	3.6	3.1
Population	0.9	1.5	0.6	1.1	1.1	1.9	2.1	2.1
Price								
Producer prices	4.6	0.8	7.6	4.6	2.7	-2.1	0.5	4.5
Consumer prices	6.1	3.8	2.6	3.0	2.3	0.3	0.6	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"

: 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)

Papua New Guinea

Energy balance table of Papua New Guinea

	Coal	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production			1 038						
Import			1 412	1 008	67		31	46	472
Export			-1 038	- 458		- 436			
International marine bunkers									
International aviation bunkers									
Stock changes			- 81	- 11	17	- 14	- 1		- 11
Total primary energy supply			1 331	540	84	- 449	30	46	461
Transfers				- 47	42	- 88			
Total transformation sector			-1 421	780		548	103		453
Main activity producers									
Autoproducers				- 594					- 99
Gas processing									
Petroleum refineries			-1 421	1 374		548	103		551
Coal transformation									
Other transformation									
Losses & own use									
Discrepancy			90	1					
Total final consumption				1 274	126	11	133	46	914
Total final energy consumption				1 274	126	11	133	46	914
Industry sector				483		11			441
Iron and steel									
Chemical & petrochemical									
Non-metallic minerals									
Other industries				483		11			441
Transport sector				639	126		133		372
Domestic air transport				133			133		
Road				497	126				372
Rail									
Inland waterways				9					
Other transport									
Other sector				151				46	101
Residential				30				28	
Commerce and public services				20				19	
Agriculture									
Non-specified others				101					101
Non-energy									
2016									
Indigenous production			1 178						
Import			1 382	952	56		66		414
Export			-1 178	- 469		- 455			
International marine bunkers									
International aviation bunkers									
Stock changes			32	50	- 2		2		26
Total primary energy supply			1 415	533	54	- 455	68		440
Transfers				- 1	77	- 76	- 47	45	
Total transformation sector			-1 422	724		541	112		467
Main activity producers				- 79					
Autoproducers				- 572					- 96
Gas processing									
Petroleum refineries			-1 422	1 375		541	112		563
Coal transformation									
Other transformation									
Losses & own use									
Discrepancy			7	17					3
Total final consumption				1 273	131	11	133	45	910
Total final energy consumption				1 273	131	11	133	45	910
Industry sector				481		11			439
Iron and steel									
Chemical & petrochemical									
Non-metallic minerals									
Other industries				481		11			439
Transport sector				643	131		133		370
Domestic air transport				133			133		
Road				501	131				370
Rail									
Inland waterways				9					
Other transport									
Other sector				149				45	101
Residential				29				27	
Commerce and public services				19				18	
Agriculture									
Non-specified others				101					101
Non-energy									

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				3 011	75		361	1 681			6 167	2 118
392				-2 558							2 420	
	- 1		- 21								-4 054	
- 9			8								- 92	
383	- 1		- 13	453	75		361	1 681			4 441	2 118
											- 47	
- 356	18		13	-169	- 75		- 361	- 50	389		- 908	- 487
				- 56	- 57			- 35	114		- 35	- 93
- 495				-152	- 18		- 361	- 2	275		- 852	- 381
				39							39	
140	18		13								- 47	
								- 13			- 13	- 13
				- 284					- 47		- 331	
									- 1		90	
27	17							1 631	342		3 246	1 631
27	17							1 631	342		3 246	1 631
18	14							66	253		803	66
18	14							66	253		803	66
9											639	
											133	
											497	
9											9	
	3							1 565	89		1 804	1 565
	2							1 330	36		1 396	1 330
	1							235	53		308	235
											101	
				2 866	170		361	1 676			6 251	2 207
414	1										2 335	
			- 14	-2 449				- 1			-4 098	- 1
											82	
24												
439	1		- 14	417	170		361	1 674			4 571	2 206
											- 1	
- 425	15		14	- 145	- 170		- 361	- 48	390		-1 032	- 579
- 79				- 56	- 109			- 34	110		- 169	- 143
- 477				- 145	- 61		- 361	- 2	281		- 860	- 424
				56							56	
130	15		14								- 47	
								- 11			- 11	- 11
				- 272					- 47		- 319	
13	1										24	
27	17							1 627	343		3 244	1 627
27	17							1 627	343		3 244	1 627
18	14							64	252		797	64
18	14							64	252		797	64
9											643	
											133	
											501	
9											9	
	3							1 563	92		1 804	1 563
	2							1 328	38		1 395	1 328
	1							234	54		308	234
											101	

Major energy indicators of Papua New Guinea

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply		2 160	2 556	3 302	3 682	4 497	4 571	4 441
Indigenous production		6 475	5 290	4 279	3 055	6 125	6 251	6 167
Import		675	943	1 810	1 583	1 910	2 335	2 420
Export		-4 976	-3 677	-2 785	- 886	-3 523	-4 098	-4 054
Final energy consumption		1 992	2 320	2 618	2 827	3 211	3 244	3 246
Industry		306	472	613	640	773	797	803
Transport		259	294	347	429	637	643	639
Residential		1 108	1 196	1 283	1 354	1 394	1 395	1 396
Commerce & public services		241	262	276	295	307	308	308
Others		77	97	99	110	101	101	101
Coal & coal 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		11		1 036	972	614	1 415	1 331
Indigenous production		5 000	3 677	2 462	890	1 221	1 178	1 038
Import				917	993	625	1 382	1 412
Export		-4 976	-3 677	-2 344	- 886	-1 221	-1 178	-1 038
Transformation sector		- 58		- 993	- 966	- 614	-1 422	-1 421
Petroleum refineries		- 58		- 993	- 966	- 614	-1 422	-1 421
Petroleum products								
Primary energy supply		675	943	449	546	1 280	533	540
Import		675	943	893	590	1 285	952	1 008
Export				- 441			- 469	- 458
Transformation sector		- 109	- 340	424	455	- 24	724	780
Power generation		- 109	- 340	- 566	- 488	- 633	- 651	- 594
Petroleum refineries				990	943	609	1 375	1 374
Final energy consumption		563	713	859	969	1 253	1 273	1 274
Industry		195	286	372	385	467	481	483
Transport		259	294	347	429	637	643	639
Residential		19	21	24	27	29	29	30
Commerce & public services		13	14	16	18	19	19	20
Others		77	97	99	110	101	101	101
Gas								
Primary energy supply		83	119	125	123	394	417	453
Indigenous production		83	119	125	123	2 695	2 866	3 011
Import								
Export						-2 301	-2 449	-2 558
Transformation sector		- 83	- 119	- 120	- 118	- 138	- 145	- 169
Power generation		- 83	- 119	- 120	- 118	- 158	- 201	- 208
Final energy consumption								
Industry								
Transport								
Residential								
Commerce & public services								
Others								
Electricity								
Power generation		135	223	298	314	379	390	389
Thermal		60	143	212	192	254	270	277
Hydro		75	80	74	85	89	84	75
Nuclear								
Others				11	36	36	36	36
Final energy consumption		117	199	262	276	334	343	342
Industry		74	142	195	201	244	252	253
Transport								
Residential		6	14	25	27	36	38	36
Commerce & public services		37	43	43	47	53	54	53
Others								

Major economic indicators of Papua New Guinea

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	4.62	5.19	5.85	6.49	7.31	8.11	8.27	8.44
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	6.43	9.71	9.61	10.69	14.25	19.46	20.26	20.57
GDP, billion USD (PPP, constant 2011)	10.24	15.46	15.30	17.02	22.69	30.98	32.25	32.75
Nominal, billion USD (current)	3.22	4.84	3.50	4.87	14.25	21.72	20.76	22.28
GDP per capita ^{*3}								
Real term (constant 2010 USD)	1 393	1 872	1 643	1 646	1 949	2 400	2 449	2 438
GDP, PPP (constant 2011 USD)	2 218	2 980	2 616	2 621	3 103	3 820	3 898	3 881
Nominal (current USD)	698	933	598	749	1 949	2 679	2 510	2 640
Nominal GDP & its components (billions of current PGK) ^{*1}								
Gross domestic product	3	6	10	15	39	60	65	71
Households and NPISHs final consumption expenditure	2	3	4	N.A.	N.A.	N.A.	N.A.	N.A.
General government final consumption expenditure	1	1	2	N.A.	N.A.	N.A.	N.A.	N.A.
Gross fixed capital formation	1	1	2	N.A.	N.A.	N.A.	N.A.	N.A.
Stock change				N.A.	N.A.	N.A.	N.A.	N.A.
Exports of goods and services	1	4	6	N.A.	N.A.	N.A.	N.A.	N.A.
Imports of goods and services	2	3	5	N.A.	N.A.	N.A.	N.A.	N.A.
Real GDP & its components (billions of 2013 PGK) ^{*1}								
Gross Domestic Product	20	30	29	N.A.	N.A.	N.A.	N.A.	N.A.
Households and NPISHs final consumption expenditure	3	4	3	N.A.	N.A.	N.A.	N.A.	N.A.
General government final consumption expenditure	1	1	1	N.A.	N.A.	N.A.	N.A.	N.A.
Gross fixed capital formation	1	1	2	N.A.	N.A.	N.A.	N.A.	N.A.
Stock change				N.A.	N.A.	N.A.	N.A.	N.A.
Exports of goods and services	3	5	5	N.A.	N.A.	N.A.	N.A.	N.A.
Imports of goods and services	3	3	4	N.A.	N.A.	N.A.	N.A.	N.A.
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	10.3	9.1	10.4	N.A.	N.A.	N.A.	N.A.	N.A.
Industry	6.0	8.2	8.3	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}	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	2.7	2.1	3.3	5.7	8.5	8.2	10.0
Imports, c.i.f.	1.2	1.5	1.2	1.7	3.5	2.6	2.1	3.1
Balance of payments (billions of current USD) ^{*2}								
Trade balance	0.1	1.4	1.1	1.8	2.2	N.A.	N.A.	N.A.
Current account	-0.1	0.5	0.3	0.5	-0.9	N.A.	N.A.	N.A.
Overall balance	0.1	0.0	0.1	0.0	0.2	N.A.	N.A.	N.A.
Foreign exchange rate (PGK/USD) ^{*1}	0.96	1.28	2.78	3.10	2.72	2.77	3.13	3.19
PPP conversion factor, GDP (PGK/USD) ^{*1}	0.75	0.91	1.41	1.82	2.11	2.48	2.62	2.70
Price Indices								
GDP Deflator (2013=100) ^{*3}	15.7	20.9	33.2	46.3	89.2	101.4	105.3	113.3
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	30.2	52.9	77.1	100.0	127.8	136.3	143.7
Growth rate (%) ^{*3}								
Real GDP	-3.0	-3.3	-2.5	6.3	10.1	9.5	4.1	1.5
Population	2.4	2.4	2.3	2.2	2.3	2.0	2.0	2.0
Price								
Producer prices	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Consumer prices	7.0	17.3	15.6	1.8	6.0	6.0	6.7	5.4

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"

: 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

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				12 498	2 499		153	3 038			23 883	5 690
22	237		183					291	1		11 186	291
-2 474	- 58		- 10	-5 478							-11 267	
	4										4	
221	149		- 169	160				23			281	23
-2 231	332		5	7 180	2 499		153	3 352	1		24 087	6 004
- 455	1 441		24								- 909	
2 934	213	147	275	-3 954	-2 499		- 121	- 502	4 566		-3 027	-3 122
- 91				-3 713	-2 441		- 117	- 89	4 339		-2 496	-2 646
- 58				- 241	- 59		- 4	- 257	226		- 550	- 319
3 083	213	147	275								177	
- 8		- 147		- 991				- 157			- 157	- 157
	- 8			- 96					- 541		-1 693	
									- 33		808	
240	1 977		304	2 139			33	2 850	3 993		19 266	2 883
240	1 977			2 139			33	2 850	3 993		18 963	2 883
65	433			1 336				495	2 406		5 681	495
				179					1 285		1 517	
65	433			1 156				495	1 121		4 164	495
174	562			682				278	5		8 111	278
	562			682				278			7 933	278
174									5		179	
1	983			121			33	2 076	1 583		5 170	2 109
	891			96			20	1 949	823		3 779	1 969
1	92			25			13	123	760		1 287	136
								2			42	2
								3			63	3
			304								304	
				14 053	2 078		145	2 451			24 455	4 674
22	37							313	2		10 890	313
-1 783				-5 756					- 3		-11 067	
266	90										284	
-1 495	126			8 297	2 078		145	2 764	- 1		24 562	4 987
- 299	1 555										- 238	
2 134	219	147	265	-4 768	-2 078		- 112	- 298	4 467		-2 137	-2 488
- 134				-4 515	-2 033		- 112	- 102	4 285		-2 940	-2 248
- 33				- 252	- 44			- 139	182		- 488	- 183
2 301	219	147	265								1 349	
- 108		- 126		-1 375				- 57			- 57	- 57
		- 21	- 265	- 252					- 541		-2 166	
									- 23		- 476	
231	1 900			1 902			33	2 466	3 902		19 545	2 499
231	1 900			1 902			33	2 466	3 902		19 545	2 499
47	410			1 155				183	2 347		5 247	183
									1 261		1 359	
47	410			1 155				183	1 086		3 888	183
185	545			649				272	4		9 442	272
	545			649				272			1 038	
185									4		8 215	272
											188	
	946			98			33	2 011	1 551		4 857	2 044
	864			76			20	1 990	808		3 758	2 010
	82			22			13	15	743		956	29
								2			60	2
								3			83	3

Major economic indicators of Peru

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	22.07	24.30	26.46	27.87	29.03	30.47	30.93	31.44
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	58	75	86	106	148	186	194	199
GDP, billion USD (PPP, constant 2011)	116	150	170	210	292	369	384	394
Nominal, billion USD (current)	29	53	52	76	148	190	192	211
GDP per capita ^{*3}								
Real term (constant 2010 USD)	2 650	3 107	3 243	3 796	5 082	6 114	6 263	6 315
GDP, PPP (constant 2011 USD)	5 254	6 160	6 428	7 526	10 075	12 121	12 415	12 518
Nominal (current USD)	1 318	2 196	1 956	2 730	5 082	6 228	6 205	6 701
Nominal GDP & its components (billions of current PEN) ^{*1}								
Gross domestic product	5	120	181	251	417	604	648	687
Households and NPISHs final consumption expenditure	4	86	128	163	257	393	419	440
General government final consumption expenditure		12	21	29	44	80	87	93
Gross fixed capital formation	1	29	36	43	98	140	139	141
Stock change		1		1	1	7	4	1
Exports of goods and services	1	15	30	67	116	129	146	169
Imports of goods and services	1	22	34	51	99	144	148	157
Real GDP & its components (billions of 2007 PEN) ^{*1}								
Gross Domestic Product	151	196	222	274	382	483	502	514
Households and NPISHs final consumption expenditure	106	136	143	167	236	310	321	330
General government final consumption expenditure	16	21	25	30	41	60	63	66
Gross fixed capital formation	21	40	38	44	96	116	111	112
Stock change	1	1		- 3	4	11	9	8
Exports of goods and services	27	39	58	93	108	118	131	142
Imports of goods and services	20	42	42	57	103	132	134	144
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	6.9	6.7	7.7	6.9	6.1	5.6	5.5	5.5
Industry	34.6	35.0	35.2	38.2	36.6	33.9	34.0	33.8
Services, etc.	N.A.	49.6	48.7	46.5	48.2	51.3	51.4	51.7
Industrial production index (2010=100) ^{*2}	41.2	54.2	58.7	74.6	100.0	N.A.	N.A.	N.A.
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	3.3	5.5	7.0	17.4	35.8	34.4	37.1	45.3
Imports, c.i.f.	2.6	7.6	7.4	12.5	30.0	37.9	36.3	39.9
Balance of payments (billions of current USD) ^{*2}								
Trade balance	0.4	-1.9	-0.1	5.6	7.4	N.A.	N.A.	N.A.
Current account	-1.4	-4.6	-1.5	1.1	-3.6	-9.5	-5.1	-2.7
Overall balance	-2.0	-0.8	-0.5	1.2	9.3	N.A.	N.A.	N.A.
Foreign exchange rate (PEN/USD) ^{*1}	0.19	2.25	3.49	3.30	2.83	3.18	3.38	3.26
PPP conversion factor, GDP (PEN/USD) ^{*1}	0.08	1.27	1.57	1.52	1.57	1.70	1.74	1.75
Price Indices								
GDP Deflator (2007=100) ^{*3}	3.6	61.5	81.3	91.5	109.1	125.2	129.1	133.6
Wholesale Price Index (2010=100) ^{*2}	4.7	57.3	79.0	86.8	100.0	110.6	111.6	112.6
Consumer Price Index (2010=100) ^{*2}	3.1	56.8	79.2	87.1	100.0	117.8	122.0	125.4
Growth rate (%) ^{*3}								
Real GDP	-5.0	7.4	2.7	6.3	8.3	3.3	4.0	2.5
Population	2.1	1.9	1.5	0.9	0.8	1.3	1.5	1.7
Price								
Producer prices	6 737.4	10.5	4.3	2.3	1.8	0.9	0.9	0.9
Consumer prices	7 481.7	11.1	3.8	1.6	1.5	3.5	3.6	2.8

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	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production	6 298		622						
Import	11 753		10 418	12 247	2 123	1 103	1 129	40	5 402
Export	-3 258		- 598	-1 420	- 90	- 166			
International marine bunkers				- 96					- 11
International aviation bunkers				-1 580			-1 580		
Stock changes	682		235	- 177	- 85	26	2	3	- 102
Total primary energy supply	15 475		10 677	8 974	1 948	963	- 449	44	5 289
Transfers									
Total transformation sector	-12 312		-10 212	8 722	2 290	216	901	52	3 345
Main activity producers	-12 312			- 969					- 394
Autoproducers									
Gas processing									
Petroleum refineries			-10 212	9 690	2 290	216	901	52	3 740
Coal transformation									
Other transformation									
Losses & own use			- 163						
Discrepancy			- 302	108	153	- 74	51	2	- 23
Total final consumption	3 163			17 804	4 391	1 104	503	97	8 612
Total final energy consumption	3 008			16 346	4 391		503	97	8 612
Industry sector	3 008			1 470				22	750
Iron and steel	214			118					28
Chemical & petrochemical	14			224				19	47
Non-metallic minerals	2 338			227					57
Other industries	442			901				3	618
Transport sector				11 352	4 379		503		6 195
Domestic air transport				512	9		503		
Road				9 881	4 204				5 667
Rail				2					2
Inland waterways				957	166				526
Other transport									
Other sector				3 523	12			76	1 667
Residential				1 159				75	
Commerce and public services				2 074					1 397
Agriculture				59	5				49
Non-specified others				232	7				221
Non-energy	155			1 458		1 104			
2016									
Indigenous production	5 917		702						
Import	10 572		10 569	10 870	1 943	953	865	32	4 761
Export	-3 607		- 674	-1 243	- 243	- 201			
International marine bunkers				- 50					- 6
International aviation bunkers				-1 296			-1 296		
Stock changes	205		- 217	- 127	36	- 14	- 8	- 3	- 148
Total primary energy supply	13 086		10 380	8 155	1 735	738	- 439	30	4 607
Transfers									
Total transformation sector	-10 232		-10 498	8 712	2 340	277	1 006	66	3 444
Main activity producers	-10 232			-1 230					- 481
Autoproducers									
Gas processing									
Petroleum refineries			-10 498	9 943	2 340	277	1 006	66	3 925
Coal transformation									
Other transformation									
Losses & own use			- 121						
Discrepancy			240	- 308	- 40	- 125	22	3	32
Total final consumption	2 854			16 559	4 035	889	589	99	8 083
Total final energy consumption	2 677			15 430	4 035		589	99	8 083
Industry sector	2 677			1 458				19	656
Iron and steel	228			107					16
Chemical & petrochemical	12			190				17	45
Non-metallic minerals	2 059			208					54
Other industries	379			953				1	542
Transport sector				10 989	4 028		589		6 156
Domestic air transport				594	5		589		
Road				9 546	3 860				5 673
Rail				2					2
Inland waterways				848	163				482
Other transport									
Other sector				2 983	8			80	1 270
Residential				1 122				79	
Commerce and public services				1 632					1 058
Agriculture				42	3				34
Non-specified others				187	5			1	179
Non-energy	177			1 129		889			

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				3 226	827		9 030	10 131			30 132	19 990
999	1 282		168					131			34 550	131
- 413	- 6		- 744								- 5 276	
- 86											- 96	
											- 1 580	
- 25	- 14		18					65			805	65
476	1 262		- 558	3 226	827		9 030	10 327			58 535	20 186
359	479		1 079	- 3 080	- 827		- 9 030	- 2 557	8 116		- 21 179	- 12 416
- 575				- 3 080	- 827		- 9 030	- 14	8 116		- 18 115	- 9 873
								- 388			- 388	- 388
934	479		1 079								- 521	
								- 2 155			- 2 155	- 2 155
				- 93					- 1 426		- 1 681	
197	- 31		- 167					- 43			- 237	- 43
1 032	1 711		354	53				7 728	6 690		35 438	7 728
1 032	1 711			53				7 728	6 690		33 824	7 728
613	85			53				1 193	2 199		7 923	1 193
80	10							1	448		781	1
154	4							1	134		373	1
162	8							1	167		2 733	1
217	63			53				1 190	1 450		4 036	1 190
265	10							462	10		11 824	462
											512	
	10							456			10 337	456
265								6	10		18	6
											957	
153	1 615							6 073	4 481		14 077	6 073
	1 083							5 697	2 303		9 159	5 697
146	532							370	1 958		4 402	370
4								1	220		280	1
3								4			236	4
			354								1 613	
1 034	1 071		211	3 270	698		9 699	9 902			30 188	20 301
- 229	- 4		- 566					127			32 137	127
- 44											- 5 524	
											- 50	
											- 1 296	
35	- 4		- 20					27			- 113	27
797	1 063		- 376	3 270	698		9 699	10 055			55 342	20 454
- 3	494		1 089	- 3 082	- 698		- 9 699	- 2 372	7 809		- 20 060	- 12 771
- 749				- 3 082	- 698		- 9 699	- 15	7 809		- 17 147	- 10 413
								- 277			- 277	- 277
747	494		1 089								- 556	
								- 2 080			- 2 080	- 2 080
				- 123					- 1 431		- 1 675	
270	4		- 474								- 68	
1 064	1 561		239	65				7 684	6 377		33 539	7 684
1 064	1 561			65				7 684	6 377		32 233	7 684
653	130			65				1 174	2 074		7 447	1 174
75	16								423		758	
121	7							1	126		328	1
146	8							1	158		2 425	1
311	99			65				1 172	1 367		3 935	1 172
203	13							430	9		11 428	430
											594	
	13							425			9 970	425
203								5	9		16	5
											848	
209	1 417							6 080	4 294		13 358	6 080
	1 043							5 715	2 204		9 042	5 715
201	374							361	1 872		3 865	361
5								1	218		260	1
3								3			190	3
			239								1 306	

Major energy indicators of the Philippines

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	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	26 480	32 248	38 687	37 932	41 376	51 839	55 342	58 535
Indigenous production	16 342	14 960	18 863	21 112	25 131	27 535	30 188	30 132
Import	11 837	18 875	21 881	19 072	21 614	29 569	32 137	34 550
Export	- 667	- 987	- 1 825	- 1 931	- 3 940	- 3 681	- 5 524	- 5 276
Final energy consumption	18 637	21 685	22 793	22 480	24 874	29 818	32 233	33 824
Industry	4 134	4 971	4 534	4 951	5 946	6 748	7 447	7 923
Transport	4 686	7 174	8 299	8 218	8 032	10 561	11 428	11 824
Residential	8 852	8 361	7 911	7 078	7 885	8 738	9 042	9 159
Commerce & public services	831	1 047	1 685	1 853	2 663	3 370	3 865	4 402
Others	134	131	364	381	347	401	451	516
Coal & coal products								
Primary energy supply	1 255	1 644	4 624	5 317	7 031	11 615	13 086	15 475
Indigenous production	625	642	644	1 521	3 510	3 894	5 917	6 298
Import	709	903	3 596	3 513	5 788	9 120	10 572	11 753
Export					- 2 163	- 1 639	- 3 607	- 3 258
Transformation sector	- 559	- 750	- 3 784	- 4 134	- 5 090	- 9 265	- 10 232	- 12 312
Power generation	- 559	- 750	- 3 784	- 4 134	- 5 090	- 9 265	- 10 232	- 12 312
Final energy consumption	526	734	701	1 056	1 841	2 218	2 677	3 008
Industry	526	734	701	1 056	1 841	2 218	2 677	3 008
Transport								
Residential								
Commerce & public services								
Others								
Crude oil & NGL								
Primary energy supply	10 091	15 783	15 361	10 630	8 886	10 431	10 380	10 677
Indigenous production	232	128	56	610	916	715	702	622
Import	9 858	15 866	15 272	10 434	8 951	10 471	10 569	10 418
Export		- 92		- 582	- 862	- 719	- 674	- 598
Transformation sector	- 10 405	- 15 492	- 15 078	- 10 199	- 8 550	- 10 181	- 10 498	- 10 212
Petroleum refineries	- 10 405	- 15 492	- 15 078	- 10 199	- 8 550	- 10 181	- 10 498	- 10 212
Petroleum products								
Primary energy supply	- 351	630	539	3 004	4 720	6 767	8 155	8 974
Import	1 269	2 106	3 013	5 124	6 870	9 884	10 870	12 247
Export	- 667	- 895	- 1 825	- 1 349	- 915	- 1 322	- 1 243	- 1 420
Transformation sector	7 780	10 990	12 701	8 567	6 802	8 259	8 712	8 722
Power generation	- 2 553	- 4 340	- 2 105	- 1 400	- 1 480	- 1 413	- 1 230	- 969
Petroleum refineries	10 333	15 330	14 806	9 967	8 282	9 672	9 943	9 690
Final energy consumption	7 867	11 298	12 563	11 728	11 329	13 996	15 430	16 346
Industry	2 240	2 688	1 977	1 671	1 402	1 382	1 458	1 470
Transport	4 686	7 174	8 295	8 209	7 839	10 155	10 989	11 352
Residential	779	1 190	1 429	1 059	930	973	1 122	1 159
Commerce & public services	111	206	577	502	941	1 292	1 632	2 074
Others	51	39	287	287	215	194	229	290
Gas								
Primary energy supply		4	9	2 701	3 028	2 854	3 270	3 226
Indigenous production		4	9	2 701	3 028	2 854	3 270	3 226
Import								
Export								
Transformation sector		- 4	- 9	- 2 560	- 2 898	- 2 697	- 3 082	- 3 080
Power generation		- 4	- 9	- 2 560	- 2 898	- 2 697	- 3 082	- 3 080
Final energy consumption				12	70	50	65	53
Industry				12	69	50	65	53
Transport								
Residential								
Commerce & public services								
Others								
Electricity								
Power generation	2 264	2 886	3 895	4 865	5 826	7 088	7 809	8 116
Thermal	1 273	1 822	2 224	3 290	4 295	5 316	5 981	6 209
Hydro	521	536	671	721	671	745	698	827
Nuclear								
Others	470	528	1 000	853	859	1 026	1 130	1 081
Final energy consumption	1 824	2 287	3 144	3 884	4 753	5 831	6 377	6 690
Industry	855	942	1 134	1 351	1 598	1 936	2 074	2 199
Transport			5	8	9	8	9	10
Residential	482	707	1 109	1 379	1 620	1 956	2 204	2 303
Commerce & public services	404	546	818	1 053	1 398	1 727	1 872	1 958
Others	83	92	78	93	128	203	218	220

Major economic indicators of the Philippines

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	61.90	69.78	77.99	86.33	93.97	102.11	103.66	105.17
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	95	105	125	157	200	266	284	303
GDP, billion USD (PPP, constant 2011)	248	277	329	412	525	699	747	797
Nominal, billion USD (current)	44	74	81	103	200	293	305	314
GDP per capita ^{*3}								
Real term (constant 2010 USD)	1 527	1 508	1 607	1 817	2 124	2 605	2 743	2 884
GDP, PPP (constant 2011 USD)	4 014	3 963	4 224	4 776	5 583	6 848	7 210	7 581
Nominal (current USD)	716	1 062	1 039	1 194	2 124	2 867	2 941	2 982
Nominal GDP & its components (billions of current PHP) ^{*1}								
Gross domestic product	1 077	1 906	3 581	5 678	9 003	13 322	14 480	15 808
Households and NPISHs final consumption expenditure	767	1 412	2 585	4 259	6 442	9 826	10 673	11 614
General government final consumption expenditure	109	217	409	513	875	1 456	1 620	1 777
Gross fixed capital formation	249	423	791	1 130	1 848	2 929	3 568	3 954
Stock change	11	5	-134	94	2	-103	-33	20
Exports of goods and services	296	693	1 839	2 620	3 134	3 783	4 069	4 904
Imports of goods and services	359	842	1 911	2 938	3 297	4 569	5 416	6 461
Real GDP & its components (billions of 2000 PHP) ^{*1}								
Gross Domestic Product	2 700	3 006	3 581	4 481	5 702	7 600	8 123	8 666
Households and NPISHs final consumption expenditure	1 775	2 079	2 585	3 302	3 946	5 267	5 642	5 974
General government final consumption expenditure	348	401	409	417	570	784	855	908
Gross fixed capital formation	609	680	791	883	1 182	1 801	2 271	2 484
Stock change	49	31	-134	62	1	38	20	21
Exports of goods and services	870	1 375	1 839	2 213	2 886	3 695	4 125	4 936
Imports of goods and services	934	1 487	1 911	2 395	2 884	3 984	4 789	5 657
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	15.2	14.6	14.0	13.3	11.6	9.5	8.8	8.5
Industry	35.4	35.4	34.5	32.7	32.6	33.5	33.9	34.0
Services, etc.	49.4	50.0	51.6	54.0	55.8	57.0	57.4	57.5
Industrial production index (2010=100) ^{*2}	N.A.	123.1	108.7	103.2	100.0	136.4	152.3	151.9
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	8.1	17.5	38.1	41.3	51.5	58.8	57.4	68.7
Imports, c.i.f.	13.0	28.3	37.0	49.5	58.5	74.8	89.4	101.9
Balance of payments (billions of current USD) ^{*2}								
Trade balance	-4.0	-8.9	-8.2	-12.1	-16.9	-23.3	-35.5	-40.2
Current account	-2.7	-2.0	-2.2	2.0	7.2	7.3	-1.2	-2.1
Overall balance	-0.6	3.3	1.1	-0.5	21.0	5.0	-1.3	0.7
Foreign exchange rate (PHP/USD) ^{*1}	24.31	25.71	44.19	55.09	45.11	45.50	47.49	50.40
PPP conversion factor, GDP (PHP/USD) ^{*1}	8.87	12.40	14.99	16.33	18.59	19.74	19.74	19.88
Price Indices								
GDP Deflator (2000=100) ^{*3}	39.9	63.4	100.0	126.7	157.9	175.3	178.3	182.4
Producer Price Index (2010=100) ^{*2}	N.A.	41.4	59.5	92.8	100.0	85.7	81.6	80.9
Consumer Price Index (2010=100) ^{*2}	28.6	46.6	63.7	78.7	100.0	115.4	116.9	120.2
Growth rate (%) ^{*3}								
Real GDP	3.0	4.7	4.4	4.8	7.6	6.1	6.9	6.7
Population	2.6	2.4	2.2	1.9	1.7	1.6	1.5	1.5
Price								
Producer prices	N.A.	4.2	12.5	9.0	-4.9	-6.7	-4.8	-0.9
Consumer prices	12.2	6.8	4.0	6.5	3.8	0.7	1.3	2.9

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"

: 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	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production	222 235		548 999						
Import	17 146	73	625	1 224	38	28	66		146
Export	-118 591	-2 024	-254 054	-127 208	-4 562	-19 270	-2 333		-41 260
International marine bunkers				-11 756					-9 134
International aviation bunkers				-5 392			-5 392		
Stock changes	-5 299	43	1 626	-99	-191	13			-46
Total primary energy supply	115 491	-1 908	297 196	-143 231	-4 715	-19 229	-7 659		-50 294
Transfers				-4			-409		405
Total transformation sector	-101 824	23 990	-290 993	280 270	39 969	27 834	12 758		79 902
Main activity producers	-43 356			-813					
Autoproducers	-12 950	-3 288	-541	-5 909					-1 588
Gas processing									
Petroleum refineries			-290 452	286 992	39 969	27 834	12 758		81 490
Coal transformation	-45 518	27 278							
Other transformation									
Losses & own use	-642	-960	-6 176	-12 195					-2 969
Discrepancy	-7 279	1	-1	-4 042	1	-111	702		1 093
Total final consumption	5 746	21 123	26	120 798	35 255	8 494	5 392		28 137
Total final energy consumption	5 624	21 123	26	91 218	35 255		5 392		28 137
Industry sector	3 062	21 123	14	15 856					3 571
Iron and steel	1 979	20 922		323					
Chemical & petrochemical	137	46	10	9 624					153
Non-metallic minerals	789	72		136					101
Other industries	157	83	4	5 773					3 317
Transport sector				58 929	35 255		5 392		17 532
Domestic air transport				5 402	10		5 392		
Road				50 235	34 999				14 805
Rail				1 966	34				1 900
Inland waterways				430	5				270
Other transport				896	207				557
Other sector	2 562		12	16 433					7 034
Residential	1 547			10 426					1 574
Commerce and public services	964			2 487					2 303
Agriculture	51		11	2 877					2 801
Non-specified others			1	643					356
Non-energy	122			29 580		8 494			
2016									
Indigenous production	209 159		550 364						
Import	13 951	51	753	1 162	188	6	13		83
Export	-107 467	-1 567	-256 134	-124 209	-5 482	-18 661	-2 498		-38 781
International marine bunkers				-10 743					-9 134
International aviation bunkers				-4 882			-4 882		
Stock changes	-798	-40	-400	-602	-244	-99			-354
Total primary energy supply	114 845	-1 556	294 583	-139 274	-5 538	-18 754	-7 367		-48 186
Transfers				-4			-363		359
Total transformation sector	-101 991	23 929	-287 427	269 172	42 041	27 267	12 248		76 168
Main activity producers	-45 314			-1 484					
Autoproducers	-12 436	-3 102	-842	-5 327					-1 414
Gas processing									
Petroleum refineries			-286 585	275 983	42 041	27 267	12 248		77 582
Coal transformation	-44 241	27 031							
Other transformation									
Losses & own use	-1 062	-964	-7 101	-11 798					-2 989
Discrepancy	-5 258	-1	-15	-4 887	-103	-358	365		-360
Total final consumption	6 534	21 408	40	113 209	36 400	8 155	4 883		24 992
Total final energy consumption	6 319	21 408	40	86 770	36 400		4 883		24 992
Industry sector	3 147	21 408	22	16 005					3 365
Iron and steel	2 003	21 190		154					
Chemical & petrochemical	99	63	18	9 754					142
Non-metallic minerals	843	71	1	118					83
Other industries	202	84	3	5 979					3 140
Transport sector				57 625	36 400		4 883		15 713
Domestic air transport				4 889	6		4 883		
Road				49 291	36 123				12 738
Rail				1 574	29				1 506
Inland waterways				435	15				346
Other transport				1 436	227				1 123
Other sector	3 172		18	13 140					5 914
Residential	1 872			7 663					940
Commerce and public services	1 236			2 125					1 940
Agriculture	63		8	2 807					2 741
Non-specified others	1		10	545					293
Non-energy	215			26 439		8 155			

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				580 954	15 908	53 279	165	7 712			1429 252	18 643
11	157		778	7 217				5	551		26 841	5
-47 078	-4 901		-7 804	-187 555				-30	-1 462		-690 924	-30
-2 622											-11 756	
											-5 392	
152	-89		62	-12 281				154			-15 856	146
-49 537	-4 833		-6 964	388 335	15 908	53 279	165	7 841	-911		732 165	18 764
											-4	
49 759	30 311	17 518	22 219	-202 045	-15 909	-53 280	-165	-4 300	93 587	127 190	-143 479	-16 705
-813				-130 771	-15 803	-53 280	-165		87 686	56 323	-100 179	-15 968
-2 947	-18	-592	-764	-68 441	-106			-4 216	6 224	70 548	-18 679	-653
53 519	30 329	18 110	22 983								-3 460	
											-18 240	
											-2 921	
-648	-40	-8 538		-2 833				-84	-323	319	-88 188	-84
1 744	-7 470		-1	-19 768				-149	-27 251	-21 047	-12 552	
				-1 227	1	1		-6	1	-1		
1 318	17 968	8 980	15 254	165 295				3 386	65 426	106 142	487 942	2 058
1 318	9 926	8 980	2 210	125 638				3 386	65 426	106 142	418 583	2 058
538	557	8 980	2 210	38 003				1 229	29 132	41 119	149 538	76
323				12 272				489	5 256	6 214	47 455	
45	446	8 980		6 792				113	4 052	11 913	32 687	19
17	18			9 408				28	1 568	2 289	14 290	
153	93		2 210	9 531				599	18 256	20 703	55 106	57
308	442			30 261					6 671		95 861	
											5 402	
	431			237							50 472	
31	1								4 369		6 335	
153	2										430	
124	8			30 024					2 302		33 222	
472	8 927			57 374				2 157	29 623	65 023	173 184	1 982
30	8 822			53 570				892	14 314	43 834	124 583	892
134	50			2 476				1 147	13 746	18 483	39 303	1 025
21	55			1 327				118	1 539	2 690	8 613	65
287				1					24	16	685	
	8 042		13 044	39 657							69 359	
				538 402	15 874	51 579	165	8 135			1373 678	18 951
1	123		748	7 342				6	275		23 540	6
-49 711	-5 358		-3 718	-175 120				-32	-1 521		-666 050	-32
-1 609											-10 743	
											-4 882	
118	51		-74	689				14			-1 137	30
-51 201	-5 184		-3 044	371 313	15 874	51 579	165	8 123	-1 246		714 406	18 955
											-4	
54 168	24 437	17 571	15 272	-201 605	-15 873	-51 580	-166	-4 449	93 360	128 351	-148 279	-16 693
-1 484				-132 561	-15 759	-51 580	-166		87 202	59 257	-100 405	-15 925
-3 033	-19	-861		-66 830	-114			-4 369	6 430	68 787	-17 803	-688
58 685	24 456	18 432	15 272								-10 602	
											-17 210	
											-2 259	
-438	-43	-8 328		-2 214				-80	-272	307	-91 196	-80
-1 618	-2 811		-2	-18 899				-144	-28 145	-23 083	-10 177	
				-22	-1	1	1	-2		7		
911	16 399	9 243	12 226	150 787				3 528	63 969	105 275	464 750	2 261
911	7 770	9 243	2 571	116 629				3 528	63 969	105 275	403 938	2 261
368	458	9 243	2 571	36 418				1 144	28 060	42 924	149 128	64
154				12 583				438	5 170	6 856	48 394	1
26	343	9 243		5 688				61	4 037	12 240	31 960	16
15	20			9 045				32	1 492	2 160	13 762	1
173	95		2 571	9 102				613	17 361	21 668	55 012	46
187	442			29 569					7 099		94 293	
											4 889	
	430			159							49 450	
39									4 169		5 743	
74											435	
74	12			29 410					2 930		33 776	
356	6 870			50 642				2 384	28 810	62 351	160 517	2 197
	6 723			47 038				1 105	13 800	43 012	114 490	1 105
103	82			2 304				1 153	13 517	16 889	37 224	1 027
1	65			1 299				126	1 476	2 433	8 212	65
252				1					17	17	591	
	8 629		9 655	34 158							60 812	

Major energy indicators of Russia

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	879 333	636 762	619 369	651 747	689 001	692 634	714 406	732 165
Indigenous production	1293 218	967 680	978 108	1203 377	1279 512	1334 441	1373 678	1429 252
Import	120 460	30 065	32 883	23 180	22 888	27 611	23 540	26 841
Export	-533 048	-345 038	-382 468	-562 509	-602 033	-649 079	-666 050	-690 924
Final energy consumption	584 861	423 703	381 569	367 708	380 284	393 292	403 938	418 583
Industry	208 677	146 682	127 834	123 033	126 336	139 323	149 128	149 538
Transport	115 879	76 144	74 482	88 573	96 492	93 870	94 293	95 861
Residential	83 509	146 927	140 268	110 564	111 475	114 716	114 490	124 583
Commerce & public services	36 276	25 514	22 639	34 726	37 023	36 398	37 224	39 303
Others	140 520	28 436	16 346	10 812	8 958	8 985	8 803	9 298
Coal & coal products								
Primary energy supply	191 114	129 205	119 991	112 581	101 441	116 483	113 289	113 583
Indigenous production	192 378	130 674	128 534	157 426	166 361	200 270	209 159	222 235
Import	35 088	14 013	15 374	13 643	15 311	14 302	14 002	17 219
Export	-40 422	-18 774	-25 476	-55 764	-85 948	-99 746	-109 034	-120 615
Transformation sector	-127 223	-101 806	-97 474	-96 120	-89 811	-83 769	-78 062	-77 834
Power generation	-104 931	-80 917	-79 903	-76 854	-70 840	-64 633	-60 852	-59 594
Final energy consumption	54 715	24 261	17 234	12 555	13 979	27 184	27 727	26 747
Industry	14 562	12 229	7 263	6 876	9 879	23 623	24 555	24 185
Transport								
Residential	8 620	8 162	8 947	2 830	1 548	2 083	1 872	1 547
Commerce & public services	917	870	387	2 674	2 473	1 385	1 236	964
Others	3 000	3 000	637	175	79	93	64	51
Crude oil & NGL								
Primary energy supply	321 937	189 296	183 806	216 839	256 924	290 015	294 583	297 196
Indigenous production	526 252	306 596	323 256	468 707	506 540	536 284	550 364	548 999
Import	18 592	8 546	5 921	2 438	1 105	3 543	753	625
Export	-222 907	-122 947	-145 135	-253 848	-248 266	-247 532	-256 134	-254 054
Transformation sector	-308 934	-185 251	-181 768	-213 893	-251 965	-284 053	-287 427	-290 993
Petroleum refineries	-307 419	-184 859	-180 702	-213 127	-251 178	-283 459	-286 585	-290 452
Petroleum products								
Primary energy supply	-58 162	-46 578	-57 695	-87 644	-117 847	-150 651	-139 274	-143 231
Import	7 329	3 018	306	26	2 832	1 961	1 162	1 224
Export	-64 273	-46 032	-53 300	-83 538	-111 999	-135 217	-124 209	-127 208
Transformation sector	209 140	141 357	157 737	192 118	239 710	274 394	269 172	280 270
Power generation	-60 579	-37 582	-22 170	-16 004	-10 327	-9 227	-6 811	-6 722
Petroleum refineries	269 719	178 939	179 907	208 854	250 037	283 621	275 983	286 992
Final energy consumption	125 712	66 235	71 064	69 669	77 491	88 390	86 770	91 218
Industry	24 456	8 479	16 953	10 266	11 038	14 451	16 005	15 856
Transport	72 882	41 162	42 295	47 558	56 302	59 591	57 625	58 929
Residential	8 771	5 225	4 355	6 331	4 719	8 161	7 663	10 426
Commerce & public services	421	365	988	845	1 663	2 379	2 125	2 487
Others	19 182	11 004	6 473	4 669	3 769	3 808	3 352	3 520
Gas								
Primary energy supply	367 392	316 635	319 008	349 669	383 543	364 254	371 313	388 335
Indigenous production	516 822	480 551	470 739	515 842	540 157	524 328	538 402	580 954
Import	56 438	2 908	10 526	6 201	3 498	7 231	7 342	7 217
Export	-201 719	-154 019	-156 592	-167 423	-154 175	-164 973	-175 120	-187 555
Transformation sector	-227 749	-190 040	-189 415	-205 837	-222 990	-207 439	-201 605	-202 045
Power generation	-227 749	-190 040	-186 413	-203 783	-221 313	-205 445	-199 391	-199 212
Final energy consumption	122 005	103 481	100 251	106 631	109 238	108 323	116 629	125 638
Industry	30 496	25 081	25 841	30 119	32 363	35 500	36 418	38 003
Transport	34 054	29 368	26 939	33 845	32 857	27 218	29 569	30 261
Residential	47 135	43 247	43 124	38 144	40 442	42 337	47 038	53 570
Commerce & public services	8 782	4 348	2 456	3 559	3 021	2 161	2 304	2 476
Others	1 538	1 437	1 891	964	555	1 107	1 300	1 328
Electricity								
Power generation	93 065	73 876	75 376	81 800	89 106	91 644	93 649	93 587
Thermal	68 620	50 229	50 019	54 061	60 089	60 305	60 773	60 111
Hydro	14 269	15 085	14 111	14 850	14 318	14 447	15 877	15 908
Nuclear	10 174	8 560	11 241	12 852	14 656	16 810	16 909	17 582
Others	2	3	5	36	44	81	91	97
Final energy consumption	71 076	53 169	52 322	55 888	62 484	62 970	63 969	65 426
Industry	41 419	27 000	26 860	28 365	28 104	28 289	28 060	29 132
Transport	8 922	5 604	5 238	7 151	7 333	7 061	7 099	6 671
Residential	9 196	10 840	12 100	9 365	11 152	12 858	13 800	14 314
Commerce & public services	5 751	5 164	5 526	9 540	14 522	13 344	13 517	13 746
Others	5 788	4 561	2 598	1 467	1 373	1 418	1 493	1 563

Major economic indicators of Russia

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	147.97	148.38	146.60	143.52	142.85	146.41	146.67	146.84
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	1 416	880	952	1 282	1 525	1 652	1 657	1 684
GDP, billion USD (PPP, constant 2011)	3 061	1 901	2 060	2 774	3 301	3 589	3 581	3 637
Nominal, billion USD (current)	N.A.	314	260	764	1 525	1 364	1 283	1 579
GDP per capita ^{*3}								
Real term (constant 2010 USD)	9 571	5 929	6 491	8 929	10 675	11 282	11 299	11 470
GDP, PPP (constant 2011 USD)	20 684	12 813	14 051	19 326	23 108	24 516	24 417	24 766
Nominal (current USD)	N.A.	2 114	1 772	5 323	10 675	9 314	8 746	10 751
Nominal GDP & its components (billions of current RUR) ^{*1}								
Gross domestic product	N.A.	1 429	7 306	21 610	46 309	83 094	86 014	92 101
Households and NPISHs final consumption expenditure	N.A.	744	3 374	10 792	23 843	43 556	45 661	48 516
General government final consumption expenditure	N.A.	273	1 103	3 646	8 671	14 684	15 729	16 649
Gross fixed capital formation	N.A.	301	1 232	3 837	10 014	17 326	18 911	20 571
Stock change	N.A.	62	134	502	458	1 278	1 332	1 618
Exports of goods and services	N.A.	418	3 219	7 607	13 529	23 854	22 138	23 994
Imports of goods and services	N.A.	370	1 756	4 648	9 790	17 153	17 689	19 073
Real GDP & its components (billions of 2010 RUR) ^{*1}								
Gross Domestic Product	73 505	45 660	49 390	66 515	79 148	85 732	86 014	87 416
Households and NPISHs final consumption expenditure	20 604	18 980	18 528	29 444	41 602	46 539	45 661	47 175
General government final consumption expenditure	19 000	13 361	13 636	14 713	15 649	15 502	15 729	16 117
Gross fixed capital formation	37 318	9 369	7 994	12 845	18 388	18 720	18 911	19 897
Stock change	13 425	4 199	2 808	4 396	2 352			
Exports of goods and services	13 109	8 394	10 737	16 545	19 359	21 461	22 138	23 247
Imports of goods and services	14 763	6 001	5 482	12 575	19 349	18 356	17 689	20 760
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	4.5	4.9	4.7	4.0	3.3	3.8	3.9	3.8
Industry	41.3	32.1	32.9	33.4	29.9	28.9	29.5	29.2
Services, etc.	51.2	51.9	51.1	50.6	56.5	57.3	56.8	56.9
Industrial production index (2010=100) ^{*2}	N.A.	67.5	69.2	91.4	100.0	112.3	114.8	117.2
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	N.A.	82.4	105.0	243.8	400.6	341.4	281.7	353.5
Imports, c.i.f.	N.A.	62.6	44.9	125.4	248.6	193.0	191.5	238.1
Balance of payments (billions of current USD) ^{*2}								
Trade balance	N.A.	20.3	57.1	116.2	147.0	148.4	90.2	22.4
Current account	N.A.	7.4	45.4	84.4	67.5	67.8	24.5	12.5
Overall balance	N.A.	20.7	27.0	70.0	45.9	-1.5	13.2	5.5
Foreign exchange rate (RUR/USD) ^{*1}	N.A.	N.A.	28.13	28.28	30.37	60.94	67.06	58.34
PPP conversion factor, GDP (RUR/USD) ^{*1}	N.A.	1.97	7.55	13.39	16.71	25.30	26.02	26.18
Price Indices								
GDP Deflator (2016=100) ^{*3}	0.0	3.1	14.8	32.5	58.5	96.8	100.0	105.4
Producer Price Index (2010=100) ^{*2}	N.A.	6.3	27.1	61.7	100.0	153.8	160.5	172.7
Consumer Price Index (2010=100) ^{*2}	N.A.	6.3	30.8	61.4	100.0	151.5	162.2	168.2
Growth rate (%) ^{*3}								
Real GDP (*3)	-3.0	-4.1	10.0	6.4	4.5	-2.3	0.3	1.6
Population (*3)	0.4	-0.1	-0.4	-0.4	0.02	0.2	0.2	0.1
Price (*2)								
Producer prices	N.A.	236.5	46.5	20.6	12.2	N.A.	N.A.	N.A.
Consumer prices	N.A.	197.4	20.8	12.7	6.8	15.5	7.0	3.7

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"

: 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 2017

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	58.33
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	159.70	Coking Coal	Rub/tonne	9,552.00	Coking Coal	
Anthracite	USD/tonne	37.60	Anthracite	Rub/tonne	11,019.00	Anthracite	
Other bituminous coal	USD/tonne	139.90	Other bituminous coal			Other bituminous coal	
Sub-bituminous Coal			Sub-bituminous Coal			Sub-bituminous Coal	
Lignite	USD/tonne	12.40	Lignite	Rub/tonne	1,227.00	Lignite	
Peat	USD/tonne	103.10	Peat			Peat	
Patent Fuel		-	Patent Fuel			Patent Fuel ⁸	Rub/tonne 2,213.71
Coke	USD/tonne	404.10	Coke			Coke	
Coal Tar ²	USD/tonne	140.10	Coal Tar			Coal Tar	
BKB/PB	USD/tonne	4,696.80	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/tonne	13,075.10	Crude Oil	Rub/tonne	22,697.00	Crude Oil	
Natural Gas Liquids	USD/tonne	111.10	Natural Gas Liquids			Natural Gas Liquids	
Ethane	USD/tonne	3,539.10	Ethane			Ethane	
LPG	USD/tonne	2,026.80	LPG ⁹	Rub/tonne	19,589.00	LPG	
Naphtha	USD/tonne	928.20	Naphtha			Naphtha	
Motor Gasoline	USD/tonne	458.10	Motor Gasoline	Rub/tonne	46,131.00	Motor Gasoline ⁹	Rub/liter 35.21
Aviation Gasoline	USD/tonne	1,014.70	Aviation Gasoline			Aviation Gasoline	
Gasoline Type Jet Fuel	USD/tonne	560.00	Gasoline Type Jet Fuel			Gasoline Type Jet Fuel	
Kerosene Type Jet Fuel	USD/tonne	468.20	Kerosene Type Jet Fuel	Rub/tonne	42,054.00	Kerosene Type Jet Fuel	
Other Kerosene	USD/tonne	2,831.40	Other Kerosene			Other Kerosene	
Gas/Diesel Oil	USD/tonne	480.20	Gas/Diesel Oil	Rub/tonne	46,998.00	Gas/Diesel Oil	Rub/liter 34.44
Fuel Oil ³	USD/tonne	210.20	Fuel Oil	Rub/tonne	16,997.00	Fuel Oil	
White Spirit SBP	USD/tonne	1,168.40	White Spirit SBP			White Spirit SBP	
Lubricants	USD/tonne	1,962.50	Lubricants	Rub/tonne	84,119.00	Lubricants	
Bitumen	USD/tonne	243.50	Bitumen ⁶	Rub/tonne	10,018.00	Bitumen	
Paraffin Waxes ⁴	USD/tonne	2,744.10	Paraffin Waxes			Paraffin Waxes	
Petroleum Coke	USD/tonne	264.00	Petroleum Coke			Petroleum Coke	
Natural Gas			Natural Gas			Natural Gas	
Natural Gas	USD/Mm ³	15.60	Natural Gas	Rub/1000 m ³	5,137.00	Natural Gas	Rub/m ³ 5.16
Liquefied Natural Gas	1000 m ³	-	Liquefied Natural Gas			Liquefied Natural Gas	Rub/m ³ 77.96
Compressed Natural Gas			Compressed Natural Gas			Compressed Natural Gas	Rub/50 liter 651.44
Electricity			Electricity			Electricity	
Electricity	USD/MWh	16.90	Electricity	Rub/MWh	2,579.00	Industrial	
						Commercial	
						Residential ¹⁰	Rub/100 kWh 314.95
						Others ¹¹	Rub/100 kWh 226.63
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	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production									
Import	899		57 954	127 072	16 717	8 197	3 087	19	21 782
Export			- 785	-100 843	-25 595	-1 017	-7 427	- 233	-25 376
International marine bunkers				-48 768					-2 090
International aviation bunkers				-8 298	- 1		-8 297		
Stock changes			142	- 369	- 82				146
Total primary energy supply	899		57 311	-31 206	-8 961	7 180	-12 637	- 214	-5 538
Transfers			7 292	-7 093		190			-3 777
Total transformation sector	- 298		-58 451	55 661	9 745	4 830	12 638	214	11 341
Main activity producers	- 298			- 11					- 1
Autoproducers				- 163					
Gas processing									
Petroleum refineries			-58 451	55 835	9 745	4 830	12 638	214	11 342
Coal transformation									
Other transformation									
Losses & own use				-2 180					
Discrepancy	- 428		-6 152	3 756	1		- 1		1
Total final consumption	173			18 938	785	12 200			2 027
Total final energy consumption	173			6 173	785				2 027
Industry sector	173			3 787					529
Iron and steel									
Chemical & petrochemical				2 993					
Non-metallic minerals									
Other industries	173			794					529
Transport sector				2 283	785				1 498
Domestic air transport									
Road				2 208	785				1 423
Rail									
Inland waterways				75					75
Other transport									
Other sector				103					
Residential				27					
Commerce and public services				76					
Agriculture									
Non-specified others									
Non-energy				12 765		12 200			
2016									
Indigenous production									
Import	426		52 775	123 493	16 910	7 168	3 133	21	22 347
Export			- 751	-97 565	-25 880	-1 098	-6 158	- 299	-25 480
International marine bunkers				-46 826					-2 059
International aviation bunkers				-7 815	- 1		-7 814		
Stock changes			142	569	31				146
Total primary energy supply	426		52 166	-28 144	-8 940	6 070	-10 839	- 278	-5 046
Transfers			6 650	-6 409		1 014			-3 849
Total transformation sector	- 259		-53 304	50 804	9 734	4 117	10 839	278	10 950
Main activity producers	- 259			- 47					- 2
Autoproducers				- 75					
Gas processing									
Petroleum refineries			-53 304	50 926	9 734	4 117	10 839	278	10 952
Coal transformation									
Other transformation									
Losses & own use				-1 986					
Discrepancy			-5 512	3 556		- 2			- 1
Total final consumption	167			17 821	794	11 199			2 054
Total final energy consumption	167			6 064	794				2 054
Industry sector	167			3 635					524
Iron and steel									
Chemical & petrochemical				2 865					
Non-metallic minerals									
Other industries	167			770					524
Transport sector				2 324	794				1 530
Domestic air transport									
Road				2 252	794				1 458
Rail									
Inland waterways				72					72
Other transport									
Other sector				105					
Residential				27					
Commerce and public services				78					
Agriculture									
Non-specified others									
Non-energy				11 757		11 199			

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
							15	638			653	334
75 489	246		1 535	8 885				68			194 878	68
-32 147	- 358		-8 690								-101 628	
-46 678											-48 768	
					46						-8 298	
- 433											- 181	
-3 769	- 112		-7 155	8 931			15	706			36 656	402
-3 506											199	
5 060	253	3 670	7 910	-7 571			- 15	- 706	4 505		-6 875	- 402
- 10				-6 680			- 15	- 706	3 972		-3 738	- 402
- 98		- 65		- 891					533		- 521	
5 168	253	3 735	7 910								-2 616	
- 528		-1 652		- 11					- 236		-2 427	
3 049	1	706	- 1	- 54							-2 878	
306	142	2 724	754	1 295					4 269		24 675	
306	142	2 724	189	1 295					4 269		11 910	
306	39	2 724	189	1 150					1 730		6 840	
269		2 724									2 993	
37	39		189	1 150					1 730		3 847	
				6					237		2 526	
				6							2 214	
									237		237	
											75	
	103			139					2 302		2 544	
	27			56					627		710	
	76			81					1 651		1 808	
				2					24		26	
			565								12 765	
							13	656			669	341
72 284	306		1 324	8 712				69			185 475	69
-30 334	- 267		-8 049								-98 316	
-44 767											-46 826	
					46						-7 815	
392											757	
-2 425	39		-6 725	8 758			13	725			33 944	410
-3 574											241	
4 020	103	3 307	7 456	-7 528			- 13	- 725	4 444		-6 581	- 410
- 45				-6 641			- 13	- 725	3 927		-3 758	- 410
- 37		- 38		- 887					517		- 445	
4 102	103	3 345	7 456								-2 378	
- 480		-1 506		- 11					- 263		-2 260	
2 732		828	- 1	6							-1 950	
273	142	2 629	730	1 225					4 181		23 394	
273	142	2 629	172	1 225					4 181		11 637	
273	37	2 629	172	1 073					1 630		6 505	
236		2 629									2 865	
37	37		172	1 073					1 630		3 640	
				10					227		2 561	
				10							2 262	
									227		227	
											72	
	105			142					2 324		2 571	
	27			55					653		735	
	78			85					1 647		1 810	
				2					24		26	
			558								11 757	

Major energy indicators of Singapore

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	11 529	18 846	18 665	21 012	23 210	30 901	33 944	36 656
Indigenous production	70	202	202	394	588	620	669	653
Import	61 402	80 885	82 531	113 189	154 788	173 606	185 475	194 878
Export	-36 878	-48 496	-41 700	-63 541	-87 590	-91 222	-98 316	-101 628
Final energy consumption	3 094	3 825	5 582	7 135	9 797	11 523	11 637	11 910
Industry	605	747	2 178	3 236	5 109	6 431	6 505	6 840
Transport	1 358	1 882	1 754	1 954	2 425	2 592	2 561	2 526
Residential	279	370	624	607	653	703	735	710
Commerce & public services	819	782	957	1 223	1 576	1 771	1 810	1 808
Others	33	44	69	115	34	26	26	26
Coal & coal products								
Primary energy supply	22	11		3	7	407	426	899
Indigenous production								
Import	37	24		3	7	407	426	899
Export	-15	-13						
Transformation sector	-1					-243	-259	-298
Power generation	-1					-243	-259	-298
Final energy consumption	21	11		2	7	163	167	173
Industry	21	11		2	7	163	167	173
Transport								
Residential								
Commerce & public services								
Others								
Crude oil & NGL								
Primary energy supply	41 678	52 527	42 668	59 611	44 853	48 664	52 166	57 311
Indigenous production								
Import	43 533	52 533	42 668	59 780	45 396	49 438	52 775	57 954
Export	-19	-6		-169	-479	-754	-751	-785
Transformation sector	-41 678	-52 526	-42 668	-59 610	-53 281	-51 479	-53 304	-58 451
Petroleum refineries	-41 678	-52 526	-42 668	-59 610	-53 281	-51 479	-53 304	-58 451
Petroleum products								
Primary energy supply	-30 241	-35 160	-25 324	-44 010	-28 731	-27 398	-28 144	-31 206
Import	17 832	27 062	38 744	48 392	102 892	115 190	123 493	127 072
Export	-36 844	-48 477	-41 700	-63 372	-87 111	-90 468	-97 565	-100 843
Transformation sector	36 896	42 743	35 009	56 922	48 400	49 139	50 804	55 661
Power generation	-4 415	-5 437	-6 596	-2 219	-2 208	-199	-122	-174
Petroleum refineries	41 381	48 275	41 725	59 259	50 608	49 338	50 926	55 835
Final energy consumption	1 897	2 159	3 130	3 575	5 141	6 068	6 064	6 173
Industry	111	132	1 262	1 623	2 787	3 590	3 635	3 787
Transport	1 342	1 865	1 729	1 851	2 226	2 369	2 324	2 283
Residential	43		93	38	33	28	27	27
Commerce & public services	401	162	46	63	95	81	78	76
Others								
Gas								
Primary energy supply		1 266	1 119	5 014	6 493	8 545	8 758	8 931
Indigenous production								
Import		1 266	1 119	5 014	6 493	8 508	8 712	8 885
Export								
Transformation sector	62	-1 180	-1 014	-4 509	-5 369	-7 343	-7 528	-7 571
Power generation		-1 266	-1 119	-4 615	-5 369	-7 343	-7 528	-7 571
Final energy consumption	62	82	105	506	1 016	1 207	1 225	1 295
Industry				399	869	1 057	1 073	1 150
Transport					19	13	10	6
Residential	30	40	39	45	49	54	55	56
Commerce & public services					78	81	85	81
Others	32	42	66	62	1	2	2	2
Electricity								
Power generation	1 351	1 913	2 723	3 286	3 989	4 336	4 444	4 505
Thermal	1 351	1 913	2 723	3 286	3 989	4 330	4 432	4 490
Hydro								
Nuclear								
Others						6	13	15
Final energy consumption	1 114	1 573	2 347	3 052	3 633	4 085	4 181	4 269
Industry	473	604	916	1 212	1 446	1 621	1 630	1 730
Transport	16	17	25	103	180	210	227	237
Residential	206	330	492	524	571	621	653	627
Commerce & public services	418	620	911	1 160	1 403	1 609	1 647	1 651
Others	1	2	3	53	33	24	24	24

Major economic indicators of Singapore

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	3.05	3.52	4.03	4.27	5.08	5.54	5.61	5.61
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	69	104	136	173	240	298	307	318
GDP, billion USD (PPP, constant 2011)	106	161	211	267	371	461	475	493
Nominal, billion USD (current)	39	88	96	128	240	308	318	338
GDP per capita ^{*3}								
Real term (constant 2010 USD)	22 572	29 473	33 851	40 498	47 237	53 883	54 765	56 740
GDP, PPP (constant 2011 USD)	34 912	45 586	52 357	62 639	73 061	83 342	84 704	87 760
Nominal (current USD)	12 763	24 915	23 853	29 961	47 237	55 646	56 722	60 297
Nominal GDP & its components (billions of current SGD) ^{*1}								
Gross domestic product	70	124	166	213	327	423	439	467
Households and NPISHs final consumption expenditure	31	51	69	85	119	157	160	166
General government final consumption expenditure	7	10	17	21	32	43	45	49
Gross fixed capital formation	22	41	54	49	84	115	115	122
Stock change	3	1	5	-4	7	-8	2	9
Exports of goods and services	125	225	312	479	647	755	727	801
Imports of goods and services	118	205	292	415	561	640	610	684
Real GDP & its components (billions of 2015 SGD) ^{*1}								
Gross Domestic Product	98	147	194	245	340	423	436	452
Households and NPISHs final consumption expenditure	45	63	87	107	130	157	162	167
General government final consumption expenditure	9	13	22	26	35	43	45	47
Gross fixed capital formation	25	43	60	56	88	115	117	124
Stock change	3	1	3	-3	6	-8	2	8
Exports of goods and services	98	192	273	432	599	755	756	799
Imports of goods and services	89	174	256	379	521	640	640	689
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Industry	26.3	26.9	27.8	25.2	26.9	24.3	24.2	24.7
Services, etc.	66.4	65.6	65.4	68.7	67.1	70.0	69.5	68.9
Industrial production index (2010=100) ^{*2}	27.4	40.7	57.5	70.8	100.0	107.1	111.1	122.6
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	52.7	118.3	137.8	229.6	351.9	346.6	338.1	373.2
Imports, c.i.f.	60.9	124.5	134.5	200.0	310.8	296.7	291.9	327.7
Balance of payments (billions of current USD) ^{*2}								
Trade balance	-1.6	10.5	15.8	47.6	63.2	92.6	87.1	92.5
Current account	3.1	14.5	10.6	29.7	55.0	53.0	55.7	55.4
Overall balance	7.0	8.9	4.8	14.1	37.7	1.5	-0.9	29.4
Foreign exchange rate (SGD/USD) ^{*1}	1.81	1.42	1.72	1.66	1.36	1.37	1.38	1.38
PPP conversion factor, GDP (SGD/USD) ^{*1}	1.38	1.34	1.24	1.13	1.15	1.20	1.17	1.16
Price Indices								
GDP Deflator (2015=100) ^{*3}	72.2	84.4	85.6	86.7	96.0	100.0	100.8	103.4
Wholesale Price Index (2010=100) ^{*2}	91.2	79.7	85.9	97.9	100.0	N.A.	N.A.	N.A.
Consumer Price Index (2010=100) ^{*2}	71.8	81.5	85.2	88.0	100.0	113.2	112.6	113.3
Growth rate (%) ^{*3}								
Real GDP	9.8	7.2	9.0	7.4	14.5	2.9	3.0	3.7
Population	4.0	3.1	1.7	2.4	1.8	1.2	1.3	0.1
Price								
Producer prices	1.7	0.0	10.1	9.7	4.7	N.A.	N.A.	N.A.
Consumer prices	3.5	1.7	1.4	0.4	2.8	-0.5	-0.5	0.6

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"

: 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 2017

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	
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	17.68
Compressed Natural Gas			Compressed Natural Gas			Compressed Natural Gas		
Electricity			Electricity			Electricity		
Electricity			Electricity			Industrial		
						Commercial		
						Residential	SGD cents/kWh	20.65
						Others		
Other Energy Products			Other Energy Products			Other Energy Products		
Condensate						Auto LPG		

Chinese Taipei

Energy balance table of Chinese Taipei

	Coal	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production			5						
Import	37 649	182	44 783	19 457	132	12 649	106		39
Export	- 1	- 30	- 401	-16 955	-4 392		- 830		-8 287
International marine bunkers				-1 211					- 98
International aviation bunkers				-2 848			-2 848		
Stock changes	- 119	5	- 1	145	255	- 45	11	4	- 142
Total primary energy supply	37 530	157	44 386	-1 412	-4 005	12 605	-3 561	4	-8 489
Transfers			265	- 515	3 092	-2 945	- 11		18
Total transformation sector	-32 039	2 610	-44 375	42 601	8 847	8 453	3 784	2	13 276
Main activity producers	-20 584			-2 691					- 118
Autoproducers	-4 810	- 971		- 736					- 2
Gas processing									
Petroleum refineries			-44 375	46 028	8 847	8 453	3 784	2	13 396
Coal transformation	-6 644	3 580							
Other transformation									
Losses & own use		-1 194		-2 119	- 3				- 28
Discrepancy	97	37	- 277	318	91	- 42	48	- 2	- 30
Total final consumption	5 588	1 610		38 874	8 022	18 071	260	4	4 747
Total final energy consumption	5 574	1 331		16 207	8 022		99	4	4 747
Industry sector	5 574	1 331		1 802	5		1		93
Iron and steel	194	1 331		168					5
Chemical & petrochemical	3 373			659			1		55
Non-metallic minerals	1 120			194					11
Other industries	887			781	5				22
Transport sector				12 258	7 986		98		4 049
Domestic air transport				98			98		
Road				11 970	7 986				3 948
Rail				17					17
Inland waterways				173					84
Other transport									
Other sector				2 147	31			4	605
Residential				1 091					
Commerce and public services				736	31			4	318
Agriculture				4					1
Non-specified others				316					286
Non-energy	14	279		22 667		18 071	162		
2016									
Indigenous production			8						
Import	36 663	133	45 161	19 728	130	12 907	211		
Export	- 1			-17 381	-4 701		- 913		-8 933
International marine bunkers				-1 296					- 92
International aviation bunkers				-2 747			-2 747		
Stock changes	349	5	141	2	- 153	- 21	- 36	- 3	77
Total primary energy supply	37 012	138	45 310	-1 694	-4 724	12 886	-3 485	- 3	-8 949
Transfers			70	- 518	3 143	-3 008	- 12		10
Total transformation sector	-30 957	2 793	-45 138	43 581	9 667	7 798	3 733	8	13 591
Main activity producers	-19 124			-2 444					- 110
Autoproducers	-4 977	- 971		- 873					- 1
Gas processing									
Petroleum refineries			-45 138	46 897	9 667	7 798	3 733	8	13 702
Coal transformation	-6 856	3 764							
Other transformation									
Losses & own use		-1 241		-2 234	- 3				- 26
Discrepancy	- 33	- 66	- 242	539	99	- 50	- 4	1	134
Total final consumption	6 022	1 623		39 673	8 181	17 626	232	6	4 760
Total final energy consumption	5 992	1 394		16 532	8 181		97	6	4 760
Industry sector	5 992	1 394		1 909	5		1		96
Iron and steel	187	1 394		174					6
Chemical & petrochemical	3 641			711			1		58
Non-metallic minerals	1 242			196					11
Other industries	922			828	5				22
Transport sector				12 398	8 146		96		4 022
Domestic air transport				96			96		
Road				12 121	8 146				3 936
Rail				18					18
Inland waterways				162					69
Other transport									
Other sector				2 226	30			6	642
Residential				1 136					
Commerce and public services				747	30			6	329
Agriculture				4					1
Non-specified others				339					312
Non-energy	30	229		23 141		17 626	135		

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				213	755	5 849	395	1 460			8 677	3 049
2 486	1 518		2 526	19 776							121 846	
-1 557	- 32		-1 857								-17 386	
-1 112											-1 211	
											-2 848	
26	36			- 3							29	
-157	1 523		669	19 985	755	5 849	395	1 460			109 106	3 049
-395	- 50		- 224								- 249	
2 372	1 226	1 841	2 801	-15 753	- 755	-5 849	- 294	-1 067	23 244		-31 677	-2 464
-2 573				-15 962	- 755	-5 849	- 156	- 31	20 145		-25 884	- 911
- 52		- 85	- 597	- 70			- 138	-1 036	3 099		-4 661	-1 553
				278							278	
4 997	1 226	1 925	3 397								1 653	
											-3 064	
- 74	- 139	-1 834	- 41	- 311					-2 215		-5 839	
50			203	- 357				- 3	- 260		- 445	
1 795	2 560	7	3 407	3 564			102	390	20 769		70 896	574
1 795	1 497	7	37	3 564			102	390	20 769		47 937	574
1 378	281	7	37	2 476				390	12 135		23 708	472
142	9		11	420					1 345		3 458	
424	146	7	25	914				1	3 235		8 182	
175	8			205					460		1 979	
637	118			937				389	7 096		10 089	472
89	36								122		12 380	
											98	
	36										11 970	
89									122		139	
											173	
328	1 180			1 088			102		8 511		11 848	102
	1 091			648			99		4 095		5 932	99
295	89			437			3		4 156		5 332	3
3				3					175		182	
30									86		402	
	1 063		3 370								22 960	
				257	848	8 251	324	1 508			11 195	3 114
1 702	2 074		2 704	17 771							119 457	
-1 278	- 5		-1 551								-17 382	
-1 204											-1 296	
											-2 747	
103	35			16							513	
- 677	2 105		1 153	18 043	848	8 251	324	1 508			109 740	3 114
- 268	- 84		- 299								- 448	
2 772	1 335	2 009	2 668	-13 609	- 848	-8 251	- 223	-1 095	22 715		-31 032	-2 517
-2 334				-14 523	- 848	-8 251	- 130	- 30	19 545		-25 805	- 977
- 65		- 108	- 699	- 63			- 93	-1 064	3 170		-4 871	-1 539
				977							977	
5 171	1 335	2 116	3 367								1 759	
											-3 092	
- 62	- 85	-2 005	- 53	- 219					-2 128		-5 823	
149	1		209	- 922					- 251		- 975	
1 915	3 272	4	3 677	3 293			101	413	20 336		71 462	597
1 915	1 505	4	64	3 293			101	413	20 336		48 062	597
1 487	253	4	64	2 209				413	11 773		23 690	496
147	9		12	385					1 299		3 439	
486	111	4	52	760					3 154		8 266	
176	9			207					459		2 104	
678	124			857				413	6 860		9 880	496
94	39								117		12 515	
											96	
	39										12 121	
94									117		135	
											162	
335	1 213			1 084			101		8 446		11 858	101
	1 136			653			98		4 071		5 958	98
306	76			428			3		4 125		5 302	3
3				3					168		176	
26									83		421	
	1 767		3 614								23 400	

Major energy indicators of Chinese Taipei

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	48 309	63 860	74 592	98 853	107 149	108 919	109 740	109 106
Indigenous production	10 559	10 888	12 211	13 100	13 445	12 319	11 195	8 677
Import	40 680	58 976	78 577	106 301	113 959	117 790	119 457	121 846
Export	- 542	-1 774	-2 392	-15 506	-16 283	-17 014	-17 382	-17 386
Final energy consumption	25 108	33 150	41 027	46 790	47 072	47 269	48 062	47 937
Industry	12 213	15 358	19 754	22 433	23 626	23 525	23 690	23 708
Transport	6 513	9 584	11 222	12 454	11 888	12 162	12 515	12 380
Residential	3 153	4 334	5 167	5 790	5 755	5 721	5 958	5 932
Commerce & public services	2 176	2 840	3 930	5 054	5 274	5 254	5 302	5 332
Others	1 053	1 034	954	1 060	530	606	597	585
Coal & coal products								
Primary energy supply	10 847	16 333	24 833	33 584	36 130	36 667	37 150	37 687
Indigenous production								
Import	10 863	16 706	25 815	33 986	36 112	37 089	36 797	37 831
Export	- 16		- 7	- 29	- 79	- 1	- 1	- 31
Transformation sector	-9 779	-14 188	-24 746	-31 565	-33 401	-34 615	-35 429	-36 468
Power generation	-5 213	-9 394	-17 932	-24 632	-25 317	-24 455	-25 072	-26 365
Final energy consumption	3 028	3 469	4 638	6 021	6 989	7 338	7 386	6 905
Industry	3 023	3 469	4 637	6 021	6 989	7 338	7 386	6 905
Transport								
Residential								
Commerce & public services								
Others								
Crude oil & NGL								
Primary energy supply	22 380	30 245	35 687	54 498	45 914	43 991	45 310	44 386
Indigenous production	164	56	33	29	13	8	8	5
Import	22 216	30 189	38 817	54 771	46 058	44 208	45 161	44 783
Export								- 401
Transformation sector	-21 592	-30 405	-38 093	-54 460	-45 814	-43 835	-45 138	-44 375
Petroleum refineries	-21 592	-30 405	-38 093	-54 460	-45 814	-43 835	-45 138	-44 375
Petroleum products								
Primary energy supply	4 149	3 557	-3 089	-10 808	-1 382	-1 113	-1 694	-1 412
Import	6 830	9 099	8 723	9 108	18 716	19 440	19 728	19 457
Export	- 526	-1 774	-2 385	-15 477	-16 204	-17 013	-17 381	-16 955
Transformation sector	18 578	25 008	32 751	50 559	45 340	43 195	43 581	42 601
Power generation	-5 171	-7 197	-6 684	-4 208	-2 992	-3 392	-3 316	-3 427
Petroleum refineries	23 749	32 205	39 435	54 767	48 333	46 587	46 897	46 028
Final energy consumption	14 579	18 423	20 724	21 262	18 509	16 415	16 532	16 207
Industry	5 199	6 206	6 566	5 742	4 368	2 110	1 909	1 802
Transport	6 496	9 564	11 183	12 409	11 754	12 045	12 398	12 258
Residential	1 116	1 247	1 469	1 304	1 186	1 125	1 136	1 091
Commerce & public services	854	548	747	961	895	782	747	736
Others	914	859	760	846	305	353	342	320
Gas								
Primary energy supply	1 595	3 647	5 581	8 947	13 292	17 361	18 043	19 985
Indigenous production	1 057	753	597	438	237	299	257	213
Import	770	2 983	5 222	8 436	13 074	17 054	17 771	19 776
Export								
Transformation sector	- 187	-1 286	-3 428	-6 795	-10 641	-12 972	-13 609	-15 753
Power generation	-260	-1 271	-3 381	-6 774	-10 477	-13 847	-14 587	-16 031
Final energy consumption	892	1 508	1 577	1 884	2 191	3 097	3 293	3 564
Industry	192	509	737	820	1 029	2 043	2 209	2 476
Transport								
Residential	610	861	660	762	734	637	653	648
Commerce & public services	91	138	180	302	428	414	428	437
Others						3	3	3
Electricity								
Power generation	7 757	11 448	15 896	19 559	21 247	22 202	22 715	23 244
Thermal	4 226	7 647	11 822	15 440	16 953	18 214	18 922	20 265
Hydro	704	764	763	673	624	645	848	755
Nuclear	2 826	3 037	3 311	3 438	3 580	3 137	2 723	1 930
Others				8	90	206	223	294
Final energy consumption	6 591	9 700	13 762	17 102	18 777	19 865	20 336	20 769
Industry	3 800	5 174	7 557	9 416	10 771	11 584	11 773	12 135
Transport	17	20	39	45	99	116	117	122
Residential	1 410	2 178	2 971	3 638	3 735	3 860	4 071	4 095
Commerce & public services	1 226	2 153	3 001	3 789	3 947	4 054	4 125	4 156
Others	139	176	195	214	225	251	251	261

Major economic indicators of Chinese Taipei

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	20.28	20.46	20.66	20.85	21.78	22.56	22.65	22.73
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	155	223	297	362	446	507	514	530
GDP, billion USD (PPP, constant 2011)	335	473	611	728	892	1 062	1 062	1 127
Nominal, billion USD (current)	167	279	332	376	446	526	531	575
GDP per capita ^{*3}								
Real term (constant 2010 USD)	7 650	10 491	13 414	15 911	19 283	21 569	21 848	22 491
GDP, PPP (constant 2015 US\$) ^{*1}	16 496	22 313	27 632	32 046	38 528	45 218	45 122	47 792
Nominal (current USD)	8 216	13 169	14 983	16 539	19 283	22 382	22 578	24 392
Nominal GDP & its components (billions of current TWD) ^{*1}								
Gross domestic product	4 480	7 397	10 351	12 092	14 119	16 771	17 176	17 501
Private Final Consumption	2 341	3 969	5 706	6 784	7 498	8 756	9 034	9 265
Government Final Consumption	810	1 253	1 624	1 846	2 099	2 346	2 463	2 462
Gross Fixed Capital Formation	1 111	2 028	2 723	2 924	3 336	3 493	3 589	3 584
Changes in Inventories	31	45	93	34	189	20	- 27	- 41
Exports	2 020	3 413	5 373	7 330	10 014	10 776	10 771	11 357
Imports	1 833	3 311	5 167	6 825	9 015	8 620	8 654	9 125
Real GDP & its components (billions of 2011 TWD) ^{*1}								
Gross Domestic Product	4 793	6 877	9 170	11 175	13 788	15 655	15 892	16 381
Private Final Consumption	3 092	4 465	6 053	7 111	7 563	8 627	8 831	9 056
Government Final Consumption	1 245	1 617	1 879	1 977	2 126	2 275	2 357	2 342
Gross Fixed Capital Formation	1 563	2 493	3 412	3 410	3 386	3 560	3 644	3 640
Changes in Inventories	45	61	98	34	196	26	- 35	- 59
Exports	2 080	3 195	5 016	7 024	10 000	11 420	11 640	12 504
Imports	2 930	4 546	7 000	8 283	9 501	10 259	10 576	11 134
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	4.9	3.5	2.5	1.9	1.7	1.4	1.3	1.3
Industry	29.2	27.0	26.4	28.7	32.3	33.8	34.2	34.7
Services	66.7	70.9	73.3	70.2	65.7	64.6	64.5	64.2
Industrial production index (2010=100) ^{*2}	N.A.	N.A.	61.9	75.0	95.8	111.8	114.0	119.7
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	67.4	113.3	151.9	198.4	274.6	304.4	303.8	324.4
Imports, c.i.f.	54.8	104.0	140.7	182.6	251.2	252.9	249.4	264.6
Balance of payments (billions of current USD) ^{*2}								
Trade balance	N.A.	N.A.	6.4	10.2	26.0	62.8	62.8	60.8
Current account	N.A.	N.A.	8.2	14.9	36.8	73.1	73.1	71.6
Overall balance	N.A.	N.A.	0.0	9.3	0.0	0.0	0.0	0.0
Foreign exchange rate (TWD/USD) ^{*1}	26.890	26.476	31.225	32.167	31.642	31.898	32.318	30.439
PPP conversion factor, GDP (TWD/USD) ^{*1}	N.A.	N.A.	N.A.	N.A.	16.23	15.17	15.15	14.70
Price Indices								
GDP Deflator (2011=100) ^{*2}	93.5	107.6	112.9	108.2	102.4	107.1	108.1	106.8
Wholesale Price Index (2016=100) ^{*2}	87.2	94.6	91.2	99.3	113.0	103.1	100.0	100.9
Consumer Price Index (2011=100) ^{*2}	69.6	83.7	89.8	92.9	98.6	103.7	105.1	105.7
Growth rate (%) ^{*3}								
Real GDP	5.6	6.5	6.4	5.4	10.6	0.8	2.3	4.6
Population	1.1	0.9	0.8	0.4	0.3	0.3	0.5	0.3
Price								
Producer prices	-0.6	7.4	1.8	0.6	5.5	-8.9	-11.6	-2.1
Consumer prices	4.1	3.7	1.3	2.3	1.0	-0.3	1.1	2.0

Source ^{*1} : "Taiwan Statistical Data Book", National Development Council (Chinese Taipei)

^{*2} : National Statistics of the Directorate-General of Budget, Accounting and Statistics (DGBAS)

^{*3} : "Financial Statistics Monthly" Central Bank, Chinese Taipei

^{*4} : Estimation by the Coordinating Agency with IEA Energy Statistics

^{*5} : PPP in 2010 is estimated by IEA data; 2012-2017 from IMF

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

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

: PPP shows Purchasing Power Parity

Energy prices in Chinese Taipei in 2017

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	219.87	Coking Coal			Coking Coal		
Anthracite	USD/tonne	151.30	Anthracite			Anthracite		
Other bituminous coal	USD/tonne	94.88	Other bituminous coal			Other bituminous coal		
Sub-bituminous Coal	USD/tonne	69.65	Sub-bituminous Coal			Sub-bituminous Coal		
Lignite			Lignite			Lignite		
Peat			Peat			Peat		
Patent Fuel			Patent Fuel			Patent Fuel		
Coke	USD/tonne	280.70	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	52.02	Crude Oil			Crude Oil		
Natural Gas Liquids			Natural Gas Liquids			Natural Gas Liquids		
Ethane			Ethane			Ethane		
LPG	USD/tonne	443.74	LPG	TWD/kg	26.96	LPG	TWD/kg	26.96
Naphtha	USD/tonne	494.13	Naphtha			Naphtha		
Motor Gasoline			Motor Gasoline	TWD/L	24.95	Motor Gasoline	TWD/L	28.07
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	38.30	Other Kerosene	TWD/L	38.30
Gas/Diesel Oil			Gas/Diesel Oil	TWD/L	22.57	Gas/Diesel Oil	TWD/L	24.20
Fuel Oil	USD/kL	371.59	Fuel Oil	TWD/kL	12,812.00	Fuel Oil	TWD/kL	12,812.00
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			Natural Gas	TWD/m ³	11.66	Natural Gas	TWD/m ³	12.85
Liquefied Natural Gas	USD/tonne	387.66	Liquefied Natural Gas	TWD/m ³	12.71	Liquefied Natural Gas		
Compressed Natural Gas			Compressed Natural Gas			Compressed Natural Gas		
Electricity			Electricity			Electricity		
Electricity			Electricity	TWD/ kWh	2.55	Industrial	TWD/ kWh	2.48
						Commercial	TWD/ kWh	3.45
						Residential	TWD/ kWh	2.42
						Others		
Other Energy Products			Other Energy Products			Other Energy Products		

Thailand

Energy balance table of Thailand

	Coal	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production	4 065		19 563						
Import	6 343	7 679	46 686	2 888	1 328		40		707
Export	- 34	- 1	-1 746	-10 044	-1 218		- 625	- 10	-4 563
International marine bunkers									
International aviation bunkers				-4 034			-4 034		
Stock changes	-2 520	-2 532	6 203	-3 607	-1 313		15	-1 609	- 521
Total primary energy supply	7 854	5 146	70 707	-14 797	-1 203		-4 604	-1 619	-4 377
Transfers			-6 553	6 555					
Total transformation sector	-7 102	- 595	-55 509	48 938	8 430		6 133	1 625	24 584
Main activity producers	-7 102	- 595		- 65					- 38
Autoproducers									
Gas processing									
Petroleum refineries			-55 509	48 537	8 430		6 133	1 625	24 623
Coal transformation									
Other transformation				466					
Losses & own use				-2 142					
Discrepancy			-1 887	-1 032	- 1		- 765		- 118
Total final consumption	752	4 551	6 757	37 522	7 226		764	7	20 089
Total final energy consumption	752	4 551		34 867	7 226		764	7	20 089
Industry sector	752	4 551		5 110	56			7	3 529
Iron and steel	78			335				1	171
Chemical & petrochemical	60	172		625	8			2	318
Non-metallic minerals	378	3 378		399	5			2	274
Other industries	236	1 001		3 750	44			1	2 766
Transport sector				24 573	7 170		764		13 909
Domestic air transport				764			764		
Road				22 362	7 170				13 639
Rail				77					77
Inland waterways				1 370					193
Other transport									
Other sector				5 185					2 652
Residential				1 766					
Commerce and public services				768					
Agriculture				2 652					2 652
Non-specified others									
Non-energy			6 757	2 655					
2016									
Indigenous production	4 245		20 066						
Import	6 579	7 142	44 249	2 612	1 166		73		721
Export	- 23	- 3	-1 638	-8 908	-1 054		- 459	- 22	-4 185
International marine bunkers									
International aviation bunkers				-4 510			-4 510		
Stock changes	-1 505	-3 086	6 321	-3 507	-1 202		- 68	-1 803	- 242
Total primary energy supply	9 296	4 052	68 999	-14 313	-1 090		-4 965	-1 825	-3 705
Transfers			-6 205	6 206					
Total transformation sector	-7 579	- 561	-55 509	46 874	8 233		5 791	1 834	23 390
Main activity producers	-7 579	- 561		- 108					- 33
Autoproducers									
Gas processing									
Petroleum refineries			-55 509	46 485	8 233		5 791	1 834	23 423
Coal transformation									
Other transformation				497					
Losses & own use				-1 465					
Discrepancy	55		- 197	3					3
Total final consumption	1 771	3 491	7 088	37 306	7 143		826	9	19 688
Total final energy consumption	1 771	3 491		34 686	7 143		826	9	19 688
Industry sector	1 771	3 491		6 601	31			9	4 986
Iron and steel	85			451				2	295
Chemical & petrochemical	75	159		578	5			2	310
Non-metallic minerals	1 305	2 907		460	3			2	342
Other industries	306	424		5 113	23			3	4 039
Transport sector				22 597	7 070		826		11 742
Domestic air transport				826			826		
Road				20 304	7 070				11 507
Rail				77					77
Inland waterways				1 390					157
Other transport									
Other sector				5 488	43				2 960
Residential				1 877					
Commerce and public services				608					
Agriculture				2 992	43				2 949
Non-specified others				10					10
Non-energy			7 088	2 620					

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				26 384	372		497	25 091			75 973	25 960
56	756			14 859				68	2 101		80 625	68
-3 344	-283							-16	-95		-11 935	-16
											-4 034	
-314	135			-18				47			-2 427	47
-3 602	609			41 225	372		497	25 191	2 006		138 201	26 060
	4 525		2 030								2	
5 558	2 608			-26 217	-372		-487	-10 492	15 954		-35 884	-11 352
-27				-26 217	-372		-487	-7 082	15 954		-25 967	-7 942
											-6 972	
5 584	2 142										-2 945	-3 410
	466							-3 410			-10 029	
	-2 142			-6 488					-1 398		-4 119	-4 288
-26	-3		-120	-772				-428				
1 929	5 597		1 910	7 748			9	14 271	16 561		88 172	14 280
1 929	4 852			5 821			9	14 271	16 561		76 832	14 280
752	766			3 657				6 974	6 949		27 993	6 974
39	124			403					676		1 492	
40	257			1 216				278	1 045		3 396	278
32	86			836				313	564		5 869	313
641	299			1 202				6 383	4 663		17 237	6 383
1 177	1 553			2 161				1 928	18		28 680	1 928
											764	
	1 553			2 161				1 928			26 451	1 928
1 177									18		95	
											1 370	
	2 533			3			9	5 369	9 594		20 159	5 378
	1 766							5 369	3 837		10 971	5 369
	768			3			9		5 732		6 511	9
									26		2 677	
	745		1 910	1 927							11 340	
				28 437	314		346	26 814			80 222	27 474
114	537			12 832				63	1 705		75 182	63
-3 091	-97							-23	-123		-10 718	-23
											-4 510	
-240	48			37				59			-1 681	59
-3 218	489			41 305	314		346	26 913	1 581		138 494	27 574
	4 415		1 791								1	
5 307	2 320			-27 068	-314		-340	-12 809	16 137		-41 170	-13 463
-75				-27 068	-314		-340	-7 309	16 137		-27 142	-7 962
											-9 024	
5 382	1 823										-5 003	-5 501
	497							-5 501			-10 806	
	-1 465			-7 887					-1 454		1 423	1
2 089	5 760		1 791	7 912			7	14 105	16 264		87 944	14 111
2 089	4 931			6 091			7	14 105	16 264		76 416	14 111
857	719			3 624				6 862	6 779		29 130	6 862
46	109			348					617		1 501	
41	219			1 091				601	1 030		3 534	601
40	73			898				703	577		6 850	703
731	317			1 288				5 558	4 555		17 244	5 558
1 232	1 727			2 466				1 741	10		26 813	1 741
											826	
	1 727			2 466				1 741			24 510	1 741
1 232									10		87	
											1 390	
	2 485			1			7	5 502	9 475		20 473	5 508
	1 877							5 502	3 795		11 174	5 502
	608			1			7		5 658		6 274	7
									23		3 015	
											10	
	829		1 791	1 820							11 528	

Major energy indicators of Thailand

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	41 480	67 074	70 918	95 240	123 555	126 555	138 494	138 201
Indigenous production	25 727	38 280	39 690	51 071	75 695	76 931	80 222	75 973
Import	18 880	32 317	39 954	57 435	65 263	75 657	75 182	80 625
Export	- 809	-1 197	-5 522	-9 113	-12 408	-11 936	-10 718	-11 935
Final energy consumption	28 720	44 776	40 471	60 867	70 327	75 893	76 416	76 832
Industry	8 753	14 505	17 191	24 038	28 479	27 812	29 130	27 993
Transport	9 521	16 312	10 831	20 661	21 590	26 390	26 813	28 680
Residential	7 477	10 646	8 125	9 012	11 056	11 698	11 174	10 971
Commerce & public services	1 161	1 736	2 160	3 830	5 601	6 013	6 274	6 511
Others	1 807	1 577	2 164	3 326	3 600	3 979	3 026	2 677
Coal & coal products								
Primary energy supply	3 800	5 679	7 864	11 521	15 136	11 746	13 348	13 000
Indigenous production	3 598	5 574	5 245	6 060	4 980	3 859	4 245	4 065
Import	192	79	2 655	5 461	10 768	13 846	13 720	14 022
Export					- 13	- 16	- 26	- 35
Transformation sector	-2 472	-3 432	-4 204	-4 725	-6 820	-7 406	-8 140	-7 697
Power generation	-2 472	-3 432	-4 204	-4 725	-6 820	-7 406	-8 140	-7 697
Final energy consumption	1 328	2 247	3 660	6 827	8 316	4 403	5 262	5 303
Industry	1 328	2 247	3 660	6 827	8 316	4 403	5 262	5 303
Transport								
Residential								
Commerce & public services								
Others								
Crude oil & NGL								
Primary energy supply	12 220	25 117	37 103	52 006	59 437	63 351	68 999	70 707
Indigenous production	2 112	2 574	2 923	12 348	18 295	18 587	20 066	19 563
Import	10 961	23 052	34 062	41 693	42 757	44 903	44 249	46 686
Export	- 767	- 722	- 514	-3 453	-1 589	- 136	-1 638	-1 746
Transformation sector	-11 816	-25 091	-38 169	-46 494	-48 436	-56 825	-55 509	-55 509
Petroleum refineries	-11 816	-25 091	-38 169	-46 494	-48 436	-56 825	-55 509	-55 509
Petroleum products								
Primary energy supply	5 393	6 085	-7 640	-9 170	-14 863	-17 342	-14 313	-14 797
Import	7 655	9 113	1 150	2 004	166	2 373	2 612	2 888
Export	- 21	- 463	-4 990	-5 604	-10 657	-11 565	-8 908	-10 044
Transformation sector	8 984	16 772	30 114	34 672	39 852	49 452	46 874	48 938
Power generation	-2 445	-5 444	-2 245	-1 986	- 270	- 194	- 108	- 65
Petroleum refineries	11 429	22 216	32 360	36 892	40 123	49 646	46 485	48 537
Final energy consumption	14 871	23 887	18 779	30 492	30 081	34 313	34 686	34 867
Industry	2 735	4 556	4 498	4 737	4 399	5 938	6 601	5 110
Transport	9 521	16 309	10 825	20 605	19 313	21 963	22 597	24 573
Residential	350	976	713	1 319	1 664	1 843	1 877	1 766
Commerce & public services	466	478	591	574	1 202	623	608	768
Others	1 799	1 568	2 151	3 256	3 504	3 946	3 003	2 652
Gas								
Primary energy supply	4 804	9 321	18 427	22 996	40 914	41 666	41 305	41 225
Indigenous production	4 804	9 321	16 609	15 121	30 028	28 475	28 437	26 384
Import			1 818	7 874	10 886	13 190	12 832	14 859
Export								
Transformation sector	-4 274	- 252	-13 395	-21 378	-24 053	-25 542	-27 068	-26 217
Power generation	-4 274	- 252	-13 395	-21 378	-24 053	-25 547	-27 068	-26 217
Final energy consumption	265	708	1 325	2 086	4 864	6 070	6 091	5 821
Industry	265	704	1 323	2 035	3 312	3 358	3 624	3 657
Transport		3	2	51	1 552	2 710	2 466	2 161
Residential								
Commerce & public services						1	1	3
Others								
Electricity								
Power generation	3 799	6 885	8 254	11 369	13 719	15 854	16 137	15 954
Thermal	3 371	6 308	7 736	10 870	13 240	15 291	15 484	15 095
Hydro	428	577	518	499	476	330	314	372
Nuclear								
Others					2	233	339	486
Final energy consumption	3 297	6 125	7 575	10 387	12 813	15 598	16 264	16 561
Industry	1 542	2 826	3 452	4 853	5 444	6 615	6 779	6 949
Transport			3	5	6	9	10	18
Residential	1 052	2 033	2 538	2 203	2 867	3 564	3 795	3 837
Commerce & public services	696	1 257	1 568	3 256	4 399	5 378	5 658	5 732
Others	8	9	13	70	97	33	23	26

Major economic indicators of Thailand

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	56.56	59.47	62.95	65.42	67.20	68.71	68.97	69.21
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	142	210	218	284	341	395	408	424
GDP, billion USD (PPP, constant 2011)	376	558	579	754	906	1 048	1 084	1 127
Nominal, billion USD (current)	85	169	126	189	341	401	412	455
GDP per capita ^{*3}								
Real term (constant 2010 USD)	2 504	3 532	3 458	4 338	5 076	5 741	5 912	6 129
GDP, PPP (constant 2011 USD)	6 653	9 385	9 190	11 527	13 489	15 256	15 710	16 286
Nominal (current USD)	1 509	2 847	2 008	2 894	5 076	5 840	5 979	6 578
Nominal GDP & its components (billions of current THB) ^{*1}								
Gross domestic product	2 184	4 218	5 070	7 614	10 808	13 743	14 555	15 452
Households and NPISHs final consumption expenditure	1 235	2 164	2 744	4 252	5 639	7 012	7 251	7 529
General government final consumption expenditure	205	475	688	1 040	1 708	2 353	2 465	2 530
Gross fixed capital formation	882	1 743	1 094	2 110	2 593	3 371	3 458	3 581
Stock change	21	65	36	206	147	- 299	- 410	- 52
Exports of goods and services	745	1 752	3 287	5 208	7 186	9 445	9 954	10 535
Imports of goods and services	909	2 034	2 862	5 288	6 567	7 862	7 806	8 398
Real GDP & its components (billions of 2002 THB) ^{*1}								
Gross Domestic Product	3 418	5 069	5 254	6 849	8 232	9 521	9 841	10 237
Households and NPISHs final consumption expenditure	1 899	2 756	2 855	3 859	4 314	4 879	5 020	5 170
General government final consumption expenditure	414	570	716	896	1 256	1 494	1 527	1 529
Gross fixed capital formation	1 547	2 535	1 169	1 885	2 004	2 351	2 418	2 462
Stock change	39	82	37	188	107	- 112	- 339	- 89
Exports of goods and services	1 178	2 276	3 305	4 717	6 068	7 290	7 496	7 904
Imports of goods and services	1 449	2 916	2 908	4 867	5 666	6 478	6 414	6 813
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	11.5	8.1	9.3	8.1	7.3	6.5	6.2	6.2
Industry	33.2	38.2	36.7	38.4	39.7	36.9	36.7	35.9
Services, etc.	N.A.	54.9	54.1	53.6	53.1	57.7	58.4	59.3
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.	23.1	56.4	69.0	110.9	193.3	214.3	215.4	236.6
Imports, c.i.f.	33.0	70.8	61.9	118.2	182.9	202.7	194.2	221.5
Balance of payments (billions of current USD) ^{*2}								
Trade balance	-6.8	-8.0	11.7	3.4	26.7	26.1	35.8	32.6
Current account	-7.3	-13.6	9.3	-7.6	11.5	27.8	43.4	44.1
Overall balance	1.8	8.4	-1.1	0.2	35.3	11.0	22.6	31.5
Foreign exchange rate (THB/USD) ^{*1}	25.59	24.92	40.11	40.22	31.69	34.25	35.30	33.94
PPP conversion factor, GDP (THB/USD) ^{*1}	10.60	11.49	12.50	12.34	12.76	12.96	12.82	12.64
Price Indices								
GDP Deflator (2002=100) ^{*3}	63.9	83.2	96.5	111.2	131.3	144.3	147.9	150.9
Producer Price Index (2010=100) ^{*2}	42.5	51.0	60.6	76.5	100.0	102.6	101.4	102.1
Consumer Price Index (2010=100) ^{*2}	49.8	62.9	77.4	86.6	100.0	110.3	110.6	111.3
Growth rate (%) ^{*3}								
Real GDP	11.2	8.1	4.5	4.2	7.5	3.1	3.4	4.0
Population	1.4	1.0	1.0	0.6	0.5	0.4	0.4	0.3
Price								
Producer prices	3.5	8.2	3.9	9.1	9.4	-4.1	-1.2	0.7
Consumer prices	5.9	5.8	1.6	4.5	3.2	-0.9	0.2	0.7

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"

: 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)

United States

Energy balance table of the United States

	Coal	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production	373 180		590 849						
Import	4 040	37	442 925	73 462	31 360	1 433	8 334	194	8 758
Export	-56 797	- 756	-78 868	-209 447	-38 098		-9 236	- 306	-68 484
International marine bunkers				-23 183					-8 172
International aviation bunkers				-24 798			-24 798		
Stock changes	11 029	13	14 265	5 073	- 102	21	166	24	2 982
Total primary energy supply	331 452	- 706	969 171	-178 893	-6 840	1 454	-25 534	- 88	-64 916
Transfers			-89 951	93 130	3 290		17	20	1 646
Total transformation sector	-322 996	5 997	-877 895	853 149	385 950	9 019	83 417	322	240 367
Main activity producers	-306 554	- 224		-5 398			- 9	- 29	-1 345
Autoproducers	-1 407	- 295		-1 615					- 41
Gas processing	-1 943								
Petroleum refineries			-882 957	860 162	385 950	9 019	83 426	351	241 753
Coal transformation	-13 092	6 516							
Other transformation			5 062						
Losses & own use	- 31	-1 101		-31 643	-1 061		- 40		-3 226
Discrepancy	4 399		3 105	7 445	- 1	- 1	1	- 1	5 088
Total final consumption	12 824	4 190	4 430	743 188	381 338	10 472	57 861	253	178 959
Total final energy consumption	12 824	4 190		626 337	381 338		57 861	253	174 293
Industry sector	12 353	4 190		18 376	282				13 207
Iron and steel	244	3 562		212					90
Chemical & petrochemical	1 861			1 841					1 608
Non-metallic minerals	4 878			1 663					537
Other industries	5 370	628		14 660	282				10 972
Transport sector				568 295	374 994		57 861		134 582
Domestic air transport				58 357	496		57 861		
Road				490 624	370 269				120 272
Rail				11 314					11 314
Inland waterways				8 000	4 229				2 996
Other transport									
Other sector	471			39 666	6 062			253	26 504
Residential				14 378				208	10 182
Commerce and public services	471			11 310	1 600			45	7 997
Agriculture				13 978	4 462				8 325
Non-specified others									
Non-energy			4 430	116 851		10 472			4 666
2016									
Indigenous production	348 463		560 147						
Import	5 064	143	437 181	74 738	34 613	1 233	7 629	117	8 373
Export	-35 581	- 625	-50 837	-187 331	-35 281		-8 695	- 447	-58 721
International marine bunkers				-19 745					-6 137
International aviation bunkers				-24 622			-24 622		
Stock changes	23 587	521	-4 326	- 885	- 705	12	- 579	66	- 849
Total primary energy supply	341 533	39	942 165	-157 845	-1 373	1 245	-26 267	- 264	-57 334
Transfers			-81 129	83 864	2 896		33	24	2 130
Total transformation sector	-329 606	5 139	-860 618	841 376	383 335	8 840	81 080	638	234 561
Main activity producers	-313 826	- 225		-5 862			- 10	- 38	-1 267
Autoproducers	-1 545	- 361		-1 676					- 32
Gas processing	-1 935								
Petroleum refineries			-865 569	848 914	383 335	8 840	81 090	676	235 860
Coal transformation	-12 300	5 725							
Other transformation			4 951						
Losses & own use	- 32	-1 103		-34 472	-1 073		- 40	- 1	-5 861
Discrepancy	1 534	- 2	2 580	8 466	- 1				2 966
Total final consumption	13 429	4 073	2 998	741 389	383 784	10 085	54 806	397	176 462
Total final energy consumption	13 429	4 073		626 621	383 784		54 806	397	171 854
Industry sector	12 891	4 073		20 206	279				13 064
Iron and steel	244	3 447		180					93
Chemical & petrochemical	2 612			3 086					1 794
Non-metallic minerals	4 582			1 418					626
Other industries	5 453	626		15 522	279				10 551
Transport sector				564 833	378 460		54 806		130 884
Domestic air transport				55 286	480		54 806		
Road				489 926	373 586				116 239
Rail				11 544					11 544
Inland waterways				8 077	4 394				3 101
Other transport									
Other sector	538			41 582	5 045			397	27 906
Residential				14 145				228	9 395
Commerce and public services	538			13 293	1 464			169	8 855
Agriculture				14 144	3 581				9 656
Non-specified others									
Non-energy			2 998	114 768		10 085			4 608

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				641 678	25 998	218 573	39 696	102 596			1992 570	163 883
11 295	5 554		6 534	70 405				2 131	5 648		598 648	2 131
-16 774	-35 568		-40 981	-74 435				-3 467	-806		-424 576	-3 467
-15 011								-222			-23 405	-222
											-24 798	
1 570	436		-24	6 286				124			36 790	124
-18 920	-29 578		-34 471	643 934	25 998	218 573	39 696	101 162	4 842		2155 229	162 449
-327	51 475		37 009								3 179	
21 266	11 591	16 210	85 007	-234 782	-25 998	-218 573	-37 581	-21 071	366 610	10 756	-502 384	-80 883
-1 509			-2 506	-217 233	-25 856	-218 573	-36 071	-15 281	350 622	10 756	-463 812	-74 165
-21		-1 373	-180	-14 295	-142		-1 510	-5 790	15 988		-9 066	-6 718
				1 247							-696	
22 796	11 591	17 583	87 693								-22 795	
											-6 576	
											561	
-200	-229	-15 119	-11 768	-4 501							-145 729	-132
-2	-2	-1	2 364	-57 896				-132	-50 031	-4 895	10 162	
				-4 941			-1	157	-2			
1 817	33 257	1 090	78 141	346 315			2 114	80 116	321 419	5 861	1520 457	81 591
1 817	8 408		2 367	322 270			2 114	80 116	321 419	5 861	1375 131	81 591
540	1 980		2 367	124 643				30 298	66 932	4 631	261 423	29 877
58	64			8 430				4	4 678	170	17 300	4
70	163			52 623				307	12 462	2 838	71 932	123
70	83		973	6 135				304	1 890	3	14 873	302
342	1 670		1 394	57 455				29 683	47 902	1 620	157 318	29 448
775	83			18 097				38 034	953		625 379	38 033
											58 357	
	83			1 143				37 441	339		529 547	37 440
								469	614		12 397	469
775								124			8 124	124
				16 954							16 954	
502	6 345			179 530			2 114	11 784	253 534	1 230	488 329	13 681
	3 988			103 676			429	8 318	118 116		244 917	8 748
500	1 168			74 347			1 685	2 258	116 127	1 230	207 428	3 726
2	1 189			1 507				1 208	4 053		20 746	1 207
									15 238		15 238	
	24 849	1 090	75 774	24 045							145 326	
				627 317	23 187	218 848	35 619	102 107			1915 688	156 290
11 559	4 955		6 259	69 549				3 209	5 985		595 869	3 209
-16 329	-31 032		-36 826	-52 677				-2 972	-802		-330 825	-2 972
-13 608								-167			-19 912	-167
											-24 622	
-65	2 174		-939	8 695				-317			27 275	-317
-18 443	-23 903		-31 506	652 884	23 187	218 848	35 619	101 860	5 183		2163 473	156 043
-108	48 067		30 822								2 735	
20 504	11 788	16 403	84 227	-250 984	-23 187	-218 848	-33 365	-21 137	369 699	12 133	-509 398	-73 761
-1 621			-2 926	-234 168	-23 057	-218 848	-32 166	-15 308	354 159	12 133	-477 168	-67 328
-20		-1 423	-201	-13 558	-130		-1 199	-5 829	15 540		-8 758	-6 433
				1 130							-805	
22 145	11 788	17 826	87 354								-16 655	
											-6 575	
											563	
-110	-210	-15 189	-11 988	-4 388							-147 102	-139
	8		5 493	-58 375				-139	-47 477	-5 504	7 621	
				-5 138			-1	182	-1	1		
1 843	35 750	1 214	77 048	338 387			2 253	80 766	327 404	6 630	1517 329	82 324
1 843	10 953		2 984	319 705			2 253	80 766	327 404	6 630	1380 881	82 324
495	3 384		2 984	125 590				29 731	68 521	5 239	266 251	29 259
17	70			8 427				2	3 452	192	15 944	2
254	1 038			51 106				296	10 720	3 210	71 030	99
5	367			6 206				427	3 132	4	15 769	424
219	1 909		2 564	59 851				29 006	51 217	1 833	163 508	28 734
582	101			17 389				38 654	911		621 787	38 654
											55 286	
	101			986				38 303	325		529 540	38 303
								276	586		12 406	276
582								75			8 152	75
				16 403							16 403	
766	7 468			176 726			2 253	12 381	257 972	1 391	492 843	14 411
	4 522			102 194			530	9 163	121 226		247 258	9 692
765	2 040			73 040			1 723	2 056	116 951	1 391	208 992	3 557
1	906			1 492				1 162	3 534		20 332	1 162
									16 261		16 261	
	24 797	1 214	74 064	18 682							136 448	

Major energy indicators of the United States

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	1915 025	2067 310	2273 782	2318 925	2216 887	2187 390	2163 473	2155 229
Indigenous production	1652 608	1659 313	1667 389	1631 135	1724 475	2022 548	1915 688	1992 570
Import	452 506	536 154	702 063	841 981	725 415	560 856	595 869	598 648
Export	-110 606	-102 784	-95 685	-105 875	-191 720	-304 525	-330 825	-424 576
Final energy consumption	1174 512	1236 998	1393 261	1406 581	1377 633	1377 147	1380 881	1375 131
Industry	283 759	272 826	332 289	276 415	270 426	263 373	266 251	261 423
Transport	487 571	527 560	588 243	622 892	595 752	614 722	621 787	625 379
Residential	209 892	247 704	264 059	271 670	270 118	255 890	247 258	244 917
Commerce & public services	159 271	173 300	193 054	200 393	207 352	208 105	208 992	207 428
Others	34 019	15 608	15 616	35 211	33 985	35 057	36 593	35 984
Coal & coal products								
Primary energy supply	460 119	473 936	533 943	558 355	502 610	374 036	341 572	330 746
Indigenous production	542 320	529 785	536 856	565 281	531 840	431 282	348 463	373 180
Import	2 119	5 421	10 014	19 598	11 440	6 048	5 207	4 077
Export	-67 987	-57 033	-38 315	-29 460	-48 240	-43 966	-36 206	-57 553
Transformation sector	-409 626	-460 522	-514 824	-508 737	-471 401	-350 615	-324 467	-316 999
Power generation	-396 005	-445 690	-501 586	-503 066	-462 776	-340 788	-315 957	-308 480
Final energy consumption	55 660	30 383	32 576	31 337	26 856	19 514	17 502	17 014
Industry	46 022	27 584	30 359	28 804	25 347	18 842	16 964	16 543
Transport								
Residential	1 751	1 705	1 327					
Commerce & public services	1 124	1 094	890	2 103	1 509	672	538	471
Others				430				
Crude oil & NGL								
Primary energy supply	783 540	819 672	887 051	911 615	876 468	933 531	942 165	969 171
Indigenous production	432 545	397 856	365 607	322 546	347 602	582 410	560 147	590 849
Import	351 036	419 075	524 256	599 496	539 779	408 366	437 181	442 925
Export	-2 100	-2 274	-6 152	-4 911	-9 302	-45 282	-50 837	-78 868
Transformation sector	-755 277	-777 078	-836 661	-852 419	-819 594	-850 590	-860 618	-877 895
Petroleum refineries	-755 277	-777 078	-836 661	-852 419	-819 594	-855 401	-865 569	-882 957
Petroleum products								
Primary energy supply	-26 697	-34 115	-15 901	17 568	-69 947	-143 994	-157 845	-178 893
Import	62 246	41 816	75 824	117 924	83 347	74 744	74 738	73 462
Export	-36 778	-39 157	-44 382	-53 107	-105 624	-171 598	-187 331	-209 447
Transformation sector	726 219	763 737	786 114	828 048	829 904	830 547	841 376	853 149
Power generation	-27 245	-15 132	-57 711	-33 344	-10 843	-8 888	-7 538	-7 013
Petroleum refineries	753 819	778 869	843 825	861 392	840 747	839 435	848 914	860 162
Final energy consumption	578 135	595 442	657 821	696 928	637 583	622 901	626 621	626 337
Industry	44 253	26 765	25 662	35 153	30 208	19 373	20 206	18 376
Transport	471 802	508 189	569 493	600 123	555 511	561 406	564 833	568 295
Residential	26 368	29 003	31 906	28 784	20 959	15 637	14 145	14 378
Commerce & public services	21 308	16 283	16 657	16 696	15 291	11 664	13 293	11 310
Others	14 404	15 202	14 103	16 172	15 614	14 821	14 144	13 978
Gas								
Primary energy supply	438 358	507 444	547 736	507 216	556 076	646 506	652 884	643 934
Indigenous production	418 208	434 582	446 949	421 559	494 788	636 668	627 317	641 678
Import	35 170	65 790	87 781	100 874	86 917	62 896	69 549	70 405
Export	-1 976	-3 534	-5 574	-16 694	-26 153	-40 700	-52 677	-74 435
Transformation sector	-88 642	-127 409	-135 832	-153 525	-183 881	-244 987	-250 984	-234 782
Power generation	-89 762	-128 613	-136 915	-154 657	-185 087	-241 807	-247 726	-231 528
Final energy consumption	289 186	312 280	342 559	298 083	309 842	321 705	319 705	322 270
Industry	109 917	112 130	137 920	100 558	109 887	121 735	125 590	124 643
Transport	15 414	16 391	15 182	14 164	16 306	16 595	17 389	18 097
Residential	102 586	113 088	116 262	112 649	110 963	108 418	102 194	103 676
Commerce & public services	61 269	70 671	73 195	68 874	71 193	73 508	73 040	74 347
Others				1 838	1 493	1 449	1 492	1 507
Electricity								
Power generation	275 442	306 020	346 226	367 124	374 475	369 546	369 765	366 610
Thermal	197 656	215 988	254 043	270 895	269 739	255 281	248 679	238 645
Hydro	23 491	27 014	21 776	23 430	22 555	21 588	23 192	25 998
Nuclear	52 597	61 387	68 604	69 722	72 148	71 405	72 233	72 129
Others	1 698	1 631	1 804	3 077	10 033	21 272	25 661	29 838
Final energy consumption	226 447	261 565	300 901	320 851	325 735	325 094	327 404	321 419
Industry	74 510	89 545	98 205	77 226	71 059	69 326	68 521	66 932
Transport	355	331	380	534	551	763	911	953
Residential	79 451	89 639	102 532	116 872	124 309	120 517	121 226	118 116
Commerce & public services	72 131	82 050	99 769	109 637	114 377	116 894	116 951	116 127
Others			15	16 582	15 439	17 594	19 795	19 291

Major economic indicators of the United States

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	249.62	266.28	282.16	295.52	309.33	320.74	323.07	325.15
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	9 001	10 217	12 620	14 332	14 992	16 710	16 972	17 349
GDP, billion USD (PPP, constant 2011)	9 189	10 430	12 884	14 632	15 305	17 060	17 327	17 711
Nominal, billion USD (current)	5 963	7 640	10 252	13 037	14 992	18 219	18 707	19 485
GDP per capita ^{*3}								
Real term (constant 2010 USD)	36 059	38 369	44 727	48 500	48 467	52 099	52 534	53 356
GDP, PPP (constant 2011 USD)	36 813	39 171	45 661	49 513	49 479	53 188	53 632	54 471
Nominal (current USD)	23 889	28 691	36 335	44 115	48 467	56 803	57 904	59 928
Nominal GDP & its components (billions of current USD) ^{*1}								
Gross domestic product	5 963	7 640	10 252	13 037	14 992	18 219	18 707	19 485
Households and NPISHs final consumption expenditure	3 809	4 963	6 762	8 747	10 186	12 295	12 767	13 321
General government final consumption expenditure	948	1 142	1 438	1 963	2 510	2 613	2 659	2 731
Gross fixed capital formation	1 269	1 594	2 373	2 990	2 756	3 705	3 772	3 986
Stock change	15	31	55	58	54	129	29	25
Exports of goods and services	552	813	1 096	1 305	1 846	2 265	2 218	2 350
Imports of goods and services	630	903	1 471	2 026	2 360	2 786	2 738	2 929
Real GDP & its components (billions of 2010 USD) ^{*1}								
Gross Domestic Product	9 001	10 217	12 620	14 332	14 992	16 710	16 972	17 349
Households and NPISHs final consumption expenditure	5 754	6 614	8 272	9 643	10 186	11 410	11 722	12 019
General government final consumption expenditure	1 820	1 877	2 040	2 287	2 510	2 373	2 408	2 406
Gross fixed capital formation	1 619	1 913	2 804	3 208	2 810	3 589	3 556	3 698
Stock change	20	38	74	60	54	121	22	21
Exports of goods and services	647	914	1 288	1 431	1 846	2 222	2 220	2 287
Imports of goods and services	737	1 035	1 791	2 246	2 360	2 881	2 936	3 070
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	N.A.	N.A.	1.2	1.2	1.0	1.1	1.1	1.0
Industry	N.A.	N.A.	22.0	20.7	19.4	18.8	18.5	18.5
Services, etc.	N.A.	N.A.	74.4	75.3	76.2	75.7	75.9	75.8
Industrial production index (2010=100) ^{*2}	68.2	79.0	101.2	105.8	100.0	110.6	108.4	110.2
External trade (billions of current USD) ^{*1}								
Exports, f.o.b.	393.6	584.7	781.9	901.1	1 278.5	1 502.6	1 451.0	1 546.3
Imports, c.i.f.	517.0	770.9	1259.3	1732.7	1 969.2	2 315.3	2 250.2	2 408.5
Balance of payments (billions of current USD) ^{*2}								
Trade balance	-111.0	-174.2	-446.8	-782.8	-648.7	-761.9	-749.8	-805.2
Current account	-79.0	-113.6	-403.5	-745.2	-431.3	-407.8	-428.4	-439.6
Overall balance	-26.0	-21.2	75.2	-32.2	16.8	-88.2	-44.4	-64.8
Foreign exchange rate (USD/USD) ^{*1}	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PPP conversion factor, GDP (USD/USD) ^{*1}	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Price Indices								
GDP Deflator (2010=100) ^{*3}	66.2	74.8	81.2	91.0	100.0	109.0	110.2	112.3
Producer Prices Index (2010=100) ^{*2}	62.9	67.5	71.8	85.2	100.0	108.0	108.4	111.0
Consumer Price Index (2010=100) ^{*1}	59.9	69.9	79.0	89.6	100.0	108.7	110.1	112.4
Growth rate (%) ^{*3}								
Real GDP	1.9	2.7	4.1	3.5	2.6	2.9	1.6	2.2
Population	1.1	1.2	1.1	0.9	0.8	0.7	0.7	0.6
Price								
Producer prices	3.6	3.6	5.8	7.3	6.8	-0.9	0.4	2.3
Consumer prices	5.4	2.8	3.4	3.4	1.6	N.A.	N.A.	N.A.

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"

: 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	Coal products	Crude oil & NGL	Total	Petroleum products				
					Gasoline	Naphtha	Jet fuel	Kerosene	Gas/diesel oil
2017									
Indigenous production	21 509		14 906						
Import	8 219		1 205	15 665	3 347		2 223	50	
Export	-1 248		-6 942	-1 674	- 265		- 574		
International marine bunkers				- 159					
International aviation bunkers				-1 291			-1 291		
Stock changes	230		-1 858	93	35			57	
Total primary energy supply	28 710		7 310	12 634	3 118		358	50	
Transfers			-1 078	1 081	735				
Total transformation sector	-13 422		-6 232	6 175	2 693		368	2 446	
Main activity producers	-13 422			- 177				- 84	
Autoproducers									
Gas processing									
Petroleum refineries			-6 232	6 351	2 693		368	2 530	
Coal transformation									
Other transformation									
Losses & own use									
Discrepancy	- 96			- 405	- 9		- 404	9	
Total final consumption	15 192			19 484	6 537		322	50	
Total final energy consumption	15 192			18 856	6 537		322	50	
Industry sector	12 827			2 919				37	
Iron and steel	462			159				4	
Chemical & petrochemical	169			147				3	
Non-metallic minerals	6 691			139				3	
Other industries	5 505			2 474				27	
Transport sector				13 584	6 408		322	6 747	
Domestic air transport				322			322		
Road				13 157	6 408			6 747	
Rail									
Inland waterways				106					
Other transport									
Other sector	2 365			2 352	129			13	
Residential	1 809			1 030				11	
Commerce and public services	543			878				2	
Agriculture	13			445	129			316	
Non-specified others									
Non-energy				628					
2016									
Indigenous production	21 692		16 582						
Import	7 391		444	14 222	2 612		1 983	51	
Export	- 696		-6 985	-1 467	- 226		- 495		
International marine bunkers				- 170					
International aviation bunkers				-1 183			-1 183		
Stock changes	374		-1 821	64	27			13	
Total primary energy supply	28 760		8 220	11 466	2 414		305	51	
Transfers			-1 078	1 080	746				
Total transformation sector	-14 668		-7 142	6 613	2 916		388	2 849	
Main activity producers	-14 668			- 464				- 101	
Autoproducers									
Gas processing									
Petroleum refineries			-7 142	7 077	2 916		388	2 950	
Coal transformation									
Other transformation									
Losses & own use									
Discrepancy	478			- 395			- 399	2	
Total final consumption	14 571			18 764	6 075		294	51	
Total final energy consumption	14 571			18 107	6 075		294	51	
Industry sector	12 827			2 877				37	
Iron and steel	462			143				4	
Chemical & petrochemical	169			132				3	
Non-metallic minerals	6 691			153				3	
Other industries	5 505			2 448				26	
Transport sector				12 968	5 952		294	6 607	
Domestic air transport				294			294		
Road				12 560	5 952			6 607	
Rail									
Inland waterways				114					
Other transport									
Other sector	1 743			2 262	123			14	
Residential	1 244			1 011				12	
Commerce and public services	487			841				2	
Agriculture	13			410	123			287	
Non-specified others									
Non-energy				657					

unit: ktoe

Fuel oil	LPG	Refinery gas	Other products	Gas	Hydro	Nuclear	Geo-thermal, solar, etc.	Others	Electricity	Heat	Total	Total renewables
				7 811	7 652		28	13 245			65 152	20 925
591	1 486		512						114		25 202	
- 271			- 26						- 61		- 9 925	
- 159											- 159	
											- 1 291	
											- 1 536	
161	1 486		485	7 811	7 652		28	13 245	53		77 444	20 925
	346										2	
43	482		143	- 6 768	- 7 652		- 28	- 32	16 834		- 11 125	- 7 712
- 92				- 6 768	- 7 652		- 28	- 32	16 834		- 11 244	- 7 712
135	482		143								119	
									- 1 671		- 1 671	
									- 357		- 858	
203	2 314		628	1 043				13 214	14 859		63 792	13 214
203	2 314			1 043				13 214	14 859		63 164	13 214
82	728			1 039				9 299	8 704		34 788	9 299
10	21								819		1 441	
3	17			927					646		1 889	
19	59			112					1 341		8 283	
50	632							9 299	5 897		23 175	9 299
106	1			4							13 589	
											322	
	1			4							13 161	
106											106	
15	1 585							3 915	6 155		14 788	3 915
	1 018							3 600	4 957		11 396	3 600
15	567								823		2 244	
								315	375		1 147	315
				628							628	
874	1 342		512	8 514	5 496		19	13 546			65 849	19 061
- 200			- 23						128		22 186	
- 170									- 63		- 9 211	
											- 170	
	24			243							- 1 183	
											- 1 140	
503	1 366		488	8 757	5 496		19	13 546	65		76 330	19 061
	335										2	
- 244	534		169	- 7 677	- 5 496		- 19	- 28	15 481		- 12 937	- 5 543
- 363				- 7 677	- 5 496		- 19	- 28	15 481		- 12 871	- 5 543
120	534		169								- 65	
									- 1 727		- 1 727	
									- 282		- 200	
262	2 235		657	1 080				13 518	13 536		61 469	13 518
262	2 235			1 080				13 518	13 536		60 811	13 518
133	679			1 076				9 598	7 745		34 123	9 598
10	13								721		1 326	
3	13			927					482		1 710	
41	56			149					1 211		8 203	
79	597							9 598	5 332		22 884	9 598
114	1			4							12 972	
											294	
	1			4							12 564	
114											114	
15	1 555							3 920	5 791		13 716	3 920
	998							3 601	4 729		10 585	3 601
15	557								751		2 078	
								319	311		1 052	319
				657							658	

Major energy indicators of Viet Nam

ktoe

	1990	1995	2000	2005	2010	2015	2016	2017
Total								
Primary energy supply	5 314	8 906	14 240	39 471	57 273	71 423	76 330	77 444
Indigenous production	5 811	13 562	25 456	59 321	65 544	68 491	65 849	65 152
Import	2 947	5 101	8 885	12 331	13 450	16 649	22 186	25 202
Export	-3 125	-9 816	-18 650	-30 064	-21 324	-11 677	-9 211	-9 925
Final energy consumption	3 843	6 795	10 300	34 953	44 790	58 002	60 811	63 164
Industry	1 713	3 071	4 543	11 207	17 816	32 418	34 123	34 788
Transport	1 298	2 306	3 483	6 468	9 274	12 176	12 972	13 589
Residential	293	550	1 050	15 068	15 470	10 536	10 585	11 396
Commerce & public services	295	502	823	1 665	1 650	1 889	2 078	2 244
Others	244	366	400	545	580	983	1 052	1 147
Coal & coal products								
Primary energy supply	2 212	3 314	4 372	7 082	15 192	26 165	28 760	28 710
Indigenous production	2 597	4 676	6 501	18 142	25 108	23 332	21 692	21 509
Import				57	656	3 879	7 391	8 219
Export	-442	-1 580	-1 821	-10 072	-11 104	-979	-696	-1 248
Transformation sector	-888	-710	-1 150	-2 132	-4 837	-13 368	-14 668	-13 422
Power generation	-888	-710	-1 150	-2 132	-4 837	-13 368	-14 668	-13 422
Final energy consumption	1 084	2 013	2 363	4 950	9 894	14 747	14 571	15 192
Industry	1 019	1 938	2 339	3 734	8 306	12 827	12 827	12 827
Transport								
Residential				861	1 204	1 453	1 244	1 809
Commerce & public services				333	364	441	487	543
Others	76	76	24	22	20	25	13	13
Crude oil & NGL								
Primary energy supply			20		7 268	8 183	8 220	7 310
Indigenous production	2 750	7 790	16 584	18 935	16 055	18 332	16 582	14 906
Import					186	444	444	1 205
Export	-2 664	-7 790	-15 701	-18 290	-8 287	-9 365	-6 985	-6 942
Transformation sector					-6 988	-7 069	-7 142	-6 232
Petroleum refineries					-6 988	-7 069	-7 142	-6 232
Petroleum products								
Primary energy supply	2 637	4 496	7 477	11 430	10 034	10 170	11 466	12 634
Import	2 947	5 101	8 885	12 274	12 312	12 437	14 222	15 665
Export	-19	-446	-1 128	-415	-1 850	-1 265	-1 467	-1 674
Transformation sector	-381	-369	-1 310	-678	4 628	6 693	6 613	6 175
Power generation	-381	-369	-1 310	-678	-1 161	-316	-464	-177
Petroleum refineries					5 789	7 009	7 077	6 351
Final energy consumption	2 227	3 819	6 010	11 124	13 068	16 897	18 107	18 856
Industry	449	736	1 422	2 499	1 781	2 569	2 877	2 919
Transport	1 293	2 298	3 462	6 468	9 274	12 173	12 968	13 584
Residential	89	125	157	727	859	909	1 011	1 030
Commerce & public services	251	410	629	958	675	799	841	878
Others	146	249	339	473	479	447	410	445
Gas								
Primary energy supply	3	186	1 119	4 648	8 122	8 775	8 757	7 811
Indigenous production	3	186	1 119	5 934	8 122	8 775	8 514	7 811
Import								
Export				-1 286				
Transformation sector	-3	-165	-1 101	-4 548	-7 630	-7 710	-7 677	-6 768
Power generation	-3	-165	-1 101	-4 548	-7 630	-7 710	-7 677	-6 768
Final energy consumption				100	492	1 065	1 080	1 043
Industry				100	492	1 062	1 076	1 039
Transport						2	4	4
Residential								
Commerce & public services								
Others								
Electricity								
Power generation	746	1 260	2 284	4 598	8 160	14 048	15 481	16 834
Thermal	285	350	1 033	3 093	5 790	9 120	10 002	9 154
Hydro	462	910	1 251	1 505	2 369	4 917	5 460	7 652
Nuclear								
Others						11	19	28
Final energy consumption	532	963	1 927	3 967	7 461	12 107	13 536	14 859
Industry	245	397	782	1 870	3 919	6 926	7 745	8 704
Transport	5	9	21					
Residential	204	425	893	1 674	2 850	4 332	4 729	4 957
Commerce & public services	44	92	194	374	611	649	751	823
Others	34	41	37	49	81	200	311	375

Major economic indicators of Viet Nam

	1990	1995	2000	2005	2010	2015	2016	2017
Population (millions) ^{*1}	67.99	74.91	79.91	83.83	87.97	92.68	93.64	94.60
Gross domestic product ^{*3}								
Real term, billion USD (constant 2010)	29	44	61	85	116	155	164	175
GDP, billion USD (PPP, constant 2011)	99	147	206	287	390	520	552	590
Nominal, billion USD (current)	6	21	31	58	116	193	205	224
GDP per capita ^{*3}								
Real term (constant 2010 USD)	433	583	765	1 018	1 318	1 667	1 753	1 853
GDP, PPP (constant 2011 USD)	1 458	1 962	2 574	3 425	4 433	5 608	5 896	6 233
Nominal (current USD)	94	277	390	687	1 318	2 085	2 192	2 366
Nominal GDP & its components (billions of current VND) ^{*1}								
Gross domestic product	41 955	228 892	441 646	914 001	2157 828	4192 862	4502 733	5005 975
Households and NPISHs final consumption expenditure	35 559	168 492	293 507	598 567	1436 289	2849 540	3086 298	3405 750
General government final consumption expenditure	5 177	18 741	28 346	49 952	129 313	265 545	293 106	325 804
Gross fixed capital formation	N.A.	58 187	122 101	285 841	704 401	1033 780	1066 160	1190 474
Stock change	N.A.	3 944	8 670	22 702	65 810	126 667	130 579	140 220
Exports of goods and services	15 120	75 106	238 142	582 214	1553 687	3764 320	4215 636	5085 742
Imports of goods and services	18 996	95 925	253 927	612 521	1730 902	3731 151	4100 294	4945 460
Real GDP & its components (billions of 2010 VND) ^{*1}								
Gross Domestic Product	548 308	813 316	1138 111	1588 646	2157 828	2875 856	3054 470	3262 548
Households and NPISHs final consumption expenditure	N.A.	574 034	732 706	1022 157	1436 289	1913 547	2053 236	2204 149
General government final consumption expenditure	N.A.	52 537	59 998	84 251	129 313	182 270	196 013	210 410
Gross fixed capital formation	N.A.	153 963	243 269	412 327	704 401	832 235	914 777	995 904
Stock change	N.A.	10 945	15 311	31 434	65 810	87 574	94 346	98 451
Exports of goods and services	73 737	181 339	462 350	1061 162	1553 687	2937 635	3344 890	3904 663
Imports of goods and services	91 438	220 498	455 760	1049 910	1730 902	3073 334	3543 103	4163 134
Sectoral shares of Real GDP (%) ^{*1}								
Agriculture, Fishery and Forestry	34.0	28.0	24.8	21.6	18.4	16.1	15.3	14.8
Industry	24.9	29.6	35.1	38.1	32.1	34.2	34.6	35.0
Services, etc.	41.7	42.6	40.1	N.A.	36.9	38.3	38.6	38.8
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.	2.4	5.4	14.5	32.4	72.2	162.1	176.6	214.3
Imports, c.i.f.	2.8	8.2	15.6	36.8	84.8	165.6	174.8	211.5
Balance of payments (billions of current USD) ^{*2}								
Trade balance	N.A.	N.A.	0.4	-2.4	-5.1	7.4	11.0	10.8
Current account	N.A.	N.A.	1.1	-0.6	-4.3	-2.0	0.6	-1.6
Overall balance	N.A.	N.A.	0.8	2.5	1.9	-1.1	11.4	18.4
Foreign exchange rate (VND/USD) ^{*1}	6 538	11 038	14 168	15 859	18 613	21 698	21 935	22 370
PPP conversion factor, GDP (VND/USD) ^{*1}	-NA-	3 813	4 039	4 435	6 628	8 889	9 063	9 186
Price Indices								
GDP Deflator (2010=100) ^{*3}	7.7	28.1	38.8	57.5	100.0	145.8	147.4	153.4
Producer Price Index (2010=100)	N.A.	N.A.	N.A.	N.A.	100.0	132.4	131.5	131.5
Consumer Price Index (2010=100)	N.A.	40.2	48.1	59.9	100.0	145.8	150.5	155.8
Growth rate (%) ^{*3}								
Real GDP	5.1	9.5	6.8	7.5	6.4	6.7	6.2	6.8
Population	2.2	1.7	1.1	0.9	1.0	1.0	1.0	1.0
Price								
Producer prices	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Consumer prices	N.A.	N.A.	-1.7	8.3	8.9	0.9	3.2	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 2017

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Primary energy									
Indigenous production	405 154	17 012	509 649	12 975	2 386 166	111	450 505	41 263	49 090
Import	50 396	455	84 556	27 295	684 662	32 178	52 092	419 350	316 167
Export	- 319 158	- 12 775	- 301 675	- 1 085	- 77 218	- 405	- 222 635	- 18 520	- 66 823
International marine bunkers	- 559		- 375	- 136	- 10 177	- 10 930		- 4 247	- 10 207
International aviation bunkers	- 4 477	- 76	- 637	- 617	- 9 564	- 6 664		- 7 070	- 5 040
Stock change	- 4 319	69	- 2 453	- 90	1 585	50	- 38 659	1 256	- 938
Total	127 037	4 685	289 065	38 342	2 975 454	14 339	241 302	432 032	282 249
Coal & coal products									
Indigenous production	293 104		30 529	982	1 770 059		271 214	774	688
Import	189		5 196	6 688	118 447	6 615	2 665	116 508	81 668
Export	- 244 692		- 18 498	- 406	- 10 276		- 175 072	- 862	
Stock change	- 4 692		- 209	72	25 678	- 343	- 41 754	56	242
Total	43 909		17 018	7 336	1 903 908	6 272	57 054	116 476	82 598
Crude oil, NGL & petroleum products									
Indigenous production	15 316	5 961	249 208	299	198 550		51 443	441	754
Import	45 283	455	57 112	17 102	481 433	21 463	49 331	203 445	190 873
Export	- 13 035	- 5 740	- 204 747	- 499	- 62 122	- 290	- 17 269	- 17 658	- 66 823
International marine bunkers	- 559		- 375	- 136	- 10 177	- 10 930		- 4 247	- 10 207
International aviation bunkers	- 4 477	- 76	- 637	- 617	- 9 564	- 6 664		- 7 070	- 5 040
Stock change	373	69	- 641	- 160	- 24 093	393	2 457	1 080	- 464
Total	42 901	669	99 920	15 989	574 028	3 971	85 963	175 991	109 093
Gas									
Indigenous production	87 821	11 051	153 431	1 030	134 691		62 326	2 562	305
Import	4 924		20 081	3 505	84 229	3 017		98 214	43 626
Export	- 61 431	- 7 035	- 71 045	- 177	- 3 145		- 30 113		
Stock change			- 1 603	- 13				120	- 717
Total	31 314	4 016	100 864	4 345	215 775	3 017	32 213	100 896	43 214
Nuclear power									
Indigenous production			26 346		64 649			8 575	38 674
Hydro power									
Indigenous production	1 379		33 752	1 833	102 326		1 602	7 124	242
Geothermal, solar, etc									
Indigenous production	2 152	0.1	2 826	745	33 690	1	10 980	7 765	1 060

Primary energy supply table in 2016

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Primary energy									
Indigenous production	388 853	17 588	479 743	12 546	2 300 128	109	442 728	34 925	51 431
Import	49 254	371	88 812	27 357	615 047	31 474	44 316	420 929	310 785
Export	- 308 738	- 13 663	- 286 619	- 1 197	- 73 188	- 471	- 248 333	- 19 208	- 64 274
International marine bunkers	- 546		- 325	- 130	- 9 671	- 9 104		- 4 537	- 10 557
International aviation bunkers	- 4 095	- 78	- 634	- 584	- 8 614	- 6 303		- 6 753	- 4 923
Stock change	3 383	77	230	- 173	54 545	- 1 262	- 14 066	1 764	- 49
Total	128 111	4 296	281 207	37 819	2 878 246	14 443	224 644	427 120	282 413
Coal & coal products									
Indigenous production	292 031		30 025	1 014	1 716 648		268 244	751	768
Import	162		4 561	6 637	112 204	7 030	2 293	116 459	81 366
Export	- 251 899		- 18 089	- 449	- 12 089		- 194 704	- 718	
Stock change	3 656		460	- 99	71 403	- 334	- 22 590	- 53	- 667
Total	43 950		16 957	7 103	1 888 167	6 695	53 243	116 439	81 467
Crude oil, NGL & petroleum products									
Indigenous production	17 566	6 459	225 603	256	203 663		46 682	445	689
Import	43 693	371	65 479	17 063	435 903	20 414	41 964	204 330	189 811
Export	- 13 445	- 6 126	- 192 206	- 445	- 56 467	- 368	- 22 667	- 18 490	- 64 274
International marine bunkers	- 546		- 325	- 130	- 9 671	- 9 104		- 4 537	- 10 557
International aviation bunkers	- 4 095	- 78	- 634	- 584	- 8 614	- 6 303		- 6 753	- 4 923
Stock change	- 273	44	1 387	- 45	- 16 858	- 927	8 524	1 787	- 949
Total	42 900	671	99 304	16 115	547 956	3 712	74 502	176 782	109 797
Gas									
Indigenous production	70 879	11 129	148 484	1 013	123 461		64 161	2 449	138
Import	5 399		17 013	3 656	66 408	3 028		99 216	39 608
Export	- 43 394	- 7 538	- 68 767	- 303	- 3 007		- 30 962		
Stock change		34	- 1 617	- 18				30	1 567
Total	32 884	3 625	95 113	4 348	186 862	3 028	33 199	101 695	41 313
Nuclear power									
Indigenous production			26 354		55 584			4 706	42 209
Hydro power									
Indigenous production	1 292		33 284	2 001	99 999		1 606	6 757	245
Geothermal, solar, etc									
Indigenous production	1 939	0.1	2 944	480	25 685		9 166	6 992	818

Note: Gas = Natural gas/ LNG & town gas

Primary energy supply table in 2017 (Continued)

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Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
91 448	164 881	16 016	6 167	23 883	30 132	1 429 252	653	8 677	75 973	1 992 570	65 152	7 776 729
48 108	94 078	8 304	2 420	11 003	34 550	26 841	194 878	121 846	80 625	598 648	25 202	2 913 654
- 56 875	- 73 217	- 2 477	- 4 054	- 11 258	- 5 276	- 690 924	- 101 628	- 17 386	- 11 935	- 424 576	- 9 925	- 2 429 826
- 390	- 794	- 288		4	- 96	- 11 756	- 48 768	- 1 211		- 23 405	- 159	- 123 494
- 2 527	- 3 977	- 1 234			- 1 580	- 5 392	- 8 298	- 2 848	- 4 034	- 24 798	- 1 291	- 90 124
- 103	- 869	382	- 92	450	805	- 15 856	- 181	29	- 2 427	36 790	- 1 536	- 26 107
79 662	180 102	20 703	4 441	24 082	58 535	732 165	36 656	109 106	138 201	2 155 229	77 444	8 020 832
1 883	6 581	1 653		196	6 298	222 235			4 065	373 180	21 509	3 004 949
19 168	6 873	235		350	11 753	17 219	899	37 831	14 022	4 077	8 219	458 622
- 523	- 69	- 832		- 230	- 3 258	- 120 615		- 31	- 35	- 57 553	- 1 248	- 634 199
31	- 696	108		390	682	- 5 256		- 113	- 5 052	11 042	230	- 19 583
20 559	12 689	1 164		706	15 475	113 583	899	37 687	13 000	330 746	28 710	2 809 789
34 746	112 770	1 660	1 038	5 499	622	548 999		5	19 563	590 849	14 906	1 852 631
22 384	51 315	8 069	2 420	10 361	22 666	1 849	185 026	64 240	49 575	516 387	16 869	2 017 657
- 22 585	- 72 979	- 1 645	- 1 496	- 5 550	- 2 018	- 381 262	- 101 628	- 17 355	- 11 789	- 288 315	- 8 616	- 1 303 421
- 390	- 794	- 288		4	- 96	- 11 756	- 48 768	- 1 211		- 23 183	- 159	- 123 272
- 2 527	- 3 977	- 1 234			- 1 580	- 5 392	- 8 298	- 2 848	- 4 034	- 24 798	- 1 291	- 90 124
- 166	- 514	207	- 92	- 124	58	1 527	- 227	145	2 596	19 338	- 1 766	- 3
31 463	85 821	6 769	1 870	10 191	19 651	153 965	26 105	42 975	55 910	790 278	19 944	2 353 467
51 258	26 566	4 179	3 011	12 498	3 226	580 954		213	26 384	641 678	7 811	1 810 994
6 555	35 705					7 217	8 885	19 776	14 859	70 405		420 998
- 33 432	- 14		- 2 558	- 5 478		- 187 555				- 74 435		- 476 419
	341	67		160		- 12 281	46	- 3	- 18	6 286		- 7 614
24 381	62 598	4 246	453	7 180	3 226	388 335	8 931	19 985	41 225	643 934	7 811	1 747 959
	2 836					53 279		5 849		218 573		418 781
2 286	2 750	2 165	75	2 499	827	15 908		755	372	25 998	7 652	209 547
28	4 295	5 076	361	153	9 030	165	15	395	497	39 696	28	118 959

Primary energy supply table in 2016 (Continued)

ktoe

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
91 643	180 481	16 203	6 251	24 455	30 188	1 373 678	669	11 195	80 222	1 915 688	65 849	7 524 574
48 768	84 453	8 438	2 335	10 890	32 137	23 540	185 475	119 457	75 182	595 869	22 186	2 797 074
- 54 888	- 75 252	- 2 654	- 4 098	- 11 067	- 5 524	- 666 050	- 98 316	- 17 382	- 10 718	- 330 825	- 9 211	- 2 301 677
- 297	- 896	- 301			- 50	- 10 743	- 46 826	- 1 296		- 19 912	- 170	- 115 362
- 2 384	- 3 715	- 1 115			- 1 296	- 4 882	- 7 815	- 2 747	- 4 510	- 24 622	- 1 183	- 86 254
837	- 146	- 12	82	284	- 113	- 1 137	757	513	- 1 681	27 275	- 1 140	69 968
83 678	184 925	20 559	4 571	24 562	55 342	714 406	33 944	109 740	138 494	2 163 473	76 330	7 888 323
1 521	6 960	1 631		175	5 917	209 159			4 245	348 463	21 692	2 909 244
17 160	5 637	230		465	10 572	14 002	426	36 797	13 720	5 207	7 391	442 318
- 15	- 1	- 859		- 107	- 3 607	- 109 034		- 1	- 26	- 36 206	- 696	- 628 500
244	- 213	151		203	205	- 838		354	- 4 591	24 108	374	71 772
18 910	12 383	1 153		736	13 086	113 289	426	37 150	13 348	341 572	28 760	2 794 835
35 208	124 685	1 834	1 178	5 553	702	550 364		8	20 066	560 147	16 582	1 817 691
25 310	43 070	8 208	2 335	10 111	21 439	1 915	176 268	64 890	46 861	511 919	14 666	1 946 019
- 23 989	- 75 060	- 1 795	- 1 647	- 5 200	- 1 917	- 380 343	- 98 316	- 17 381	- 10 546	- 238 168	- 8 452	- 1 237 301
- 297	- 896	- 301			- 50	- 10 743	- 46 826	- 1 296		- 19 745	- 170	- 115 195
- 2 384	- 3 715	- 1 115			- 1 296	- 4 882	- 7 815	- 2 747	- 4 510	- 24 622	- 1 183	- 86 254
628	- 149	- 142	82	81	- 344	- 1 002	711	143	2 814	- 5 211	- 1 756	- 11 456
34 475	87 935	6 689	1 948	10 544	18 534	155 309	24 022	43 616	54 686	784 320	19 687	2 313 505
52 446	30 433	4 230	2 866	14 053	3 270	538 402		257	28 437	627 317	8 514	1 731 939
6 295	35 554					7 342	8 712	17 771	12 832	69 549		392 383
- 30 739	- 22		- 2 449	- 5 756		- 175 120				- 52 677		- 420 735
	216	- 21				689	46	16	37	8 695	243	9 916
28 002	66 181	4 209	417	8 297	3 270	371 313	8 758	18 043	41 305	652 884	8 757	1 713 503
	2 753					51 579		8 251		218 848		410 284
1 722	2 639	2 229	170	2 078	698	15 874		848	314	23 187	5 496	200 438
27	4 343	5 048	361	145	9 699	165	13	324	346	35 619	19	104 133

Final energy consumption table in 2017

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Total	77 015	919	174 916	26 158	1 708 188	6 715	158 427	258 185	130 635
Coal & coal products	2 523		2 580	288	548 726		8 246	21 308	8 090
Crude oil, NGL & petroleum products	39 542	629	71 681	14 874	418 097	2 278	63 100	117 113	45 336
Gas	12 222	19	44 523	1 482	138 430	615	14 720	29 768	22 168
Electricity	18 115	270	43 743	6 002	464 951	3 773	19 189	82 880	44 991
Others	4 613		12 389	3 512	137 984	50	53 171	7 116	10 050
Industry	22 482	151	45 617	9 923	970 053	300	41 599	86 386	48 380
Coal & coal products	2 511		2 572	286	445 127		8 232	21 188	7 591
Crude oil, NGL & petroleum products	3 579	137	5 853	3 608	87 100	81	6 042	20 218	3 583
Gas	6 975		14 683	801	66 554	26	14 345	11 400	7 482
Electricity	6 457	14	15 400	3 578	300 933	190	6 212	29 784	23 597
Others	2 960		7 109	1 650	70 340	3	6 767	3 796	6 127
Transport	33 350	448	61 306	9 155	287 109	2 078	48 748	70 753	35 623
Coal & coal products					1 829				1
Crude oil, NGL & petroleum products	32 374	448	55 049	9 055	236 222	2 000	44 962	68 780	33 663
Gas	372		3 416	17	23 948			51	1 186
Electricity	504		675	83	12 195	75	20	1 501	246
Others	100		2 166		12 916	4	3 766	420	528
Agriculture	2 611		6 824	385	47 430			3 620	1 513
Coal & coal products					14 866				
Crude oil, NGL & petroleum products	2 417		5 159	214	18 257			3 365	287
Gas	24		834	21	101			1	3
Electricity	170		831	144	10 106			246	1 126
Others				6	4 101			8	97
Residential & commercial	18 572	294	58 959	6 398	295 484	4 337	65 449	95 510	42 660
Coal & coal products	12		8		67 667		14	119	499
Crude oil, NGL & petroleum products	1 172	19	5 620	1 771	40 409	197	9 465	23 451	5 592
Gas	4 851	19	25 590	642	43 116	589	375	18 315	13 497
Electricity	10 984	256	24 690	2 184	99 745	3 508	12 957	51 313	19 774
Others	1 553		3 051	1 801	44 548	43	42 638	2 312	3 298

Final energy consumption table in 2016

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Total	76 365	854	168 313	25 924	1 731 446	6 762	147 528	256 026	128 752
Coal & coal products	2 398		2 417	208	643 583		8 905	20 820	8 857
Crude oil, NGL & petroleum products	38 769	556	71 952	14 490	402 205	2 314	53 486	118 050	44 698
Gas	12 399	17	42 895	1 436	117 849	610	13 918	28 510	21 532
Electricity	18 198	280	40 786	6 033	438 743	3 793	18 576	81 665	44 478
Others	4 601		10 263	3 757	129 066	46	52 643	6 981	9 187
Industry	22 740	116	42 132	10 602	1 028 462	290	39 667	85 819	47 819
Coal & coal products	2 391		2 411	207	535 812		8 891	20 720	8 299
Crude oil, NGL & petroleum products	3 614	102	5 616	3 884	84 959	76	4 538	20 706	3 578
Gas	7 240		14 198	819	52 778	25	13 533	11 245	7 509
Electricity	6 645	14	14 482	3 750	288 393	188	5 860	29 467	22 819
Others	2 850		5 425	1 942	66 519	1	6 846	3 681	5 614
Transport	32 685	434	61 535	8 835	271 843	2 108	43 928	71 344	34 912
Coal & coal products					2 034				1
Crude oil, NGL & petroleum products	31 715	434	55 556	8 726	226 094	2 033	40 789	69 394	32 985
Gas	285		3 673	24	21 463			61	1 201
Electricity	524		594	85	10 763	70	19	1 501	231
Others	161		1 712		11 490	4	3 120	387	495
Agriculture	2 453		6 818		45 594			3 542	1 621
Coal & coal products					14 736				
Crude oil, NGL & petroleum products	2 248		5 068		17 684			3 310	341
Gas	54		888		97			2	3
Electricity					26			73	
Others	151		862		13 052			157	1 277
Residential & commercial	18 487	303	56 981	6 177	280 109	4 364	61 592	93 179	42 315
Coal & coal products	7		6		69 743		14	99	558
Crude oil, NGL & petroleum products	1 192	20	5 712	1 620	37 028	204	5 818	23 161	5 895
Gas	4 820	17	24 136	593	39 224	585	385	17 202	12 819
Electricity	10 878	266	24 063	2 191	92 402	3 535	12 697	50 443	20 052
Others	1 590		3 064	1 773	41 711	40	42 678	2 274	2 991

Note: Gas = Natural gas/ LNG & town gas

Final energy consumption table in 2017 (Continued)

ktoe

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
46 445	117 102	13 174	3 246	18 963	33 824	418 583	11 910	47 937	76 832	1 375 131	63 164	4 767 469
1 802	3 332	568		507	3 008	26 747	173	6 905	5 303	17 014	15 192	672 312
25 270	68 223	6 311	1 274	9 441	16 346	91 244	6 173	16 207	34 867	626 337	18 856	1 693 200
6 176	14 736	1 656		2 139	53	125 638	1 295	3 564	5 821	322 270	1 043	748 338
12 817	23 381	3 346	342	3 993	6 690	65 426	4 269	20 769	16 561	321 419	14 859	1 177 787
379	7 430	1 293	1 631	2 883	7 728	109 528		492	14 280	88 091	13 214	475 832
16 607	37 347	4 446	803	5 681	7 923	149 538	6 840	23 708	27 993	261 423	34 788	1 801 987
1 802	3 332	477		507	3 008	24 185	173	6 905	5 303	16 543	12 827	562 569
2 423	6 408	438	483	938	1 470	15 870	3 787	1 802	5 110	18 376	2 919	190 226
6 023	13 721	1 310		1 336	53	38 003	1 150	2 476	3 657	124 643	1 039	315 676
6 358	12 680	1 191	253	2 406	2 199	29 132	1 730	12 135	6 949	66 932	8 704	536 834
	1 206	1 030	66	495	1 193	42 348		390	6 974	34 929	9 299	196 681
21 498	51 420	5 235	639	8 111	11 824	95 861	2 526	12 380	28 680	625 379	13 589	1 425 714
												1 830
20 949	51 280	5 227	639	7 146	11 352	58 929	2 283	12 258	24 573	568 295	13 584	1 259 070
130	47			682		30 261	6		2 161	18 097	4	80 378
39	93	5		5	10	6 671	237	122	18	953		23 452
379		3		278	462				1 928	38 034		60 984
147	4 224	654	101	42	280	8 613		182	2 677	20 746	1 147	101 197
		62				51					13	14 992
97	3 229	330	101	40	59	2 888		4	2 652	13 978	445	53 521
		31				1 327		3		1 507		3 852
50	995	215			220	1 539		175	26	4 053	375	20 271
		16		2	1	2 808				1 208	315	8 561
7 922	21 619	2 716	1 703	5 066	13 561	163 886	2 518	11 263	17 482	452 345	13 640	1 301 385
		29				2 511				471	2 352	73 682
1 530	7 306	260	50	1 256	3 233	12 913	103	1 827	2 533	25 688	1 908	146 301
23	968	315		121		56 046	137	1 084	3	178 023		343 715
6 369	7 121	1 868	89	1 583	4 261	28 060	2 278	8 250	9 568	234 243	5 780	534 882
	6 224	244	1 565	2 105	6 067	64 356		102	5 378	13 920	3 600	202 805

Final energy consumption table in 2016 (Continued)

ktoe

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
45 994	116 374	12 803	3 244	19 545	32 233	403 938	11 637	48 062	76 416	1 380 881	60 811	4 753 907
1 783	1 767	550		580	2 677	27 727	167	7 386	5 262	17 502	14 571	767 160
25 948	70 436	6 020	1 273	10 663	15 430	86 810	6 064	16 532	34 686	626 621	18 107	1 665 110
5 488	13 760	1 662		1 902	65	116 629	1 225	3 293	6 091	319 705	1 080	710 066
12 386	23 246	3 343	343	3 902	6 377	63 969	4 181	20 336	16 264	327 404	13 536	1 147 841
389	7 165	1 228	1 627	2 499	7 684	108 803		514	14 111	89 649	13 518	463 731
15 571	35 059	4 411	797	5 247	7 447	149 128	6 505	23 690	29 130	266 251	34 123	1 855 006
1 783	1 767	490		580	2 677	24 555	167	7 386	5 262	16 964	12 827	653 190
2 685	7 065	452	481	982	1 458	16 027	3 635	1 909	6 601	20 206	2 877	191 451
5 283	12 753	1 316		1 155	65	36 418	1 073	2 209	3 624	125 590	1 076	297 909
5 819	12 548	1 186	252	2 347	2 074	28 060	1 630	11 773	6 779	68 521	7 745	520 352
	926	967	64	183	1 174	44 068		413	6 862	34 970	9 598	192 103
20 968	52 943	4 917	643	9 442	11 428	94 293	2 561	12 515	26 813	621 787	12 972	1 398 905
												2 035
20 366	52 822	4 909	643	8 517	10 989	57 625	2 324	12 398	22 597	564 833	12 968	1 238 717
184	23			649		29 569	10		2 466	17 389	4	77 000
29	98	5		4	9	7 099	227	117	10	911		22 296
389		3		272	430				1 741	38 654		58 857
430	4 145	660	101	60	260	8 212		176	3 015	20 332	1 052	98 472
		29				63					13	14 841
384	3 170	362	101	57	42	2 815		4	2 992	14 144	410	53 132
		35				1 299		3		1 492		3 874
						2 348						2 447
47	975	234		2	218	1 687		168	23	4 696	630	24 179
8 427	21 735	2 683	1 702	4 714	12 907	151 714	2 545	11 261	17 448	456 250	12 664	1 267 557
		31				3 108				538	1 730	75 835
1 914	7 379	232	48	1 027	2 755	9 788	105	1 884	2 485	27 438	1 852	137 558
21	984	311		98		49 342	140	1 081	1	175 234		326 994
6 491	7 133	1 867	92	1 551	4 077	27 317	2 300	8 195	9 453	238 177	5 480	528 658
	6 239	242	1 563	2 039	6 076	62 159		101	5 508	14 863	3 601	198 512

Demand & supply table of coal in 2017

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Indigenous production	293 104		30 529	982	1 770 059		271 214	774	688
Import	69		4 642	6 688	118 435	6 615	2 665	115 611	81 437
Export	- 244 465		- 18 470	- 370	- 4 755		- 175 072	- 2	
Stock change	- 4 697		- 367	70	16 323	- 343	- 41 754		242
Primary energy supply	44 011		16 334	7 370	1 900 061	6 272	57 054	116 383	82 367
Main activity producers	- 39 182		- 13 777	- 6 929	- 828 735	- 6 272	- 48 804	- 61 719	- 51 378
Autoproducers					- 185 826			- 4 085	- 3 872
Coal transformation	- 2 607		- 1 949	- 337	- 379 515		- 18	- 40 665	- 23 628
Refining									
Gas processing					- 7 836				
Other transformation									
Final energy consumption	2 083		1 001	217	436 585		8 232	10 040	3 994

Demand & supply table of crude oil & NGL in 2017

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Indigenous production	15 316	5 961	249 208	299	198 550		51 443	441	754
Import	16 656		45 605	8 911	419 462		21 032	158 758	152 837
Export	- 10 751	- 5 740	- 180 618		- 4 861		- 15 249		- 368
Stock change	28	81	- 319	- 13	- 17 018		- 1 282	1 414	- 184
Primary energy supply	21 249	301	113 876	9 197	596 134		55 944	160 613	153 039
Main activity producers					- 142			- 1 362	
Autoproducers								- 1	
Coal transformation									
Refining	- 23 368	- 301	- 98 006	- 10 115	- 584 773		- 55 533	- 161 960	- 164 455
Gas processing									
Other transformation			2 882	39				4 487	12 014
Final energy consumption	15				665			23	

Demand & supply table of gas in 2017

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Indigenous production	87 821	11 051	153 431	1 030	134 691		62 326	2 562	305
Import	4 924		20 081	3 505	84 229	3 017		98 214	43 626
Export	- 61 431	- 7 035	- 71 045	- 177	- 3 145		- 30 113		
Stock change			- 1 603	- 13				120	- 717
Primary energy supply	31 314	4 016	100 864	4 345	215 775	3 017	32 213	100 896	43 214
Main activity producers	- 8 409	- 1 082	- 7 883	- 2 168	- 32 722	- 2 402	- 9 704	- 67 366	- 19 747
Autoproducers	- 3 597	- 150	- 5 838	- 107	- 9 786			- 3 026	- 1 661
Coal transformation									
Refining									
Gas processing		- 853			- 770		4 805	1 656	
Other transformation			- 2 845	- 24					
Final energy consumption	12 937	467	47 595	1 696	142 415	615	17 885	29 992	22 168

Note: Gas = Natural gas/ LNG

Demand & supply table of coal in 2017 (continued)

ktoe

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
1 883	6 581	1 653		196	6 298	222 235			4 065	373 180	21 509	3 004 949
19 168	6 059	235		306	11 753	17 146	899	37 649	6 343	4 040	8 219	447 979
- 523	- 2	- 832		- 230	- 3 258	- 118 591		- 1	- 34	- 56 797	- 1 248	- 624 650
31	- 696	108		381	682	- 5 299		- 119	- 2 520	11 029	230	- 26 699
20 559	11 942	1 164		653	15 475	115 491	899	37 530	7 854	331 452	28 710	2 801 580
- 18 845	- 8 245	- 129		- 160	- 12 312	- 43 356	- 298	- 20 584	- 7 102	- 306 554	- 13 422	- 1 487 803
		- 6		- 40		- 12 950		- 4 810		- 1 407		- 212 996
	- 1 197	- 443				- 45 518		- 6 644		- 13 092		- 515 612
										- 1 943		- 9 779
1 802	2 630	529		453	3 008	5 624	173	5 574	752	12 824	15 192	510 713

Demand & supply table of crude oil & NGL in 2017 (continued)

ktoe

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
34 746	112 770	1 660	1 038	5 499	622	548 999		5	19 563	590 849	14 906	1 852 631
10 204	623	5 489	1 412	6 326	10 418	625	57 954	44 783	46 686	442 925	1 205	1 451 911
- 14 960	- 65 061	- 1 400	- 1 038	- 79	- 598	- 254 054	- 785	- 401	- 1 746	- 78 868	- 6 942	- 643 519
- 297	- 583	34	- 81	- 65	235	1 626	142	- 1	6 203	14 265	- 1 858	2 327
29 693	47 749	5 783	1 331	11 681	10 677	297 196	57 311	44 386	70 707	969 171	7 310	2 663 349
												- 1 504
						- 541						- 542
- 27 234	- 47 106	- 5 690	- 1 421	- 8 513	- 10 212	- 290 452	- 58 451	- 44 375	- 55 509	- 882 957	- 6 232	- 2 536 664
	86									5 062		24 570
						26						729

Demand & supply table of gas in 2017 (continued)

ktoe

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
51 258	26 566	4 179	3 011	12 498	3 226	580 954		213	26 384	641 678	7 811	1 810 994
6 555	35 705					7 217	8 885	19 776	14 859	70 405		420 998
- 33 432	- 14		- 2 558	- 5 478		- 187 555				- 74 435		- 476 419
	341	67		160		- 12 281	46	- 3	- 18	6 286		- 7 614
24 381	62 598	4 246	453	7 180	3 226	388 335	8 931	19 985	41 225	643 934	7 811	1 747 959
- 10 475	- 27 026	- 1 244	- 56	- 3 713	- 3 080	- 130 771	- 6 680	- 15 962	- 26 217	- 217 233	- 6 768	- 600 708
- 1 078	- 11 289	- 41	- 152	- 241		- 68 441	- 891	- 70		- 14 295		- 120 662
2 704	34		39					278		1 247		9 139
- 679						- 2 833				- 4 501		- 10 882
14 855	15 132	2 802		2 139	53	165 295	1 295	3 564	7 748	346 315	1 043	836 011

Demand & supply table of coal in 2016

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Indigenous production	292 031		30 025	1 014	1 716 648		268 244	751	768
Import	19		3 919	6 637	112 180	7 030	2 293	115 033	81 131
Export	- 251 555		- 18 060	- 349	- 5 149		- 194 704	- 1	
Stock change	3 665		573	- 148	61 021	- 334	- 22 590		- 667
Primary energy supply	44 160		16 457	7 154	1 884 701	6 695	53 243	115 783	81 232
Main activity producers	- 39 849		- 14 472	- 6 955	- 794 612	- 6 695	- 44 335	- 60 140	- 46 546
Autoproducers					- 178 291			- 5 077	- 5 482
Coal transformation	- 2 549		- 1 920	- 366	- 389 734		- 18	- 40 904	- 24 081
Refining									
Gas processing					- 5 932				
Other transformation									
Final energy consumption	2 026		911	136	519 297		8 891	9 847	5 032

Demand & supply table of crude oil & NGL in 2016

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Indigenous production	17 566	6 459	225 603	256	203 663		46 682	445	689
Import	16 293		52 174	8 607	381 007		21 979	163 611	149 275
Export	- 11 668	- 6 126	- 170 759		- 2 941		- 18 595		- 522
Stock change	231	29	690	46	- 17 428		5 728	1 483	- 927
Primary energy supply	22 422	363	107 708	8 909	564 301		55 795	165 539	148 515
Main activity producers					- 131			- 2 398	
Autoproducers								- 1	
Coal transformation									
Refining	- 24 197	- 259	- 94 405	- 10 124	- 553 423		- 53 684	- 166 881	- 155 876
Gas processing									
Other transformation	132		3 129					4 764	10 598
Final energy consumption	15				3 365			116	

Demand & supply table of gas in 2016

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Indigenous production	70 879	11 129	148 484	1 013	123 461		64 161	2 449	138
Import	5 399		17 013	3 656	66 408	3 028		99 216	39 608
Export	- 43 394	- 7 538	- 68 767	- 303	- 3 007		- 30 962		
Stock change		34	- 1 617	- 18				30	1 567
Primary energy supply	32 884	3 625	95 113	4 348	186 862	3 028	33 199	101 695	41 313
Main activity producers	- 9 247	- 1 170	- 8 412	- 2 071	- 30 802	- 2 419	- 11 073	- 70 803	- 19 312
Autoproducers	- 2 772	- 161	- 6 230	- 64	- 8 551			- 3 055	- 1 236
Coal transformation									
Refining									
Gas processing		- 374		4	614		4 899	1 507	
Other transformation	- 119		- 3 089						
Final energy consumption	13 150	556	46 018	1 695	122 579	610	17 331	28 753	21 532

Note: Gas = Natural gas/ LNG

Demand & supply table of coal in 2016 (Continued)

ktoe

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
1 521	6 960	1 631		175	5 917	209 159			4 245	348 463	21 692	2 909 244
17 160	4 884	230		380	10 572	13 951	426	36 663	6 579	5 064	7 391	431 542
- 15	- 1	- 859		- 107	- 3 607	- 107 467		- 1	- 23	- 35 581	- 696	- 618 175
244	- 213	151		225	205	- 798		349	- 1 505	23 587	374	64 140
18 910	11 630	1 153		673	13 086	114 845	426	37 012	9 296	341 533	28 760	2 786 750
- 17 090	- 9 066	- 111		- 192	- 10 232	- 45 314	- 259	- 19 124	- 7 579	- 313 826	- 14 668	- 1 451 065
		- 4		- 75		- 12 436		- 4 977		- 1 545		- 207 887
	- 1 265	- 432				- 44 241		- 6 856		- 12 300		- 524 665
										- 1 935		- 7 867
1 783	1 044	513		518	2 677	6 319	167	5 992	1 771	13 429	14 571	594 924

Demand & supply table of crude oil & NGL in 2016 (Continued)

ktoe

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
35 208	124 685	1 834	1 178	5 553	702	550 364		8	20 066	560 147	16 582	1 817 691
10 881	511	5 574	1 382	5 323	10 569	753	52 775	45 161	44 249	437 181	444	1 407 750
- 16 627	- 65 726	- 1 574	- 1 178	- 117	- 674	- 256 134	- 751		- 1 638	- 50 837	- 6 985	- 612 851
70	- 133	- 60	32	14	- 217	- 400	142	141	6 321	- 4 326	- 1 821	- 10 384
29 532	59 337	5 774	1 415	10 774	10 380	294 583	52 166	45 310	68 999	942 165	8 220	2 602 206
												- 2 529
						- 842						- 843
- 27 506	- 57 697	- 5 684	- 1 422	- 7 265	- 10 498	- 286 585	- 53 304	- 45 138	- 55 509	- 865 569	- 7 142	- 2 482 169
	100									4 951		23 674
						40			7 088	2 998		13 621

Demand & supply table of gas in 2016 (Continued)

ktoe

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
52 446	30 433	4 230	2 866	14 053	3 270	538 402		257	28 437	627 317	8 514	1 731 939
6 295	35 554					7 342	8 712	17 771	12 832	69 549		392 383
- 30 739	- 22		- 2 449	- 5 756		- 175 120				- 52 677		- 420 735
	216	- 21				689	46	16	37	8 695	243	9 916
28 002	66 181	4 209	417	8 297	3 270	371 313	8 758	18 043	41 305	652 884	8 757	1 713 503
- 11 698	- 26 805	- 1 019	- 56	- 4 515	- 3 082	- 132 561	- 6 641	- 14 523	- 27 068	- 234 168	- 7 677	- 625 123
- 965	- 9 407	- 35	- 145	- 252		- 66 830	- 887	- 63		- 13 558		- 114 210
1 019	234		56					977		1 130		10 066
- 985						- 2 214				- 4 388		- 10 795
10 855	14 259	2 912		1 902	65	150 787	1 225	3 293	7 912	338 387	1 080	784 901

Power generation table in 2017

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Total	257 769	4 159	658 074	79 417	6 495 143	37 010	254 620	1 040 612	561 225
Thermal	217 562	4 156	124 710	44 540	4 662 739	36 911	222 604	819 899	393 251
Coal	161 830		59 846	29 277	4 437 289	22 955	147 964	351 830	255 508
Oil	5 272	45	7 296	1 914	16 077	387	18 848	69 929	11 796
Gas	50 460	4 110	57 568	13 349	209 373	13 569	55 791	398 140	125 947
Hydro	16 037		392 536	21 315	1 189 840	3	18 632	82 854	2 820
Nuclear			101 112		248 070			32 912	148 427
Geothermal				64			12 764	2 457	
Others	24 170	3.1	39 716	13 498	394 493	96	619	102 490	16 727
Main activity producers	229 411	3 726	595 029	73 050	5 771 987	36 913	254 620	907 928	515 297
Thermal	198 739	3 723	98 351	43 389	3 939 584	36 911	222 604	752 559	350 122
Coal	161 830		59 812	29 277	3 734 034	22 955	147 964	324 710	228 550
Oil	1 566	45	5 465	1 391	13 161	387	18 848	46 824	5 397
Gas	35 342	3 677	33 074	12 721	192 388	13 569	55 791	381 025	116 175
Hydro	16 037		362 251	21 268	1 189 840		18 632	80 598	2 820
Nuclear			101 112		248 070			32 912	148 427
Geothermal				64			12 764	2 333	
Others	14 635	3.1	33 315	8 328	394 493	2	619	39 527	13 928
Autoproducers	28 358	433	63 045	6 367	723 156	97		132 684	45 928
Thermal	18 823	433	26 359	1 151	723 156			67 340	43 129
Coal			34		703 255			27 120	26 958
Oil	3 706		1 831	523	2 916			23 105	6 399
Gas	15 118	433	24 494	628	16 985			17 115	9 772
Hydro			30 285	47		3		2 256	
Nuclear									
Geothermal								124	
Others	9 535		6 401	5 170		94		62 963	2 799

Power generation table in 2016

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Total	251 331	4 666	668 035	75 387	5 814 573	37 971	233 684	1 055 517	548 922
Thermal	217 871	4 665	141 773	42 515	4 284 188	37 921	209 405	910 996	371 960
Coal	158 610		65 176	28 002	4 122 709	25 815	124 657	334 757	236 586
Oil	6 799	47	8 087	3 156	21 975	206	30 611	84 041	12 518
Gas	52 462	4 618	68 510	11 357	139 504	11 900	54 137	492 198	122 856
Hydro	13 361		382 182	23 881	1 130 270	2	13 741	89 012	2 146
Nuclear			101 809		170 789			4 459	164 762
Geothermal	1						10 048	2 582	
Others	20 098	1.1	42 271	8 991	229 326	48	489	48 468	10 054
Main activity producers	226 812	4 196	595 426	69 166	5 143 483	37 924	233 684	883 336	519 185
Thermal	200 504	4 195	114 961	41 778	3 613 098	37 921	209 405	792 362	344 145
Coal	158 610		65 142	28 002	3 468 786	25 815	124 657	266 657	215 225
Oil	1 532	47	6 202	2 729	20 031	206	30 611	73 907	9 131
Gas	40 362	4 148	43 617	11 047	124 281	11 900	54 137	451 798	119 789
Hydro	13 361		348 511	23 837	1 130 270		13 741	81 057	2 146
Nuclear			101 809		170 789			4 459	164 762
Geothermal	1						10 048	2 384	
Others	12 946	1.1	30 145	3 551	229 326	2	489	3 074	8 132
Autoproducers	24 519	470	72 609	6 221	671 090	48		172 181	29 737
Thermal	17 367	470	26 812	737	671 090			118 634	27 815
Coal			34		653 922			68 100	21 361
Oil	5 267		1 885	427	1 944			10 133	3 387
Gas	12 100	470	24 893	310	15 223			40 401	3 067
Hydro			33 671	44		2		7 955	
Nuclear									
Geothermal								198	
Others	7 152		12 126	5 440		46		45 394	1 922

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	16 127 946
259 562	8 271	3 177	21 596	71 182	700 204	50 764	232 100	156 380	2 691 535	109 278	10 968 531
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	6 232 531
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		58 989
13 691	2 802	49	2 435	3 308	3 376	1 623	6 953	24 297	406 748	531	1 060 834
246 921	42 709	1 325	50 458	94 370	858 849	46 193	234 246	185 510	4 117 150	195 749	14 620 168
197 006	7 384	622	20 433	71 182	470 793	44 570	201 100	156 380	2 593 201	109 278	9 649 944
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	169 747
134 026	6 828	214	18 765	20 547	340 470	43 868	90 962	120 264	1 255 111	41 020	2 975 179
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		58 225
2 198	2 304	36	1 646	3 308	698	1 623	1 920	24 297	365 651	531	909 719
75 141	1 454	3 197	2 633		233 322	6 194	36 032		141 082		1 507 779
62 556	887	2 555	1 163		229 411	6 194	31 000		98 334		1 318 588
302	662		129		45 085		27 434		8 277		839 257
6 270		2 075	100		6 136	343	1 113		7 464		62 784
55 984	225	480	934		178 190	5 851	2 453		82 592		416 547
942		209	681		1 233				1 651		37 312
150	69	420									764
11 493	498	13	789		2 678		5 032		41 097		151 115

Power generation table in 2016 (Continued)

GWh

Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
310 719	44 040	4 324	48 472	82 413	1 065 623	50 415	258 020	184 350	4 297 048	162 218	15 761 489
251 636	8 748	2 890	23 524	61 450	698 401	48 864	207 861	170 073	2 882 404	105 909	10 879 022
33 808	1 880		302	36 686	158 550	603	119 064	28 993	1 470 997	56 469	7 150 231
31 577	1	2 401	1 565	5 886	10 102	352	12 689	1 014	38 837	1 293	266 503
186 251	6 867	489	21 657	18 878	529 749	47 909	76 108	140 066	1 372 570	48 147	3 462 287
30 815	24 355	1 012	23 707	8 665	167 993		7 505	3 838	251 018	56 118	2 359 849
11 577					195 470		36 471		830 288		1 573 245
6 331	7 855	422		11 044	457			1	18 727		57 252
10 360	3 082		1 242	1 254	3 302	1 551	6 183	10 438	314 611	191	892 121
262 704	42 506	917	45 947	82 413	993 627	44 866	218 698	148 298	4 119 184	162 218	14 269 733
212 385	7 930	257	21 730	61 450	630 719	43 315	172 326	143 815	2 758 087	105 909	9 567 542
33 461	1 213		220	36 686	146 101	603	84 961	25 000	1 454 960	56 469	6 301 647
25 540	1	257	470	5 886	5 090	26	11 575	989	29 999	1 293	202 415
153 384	6 716		21 040	18 878	479 528	42 686	75 790	117 826	1 273 128	48 147	3 063 480
30 051	24 346	661	23 112	8 665	166 498		7 505	3 838	249 564	56 118	2 321 292
11 577					195 470		36 471		830 288		1 573 245
6 291	7 784			11 044	457			1	18 727		56 592
2 400	2 446		1 106	1 254	483	1 551	2 395	644	262 518	191	751 062
48 015	1 534	3 407	2 525		71 996	5 549	39 322	36 052	177 864		1 491 756
39 251	818	2 634	1 794		67 682	5 549	35 535	26 258	124 317		1 311 480
347	667		82		12 449		34 104	3 993	16 037		848 584
6 037		2 145	1 095		5 012	326	1 113	25	8 838		64 088
32 867	151	489	617		50 221	5 223	318	22 240	99 442		398 808
764	9	351	595		1 495				1 454		38 558
40	71	422									660
7 960	636		136		2 819		3 787	9 794	52 093		141 059

Fuel consumption table for power generation in 2017

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea	Malaysia
Main activity producers	- 48 315	- 1 095	- 23 386	- 10 012	- 903 787	- 8 774	- 61 804	- 147 663	- 75 768	- 29 705
Coal	- 39 182		- 13 777	- 6 929	- 828 735	- 6 272	- 48 804	- 61 719	- 51 378	- 18 845
Coke								- 9		
Coke oven gas					- 1 293			- 1 097	- 486	
Blast furnace gas								- 3 867	- 1 355	
Crude oil & NGL					- 142			- 1 362		
LPG				- 2				- 210		
Refinery gas					- 737			- 1 561		
Naphtha								- 4		
Diesel oil	- 281	- 13	- 201	- 206	- 244	- 100	- 2 297	- 514	- 148	- 165
Fuel oil	- 23		- 608	- 10	- 434		- 775	- 4 776	- 1 302	- 155
Natural gas	- 8 409	- 1 082	- 7 883	- 2 168	- 32 722	- 2 402	- 9 704	- 67 366	- 19 747	- 10 475
Others	- 420		- 917	- 697	- 39 480		- 224	- 5 178	- 1 352	- 67
Autoproducers	- 5 140	- 150	- 7 262	- 4 181	- 229 318	- 52		- 15 471	- 9 770	- 1 837
Coal					- 185 826			- 4 085	- 3 872	
Coke								- 4		
Coke oven gas			- 7		- 7 894			- 245	- 361	
Blast furnace gas					- 22 573			- 1 131	- 1 555	
Crude oil & NGL								- 1		
LPG					- 48			- 167		
Refinery gas			- 256		- 1 807			- 2 233		
Naphtha					- 922			- 1	- 1 101	
Diesel oil	- 807		- 104	- 70	- 60			- 246		- 46
Fuel oil	- 12		- 59	- 71	- 402			- 1 045		
Natural gas	- 3 597	- 150	- 5 838	- 107	- 9 786			- 3 026	- 1 661	- 1 078
Others	- 724		- 998	- 3 933		- 52		- 3 287	- 1 220	- 713

Fuel consumption table for power generation in 2016

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea	Malaysia
Main activity producers	- 49 741	- 1 183	- 24 667	- 10 181	- 868 246	- 9 205	- 60 690	- 152 311	- 72 098	- 29 103
Coal	- 39 849		- 14 472	- 6 955	- 794 612	- 6 695	- 44 335	- 60 140	- 46 546	- 17 090
Coke								- 9		
Coke oven gas					- 1 358			- 1 098	- 433	
Blast furnace gas								- 4 110	- 1 364	
Crude oil & NGL					- 131			- 2 398		
LPG								- 425		
Refinery gas					- 621			- 904		
Naphtha								- 3		
Diesel oil	- 207	- 13	- 196	- 443	- 298	- 91	- 4 060	- 539	- 92	- 148
Fuel oil	- 18		- 670	- 15	- 945		- 998	- 6 704	- 2 999	- 99
Natural gas	- 9 247	- 1 170	- 8 412	- 2 071	- 30 802	- 2 419	- 11 073	- 70 803	- 19 312	- 11 698
Others	- 420		- 917	- 697	- 39 480		- 224	- 5 178	- 1 352	- 67
Autoproducers	- 4 270	- 161	- 9 388	- 3 317	- 219 694	- 54		- 16 412	- 10 849	- 1 335
Coal					- 178 291			- 5 077	- 5 482	
Coke					- 42			- 5		
Coke oven gas			- 7		- 8 133			- 292	- 330	
Blast furnace gas					- 21 934			- 1 082	- 1 512	
Crude oil & NGL								- 1		
LPG					- 44			- 175		
Refinery gas			- 268		- 1 687			- 2 192		
Naphtha								- 1	- 1 279	
Diesel oil	- 896		- 99	- 68	- 62			- 277		- 225
Fuel oil	- 27		- 51	- 53	- 951			- 997		
Natural gas	- 2 772	- 161	- 6 230	- 64	- 8 551			- 3 055	- 1 236	- 965
Others	- 575		- 2 733	- 3 132		- 54		- 3 258	- 1 010	- 145

Fuel consumption table for power generation in 2017 (Continued)

ktoe

Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
- 42 806	- 1 419	- 92	- 4 278	- 16 375	- 174 940	- 7 695	- 39 268	- 40 466	- 542 146	- 20 398	- 2 200 192
- 8 245	- 129		- 160	- 12 312	- 43 356	- 298	- 20 584	- 7 102	- 306 554	- 13 422	- 1 487 803
											- 9
									- 26		- 2 902
									- 198		- 5 420
											- 1 504
											- 212
											- 2 298
											- 4
- 585	- 1		- 226	- 394		- 1	- 118	- 38	- 1 345	- 84	- 6 961
- 6 950			- 91	- 575	- 813	- 10	- 2 573	- 27	- 1 509	- 92	- 20 722
- 27 026	- 1 244	- 56	- 3 713	- 3 080	- 130 771	- 6 680	- 15 962	- 26 217	- 217 233	- 6 768	- 600 708
	- 45	- 35	- 89	- 14		- 706	- 31	- 7 082	- 15 281	- 32	- 71 649
- 13 856	- 374	- 748	- 714	- 388	- 94 581	- 1 054	- 6 903		- 23 222		- 415 021
	- 6		- 40		- 12 950		- 4 810		- 1 407		- 212 996
					- 2						- 6
- 4	- 42				- 1 477		- 256		- 50		- 10 336
- 83	- 135				- 1 809		- 592		- 245		- 28 123
					- 541						- 542
					- 18						- 287
- 54					- 592	- 65	- 85		- 1 373		- 6 410
											- 2 024
- 168		- 99	- 120		- 1 588		- 2		- 41		- 3 351
- 342		- 495	- 58		- 2 947	- 98	- 52		- 21		- 5 602
- 11 289	- 41	- 152	- 241		- 68 441	- 891	- 70		- 14 295		- 120 662
- 1 916	- 150	- 2	- 257	- 388	- 4 216		- 1 036		- 5 790		- 24 681

Fuel consumption table for power generation in 2016 (Continued)

ktoe

Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
- 42 495	- 1 176	- 170	- 5 066	- 14 559	- 179 359	- 7 653	- 36 122	- 41 837	- 566 388	- 22 840	- 2 195 090
- 9 066	- 111		- 192	- 10 232	- 45 314	- 259	- 19 124	- 7 579	- 313 826	- 14 668	- 1 451 065
											- 9
									- 20		- 2 909
									- 205		- 5 679
											- 2 529
											- 425
											- 1 525
											- 3
- 501	- 1		- 136	- 481		- 2	- 110	- 33	- 1 267	- 101	- 8 718
- 6 123		- 79	- 134	- 749	- 1 484	- 45	- 2 334	- 75	- 1 621	- 363	- 25 456
- 26 805	- 1 019	- 56	- 4 515	- 3 082	- 132 561	- 6 641	- 14 523	- 27 068	- 234 168	- 7 677	- 625 123
	- 45	- 35	- 89	- 14		- 706	- 31	- 7 082	- 15 281	- 32	- 71 649
- 12 096	- 375	- 719	- 626	- 277	- 92 906	- 962	- 7 127		- 22 768		- 403 336
	- 4		- 75		- 12 436		- 4 977		- 1 545		- 207 887
					- 2						- 49
- 11	- 40				- 1 579		- 266		- 57		- 10 715
- 112	- 128				- 1 521		- 582		- 304		- 27 175
					- 842						- 843
					- 19						- 323
- 85					- 861	- 38	- 108		- 1 423		- 6 577
											- 1 280
- 152		- 96	- 128		- 1 414		- 1		- 32		- 3 450
- 584		- 477	- 33		- 3 033	- 37	- 65		- 20		- 6 327
- 9 407	- 35	- 145	- 252		- 66 830	- 887	- 63		- 13 558		- 114 210
- 1 745	- 168	- 2	- 139	- 277	- 4 369		- 1 064		- 5 829		- 24 500

Power generation capacity - total

MW

	1990	2010	2011	2012	2013	2014	2015	2016	2017
Australia	38 451	60 068	61 939	64 246	64 026	66 557	66 353	65 559	66 455
Brunei Darussalam	307	889	895	915	917	920	923	923	993
Canada	104 141	132 375	132 959	132 598	132 598	140 340	148 150	144 023	147 629
Chile	5 099	16 231	17 549	18 153	18 515	20 513	22 431	25 798	26 310
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
Hong Kong, China	8 342	12 624	12 624	12 625	12 625	12 626	12 626	10 685	10 557
Indonesia	9 275	40 487	48 397	48 733	54 905	57 003	59 399	59 653	60 793
Japan	188 700	281 082	282 284	285 643	287 060	287 060	290 475	299 362	334 428
Korea	21 021	72 509	72 356	80 007	77 735	99 830	103 001	111 201	122 950
Malaysia	5 582	24 817	25 599	29 143	29 748	29 974	30 439	33 045	33 592
Mexico	27 371	62 290	61 600	62 136	63 611	66 238	67 333	72 334	74 431
New Zealand	7 176	9 457	9 765	9 615	9 622	9 704	9 455	9 288	9 305
Papua New Guinea	490	N.A.	N.A.	N.A.	N.A.	770	1 174	1 181	1 181
Peru	4 143	N.A.	N.A.	9 699	11 051	10 269	10 908	14 009	N.A.
Philippines	6 869	13 319	16 162	17 025	17 325	17 944	18 695	21 423	22 728
Russia	213 400	222 935	222 984	232 685	239 423	259 020	257 075	266 448	272 449
Singapore	3 667	10 265	10 222	10 488	11 221	12 863	13 042	13 474	13 355
Chinese Taipei	17 819	49 036	48 961	48 655	49 126	48 750	49 143	50 493	50 735
Thailand	8 725	31 486	31 486	33 178	34 973	34 973	35 808	48 276	49 048
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
Viet Nam	2 537	21 542	23 527	26 475	30 662	34 215	38 523	38 643	N.A.

Power generation capacity - thermal power

MW

	1990	2010	2011	2012	2013	2014	2015	2016	2017
Australia	30 130	49 028	49 626	50 459	49 509	49 977	49 710	47 786	46 013
Brunei Darussalam	307	888	894	914	915	919	922	922	992
Canada	31 201	40 424	38 939	34 660	34 660	34 174	40 946	35 076	34 071
Chile	2 421	10 050	10 871	11 125	10 838	12 324	13 616	15 736	16 501
China	101 845	706 630	768 520	819 170	862 380	894 420	970 460	1 060 944	1 104 946
Hong Kong, China	8 342	12 624	12 624	12 625	12 625	12 625	12 625	10 668	10 510
Indonesia	7 040	27 973	34 717	33 759	38 508	40 178	42 506	42 428	43 320
Japan	119 303	181 736	182 382	185 309	188 904	188 904	193 356	194 669	197 092
Korea	11 065	60 389	58 303	65 538	62 565	68 549	70 108	75 559	86 377
Malaysia	4 185	22 488	22 515	24 994	24 973	24 243	23 518	25 732	26 436
Mexico	18 155	47 736	47 070	46 707	48 047	48 797	49 421	53 047	54 388
New Zealand	2 296	2 929	3 138	2 988	2 738	2 661	2 389	2 221	2 209
Papua New Guinea	335	N.A.	N.A.	N.A.	N.A.	251	824	831	831
Peru	1 744	4 682	N.A.	5 828	7 414	6 464	6 464	8 328	N.A.
Philippines	3 661	9 041	10 772	11 504	11 784	12 047	12 365	14 465	15 649
Russia	149 700	151 114	151 114	157 845	163 926	182 465	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
Chinese Taipei	10 041	37 939	37 647	37 078	37 300	36 665	36 654	37 471	36 730
Thailand	6 451	25 109	25 201	28 859	30 119	30 119	30 719	38 685	38 685
United States	536 667	793 551	798 833	793 352	787 297	789 624	773 980	769 999	762 764
Viet Nam	1 362	13 338	13 338	13 778	15 931	18 751	21 822	21 855	N.A.

Power generation capacity - hydro power

MW

	1990	2010	2011	2012	2013	2014	2015	2016	2017
Australia	8 321	8 773	8 788	8 790	8 037	8 048	8 048	8 724	8 271
Brunei Darussalam									
Canada	59 381	75 078	75 573	75 537	75 537	78 533	79 420	80 259	80 657
Chile	2 678	5 467	5 946	5 992	6 094	6 445	6 499	6 671	6 656
China	36 046	213 400	233 390	248 900	280 020	304 860	319 540	332 071	343 587
Hong Kong, China									
Indonesia	2 095	3 734	3 944	4 146	5 166	5 229	5 262	5 382	5 450
Japan	37 482	47 966	48 111	48 418	48 934	48 934	49 597	50 117	50 014
Korea	2 340	5 525	6 418	6 447	6 454	6 467	6 471	6 485	6 489
Malaysia	1 397	2 107	2 856	3 317	3 916	4 773	5 716	6 130	5 881
Mexico	7 838	11 626	11 646	11 650	11 653	12 464	12 223	12 580	12 628
New Zealand	4 619	5 254	5 254	5 254	5 263	5 263	5 340	5 340	5 381
Papua New Guinea	155	N.A.	N.A.	N.A.	N.A.	198	296	295	295
Peru	2 400	3 318	N.A.	3 484	3 556	3 527	4 166	5 189	N.A.
Philippines	2 153	2 914	3 491	3 521	3 521	3 543	3 600	3 618	3 627
Russia	43 400	47 430	47 479	49 445	50 104	50 845	50 998	50 998	50 998
Singapore									
Chinese Taipei	2 562	4 579	4 643	4 683	4 683	4 683	4 691	4 691	4 691
Thailand	2 274	3 488	3 488	3 508	3 524	3 524	3 524	3 519	3 586
United States	92 360	101 023	100 944	101 106	101 589	102 162	102 239	102 790	102 703
Viet Nam	1 176	8 180	10 165	12 643	14 661	15 394	16 587	16 669	N.A.

Power generation capacity - nuclear power

MW

	1990	2010	2011	2012	2013	2014	2015	2016	2017
Australia									
Brunei Darussalam									
Canada	13 538	12 665	12 665	13 370	13 370	14 033	14 033	14 033	14 033
Chile									
China		10 820	12 570	12 570	14 610	20 080	27 170	33 642	35 817
Hong Kong, China									
Indonesia									
Japan	31 645	48 847	48 960	48 960	46 148	46 148	44 264	41 482	39 132
Korea	7 616	5 525	6 418	6 447	6 454	20 716	21 716	23 116	22 529
Malaysia									
Mexico	675	1 365	1 365	1 610	1 400	1 400	1 510	1 608	1 608
New Zealand									
Papua New Guinea									
Peru									
Philippines									
Russia	20 300	24 300	24 300	25 304	25 304	25 304	26 304	27 189	27 952
Singapore									
Chinese Taipei	5 144	5 144	5 144	5 144	5 144	5 144	5 144	5 144	5 144
Thailand									
United States	99 643	101 167	101 419	101 885	99 240	98 569	98 672	99 565	99 629
Viet Nam									

Power generation capacity - others

MW

	1990	2010	2011	2012	2013	2014	2015	2016	2017
Australia		2 267	3 525	4 997	6 480	8 532	8 595	9 049	12 171
Brunei Darussalam		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Canada	21	4 208	5 782	9 031	9 031	13 600	13 751	14 655	18 868
Chile		714	732	1 036	1 583	1 744	2 316	3 391	3 152
China		31 330	50 070	64 110	90 270	150 830	208 100	223 853	292 734
Hong Kong, China						1	1	17	47
Indonesia	140	8 780	9 735	10 828	11 231	11 596	11 631	11 843	12 022
Japan	270	2 533	2 831	2 956	3 074	3 074	3 258	13 094	48 190
Korea		1 070	1 217	1 575	2 262	4 098	4 706	6 041	7 555
Malaysia		221	228	832	859	957	1 205	1 184	1 274
Mexico	703	1 563	1 519	2 169	2 511	3 577	4 179	5 099	5 807
New Zealand	261	1 274	1 373	1 373	1 621	1 780	1 726	1 727	1 715
Papua New Guinea		N.A.	N.A.	N.A.	N.A.	321	54	54	54
Peru		N.A.	N.A.	387	81	278	278	492	N.A.
Philippines	1 055	1 364	1 900	2 001	2 021	2 354	2 730	3 340	3 452
Russia		91	91	91	89	406	625	632	746
Singapore		4	6	10	257	257	317	382	112
Chinese Taipei	72	1 373	1 528	1 750	1 999	2 258	2 654	3 187	4 169
Thailand		2 889	2 797	811	1 330	1 330	1 564	6 072	6 777
United States	4 919	45 239	54 082	71 535	76 966	83 083	87 800	120 046	135 236
Viet Nam		24	24	54	70	70	114	120	N.A.

Appendices

A.	Definition of products.....	171
	Coal.....	171
	Oil.....	172
	Gas.....	175
	New and renewable energy.....	176
	Electricity and heat.....	177
B.	Definition of flows.....	179
	Supply sector.....	179
	Transformation sector.....	181
	Energy sector.....	183
	Final energy consumption sector.....	183
C.	Energy prices.....	188
D.	Definition of columns and rows of the energy balance table.....	189
	Columns.....	189
	Rows.....	190
E.	Conversion factors.....	193
F.	Currency codes.....	196

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 (C₂H₆). 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 (C₃H₈) and butane (C₄H₁₀) 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/ oxygenates 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 (41.868 gigajoules) 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 Coordinating Agency 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 includes all primary coal, such as anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite and peat.

Column 2: Coal products includes all fuels derived from coal including patent fuel, coke oven coke, gas coke, briquettes, coal tar, coke oven gas, blast furnace gas and oxygen steel furnace gas.

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 = 0.000086 Mtoe).

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 = 0.086 Mtoe. 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 = 0.086 Mtoe. 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 = (0.086/0.33) Mtoe. In the case of electricity produced from geothermal heat the primary value is calculated using 1 TWh = (0.086/0.1) Mtoe.

6. Heat

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

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 2017

	Australia	Brunei	Canada	Chile	China	Hong Kong, China	Indonesia	Japan	Korea
Coal									
Coking coal	6 807		5 973	7 099	6 223			6 706	6 690
Anthracite	6 377		6 301		6 551		6 377	6 508	4 829
Other bituminous coal	6 138		6 503	5 328	4 816	6 298	5 880	5 983	5 660
Sub-bituminous coal	4 413		4 275						5 100
Lignite	2 341		3 348		2 982				
Peat									
Coal Products									
Patent fuels									4 630
Coke oven coke	6 449		6 558	6 829	6 800			6 970	6 900
Coal tar	8 530			9 277	8 000			8 453	8 837
Coal briquettes	5 015				4 250		4 740		
Crude oil and NGL									
Crude oil	10 338	10 748	10 220	10 319	10 000		10 920	10 043	10 080
Natural gas liquids	10 846	10 900	10 801	11 495			11 934	10 817	
Refinery feedstocks	10 338		10 151	10 700	9 295		9 996	10 151	11 265
Additives/oxygenates		9 597	6 000	5 410	10 000		9 690		10 528
Other hydrocarbons		10 900	10 000	8 407	10 000		8 880		
Petroleum products									
Refinery gas	11 488		11 488	11 488	11 000			11 488	11 488
Ethane	11 799		11 799						
LPG	11 393	11 023	11 297	11 297	12 000	10 878	11 934	11 393	11 393
Naptha	10 318		10 748	10 748	9 176	10 540	11 064	10 318	10 318
Motor gasoline	10 653	10 688	10 700	10 700	10 300	10 217	11 064	10 653	10 653
Bio-ethanol	6 401		6 401		10 300			6 401	
Aviation gasoline	10 653		10 700	10 700			9 801	10 653	10 653
Gasoline-type jet fuel									
Kerosene-type jet fuel	10 629	10 648	10 653	10 653	10 300	10 262	10 398	10 629	10 629
Other kerosene	10 246	10 648	10 461	10 461	10 300	10 522	10 212	10 246	10 246
Gas/diesel oil	10 175	10 361	10 175	10 342	10 200	10 150	9 166	10 175	10 175
Bio-diesel	8 790		8 790		10 200	9 028	9 690	8 790	10 021
Fuel oil	10 175	9 716	9 602	9 602	10 000	9 912	10 319	10 175	10 175
White spirit SBP	10 270		10 270		9 176			10 270	10 270
Lubricants	10 246		10 032		9 176		9 996	10 246	10 246
Bitumen	9 267		9 554		9 176			9 267	9 267
Paraffin wax					9 176		9 996	9 554	9 554
Petroleum coke	8 073		7 643	7 643	7 350			8 073	8 073
Other products	9 554	11 023	9 554	9 554	9 310		9 996	9 554	9 554
Natural gas									
Natural gas		8 991			8 899	9 134	8 606		
New and renewables									
Fuel wood and wood waste									
Bagasse									
Charcoal				6 743		6 998		6 998	
Other biomass					7 000		3 707		
Industrial waste						1 037			
Municipal solid waste							2 092		

Note: The Net Calorific Values are used to convert the unit of each product to tons of oil equivalent (toe). 1 toe = 10⁷ kcal

Some economies report natural gas and biomass data in TJ and ktOE respectively. Therefore, the calorific value per cubic meter or per kg cannot be calculated.

Average Net Calorific Values of Energy Products in 2017 (continued)

kcal/kg (kcal/m³ for Natural Gas)

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam
	6 936	7 106				6 807		6 660	6 600	6 746	
	6 355					6 927		6 745	7 500	7 276	5 600
6 300	6 180	6 344		6 500		6 058	6 162	5 643	6 300	6 388	
	4 746	4 829			5 278			4 677		4 545	
	2 714	3 894				3 563		3 957	2 500	3 336	
						2 380					
								3 610			
	6 813	7 046		6 735		6 930		6 650		6 894	
	9 069										
	4 299								6 300		
10 342	10 392	10 289	10 120		9 905	10 050	10 200	10 442	10 089	10 247	10 200
10 150	9 888	10 935	10 120		8 352	10 010			11 757	11 062	10 602
10 180	10 115	10 482					10 230	10 442		10 399	
10 150	8 134							12 064		9 043	
10 150	10 000								10 089	12 182	
10 150	11 488	11 488				11 823	11 488	14 996		11 488	
	11 799								11 203	11 799	
10 878	11 297	11 393	11 393		10 760	10 987	11 297	11 893	11 800	11 297	10 900
10 540	10 748		10 500		11 031	10 509	10 748	10 539		10 748	
10 500	10 700	10 653	10 654		10 477	10 509	10 700	10 494	10 148	10 700	10 500
		7 083		6 351	7 083				7 087	7 648	
	10 700	10 653			10 894	10 509	10 700	10 669		10 700	
10 318	10 653	10 629	10 632		9 957	10 270	10 653	10 038	10 274	10 653	10 300
10 318		10 246	10 233		9 855		10 461	10 600	10 185	10 461	10 300
10 150	10 175	10 175	10 284		10 049	10 175	10 342	10 066	10 308	10 175	10 200
9 864				9 847	9 416				10 133	10 074	
9 912	9 602	10 175	10 520		9 617	9 554	9 602	10 027	10 064	9 602	9 900
		10 270				10 414	10 270	11 538		10 270	
	10 032	10 246			9 248	10 032	10 032	9 600		10 032	10 070
	9 554	9 267			9 248	9 315	9 315	10 000		9 554	9 988
	9 554					9 554	9 554	10 666		9 554	
	7 643	8 073				7 643	7 643	8 200		7 643	
10 150	9 554	9 554	9 602		9 864	9 554	9 554	12 496	10 000	9 554	9 900
8 431			9 163	9 657	8 226			9 000	8 622		9 000
			3 775	3 598	3 291				3 820		3 785
				1 499	2 166				1 800		1 785
			7 356	6 558		7 356			6 900		
4 489			1 976	3 596	3 331				3 030		3 000
									1 160		

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