

# APEC

ENERGY STATISTICS 2008

ENERGY WORKING GROUP  
NOVEMBER 2010  
COORDINATING AGENCY:  
THE ENERGY DATA AND MODELLING CENTER  
THE INSTITUTE OF ENERGY ECONOMICS, JAPAN

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## PREFACE

The APEC Energy Statistics 2008 consists of the following chapters:

1. Explanation of the APEC Energy Statistics
2. Overview of the APEC Energy Situation
3. Member 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; the Russian Federation; Singapore; Chinese Taipei; Thailand; the United States of America and Viet Nam.

Chapter 1 describes the methodology for collecting and standardizing 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 and quarterly tables by member economies. The annual tables contain Energy Balance Tables for 2008 and 2007 and Energy Prices for 2008. The annual tables also include Major Energy Indicators such as primary energy supply, final energy consumption, demand and supply by energy sources and electricity 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 1980 to 2008 except Russia and Viet Nam which do not have data from the '80s to the early 90's. The objective is to report the most recently updated data.

APEC Energy Statistics 2008 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. It is prepared in close cooperation with member economies.

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# 1 Background Information on the APEC Energy Statistics

The APEC Energy Statistics consist of energy data submitted by each member economy as well as social and economic data collected by EDMC (The Energy Data and Modelling Center), which is the Coordinating Agency (hereinafter referred to as C.A.) for this APEC activity. The energy balance tables, which give a 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 EDMC.

## 1.1 Energy Data

### 1.1.1 Original Data

The APEC member economies regularly submit energy demand and supply data to EDMC. These data are defined as “original data”. Details for collection of the data are given below:

#### a. Collection Format for Original Energy Data

Most of the items found in the 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) that was developed in 2005 for the collection of annual data for the year 2004. These questionnaires are simplified forms of the annual energy questionnaires of the International Energy Agency (IEA) in view of the harmonization efforts of the C.A. with the IEA. Table 1-1a and 1-1b show the energy product and flows that are 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 members submitted the following information:

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

The data are reported in the following required units:

Coal, Solid Coal Products	1,000 Metric Tons
Gaseous Coal Products	10 <sup>10</sup> kcal (gross)
Oil and Oil Products	1,000 Metric Tons
Natural Gas	Million Cubic Meters
LNG	1,000 Metric Tons
Solid and Liquid Bio-fuels	1,000 Metric Tons
Biogas	10 <sup>10</sup> kcal (gross)
Electricity (including renewable)	GWh
Heat	10 <sup>10</sup> 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 MW.

For OECD member countries that also submit annual energy supply and demand data to IEA, C.A. accepts data submission using the IEA format. The C.A. developed computer programs to transfer data from the IEA format to APEC format and to generate energy balance tables from the APEC questionnaires.

Table 1-1a: Energy Products in the APEC Energy Database

<p><b>Coal</b></p> <ul style="list-style-type: none"> <li>Coking Coal</li> <li>Other bituminous coal</li> <li>Sub-bituminous Coal</li> <li>Anthracite</li> <li>Lignite</li> <li>Peat</li> </ul> <p><b>Coal Products</b></p> <ul style="list-style-type: none"> <li>Coke Oven Coke</li> <li>Coke Oven Gas</li> <li>Blast furnace Gas</li> <li>Oxygen Steel furnace Gas</li> <li>Patent Fuel</li> <li>Coal Tar</li> <li>BKB/PB</li> <li>Gas Works Gas</li> </ul> <p><b>Crude Oil &amp; NGL</b></p> <ul style="list-style-type: none"> <li>Crude Oil</li> <li>Natural Gas Liquids</li> <li>Refinery Feedstocks</li> <li>Additives / Oxygenates</li> <li>Other Hydrocarbons</li> </ul> <p><b>Gas</b></p> <ul style="list-style-type: none"> <li>Natural Gas</li> <li>LNG</li> </ul>	<p><b>Crude Oil &amp; NGL</b></p> <ul style="list-style-type: none"> <li>Crude Oil</li> <li>Natural Gas Liquids</li> <li>Refinery Feedstocks</li> <li>Additives / Oxygenates</li> <li>Other Hydrocarbons</li> </ul> <p><b>Petroleum Products</b></p> <ul style="list-style-type: none"> <li>Gasoline</li> <li>Motor Gasoline</li> <li>Aviation Gasoline</li> <li>Naphtha</li> <li>Jet Fuel</li> <li>Gasoline Type Jet Fuel</li> <li>Kerosene Type Jet Fuel</li> <li>Kerosene</li> <li>Gas/Diesel Oil</li> <li>Fuel Oil</li> <li>LPG</li> <li>Refinery Gas (not liq.)</li> <li>Ethane</li> <li>White Spirit SBP</li> <li>Lubricants</li> <li>Bitumen</li> <li>Paraffin Waxes</li> <li>Petroleum Coke</li> <li>Other Products</li> </ul>	<p><b>Hydro</b></p> <p><b>Nuclear</b></p> <p><b>New and Renewable Energy</b></p> <ul style="list-style-type: none"> <li>Geothermal</li> <li>Photovoltaic</li> <li>Tide, Wave and Ocean</li> <li>Wind</li> <li>Geothermal Heat</li> <li>Solar Heat</li> <li>Fuel Wood and Woodwaste</li> <li>Bagasse</li> <li>Charcoal</li> <li>Other Biomass</li> <li>Biogas</li> <li>Industrial Waste</li> <li>Municipal Solid Waste</li> <li>Liquid Bio-fuels</li> </ul> <p><b>Electricity</b></p> <p><b>Heat</b></p>
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## b. Collection Schedule and Actual Dates of Submission

The C.A. set the deadline for submission to end of November 2009. In principle, all twenty-one APEC members are expected to submit annual data to the C.A. on the aforementioned deadline. Only New Zealand was able to submit the 5 energy questionnaires by the

deadline. Indonesia, Mexico and Chinese Taipei submitted the 5 questionnaires before the end of December 2009. The remaining non-OECD APEC economies submitted after December 2009 except for Papua New Guinea and Singapore. Most of the energy data of these two economies were estimated by the C.A.

Table 1-1b: Energy Flows in the APEC Energy Database

<p><b>Indigenous Production</b></p> <p><b>Imports</b></p> <p><b>Exports</b></p> <p><b>International Marine Bunkers</b></p> <p><b>Stock Changes</b></p> <p><b>Total Primary Energy Supply</b></p> <p><b>Transfers</b></p> <p>Recycled Products</p> <p>Inter-product Transfers</p> <p>Products Transferred</p> <p>Gas Separation</p>	<p><b>Total Transformation Sector</b></p> <p><b>Main Activity Producer</b></p> <p>Electricity Plants</p> <p>CHP Plants</p> <p>Heat Plants</p> <p><b>Autoproducers</b></p> <p>Electricity Plants</p> <p>CHP Plants</p> <p>Heat Plants</p> <p><b>Gas Processing</b></p> <p>Gas Works</p> <p>Liquefaction</p> <p>Re-gasification</p> <p>Natural Gas Blending Plants</p> <p>Gas to Liquid</p> <p><b>Refineries</b></p> <p><b>Coal Transformation</b></p> <p>Coke Ovens</p> <p>Blast Furnaces</p> <p>Patent Fuel Plants</p> <p>BKB/PB Plants</p> <p>Liquefaction (Coal to Oil)</p> <p><b>Petrochemical Industry</b></p> <p><b>Biofuel Processing</b></p> <p><b>Charcoal Processing</b></p> <p><b>Non-specified Transformation</b></p> <p><b>Losses &amp; Own Use</b></p> <p><b>Own Use</b></p> <p><b>Distribution Losses</b></p> <p><b>Discrepancy</b></p>	<p><b>Total Final Energy Consumptions</b></p> <p><b>Industry Sector</b></p> <p>Iron and Steel</p> <p>Chemical (incl. Petro-Chemical)</p> <p>Non Ferrous Metals</p> <p>Non Metallic Mineral Products</p> <p>Transportation Equipment</p> <p>Machinery</p> <p>Mining and Quarrying</p> <p>Food, Beverages and Tobacco</p> <p>Pulp, Paper and Printing</p> <p>Wood and Wood Products</p> <p>Construction</p> <p>Textiles and Leather</p> <p>Non-specified Industry</p> <p><b>Transport Sector</b></p> <p>International Civil Aviation</p> <p>Domestic Air Transport</p> <p>Road</p> <p>Rail</p> <p>Inland Waterways</p> <p>Pipeline Transport</p> <p>Non-specified Transport</p> <p><b>Other Sector</b></p> <p>Commerce and Public Services</p> <p>Residential</p> <p>Agriculture</p> <p>Fishing</p> <p>Non-specified Others</p> <p><b>of which Non-Energy Use</b></p> <p>Transformation Sector</p> <p>Industry Sector</p> <p>Transport Sector</p> <p>Other Sector</p>
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### c. Collection Status

As of June 30, 2010, 17 APEC economies have submitted data to the C.A., one economy more than the 16 that submitted last year. Brunei Darussalam and Viet Nam submitted their energy balance tables for 2008. There was no submission from Peru. Fortunately, the CA was able to download their energy data from the Peru Ministry of Mines and Energy website. Of the remaining two economies, Papua New Guinea submitted crude oil and natural gas production, exports as well as refinery input and output data while Singapore did not submit any data at all.

The C.A. took measures to be able to generate energy balance tables for Papua New Guinea and Singapore. For the former, the C.A. estimated the final energy consumption, electricity generation and inputs as well as imports of petroleum products. For Singapore, the C.A. has to rely on the electricity and gas data downloaded from the website of the Energy Market Authority and the international marine bunker sales from Singapore Ports Authority website. Oil data are also calculated based on the oil trade data submitted by Singapore to the Joint Oil Data Initiative (JODI). The C.A. will highly appreciate if Singapore does the estimation of the data and submit the same to C.A. in the future.

### d. Use of the Internet

The advances in internet technology had enabled the submission of all energy data as email attachment. Correspondence for the improvement of data consistency and accuracy had also been carried out mostly through the internet.

## 1.2 Standardization

The APEC reporting format requires the use of certain units for reporting energy data. In this regard, the level of standardization has been improved by at least one notch. For example, all oil data are now reported in 1,000 metric tons unit. Before the 2004 data, each economy uses its own units such as barrels, kiloliters, cubic meters, etc. The C.A. however, does not standardize the conversion factor from physical to thermal units in view of the peculiarities in the thermal quantity of each energy product from the different economies. In this regard, the C.A. makes use of the calorific value data reported by each economy as opposed to using typical conversion factors.

### 1.2.1 Conversion Factors for Fossil Energy from Physical to Thermal Units

Between the two calorific values, namely gross and net calorific values, the APEC Standard adopted the net calorific value at the Third Experts Meeting (Singapore) to facilitate comparisons with international energy statistics such those of the IEA and UNSD. Therefore, gross calorific values used by some members must be converted to net calorific values. If only the gross calorific values are reported, the C.A. converts them to net calorific values by:

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

### 1.2.2 Conversion Factors for Primary Electricity

Table 1-2 shows the efficiency applied to convert primary electricity, i.e. power generated by processes which excludes fossil fuel, 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, standardization is required. APEC adopted the following conversion coefficients for compatibility with IEA and UN statistics.

Table 1-2: Efficiency of Primary Electricity

Primary Electricity	Efficiency
Hydro Power	100%
Nuclear Power	33%
Geothermal Power	10%
Other New Power	100%

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

### 1.3 Secondary Data

Using the original data submitted by each member, C.A. prepares the following tables through the standardization process described in 1.2.

- (1) Energy Balance Table
- (2) Primary Energy Supply Table
- (3) Final Energy Consumption Table
- (4) Supply and Demand by Energy Source Table
- (5) Electricity Table
- (6) Stock Change Table

The Energy Balance Tables give a detailed description of energy sources and their flows.

APEC Energy Statistics contain the six tables mentioned above. Tables (2) through (6) are collectively referred to as “other tables”, and are compiled from data obtained from the original data tables after adjustment and the energy balance tables. Tables 2 through 6 allow comparisons among member economies.

#### 1.3.1 Energy Balance Table

The energy balance table is, in principle, the same as that of the IEA but with some adjustments. The different values could be attributed to the following:

- APEC statistics are basically based on official data provided by national government agencies of each member economy, and thus, agencies exclude any data not reported to the government. It is assumed that the IEA estimates these quantities.
- For this reason, some data for private-power generations are missing in some member economies.
- APEC and the IEA use different heat conversion methods.
- The reporting date 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).

#### 1.3.2 Other Tables

Other tables, i.e., primary energy supply, final energy consumption, supply and demand by energy source, electricity and stock change, are all designed to allow comparisons among member economies.

The primary energy supply table shows items that constitute the primary energy supply, namely, indigenous production, imports, exports, stock change, and international marine 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 others for each final consumption sector (agriculture, residential, commercial, industry and transport).

The supply and demand table for each energy source

emphasizes coal, petroleum and gas, and shows, at a balance, how the primary supply volume is being 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.

The stock change table shows the inventory of fossil fuels owned by each member economy, in units of calorific value (ktoe and PJ), at the beginning and end of the period as well as the stock change. Since the conventional approach is to report stock level only in terms of its change, many members omit the stock level at the beginning and end of the term.

## 1.4 Notes on Member Economies

### 1.4.1 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 harmonization efforts with the IEA, the C.A. accepts submission from OECD members using the IEA format. Likewise, to reduce the burden on member economies' statisticians the C.A. decided that to leave to IEA the data negotiation with the APEC OECD member economies and just used the processed and updated data from IEA.

### 1.4.2 Specific Notes

#### a. Brunei Darussalam

Brunei Darussalam is not able to submit their annual energy data in the APEC format but in its own format. C.A. enters the data in the APEC reporting format and produces the energy balance table.

#### b. Japan

Energy data after 2000 are not official data prepared by Japanese Government. C.A. used data on energy balance table produced by the Institute of Energy Economics, Japan to maintain continuity of data from before 2000.

#### c. Papua New Guinea

C.A. estimated energy balance tables from 2000 to 2008 for Papua New Guinea from the crude oil and natural gas production, refinery intake and output data, crude oil exports and GDP data obtained from Papua New Guinea.

#### d. Peru

Peru used to submit the annual data using the APEC format. However, the economy was not able to submit the 2008 data for reasons not explained to the C.A. To be able to produce Peru's energy balance and other tables, the C.A. downloaded the energy balances from the website of Peru Ministry of Mines and Energy.

#### e. Singapore

Singapore cannot submit the data on natural gas imports, crude oil inputs and petroleum products output of the refinery sector as well as fuel inputs for electricity generation. Furthermore there are no data in the final energy consumption sectors.

C.A. estimated the energy balance tables for Singapore from 1980 to 2008.

C.A. estimated values in petroleum refinery using import volumes of crude oil and export volumes of petroleum products (assuming the stock change and the discrepancy are 0).

Some erroneous data are corrected by using the IEA energy balance data, data from Energy Market Authority in Singapore, and the socioeconomic indicators (ex: GDP, etc.).

f. Viet Nam

Viet Nam did not submit annual energy data in the APEC format for 2008. In this regard, the C.A. entered the data in the new format and generated the energy balance table.

### 1.5 Socioeconomic Data

At the moment, the socioeconomic data for each member economy shown in the APEC Energy Statistics are not reported by the members, but, instead, are prepared by C.A. The data are derived from the “World Development Indicators” (World Bank) and “The International Financial Statistics Yearbook” (IMF). The data on Chinese Taipei not found in these statistics, are derived from the “Chinese Taipei Statistical Data Book”. This book is regularly delivered to C.A. through the goodwill of this member. The items C.A. picks up from these statistics are:

- Population
- GDP and its components
- Index of Industrial Production
- External Trade (dollar base)
- Balance of Payment (dollar base)
- Exchange Rate
- Prices (CPI, etc.)

The GDP data of Brunei from 1996 are also derived from the “Brunei Darussalam Statistical Yearbook” which is also provided by this member economy to the C.A. through its goodwill.

In addition to reporting the GDP in the member economy’s currency, C.A. provides estimates in real, nominal dollar and real PPP (Purchasing Power Parity) terms.

### 1.6 APEC Energy Database

C.A. has established the APEC Energy Database, which contains all data on APEC Energy Statistics. The web address of the database is: <http://www.ieej.or.jp/egeda/>.

## 2 Overview of the APEC Energy Situation

## 2.1 Overall Notes

Chapter 2 summarizes the energy supply and demand in the APEC region using the energy balance tables of APEC member economies stored in the APEC Energy Database. Energy categories used in this chapter are defined as follows:

### a. Coal:

Coking coal, anthracite, other bituminous coal, sub-bituminous coal, lignite and peat, patent fuel, coke, coal tar, BKB/PB, gas works gas and oxygen steel furnace gas

### b. Oil:

Crude oil, NGL, refinery feedstocks, additives/oxygenates, and other hydrocarbons, refinery gas, ethane, LPG, Naphtha, motor gasoline, aviation gasoline, gasoline type jet fuel, kerosene type jet fuel, other kerosene, gas/diesel oil, fuel oil, white spirit SBP, lubricants, bitumen, paraffin waxes, petroleum coke and other products

### c. Gas:

Natural gas and LNG

### d. Hydro, Nuclear, etc.:

Electricity generated from non-thermal resources such as hydro, nuclear, geothermal, solar and wind

### e. Others:

Incineration and commercial renewable energy

Regional groupings of APEC member economies are as follows:

### a. East Asia and Russia:

China; Hong Kong, China; Japan; Korea, Russia and Chinese Taipei

### b. Southeast Asia

Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore, Thailand and Viet Nam

### c. Oceania:

Australia, New Zealand and Papua New Guinea

### d. North America:

Canada and the United States of America

### e. Latin America:

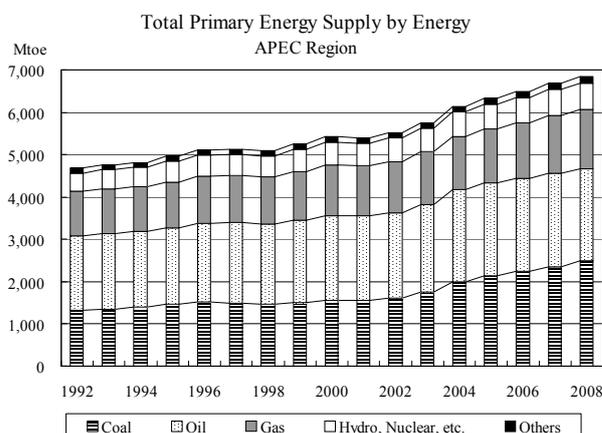
Chile, Mexico and Peru

From 2004, APEC collected the member economies' annual energy data using the new format which resulted to reporting of non-commercial biomass supply and consumption which were not reported until 2003 for some economies. To analyze the historical trend, Non-commercial biomass data of Indonesia, Peru, Thailand and Viet Nam which were not reported before 2004 were excluded in this analysis.

## 2.2 Analysis of Energy Supply and Demand in the APEC Region

This section discusses energy supply and demand in the APEC region.

### 2.2.1 Primary Energy Supply



The level of primary energy supply in 2008 of 6,842 Mtoe increased by 2.4% from the 2007 level of 6,684 Mtoe. In the period 1992 to 2008, primary energy supply had an average growth rate of 2.4% per annum, in contrast with the 3.1% growth in real GDP over the same period. As a result, elasticity of demand was calculated at 0.77 for this period.

For the period 1992 to 2008, coal supply rose at an average rate of 4.1% per annum to reach 2,490 Mtoe. Oil supply rose at an average rate of 1.3% per annum to reach 2,178 Mtoe. Gas supply increased by 1.8% per annum to reach 1,403 Mtoe. The supply of hydro, nuclear, etc. grew by 2.3% per annum to reach 620 Mtoe. The category of “Others” grew 1.3% per annum, the total was small at 152 Mtoe and the share was 2.2% in 2008.

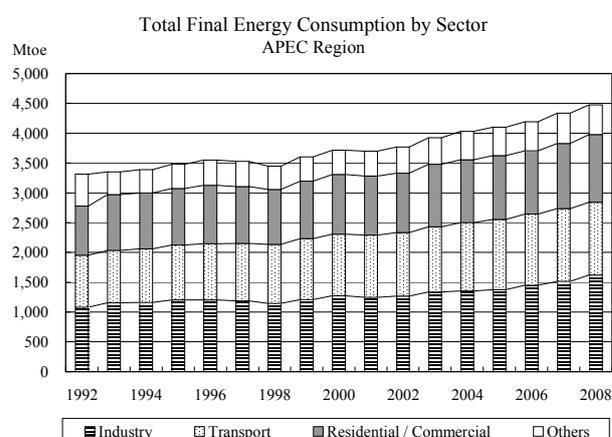
## 2.2.2 Final Energy Consumption

The level of final energy consumption in 2008 of 4,479 Mtoe grew by 3.3% from the 2007 level of 4,338 Mtoe. The growth rate was 1.9% per annum from 3,317 Mtoe in 1992. This growth rate for 16 years was lower than that of primary energy supply. It indicates that net energy consumption growth in the transformation sector surpassed that of the final energy consumption sector.

The final energy consumption of the residential/commercial and other sectors increased by 1.8%, from 1,604 Mtoe in 2007 to 1,633 Mtoe in 2008. The transport sector consumption increased by 0.1% from 1,222 Mtoe in 2007 to 1,224 Mtoe in 2008 while industrial sector consumption grew by 7.3% from 2007 to 2008.

Its total consumption of 1,623 Mtoe was the largest for all sectors in 2008 with a share of 36.2% to the total

final consumption. The transportation sector share was 27.3% while the residential/commercial sector share was 25.3%.



By fuel, oil consumption decreased by 2.2% from 1,966 Mtoe in 2007 to 1,923 Mtoe in 2008. This grew at an average rate of 1.9% per annum from 1,426 Mtoe in 1992.

Electricity consumption rose by 2.5% from 894 Mtoe in 2007 to 916 Mtoe in 2008, gas consumption increased by 12.3% to 745 Mtoe in 2008. Coal consumption grew by 14.1% from 540 Mtoe in 2007 to 616 Mtoe in 2008.

## 2.2.3 Energy Balance Table

This section presents the 2008 aggregate energy balance table for the APEC region. Note that the

APEC Region	2008											Unit: Mtoe
	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	2,631	-	1,485	7	1,488	146	421	54	151	-	-	6,383
2 Import	322	11	1,354	434	281	-	-	-	2	9	-	2,412
3 Export	-415	-12	-514	-412	-352	-	-	-	-1	-10	-	-1,717
4 International Marine Bunkers	-	-	-	-85	-	-	-	-	-	-	-	-85
5 International Aviation Bunkers	-	-	-	-62	-	-	-	-	-	-	-	-62
6 Stock Change	-40	-7	-26	-4	-13	-	-	-	-0	-	-	-90
7 Total Primary Energy Supply	2,498	-8	2,299	-121	1,403	146	421	54	152	-1	-	6,842
8 Public Electricity	-1,461	-6	-9	-66	-517	-141	-421	-40	-19	1,020	106	-1,555
9 Autoproducers of Electricity	-105	-16	-1	-33	-63	-5	-	-10	-25	70	108	-78
10 Gas Processing	-9	-2	-0	-6	56	-	-	-	-	-	-	39
11 Petroleum Refineries	-	-	-2,251	2,240	-	-	-	-	-	-	-	-11
12 Coal Transformation	-349	164	-	-1	-0	-	-	-	-	-	-	-186
13 Other Transformation	-	-	25	-12	-2	-	-	-	-22	-	-	-11
14 Loss & Own Use	-67	-14	-11	-113	-133	-0	-	-0	-0	-170	-25	-532
15 Discrepancy	-4	-5	2	-33	1	-0	-	-0	3	-3	-3	-42
16 Total Final Energy Consumption	503	113	8	1,915	745	-	-	4	88	916	187	4,479
17 Industry Sector	408	106	3	245	316	-	-	0	56	403	85	1,623
18 Transport Sector	4	0	0	1,140	63	-	-	-	-	16	-	1,224
19 Other Sector	90	7	0	237	315	-	-	3	32	497	102	1,285
19.1 Residential & Commercial	73	7	-	156	311	-	-	3	32	453	98	1,133
19.2 Agriculture	8	0	0	48	1	-	-	-	1	12	3	74
19.3 Other	9	0	0	33	2	-	-	-	0	32	2	78
20 Non-energy	-	-	5	292	51	-	-	-	-	-	-	348

export/import row does not show the volume of trade between APEC and non-APEC regions.

Some of the salient points on the table are:

- 63% of coal is used for power generation.
- Petroleum products consumed by APEC members are mainly refined within the region.
- The percentage share of gas consumption is third, behind petroleum products and electricity. The industrial and residential/commercial sectors are the dominant users.
- The category “Other” consists mainly of wastes and commercial renewable energy, such resources being used to generate electricity and consumed directly in the industry sector and the residential/commercial sector.
- Heat accounts for 4.2% of final consumption.
- Oil and Petroleum Products accounted for 43% of total final energy consumption, followed in order, by electricity, gas, and coal.

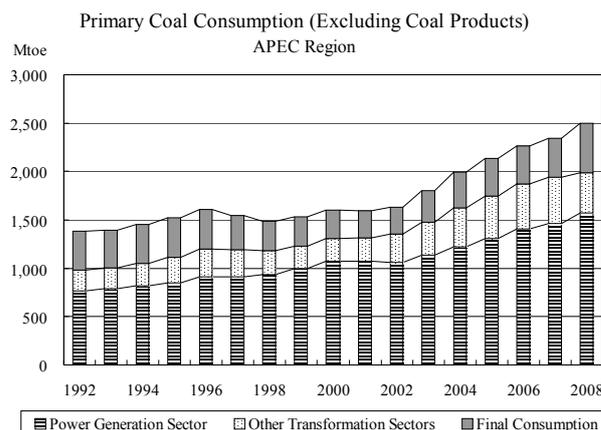
### 2.3 Analysis of Energy Supply and Demand by Energy Sources

This section analyses energy supply and demand in the APEC region by energy sources.

#### 2.3.1 Coal (excluding coal products)

The supply of coal increased by 6.1% from 2,355 Mtoe in 2007 to 2,498 Mtoe in 2008. Its share in the total primary energy supply is 28.1% in 1992 and increased to 36.5% in 2008.

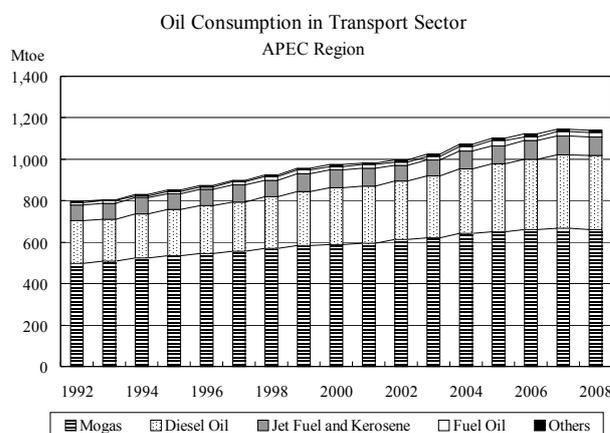
Most coal (excluding coal products) is used for electricity generation, accounting for 62.7% of the total supply in 2008.



#### 2.3.2 Oil

Oil supply decreased by 1.7% from 2,215 Mtoe in 2007 to 2,178 Mtoe in 2008. It represented 31.8% of total primary energy supply in 2008.

More than half of all petroleum products are used in the transportation sector, with the major products being motor gasoline and automotive diesel oil. Recently, there has been a marked increase in the consumption of diesel.



#### 2.3.3 Gas

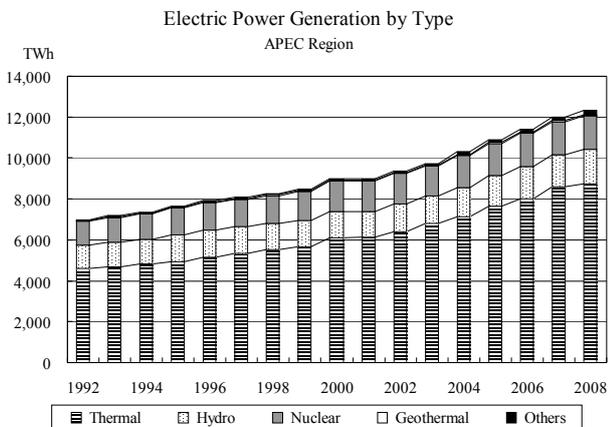
The supply of gas increased by 2.4% from 1,370 Mtoe in 2007 to 1,403 Mtoe in 2008. Gas represented 20.5% of the total primary energy supply in 2008.

Most gas is consumed in the industrial and residential/commercial sectors. As of 2008, 41.3% of gas was used for electric power generation.

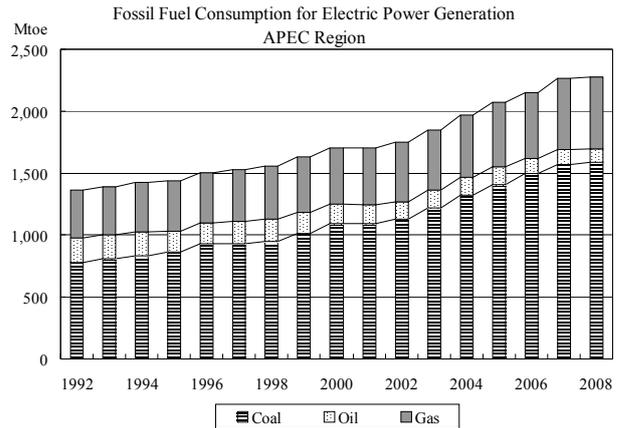
### 2.3.4 Electricity

Power generation rose by 2.5% from 11,998 TWh in 2007 to 12,300 TWh in 2008. From 1992 to 2008, power generation grew at an average rate of 3.6% per annum (from 6,985 TWh). Thermal power generation increased by 1.8% from 8,587 TWh in 2007 to 8,740 TWh in 2008. As a result, the share of thermal power generation was 71.1% of the total in 2008. Nuclear power generation is decreased by 0.5%, from 1,625 TWh in 2007 to 1,617 TWh in 2008. The hydropower generation rose by 7.5% from 1,575 TWh in 2007 to 1,693 TWh in 2008.

Non-fossil electricity generation, which includes hydro and nuclear, increased by 2.0%, from 605 Mtoe in 2007 to 617 Mtoe in 2008. From 1992 until 2008, their collective supply grew at an average rate of 2.3% per annum.



When discussing the issue of global warming in the APEC region, there is significant room for exploring possible solutions, including improving the efficiency of coal-fired power generation units and converting from coal and oil to gas-fired generation in view of the fact that coal remains and still is the major fuel for electricity generation.



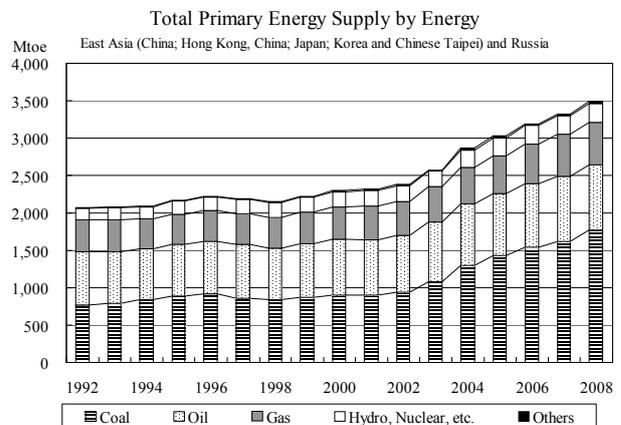
### 2.4 Analysis of Energy Supply and Demand by Region

This section divides the APEC region into five groups, namely East Asia and Russia, Southeast Asia, Oceania, North America and Latin America, to compare their energy supply and demand situations.

#### 2.4.1 East Asia and Russia

Primary energy supply in this region rose by 5.0% to 3,487 Mtoe in 2008. Over the period 1992 to 2008, primary energy supply increased 3.3% per annum (from 2,073 Mtoe).

Coal and oil constitute the main energy sources in East Asia, accounting for 50.7% and 24.9% of total energy supply, respectively, in 2008.

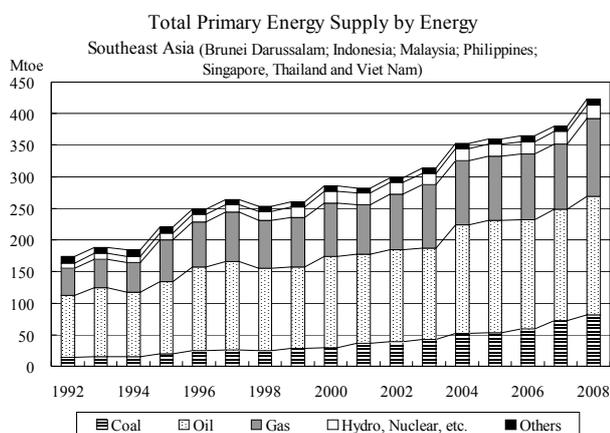


In terms of final energy consumption by sector, the

industrial sector has the highest consumption of 49.4% of total final energy consumption. This is followed in order by the residential/commercial sector and the transportation sector.

### 2.4.2 Southeast Asia

Primary energy supply in Southeast Asia increased by 11.2% to 423 Mtoe in 2008. From 1992 to 2008 it increased at an average rate of 5.7% per annum; the highest rate of growth among the five regional groups. The region's share to the total APEC region increased to 6.2% in 2008 from 3.7% in 1992.



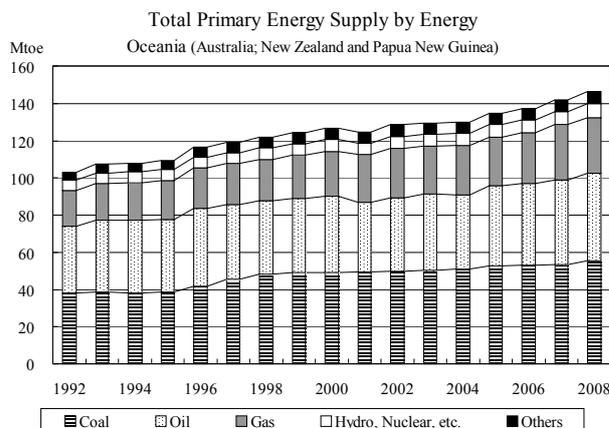
Although Southeast Asia relies heavily on oil, use of coal and gas has been increasing in recent years, making the share of oil to drop to 44.3% in 2008 from 56.7% in 1992.

The industrial sector consumes the largest amount of energy, followed in order by the transportation and residential/commercial sectors. Because most energy demand in the transportation sector is met by oil, consumption of this fuel has grown steadily.

### 2.4.3 Oceania

Primary energy supply in Oceania increased by 3.0% to 146 Mtoe in 2008. From 1992 to 2008, the average growth rate per annum was 2.2% (from 103 Mtoe). The

Oceania share of total APEC supply was only 2.1% in 2008.

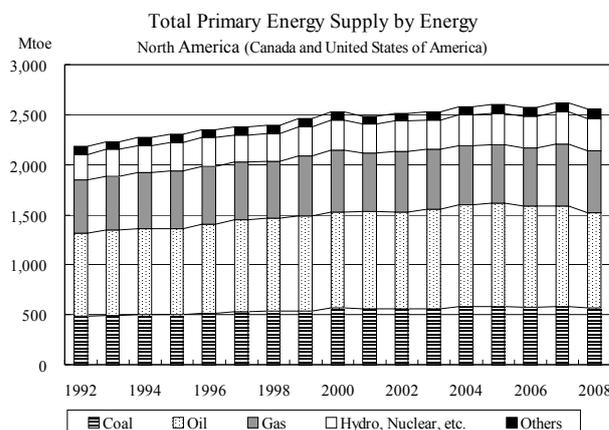


Coal and oil are the major energy sources in Oceania, accounting for 70.2% of total primary energy supply. Oil supply increased by 4.3% and gas supply decreased by 0.4% in 2008.

In terms of final energy consumption by sector, the transport sector consumed the highest amount of energy, followed in order by the industrial sector, and the residential/commercial sector.

### 2.4.4 North America

Primary energy supply in North America decreased by 2.2% to 2,559 Mtoe in 2008. From 1992, it grew at an average rate of 1.0% per annum (from 2,185 Mtoe). The region accounted for 37.4% of energy supply in the APEC region in 2008.

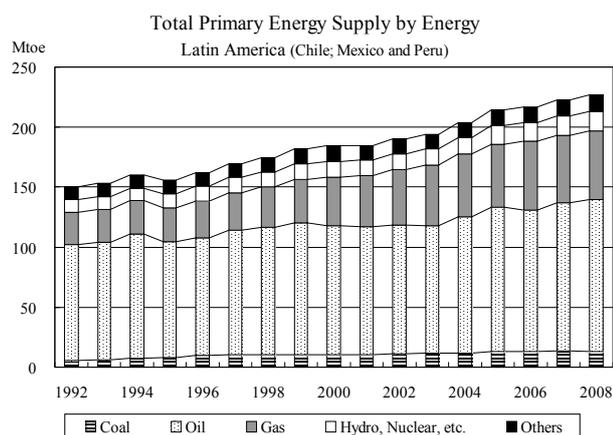


The main energy source in North America is oil, and the supply of oil has increased at an average rate of 0.8% per annum over the past 16 years.

In terms of final energy consumption by sector, energy consumption by the industrial and transportation accounted for 19.8% and 38.3% of the total, respectively. The residential/commercial sector consumed 30.8% of the total.

### 2.4.5 Latin America

Primary energy supply in Latin America grew by 1.8% to 227 Mtoe in 2008, increasing by 2.6% per annum from 150 Mtoe in 1992.



Oil is the major energy source in Latin America and represented 55.8% of the total, followed by gas with a share of 25.4% in 2008.

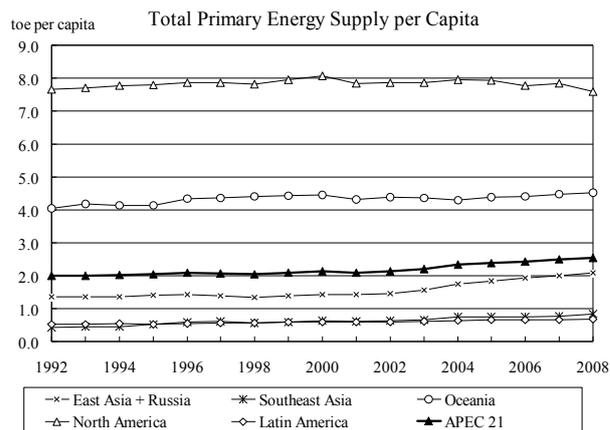
In terms of final energy consumption by sector, the transport and industrial sectors consumed 43.2% and 27.9% of the total, respectively, in 2008.

### 2.5 Other Analyses

This section analyses the per capita primary energy consumption, the elasticity of primary energy supply against real GDP and CO<sub>2</sub> Emissions in the region.

### 2.5.1 Primary Energy Supply Per Capita

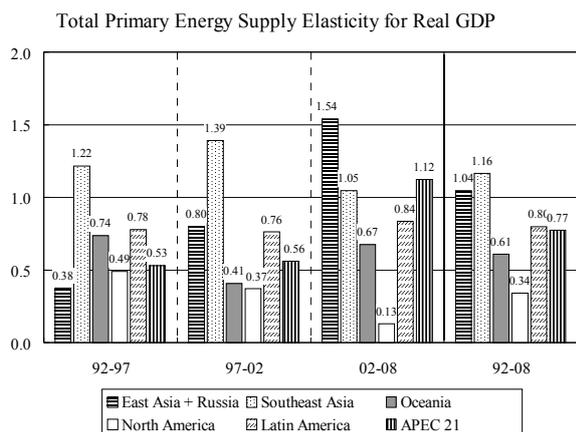
North America had the highest primary energy supply per capita (7.59 toe) in the APEC region in 2008, followed in order by Oceania (4.53 toe), East Asia and Russia (2.08 toe), Southeast Asia (0.84 toe) and Latin America (0.67 toe). The average for APEC was 2.54 toe per capita in 2008.



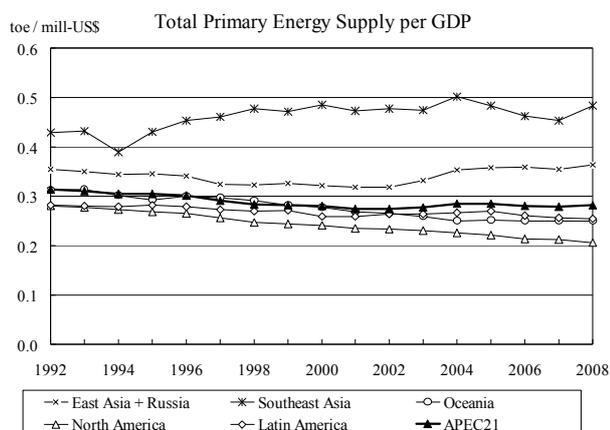
From 1992 to 2008, the APEC average growth rate in energy per capita was 1.5% per annum (from 2.00 toe per capita) while in Southeast Asia, the growth rate was 4.2% per annum. North America showed almost no growth (-0.1%) over the same period.

### 2.5.2 Elasticity of Primary Energy Supply against Real GDP

From 1992 to 2008, the elasticity of supply has exceeded 1.0 in Southeast Asia (1.16) over the last 16 years while that of East Asia and Russia was 1.04. The converse is true for Oceania (0.61), North America (0.34, the lowest) and Latin America (0.80). Elasticity for the APEC region as a whole was 0.77. This means that when the GDP of the APEC region increased by one unit, energy supply increased by only 0.77 units.



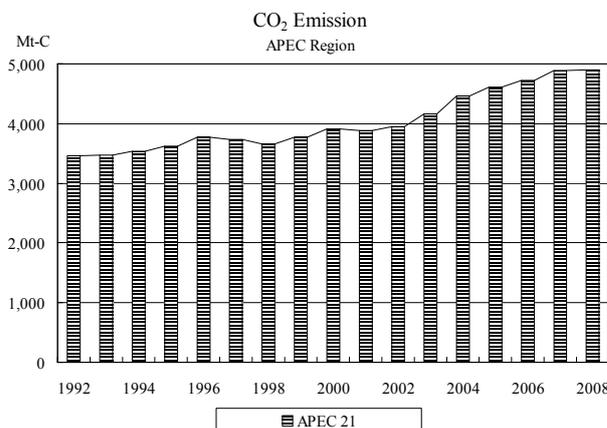
From 1992 to 2008, the average growth rate in energy intensity of GDP in the APEC region was -0.7% per annum (from 0.31 toe/ million US\$ to 0.28 toe/million US\$). On the other hand, in Southeast Asia, the growth rate was 0.8% per annum for the last 16 years. In North America, the average growth rate was -1.9% per annum from 1992 to 2008.



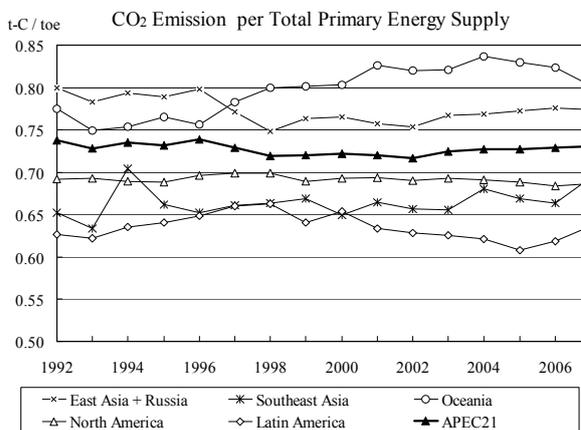
### 2.5.3 CO<sub>2</sub> Emissions from Fuel Combustion

The CO<sub>2</sub> emission data for 2008 were collected from 6 member economies, namely: Canada; Hong Kong, China; Japan; New Zealand; Chinese Taipei and United States. For the other member economies, the C.A. estimated the CO<sub>2</sub> emissions. Based on both of the data mentioned above, CO<sub>2</sub> emissions from fuel combustion

grew by 0.4% from 4,886 Mt-C in 2007 to 4,905 Mt-C in 2008, or 2.2% per annum from 3,457 Mt-C in 1992. As a result, CO<sub>2</sub> emissions per total primary energy supply, per real GDP and per population became 0.72 t-C/toe, 201.5 t-C/US Million-dollar (at 2000 price) and 1.82 t-C/capita in 2008 respectively.



From 1992 to 2008, the average growth rate in CO<sub>2</sub> per energy was -0.2% per annum (0.717 t-C/toe in 2008), the average growth rate in CO<sub>2</sub> per real GDP decreased by 0.9% per annum, and the average growth rate in CO<sub>2</sub> per capita grew by 1.3% per annum.



## 3 Member Tables

### 3.1 Australia

## Energy Balance Table of Australia in 2008

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	218,816	-	23,859	47	-	-	-	-	47
2 Import	-	4	21,339	14,386	2,750	-	1,554	-	6,412
3 Export	-163,964	-	-14,992	-1,516	-560	-	-125	-	-396
4 International Marine Bunkers	-	-	-	-953	-	-	-	-	-66
5 International Aviation Bunkers	-	-	-	-3,053	-	-	-3,053	-	-
6 Stock Changes	-1,085	-	207	127	28	-	32	-3	-79
7 Total Primary Energy Supply	53,767	4	30,412	9,038	2,217	-	-1,592	-3	5,918
8 Transfers	-	-	-789	9,319	-	-	-	-	-
9 Total Transformation Sector	-48,760	2,062	-32,608	32,266	13,574	392	4,380	86	9,863
9.1 Main Activity Producer	-45,022	-456	-	-468	-	-	-	-	-307
9.2 Autoproducers	-	-23	-	-210	-	-	-	-	-210
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-32,713	32,965	13,574	392	4,380	86	10,380
9.5 Coal Transformation	-3,738	2,540	-	-21	-	-	-	-	-
9.6 Other Transformation	-	-	104	-	-	-	-	-	-
10. Loss & Own Use	-	-629	-131	-2,316	-	-	-	-9	-943
11. Discrepancy	-2,234	-461	3,116	-10,790	-754	-375	-725	-58	-865
12 Total Final Energy Consumption	2,773	976	-	37,517	15,037	18	2,063	15	13,972
13 Industry Sector	2,664	952	-	4,469	-	18	-	-	3,258
14 Transport Sector	92	-	-	26,873	14,927	-	2,063	-	8,364
15 Other Sector	18	24	-	2,843	110	-	-	10	2,350
15.1 Residential & Commercial	18	24	-	897	-	-	-	9	554
15.2 Agriculture	-	-	-	1,945	110	-	-	1	1,797
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	-	3,332	-	-	-	5	-

## Energy Balance Table of Australia in 2007

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	217,133	-	25,301	71	-	-	-	-	71
2 Import	-	27	20,740	12,730	2,268	-	881	-	6,412
3 Export	-158,314	-	-15,103	-1,605	-662	-	-101	-	-396
4 International Marine Bunkers	-	-	-	-829	-	-	-	-	-66
5 International Aviation Bunkers	-	-	-	-3,080	-	-	-3,080	-	-
6 Stock Changes	-6,401	-506	-287	-164	-29	-	45	3	-79
7 Total Primary Energy Supply	52,419	-479	30,650	7,122	1,578	-	-2,255	3	5,942
8 Transfers	-	-	-989	8,525	-	-	-	-	-
9 Total Transformation Sector	-48,521	2,122	-34,854	32,762	14,001	218	4,505	73	9,934
9.1 Main Activity Producer	-44,782	-391	-	-671	-	-	-	-	-517
9.2 Autoproducers	-	-22	-	-	-	-	-	-	-
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-34,941	33,454	14,001	218	4,505	73	10,451
9.5 Coal Transformation	-3,739	2,534	-	-21	-	-	-	-	-
9.6 Other Transformation	-	-	87	-	-	-	-	-	-
10. Loss & Own Use	-	-629	-130	-2,405	-	-	-	-6	-943
11. Discrepancy	-1,380	-77	5,323	-8,612	-475	-200	-409	-54	-914
12 Total Final Energy Consumption	2,518	937	-	37,392	15,104	18	1,840	15	14,019
13 Industry Sector	2,412	910	-	4,376	-	18	-	1	3,258
14 Transport Sector	85	-	-	26,856	14,996	-	1,840	-	8,411
15 Other Sector	21	27	-	2,819	108	-	-	11	2,350
15.1 Residential & Commercial	21	27	-	877	-	-	-	11	554
15.2 Agriculture	-	-	-	1,942	108	-	-	-	1,797
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	-	3,342	-	-	-	3	-

Energy Balance Table of Australia in 2008 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	39,391	1,037	-	509	5,479	-	-	289,137
1,567	562	-	-	1,542	4,346	-	-	-	-	-	-	40,075
-247	-	-	-	-187	-17,854	-	-	-	-	-	-	-198,327
-887	-	-	-	-	-	-	-	-	-	-	-	-953
-	-	-	-	-	-	-	-	-	-	-	-	-3,053
7	-18	-	-	161	-	-	-	-	-	-	-	-751
440	543	-	-	1,515	25,883	1,037	-	509	5,479	-	-	126,129
-	401	-	442	8,475	-	-	-	-	-	-	-	8,530
819	910	936	-	1,305	-9,637	-1,037	-	-353	-1,363	22,123	-	-37,307
-161	-	-	-	-	-6,100	-1,037	-	-340	-470	20,862	-	-33,030
-	-	-	-	-	-3,185	-	-	-13	-789	1,261	-	-2,959
-	-	-	-	-	-270	-	-	-	-	-	-	-270
1,001	910	936	-	1,305	-	-	-	-	-	-	-	253
-21	-	-	-	-	-82	-	-	-	-	-	-	-1,301
-	-	-	-	-	-	-	-	-	-104	-	-	0
-69	-51	-862	-	-381	-7,622	-	-	-	-	-3,879	-	-14,576
-156	450	-0	-21	-8,287	4,025	-	-	-	0	0	-	-6,344
1,034	2,254	75	421	2,628	12,649	-	-	156	4,116	18,244	-	76,431
872	243	75	-	4	7,678	-	-	-	2,680	8,159	-	26,601
159	1,360	-	-	-	403	-	-	-	-	242	-	27,610
3	369	-	-	-	3,877	-	-	156	1,436	9,844	-	18,197
3	332	-	-	-	3,874	-	-	156	1,436	9,683	-	16,088
-	38	-	-	-	3	-	-	-	-	161	-	2,109
-	-	-	-	-	-	-	-	-	-	-	-	-
-	281	-	421	2,624	691	-	-	-	-	-	-	4,023

Energy Balance Table of Australia in 2007 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	38,973	1,248	-	379	5,329	-	-	288,435
1,311	434	-	-	1,424	4,598	-	-	-	-	-	-	38,095
-199	-	-	-	-248	-17,774	-	-	-	-	-	-	-192,796
-763	-	-	-	-	-	-	-	-	-	-	-	-829
-	-	-	-	-	-	-	-	-	-	-	-	-3,080
66	14	-	-	-184	-	-	-	-	-	-	-	-7,359
414	448	-	-	992	25,797	1,248	-	379	5,329	-	-	122,466
-	614	-	440	7,471	-	-	-	-	-	-	-	7,536
794	828	978	-	1,432	-8,174	-1,248	-	-236	-1,228	21,591	-	-37,786
-154	-	-	-	-	-4,987	-1,248	-	-225	-363	20,478	-	-32,188
-	-	-	-	-	-2,841	-	-	-11	-778	1,113	-	-2,539
-	-	-	-	-	-264	-	-	-	-	-	-	-264
969	828	978	-	1,432	-	-	-	-	-	-	-	-1,487
-21	-	-	-	-	-82	-	-	-	-	-	-	-1,309
-	-	-	-	-	-	-	-	-	-87	-	-	0
-76	-48	-912	-	-420	-7,911	-	-	-	-	-3,822	-	-14,897
-157	515	-0	-22	-6,895	2,932	-	-	-	0	-	-	-1,814
975	2,357	65	418	2,581	12,644	-	-	143	4,102	17,769	-	75,505
804	226	65	-	4	7,805	-	-	-	2,630	7,977	-	26,109
168	1,441	-	-	-	395	-	-	-	-	228	-	27,564
3	346	-	-	-	3,819	-	-	143	1,471	9,564	-	17,865
3	309	-	-	-	3,816	-	-	143	1,471	9,405	-	15,760
-	38	-	-	-	3	-	-	-	-	160	-	2,104
-	-	-	-	-	-	-	-	-	-	-	-	-
-	344	-	418	2,577	626	-	-	-	-	-	-	3,967

## Major Energy Indicators of Australia

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	69,279	86,847	92,880	107,967	115,885	117,828	122,466	126,129
Indigenous Production	86,084	158,144	187,221	233,412	267,916	268,110	288,435	289,137
Import	13,902	14,398	20,848	26,382	31,095	33,198	38,095	40,075
Export	-32,208	-78,900	-110,068	-153,518	-178,900	-178,921	-192,796	-198,327
Final Energy Consumption	51,533	56,459	62,081	69,566	74,952	74,221	75,505	76,431
Industry	23,239	19,121	20,866	23,777	25,897	25,929	26,109	26,601
Transport	17,547	21,111	23,080	25,658	27,315	27,091	27,564	27,610
Residential & Commercial	8,494	10,960	12,449	14,102	15,434	15,458	15,760	16,088
Agriculture	1,075	1,301	1,451	1,607	2,237	2,113	2,104	2,109
Non-energy	1,176	3,955	4,228	4,423	4,070	3,629	3,967	4,023
<b>Coal, Coal Products</b>								
Primary Energy Supply	26,403	34,980	37,549	48,156	50,750	50,916	51,939	53,771
Indigenous Production	51,868	106,103	127,823	164,578	201,952	201,305	217,133	218,816
Import	-	-	-	-	-	31	27	4
Export	-28,645	-67,248	-88,584	-121,425	-150,297	-149,984	-158,314	-163,964
Transformation Sector	-19,165	-30,398	-32,627	-43,637	-46,621	-46,734	-46,399	-46,698
Power Generation	-19,184	-28,773	-30,935	-42,200	-44,765	-45,456	-45,194	-45,500
Final Energy Consumption	7,328	4,204	4,287	4,115	3,542	3,536	3,455	3,749
Industry	7,107	3,993	4,113	3,979	3,377	3,402	3,322	3,616
Transport	4	72	86	88	92	79	85	92
Residential & Commercial	217	139	88	47	72	55	48	41
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	29,632	33,074	35,286	36,577	30,792	30,407	30,650	30,412
Indigenous Production	19,906	29,026	28,364	33,910	24,129	23,079	25,301	23,859
Import	9,891	10,210	17,597	22,314	21,377	20,002	20,740	21,339
Export	-107	-5,856	-10,372	-19,365	-14,828	-12,550	-15,103	-14,992
Transformation Sector	-29,788	-29,442	-33,316	-37,085	-34,075	-33,303	-34,854	-32,608
Petroleum Refineries	-29,788	-29,442	-33,316	-37,085	-34,086	-33,355	-34,941	-32,713
<b>Petroleum Products</b>								
Primary Energy Supply	805	-1,873	-2,732	-2,425	4,768	6,206	7,122	9,038
Import	4,012	4,188	3,251	4,068	9,719	11,959	12,730	14,386
Export	-3,456	-3,447	-2,857	-3,463	-1,515	-1,776	-1,605	-1,516
Transformation Sector	29,314	31,098	35,501	37,709	33,898	31,163	32,762	32,266
Power Generation	-1,132	-946	-793	-525	-479	-593	-671	-678
Petroleum Refineries	30,525	32,061	36,320	38,258	34,399	31,778	33,454	32,965
Final Energy Consumption	27,930	28,995	31,393	34,714	36,571	36,025	37,392	37,517
Industry	7,003	2,885	2,951	3,548	3,721	3,828	4,376	4,469
Transport	17,466	20,874	22,635	25,064	26,655	26,408	26,856	26,873
Residential & Commercial	1,327	623	645	663	775	831	877	897
Agriculture	956	1,096	1,227	1,358	2,083	1,952	1,942	1,945
Non-energy	1,176	3,506	3,927	4,082	3,338	3,006	3,342	3,332
<b>Natural Gas</b>								
Primary Energy Supply	7,794	15,344	17,029	19,095	22,966	23,526	25,797	25,883
Indigenous Production	7,794	17,693	25,285	28,360	35,226	36,933	38,973	39,391
Import	-	-	-	-	-	1,204	4,598	4,346
Export	-	-2,350	-8,255	-9,265	-12,260	-14,611	-17,774	-17,854
Transformation Sector	-1,622	-4,092	-4,103	-4,428	-8,277	-7,958	-8,174	-9,637
Power Generation	-1,642	-3,471	-3,562	-4,061	-7,864	-7,551	-7,828	-9,285
Final Energy Consumption	5,851	8,810	10,180	11,459	13,444	13,157	12,644	12,649
Industry	4,366	5,666	6,472	7,165	8,408	8,298	7,805	7,678
Transport	-	10	188	304	353	379	395	403
Residential & Commercial	1,485	2,684	3,218	3,648	3,949	3,856	3,816	3,874
Agriculture	-	1	1	1	2	2	3	3
Non-energy	-	449	301	341	731	623	626	691
<b>Electricity</b>								
Power Generation	8,261	13,332	14,892	18,080	21,119	21,271	21,591	22,123
Thermal	7,076	11,343	12,901	15,938	18,581	18,610	18,965	19,474
Hydro	1,185	1,280	1,397	1,438	1,343	1,378	1,248	1,037
Nuclear	-	-	-	-	-	-	-	-
Others	-	709	594	703	1,196	1,283	1,377	1,612
Final Energy Consumption	6,966	11,112	12,460	14,857	17,334	17,442	17,769	18,244
Industry	2,948	5,090	5,599	6,624	7,839	7,830	7,977	8,159
Transport	77	155	171	201	215	225	228	242
Residential & Commercial	3,821	5,663	6,467	7,784	9,128	9,227	9,405	9,683
Agriculture	119	204	224	248	152	160	160	161

## Major Economic Indicators of Australia

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	14.69	17.07	18.07	19.15	20.39	20.70	21.07	21.43
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	207.36	288.64	323.15	399.61	466.36	480.35	496.20	514.46
Real Term (Billions of 2000 Price and 2000 PPP)	272.65	379.51	424.89	525.42	613.17	631.57	652.41	676.42
Nominal (Billions of Current USD)	170.20	318.93	384.09	399.61	738.81	787.42	947.37	1,033.69
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	14,114	16,914	17,881	20,864	22,866	23,207	23,547	24,004
Real Term (2000 Price and 2000 PPP)	18,557	22,239	23,511	27,433	30,065	30,514	30,960	31,562
Nominal (Current USD)	11,585	18,689	21,253	20,864	36,225	38,044	44,957	48,231
Nominal GDP & its Components (Billions of Current AUD) *1								
Gross Domestic Product	149.48	408.57	518.14	689.26	967.45	1,045.67	1,132.17	1,232.34
Household Final Consumption Expenditure, etc.	75.29	224.10	288.52	378.95	521.03	547.46	584.91	627.01
General Government Final Consumption Expenditure	27.13	75.58	95.01	125.18	173.14	186.21	200.13	N.A.
Gross Fixed Capital Formation	41.58	96.43	118.40	151.47	260.76	284.71	320.05	N.A.
Stock Change	0.45	-1.36	-0.04	0.86	0.61	2.65	4.69	N.A.
Exports of Goods and Services	22.61	66.25	99.48	156.16	196.27	215.70	234.86	N.A.
Imports of Goods and Services	25.53	66.95	101.41	154.33	210.79	228.45	254.78	N.A.
Real GDP & its Components (Billions of 2000 AUD) *1								
Gross Domestic Product	473.14	658.58	737.34	911.80	1,064.08	1,096.00	1,132.17	1,173.84
Household Final Consumption Expenditure, etc.	243.80	332.36	370.42	450.89	548.02	562.23	584.91	606.55
General Government Final Consumption Expenditure	83.74	121.74	136.57	162.45	189.64	194.36	200.13	207.01
Gross Fixed Capital Formation	95.07	145.76	156.16	213.62	278.78	303.44	320.05	351.74
Stock Change	1.95	6.93	3.48	2.76	6.10	2.30	2.65	4.67
Exports of Goods and Services	57.71	93.64	140.58	198.38	221.48	226.36	234.86	244.42
Imports of Goods and Services	41.22	78.91	102.06	151.14	217.61	233.36	254.78	287.55
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	3.6	3.1	2.5	3.1	2.9	2.9	2.3	2.4
Industry	28.8	28.1	27.2	25.8	24.6	24.4	24.6	24.6
Services, etc.	50.3	53.3	55.1	56.2	57.7	57.9	58.3	58.5
Industrial Production Index (2005=100) *2	56.4	76.5	80.6	95.6	100.0	99.6	101.0	102.9
External Trade (Billions of Current USD) *1								
Exports, f.o.b.	21.944	39.752	53.111	63.870	106.097	123.437	141.358	187.428
Imports, c.i.f.	22.399	41.985	61.283	71.529	125.281	139.253	165.336	200.272
Balance of Payments (Billions of Current USD) *2								
Trade Balance	1.371	0.358	-4.223	-4.862	-13.372	-9.596	-17.784	-4.915
Current Account	-4.447	-15.948	-19.277	-14.763	-41.032	-41.504	-58.032	-47.786
Overall Balance	0.448	1.740	0.396	-1.365	7.256	9.722	-35.148	3.692
Foreign Exchange Rate (AUD/USD) *1	0.8782	1.2811	1.3490	1.7248	1.3095	1.3280	1.1951	1.1922
PPP conversion factor, GDP (AUD/International Dollar) *1	0.9931	1.3814	1.3222	1.3118	1.3884	1.4076	1.4229	1.4826
Price Indices								
GDP Deflator (2007=100) *3	31.6	62.0	70.3	75.6	90.9	95.4	100.0	105.0
Manufacturing Output Price Index (2005=100) *2	38.8	76.6	84.5	87.5	100.0	107.9	110.5	119.6
Consumer Price Index (2005=100) *2	31.7	69.2	78.3	86.1	100.0	103.5	106.0	110.6
Growth Rate (%) *3								
Real GDP	3.14	3.94	4.33	4.00	2.80	3.00	3.30	3.68
Population	1.23	1.49	1.22	1.20	1.33	1.49	1.81	1.71
Price								
Manufacturing Output Price Index	14.0	6.0	4.2	7.1	6.0	7.9	2.3	8.3
Consumer Price Index	10.1	7.3	4.6	4.5	2.7	3.5	2.3	4.4

Source       \*1 : "World Development Indicators", World Bank  
              \*2 : "International Financial Statistics", International Monetary Fund  
              \*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note         : N.A. means "not available"  
              : AUD means Australian Dollar, USD means United States Dollar  
              : PPP means Purchasing Power Parity



## 3.2 Brunei Darussalam

## Energy Balance Table of Brunei Darussalam in 2008

	1	2	3	4	4.1	4.2	4.3	4.4	4.5
	Coal	Coal Products	Crude Oil & NGL	Petroleum Products	Mogas	Naphtha	Jet Fuel	Kerosene	Diesel Oil
1 Indigenous Production	-	-	9,330	16	-	-	-	-	-
2 Import	-	-	16	48	12	-	-	-	26
3 Export	-	-	-8,460	-	-	-	-	-	-
4 International Marine Bunkers	-	-	-	-	-	-	-	-	-
5 International Aviation Bunkers	-	-	-	-90	-	-	-90	-	-
6 Stock Changes	-	-	-107	3	5	-	-1	-	0
<b>7 Total Primary Energy Supply</b>	-	-	<b>779</b>	<b>-22</b>	<b>17</b>	-	<b>-91</b>	-	<b>27</b>
8 Transfers	-	-	-	-	-	-	-	-	-
9 Total Transformation Sector	-	-	-777	677	206	-	98	-	176
9.1 Main Activity Producer	-	-	-	-8	-	-	-	-	-8
9.2 Autoproducers	-	-	-	-	-	-	-	-	-
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-777	685	206	-	98	-	184
9.5 Coal Transformation	-	-	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-	-	-228	-1	-	-	-1	-1
11. Discrepancy	-	-	-2	33	3	-	-7	4	1
<b>12 Total Final Energy Consumption</b>	-	-	-	<b>460</b>	<b>225</b>	-	-	<b>3</b>	<b>204</b>
13 Industry Sector	-	-	-	70	-	-	-	2	67
14 Transport Sector	-	-	-	363	225	-	-	-	137
15 Other Sector	-	-	-	18	-	-	-	1	0
15.1 Residential & Commercial	-	-	-	17	-	-	-	1	0
15.2 Agriculture	-	-	-	0	-	-	-	-	0
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	-	10	-	-	-	-	-

## Energy Balance Table of Brunei Darussalam in 2007

	1	2	3	4	4.1	4.2	4.3	4.4	4.5
	Coal	Coal Products	Crude Oil & NGL	Petroleum Products	Mogas	Naphtha	Jet Fuel	Kerosene	Diesel Oil
1 Indigenous Production	-	-	9,424	16	-	-	-	-	-
2 Import	-	-	-	8	-	-	-	-	-
3 Export	-	-	-8,704	-	-	-	-	-	-
4 International Marine Bunkers	-	-	-	-	-	-	-	-	-
5 International Aviation Bunkers	-	-	-	-77	-	-	-77	-	-
6 Stock Changes	-	-	40	-1	-2	-	1	-	0
<b>7 Total Primary Energy Supply</b>	-	-	<b>760</b>	<b>-54</b>	<b>-2</b>	-	<b>-76</b>	-	<b>0</b>
8 Transfers	-	-	-	-	-	-	-4	4	-
9 Total Transformation Sector	-	-	-696	644	217	-	82	-	180
9.1 Main Activity Producer	-	-	-	-8	-	-	-	-	-8
9.2 Autoproducers	-	-	-	-	-	-	-	-	-
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-696	652	217	-	82	-	188
9.5 Coal Transformation	-	-	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-	-	-176	-2	-	-1	-	-8
11. Discrepancy	-	-	-63	23	1	-	-1	-0	23
<b>12 Total Final Energy Consumption</b>	-	-	-	<b>436</b>	<b>214</b>	-	-	<b>4</b>	<b>196</b>
13 Industry Sector	-	-	-	54	-	-	-	3	52
14 Transport Sector	-	-	-	357	214	-	-	-	144
15 Other Sector	-	-	-	17	-	-	-	1	0
15.1 Residential & Commercial	-	-	-	17	-	-	-	1	0
15.2 Agriculture	-	-	-	0	-	-	-	-	0
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	-	8	-	-	-	-	-

Energy Balance Table of Brunei Darussalam in 2008 (Continued)

											unit: ktoe	
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	16	-	-	-	11,291	-	-	-	-	-	-	20,637
-	-	-	-	10	-	-	-	-	-	-	-	64
-	-	-	-	-	-8,545	-	-	-	-	-	-	-17,004
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-0	-	-	-2	16	-	-	-	-	-	-	-90
-	-	-	-	-	-	-	-	-	-	-	-	-87
-	16	-	-	9	2,763	-	-	-	-	-	-	3,520
-	-	-	-	-	-	-	-	-	-	-	-	-
83	-	76	-	38	-1,879	-	-	-	-	294	-	-1,685
-	-	-	-	-	-1,013	-	-	-	-	264	-	-757
-	-	-	-	-	-867	-	-	-	-	30	-	-836
-	-	-	-	-	0	-	-	-	-	-	-	0
83	-	76	-	38	-	-	-	-	-	-	-	-92
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-83	-	-97	-	-46	-854	-	-	-	-	-24	-	-1,106
-	0	21	-	11	-2	-	-	-	-	0	-	29
-	16	-	-	12	28	-	-	-	-	270	-	759
-	-	-	-	2	-	-	-	-	-	47	-	117
-	-	-	-	1	-	-	-	-	-	-	-	363
-	16	-	-	-	28	-	-	-	-	224	-	269
-	16	-	-	-	28	-	-	-	-	224	-	269
-	-	-	-	-	-	-	-	-	-	-	-	0
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	10	-	-	-	-	-	-	-	10

Energy Balance Table of Brunei Darussalam in 2007 (Continued)

											unit: ktoe	
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	16	-	-	-	11,394	-	-	-	-	-	-	20,834
-	-	-	-	8	-	-	-	-	-	-	-	8
-	-	-	-	-	-8,240	-	-	-	-	-	-	-16,944
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-77
-	-0	-	-	0	12	-	-	-	-	-	-	51
-	16	-	-	8	3,166	-	-	-	-	-	-	3,872
-	-	-	-	-	-	-	-	-	-	-	-	-
92	-	73	-	-	-1,984	-	-	-	-	292	-	-1,745
-	-	-	-	-	-1,030	-	-	-	-	262	-	-776
-	-	-	-	-	-863	-	-	-	-	30	-	-833
-	-	-	-	-	-92	-	-	-	-	-	-	-92
92	-	73	-	-	-	-	-	-	-	-	-	-45
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-92	-	-73	-	-	-539	-	-	-	-	-24	-	-740
-	-1	-	-	-1	-614	-	-	-	-	0	-	-655
-	15	-	-	8	29	-	-	-	-	268	-	733
-	-	-	-	-	-	-	-	-	-	48	-	102
-	-	-	-	-	-	-	-	-	-	-	-	357
-	15	-	-	-	29	-	-	-	-	220	-	265
-	15	-	-	-	29	-	-	-	-	220	-	265
-	-	-	-	-	-	-	-	-	-	-	-	0
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	8	-	-	-	-	-	-	-	8

## Major Energy Indicators of Brunei Darussalam

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	3,224	2,033	2,641	2,635	2,123	3,960	3,872	3,520
Indigenous Production	20,664	15,259	17,395	17,411	21,630	23,038	20,834	20,637
Import	215	80	36	22	43	13	8	64
Export	-17,589	-12,977	-14,678	-14,845	-19,362	-19,073	-16,944	-17,004
Final Energy Consumption	220	379	562	570	577	707	733	759
Industry	39	53	109	91	96	104	102	117
Transport	144	217	259	259	219	350	357	363
Residential & Commercial	37	108	150	198	246	28	265	269
Agriculture	-	-	-	0	0	0	0	0
Non-energy	-	-	42	18	17	14	8	10
<b>Coal, Coal Products</b>								
Primary Energy Supply	-	-	-	-	-	-	-	-
Indigenous Production	-	-	-	-	-	-	-	-
Import	-	-	-	-	-	-	-	-
Export	-	-	-	-	-	-	-	-
Transformation Sector	-	-	-	-	-	-	-	-
Power Generation	-	-	-	-	-	-	-	-
Final Energy Consumption	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	-	-	-	-	-	-	-	-
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	167	38	534	566	697	749	760	779
Indigenous Production	12,121	7,677	8,465	9,006	10,487	11,208	9,424	9,330
Import	-	76	-	-	-	-	-	16
Export	-11,919	-7,424	-7,900	-8,541	-9,806	-10,536	-8,704	-8,460
Transformation Sector	-	65	-534	-573	-706	-735	-696	-777
Petroleum Refineries	-	-321	-534	-573	-706	-735	-696	-777
<b>Petroleum Products</b>								
Primary Energy Supply	194	-38	-31	-43	-161	-57	-54	-22
Import	215	4	36	22	43	13	8	48
Export	-	-3	-0	-1	-	-	-	-
Transformation Sector	-	314	540	573	632	631	644	677
Power Generation	-	-3	-4	-5	-8	-8	-8	-8
Petroleum Refineries	-	290	533	566	639	639	652	685
Final Energy Consumption	194	271	380	335	300	436	436	460
Industry	31	17	65	40	47	56	54	70
Transport	144	217	259	259	219	350	357	363
Residential & Commercial	19	37	13	14	17	15	17	17
Agriculture	-	-	-	0	0	0	0	0
Non-energy	-	-	42	18	17	14	8	10
<b>Natural Gas</b>								
Primary Energy Supply	2,863	2,033	2,138	2,113	1,587	3,269	3,166	2,763
Indigenous Production	8,543	7,583	8,931	8,405	11,143	11,816	11,394	11,291
Import	-	-	-	-	-	-	-	-
Export	-5,670	-5,549	-6,778	-6,302	-9,556	-8,537	-8,240	-8,545
Transformation Sector	-1,726	-1,226	-1,886	-1,378	-1,078	-2,002	-1,984	-1,879
Power Generation	-733	-517	-1,312	-1,378	-1,078	-1,923	-1,893	-1,879
Final Energy Consumption	-	25	33	22	13	13	29	28
Industry	-	-	-	-	-	-	-	-
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	-	25	33	22	13	13	29	28
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Electricity</b>								
Power Generation	33	101	188	244	281	284	292	294
Thermal	33	101	188	244	281	284	292	294
Hydro	-	-	-	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-
Final Energy Consumption	26	82	149	213	264	258	268	270
Industry	8	36	44	51	49	48	48	47
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	18	46	104	161	215	-	220	224
Agriculture	-	-	-	-	-	-	-	-

## Major Economic Indicators of Brunei Darussalam

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	0.19	0.26	0.29	0.33	0.37	0.38	0.38	0.39
Gross Domestic Product *4								
Real Term (Billions of 2000 Price and 2000 USD)	5.77	4.81	5.62	6.00	6.65	6.94	6.99	N.A.
Real Term (Billions of 2000 Price and 2000 PPP)	13.49	11.24	13.13	14.02	15.54	16.22	16.32	N.A.
Nominal (Billions of Current USD)	4.93	3.52	4.73	6.00	9.53	11.47	12.28	N.A.
GDP per Capita *4								
Real Term (2000 Price and 2000 USD)	29,916	18,714	19,044	17,996	17,968	18,392	18,150	N.A.
Real Term (2000 Price and 2000 PPP)	69,908	43,730	44,503	42,054	41,988	42,979	42,413	N.A.
Nominal (Current USD)	25,534	13,698	16,050	17,996	25,755	30,390	31,917	N.A.
Nominal GDP & its Components (Billions of Current BND) *1								
Gross Domestic Product	10.55	6.38	6.71	10.35	15.86	18.23	18.51	N.A.
Household Final Consumption Expenditure, etc.	0.74	1.69	2.46	2.57	3.56	3.61	3.72	N.A.
General Government Final Consumption Expenditure	0.88	1.40	1.80	2.67	2.92	3.29	3.84	N.A.
Gross Fixed Capital Formation	N.A.	1.19	2.46	1.34	1.80	1.91	2.40	N.A.
Stock Change	0.00	0.00	0.00	0.01	0.00	-0.01	0.00	N.A.
Exports of Goods and Services	9.85	3.94	4.01	6.97	11.13	13.09	12.52	N.A.
Imports of Goods and Services	1.23	2.38	3.75	3.71	4.33	4.60	5.15	N.A.
Real GDP & its Components (Billions of 2000 BND) *1								
Gross Domestic Product	9.96	8.29	9.68	10.35	11.46	11.97	12.04	N.A.
Household Final Consumption Expenditure, etc.	N.A.	2.02	2.51	2.57	3.49	3.62	3.69	N.A.
General Government Final Consumption Expenditure	N.A.	2.11	2.45	2.67	2.87	3.24	3.75	N.A.
Gross Fixed Capital Formation	N.A.	1.55	2.35	1.34	1.72	1.74	2.20	N.A.
Stock Change	N.A.	0.00	0.00	0.01	0.00	0.00	0.00	N.A.
Exports of Goods and Services	N.A.	4.91	6.62	6.97	7.49	7.77	7.01	N.A.
Imports of Goods and Services	N.A.	2.98	4.69	3.71	4.25	4.43	5.01	N.A.
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	N.A.	0.8	0.8	1.0	1.3	1.1	1.1	N.A.
Industry	N.A.	63.3	65.0	63.7	61.2	60.3	56.6	N.A.
Services, etc.	N.A.	35.9	34.2	35.3	37.5	38.6	42.4	N.A.
Industrial Production Index (2000=100)	N.A.							
External Trade (Billions of Current USD) *1								
Exports, f.o.b.	4.581	2.213	2.402	3.903	6.249	7.636	7.668	11.100
Imports, c.i.f.	0.572	1.001	2.091	1.107	1.491	1.676	2.101	2.520
Balance of Payments (Billions of Current USD) *2								
Trade Balance	N.A.	N.A.	N.A.	N.A.	4.829	6.039	5.700	7.840
Current Account	N.A.	N.A.	N.A.	N.A.	4.033	5.229	4.828	6.939
Overall Balance	N.A.	N.A.	N.A.	N.A.	-0.063	0.029	0.142	0.045
Foreign Exchange Rate (BND/USD) *1	2.1412	1.8125	1.4174	1.7240	1.6644	1.5889	1.5071	1.4172
Purchasing Power Parity (BND/International Dollar) *1	1.4484	0.6958	0.5551	0.7377	0.9031	0.9628	0.9465	N.A.
Price Indices								
GDP Deflator (2000=100) *4	106.0	77.0	69.3	100.0	138.4	152.3	153.7	N.A.
Wholesale Price Index (2000=100) *2	N.A.							
Consumer Price Index (2005=100) *2	61.1	81.7	95.2	99.4	100.0	100.1	100.4	103.1
Growth Rate (%) *4								
Real GDP	-7.00	1.09	4.48	2.85	0.39	4.40	0.62	N.A.
Population	3.35	2.87	2.70	2.32	2.01	1.99	1.96	1.93
Price								
Wholesale Price Index	N.A.							
Consumer Price Index	N.A.	2.1	6.0	1.6	1.2	0.1	0.3	2.7

Source \*1 : "World Development Indicators", World Bank

\*2 : "International Financial Statistics", International Monetary Fund

\*3 : "Brunei Darussalam Statistical Yearbook", Statistical Division, Department of Economic Planning and Development, Ministry of Finance

\*4 : Calculated from \*1, \*2 and \*3 by the Coordinating Agency

Note : N.A. means "not available"

: BND means Brunei Dollar, USD means United States Dollar

: PPP means Purchasing Power Parity



### 3.3 Canada

## Energy Balance Table of Canada in 2008

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	33,640	-	160,998	-	-	-	-	-	-
2 Import	11,026	905	42,554	15,786	4,292	64	2,257	207	3,373
3 Export	-19,442	-79	-99,188	-21,862	-5,915	-260	-354	-54	-7,902
4 International Marine Bunkers	-	-	-	-523	-	-	-	-	-33
5 International Aviation Bunkers	-	-	-	-559	-	-	-559	-	-
6 Stock Changes	26	190	-39	-171	172	59	13	-13	-161
7 Total Primary Energy Supply	25,251	1,017	104,325	-7,330	-1,451	-136	1,357	140	-4,722
8 Transfers	-	-	-7,830	15,641	960	721	-328	-1,412	236
9 Total Transformation Sector	-25,081	1,087	-95,418	100,284	33,424	3,750	4,383	1,517	31,274
9.1 Main Activity Producer	-22,196	-	-	-2,464	-	-	-	-	-68
9.2 Autoproducers	-5	-18	-	-71	-	-	-	-	-71
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-96,107	102,818	33,424	3,750	4,383	1,517	31,413
9.5 Coal Transformation	-2,880	1,104	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	689	-	-	-	-	-	-
10. Loss & Own Use	-66	-	-	-9,088	-1	-3	-	-	-14
11. Discrepancy	2,202	-691	-1,077	-8,754	-16	-607	-115	32	1,099
12 Total Final Energy Consumption	2,306	1,412	-	90,753	32,915	3,724	5,296	277	27,872
13 Industry Sector	2,253	1,412	-	5,938	-	-	-	19	3,551
14 Transport Sector	-	-	-	53,655	32,915	-	5,296	-	14,215
15 Other Sector	53	-	-	12,762	-	-	-	258	10,106
15.1 Residential & Commercial	53	-	-	10,240	-	-	-	256	7,835
15.2 Agriculture	-	-	-	2,522	-	-	-	2	2,271
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	-	18,398	-	3,724	-	-	-

## Energy Balance Table of Canada in 2007

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	34,276	-	162,519	-	-	-	-	-	-
2 Import	10,001	495	43,239	13,306	3,301	81	2,459	157	1,555
3 Export	-18,288	-116	-97,872	-21,687	-6,729	-370	-389	-77	-7,170
4 International Marine Bunkers	-	-	-	-633	-	-	-	-	-41
5 International Aviation Bunkers	-	-	-	-524	-	-	-524	-	-
6 Stock Changes	75	-29	2,006	-616	-66	40	-20	26	-8
7 Total Primary Energy Supply	26,063	350	109,891	-10,155	-3,495	-249	1,526	106	-5,664
8 Transfers	-	-	-8,380	17,416	763	736	-392	-1,502	1,718
9 Total Transformation Sector	-26,444	1,109	-105,084	104,229	36,102	4,049	4,302	1,615	31,644
9.1 Main Activity Producer	-23,527	-	-	-2,791	-	-	-	-	-126
9.2 Autoproducers	-5	-24	-	-	-	-	-	-	-
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-105,746	107,020	36,102	4,049	4,302	1,615	31,770
9.5 Coal Transformation	-2,912	1,133	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	662	-	-	-	-	-	-
10. Loss & Own Use	-43	-	-	-9,607	-1	-5	-1	-	-31
11. Discrepancy	2,922	-57	3,573	-9,655	-114	-732	-97	26	284
12 Total Final Energy Consumption	2,499	1,402	-	92,228	33,255	3,798	5,337	245	27,951
13 Industry Sector	2,468	1,402	-	6,392	-	-	-	25	3,636
14 Transport Sector	-	-	-	53,628	33,255	-	5,337	-	13,839
15 Other Sector	30	-	-	13,049	-	-	-	220	10,476
15.1 Residential & Commercial	30	-	-	10,516	-	-	-	217	8,216
15.2 Agriculture	-	-	-	2,533	-	-	-	3	2,260
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	-	19,159	-	3,798	-	-	-

Energy Balance Table of Canada in 2008 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	143,807	32,902	24,484	331	11,836	-	-	407,999
1,617	138	-	-	3,838	12,830	-	-	-	286	1,378	-	84,766
-4,163	-387	-	-	-2,826	-84,712	-	-	-	-9	-3,707	-	-228,998
-491	-	-	-	-	-	-	-	-	-	-	-	-523
-	-	-	-	-	-	-	-	-	-	-	-	-559
68	-34	-	-	-276	5,145	-	-	-	-	-	-	5,151
-2,969	-284	-	-	735	77,071	32,902	24,484	331	12,114	-2,330	-	267,835
1,359	2,465	-	5,445	6,196	-	-	-	-	-	-	-	7,811
6,395	2,057	6,089	-	11,396	-9,907	-32,902	-24,484	-331	-2,682	56,014	805	-32,615
-1,162	-	-213	-	-1,021	-5,718	-30,015	-24,484	-331	-11	51,388	762	-33,068
-	-	-	-	-	-1,904	-2,887	-	-	-1,983	4,626	43	-2,199
-	-	-	-	-	-1,711	-	-	-	-	-	-	-1,711
7,557	2,057	6,301	-	12,417	-	-	-	-	-	-	-	6,711
-	-	-	-	-	-	-	-	-	-	-	-	-1,776
-	-	-	-	-	-574	-	-	-	-688	-	-	-573
-516	-33	-6,089	-	-2,432	-15,447	-	-	-	-1	-8,990	-	-33,592
-810	108	-	-	-8,445	1,227	-	-	-	0	-79	-44	-7,217
3,459	4,314	-	5,445	7,450	52,943	-	-	-	9,431	44,615	761	202,222
1,391	973	-	-	5	20,776	-	-	-	7,573	16,204	669	54,826
943	285	-	-	-	3,199	-	-	-	-	361	-	57,215
1,124	1,273	-	-	-	25,852	-	-	-	1,858	28,050	92	68,667
1,053	1,096	-	-	-	25,365	-	-	-	1,858	27,221	91	64,828
71	177	-	-	-	487	-	-	-	0	829	1	3,839
-	-	-	-	-	-	-	-	-	-	-	-	-
-	1,784	-	5,445	7,445	3,115	-	-	-	-	-	-	21,514

Energy Balance Table of Canada in 2007 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	151,404	31,889	24,364	262	11,827	-	-	416,542
1,773	6	-	-	3,975	10,798	-	-	-	257	1,667	-	79,763
-4,040	-354	-	-	-2,559	-88,274	-	-	-	-10	-4,328	-	-230,575
-592	-	-	-	-	-	-	-	-	-	-	-	-633
-	-	-	-	-	-	-	-	-	-	-	-	-524
-9	-5	-	-	-574	6,690	-	-	-	-	-	-	8,125
-2,867	-352	-	-	842	80,619	31,889	24,364	262	12,075	-2,662	-	272,697
293	2,294	-	6,173	7,333	-	-	-	-	-	-	-	9,035
6,597	2,122	6,363	-	11,436	-10,952	-31,889	-24,364	-262	-2,654	55,221	847	-40,243
-1,476	-	-298	-	-891	-6,810	-29,343	-24,364	-262	-11	50,929	804	-35,375
-	-	-	-	-	-1,853	-2,546	-	-	-1,983	4,292	43	-2,076
-	-	-	-	-	-1,720	-	-	-	-	-	-	-1,720
8,072	2,122	6,661	-	12,328	-	-	-	-	-	-	-	1,274
-	-	-	-	-	-	-	-	-	-	-	-	-1,779
-	-	-	-	-	-569	-	-	-	-660	-	-	-567
-509	-26	-6,362	-	-2,672	-15,275	-	-	-	-1	-9,535	-1	-34,462
326	177	-1	-	-9,525	1,250	0	-	-	0	234	1	-1,731
3,840	4,215	-	6,173	7,414	55,642	-	-	-	9,420	43,258	847	205,296
1,770	938	-	-	24	22,700	-	-	-	7,562	16,605	711	57,839
929	268	-	-	-	4,143	-	-	-	-	348	-	58,119
1,141	1,212	-	-	-	25,457	-	-	-	1,858	26,306	136	66,837
1,049	1,035	-	-	-	24,978	-	-	-	1,858	25,497	91	62,970
92	177	-	-	-	479	-	-	-	0	795	1	3,809
-	-	-	-	-	-	-	-	-	-	14	44	58
-	1,797	-	6,173	7,391	3,341	-	-	-	-	-	-	22,501

## Major Energy Indicators of Canada

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	194,245	208,687	231,907	252,364	272,275	269,859	272,697	267,835
Indigenous Production	207,701	273,837	349,951	373,844	401,579	411,226	416,542	407,999
Import	41,540	46,403	45,263	72,052	82,009	79,911	79,763	84,766
Export	-52,494	-105,714	-164,902	-199,686	-215,691	-220,442	-230,575	-228,998
Final Energy Consumption	156,724	158,963	173,621	189,200	202,936	196,426	205,296	202,222
Industry	61,067	47,276	50,113	54,686	57,547	54,343	57,839	54,826
Transport	45,020	43,122	47,759	52,231	55,774	55,466	58,119	57,215
Residential & Commercial	48,190	50,564	53,988	58,293	62,429	59,548	62,970	64,828
Agriculture	2,431	3,247	3,834	4,200	3,570	3,613	3,809	3,839
Non-energy	12	14,697	17,867	19,731	23,561	23,406	22,501	21,514
<b>Coal, Coal Products</b>								
Primary Energy Supply	21,293	24,276	25,318	31,661	28,829	28,600	26,413	26,268
Indigenous Production	20,204	37,927	40,846	34,407	31,865	32,350	34,276	33,640
Import	10,808	9,547	6,942	15,048	11,778	12,691	10,496	11,932
Export	-10,203	-21,442	-23,589	-19,269	-16,854	-16,846	-18,404	-19,520
Transformation Sector	-16,316	-21,399	-22,420	-28,643	-25,619	-25,071	-25,336	-23,994
Power Generation	-14,797	-19,972	-20,791	-26,964	-24,005	-23,337	-23,557	-22,218
Final Energy Consumption	5,657	2,924	2,664	2,939	3,066	3,101	3,900	3,718
Industry	5,554	2,872	2,609	2,902	3,031	3,062	3,870	3,665
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	103	51	55	37	35	39	30	53
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	97,222	83,138	84,621	96,847	106,410	103,670	109,891	104,325
Indigenous Production	85,309	94,488	113,878	128,871	148,012	155,932	162,519	160,998
Import	28,162	27,134	30,484	46,942	46,637	42,841	43,239	42,554
Export	-15,229	-37,811	-60,518	-78,446	-85,864	-95,276	-97,872	-99,188
Transformation Sector	-96,888	-85,818	-82,928	-94,873	-99,073	-97,940	-105,084	-95,418
Petroleum Refineries	-96,888	-85,818	-82,928	-95,007	-99,243	-98,078	-105,746	-96,107
<b>Petroleum Products</b>								
Primary Energy Supply	-6,363	-6,283	-6,416	-8,855	-9,202	-8,462	-10,155	-7,330
Import	2,314	7,673	6,647	7,362	14,019	14,398	13,306	15,786
Export	-6,408	-11,857	-12,332	-14,895	-21,818	-20,829	-21,687	-21,862
Transformation Sector	92,316	83,119	83,886	93,681	101,920	101,298	104,229	100,284
Power Generation	-2,998	-3,532	-2,267	-2,853	-3,200	-2,349	-2,791	-2,535
Petroleum Refineries	95,314	86,651	86,154	96,534	105,120	103,648	107,020	102,818
Final Energy Consumption	81,315	68,787	72,434	81,000	93,328	89,668	92,228	90,753
Industry	20,046	6,787	5,751	6,457	8,832	6,019	6,392	5,938
Transport	43,191	39,944	42,369	47,084	51,109	50,986	53,628	53,655
Residential & Commercial	16,583	8,736	8,061	9,027	10,959	10,309	10,516	10,240
Agriculture	1,478	2,006	2,532	2,787	2,262	2,324	2,533	2,522
Non-energy	12	11,315	13,721	15,645	20,167	20,030	19,159	18,398
<b>Natural Gas</b>								
Primary Energy Supply	45,889	54,743	67,110	74,259	80,624	79,651	80,619	77,071
Indigenous Production	63,643	88,579	130,252	148,361	154,077	154,909	151,404	143,807
Import	2	521	551	1,329	7,833	7,923	10,798	12,830
Export	-18,057	-33,045	-64,727	-82,681	-87,402	-83,797	-88,274	-84,712
Transformation Sector	-1,806	-2,447	-5,752	-8,812	-9,249	-8,824	-10,952	-9,907
Power Generation	-1,806	-1,868	-4,325	-7,356	-7,512	-7,203	-8,662	-7,622
Final Energy Consumption	35,108	43,314	50,762	53,426	51,626	50,558	55,642	52,943
Industry	17,137	16,856	18,321	19,318	18,756	19,328	22,700	20,776
Transport	1,634	2,897	5,057	4,758	4,299	4,091	4,143	3,199
Residential & Commercial	16,058	19,681	22,744	24,677	24,752	23,323	24,978	25,365
Agriculture	279	498	493	586	425	440	479	487
Non-energy	-	3,382	4,146	4,086	3,394	3,376	3,341	3,115
<b>Electricity</b>								
Power Generation	32,245	41,465	48,170	52,091	53,848	52,973	55,221	56,014
Thermal	7,230	8,612	9,381	12,909	12,230	11,578	12,954	12,626
Hydro	21,769	25,529	28,899	30,841	31,281	30,569	31,889	32,902
Nuclear	3,116	6,347	8,501	6,324	7,995	8,510	8,121	8,161
Others	129	977	1,389	2,017	2,341	2,317	2,256	2,325
Final Energy Consumption	26,440	35,960	38,425	41,421	44,046	42,702	43,258	44,615
Industry	12,035	14,443	15,891	17,485	18,197	17,494	16,605	16,204
Transport	196	281	333	389	366	390	348	361
Residential & Commercial	13,535	20,484	21,381	22,710	24,593	23,963	25,497	27,221
Agriculture	674	743	808	826	881	847	795	829

## Major Economic Indicators of Canada

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	24.59	27.79	29.35	30.77	32.31	32.65	32.98	33.31
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	411.96	543.64	592.05	724.91	820.79	846.32	869.28	872.76
Real Term (Billions of 2000 Price and 2000 PPP)	496.73	655.51	713.88	874.08	989.68	1,020.47	1,048.15	1,052.35
Nominal (Billions of Current USD)	268.89	582.74	590.50	724.91	1,132.75	1,278.68	1,429.71	1,501.27
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	16,751	19,562	20,169	23,559	25,402	25,922	26,361	26,200
Real Term (2000 Price and 2000 PPP)	20,198	23,587	24,320	28,407	30,629	31,256	31,785	31,591
Nominal (Current USD)	10,934	20,968	20,117	23,559	35,057	39,165	43,356	45,068
Nominal GDP & its Components (Billions of Current CAD) *1								
Gross Domestic Product	314.39	679.92	810.43	1,076.58	1,372.63	1,450.49	1,535.65	1,601.92
Household Final Consumption Expenditure, etc.	168.48	385.41	460.91	596.01	759.24	803.26	852.77	N.A.
General Government Final Consumption Expenditure	67.08	151.42	172.46	200.08	260.20	278.92	296.47	N.A.
Gross Fixed Capital Formation	72.94	144.86	143.00	206.27	292.27	323.98	347.40	N.A.
Stock Change	-0.68	-2.68	9.03	11.53	9.36	8.05	9.82	N.A.
Exports of Goods and Services	88.29	175.51	302.48	490.69	518.91	522.70	532.12	N.A.
Imports of Goods and Services	82.46	174.62	276.62	428.75	467.85	487.05	502.26	N.A.
Real GDP & its Components (Billions of 2000 CAD) *1								
Gross Domestic Product	611.81	807.37	879.26	1,076.58	1,218.96	1,256.87	1,290.98	1,296.14
Household Final Consumption Expenditure, etc.	359.48	467.95	500.52	596.01	696.58	726.44	759.24	N.A.
General Government Final Consumption Expenditure	144.71	184.41	188.25	200.08	227.59	236.14	244.86	N.A.
Gross Fixed Capital Formation	116.92	157.25	149.11	206.27	272.20	291.42	302.85	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	135.50	220.55	326.07	490.69	503.17	506.16	511.23	N.A.
Imports of Goods and Services	133.41	221.57	291.53	428.75	498.41	521.32	549.94	N.A.
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	2.7	2.6	2.4	2.1	2.0	1.9	N.A.	N.A.
Industry	33.0	30.7	30.1	30.8	29.0	28.4	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 (2005=100) *2	51.8	64.0	72.1	88.3	100.0	102.9	105.5	106.2
External Trade (Billions of Current USD) *1								
Exports, f.o.b.	67.734	127.629	192.197	276.635	360.475	388.091	420.693	456.420
Imports, c.i.f.	62.544	123.244	168.426	244.786	322.411	357.651	389.911	418.336
Balance of Payments (Billions of Current USD) *2								
Trade Balance	7.939	9.513	25.855	45.047	63.266	57.029	59.523	63.700
Current Account	-6.088	-19.764	-4.328	19.622	33.243	31.319	29.936	27.281
Overall Balance	-0.536	1.139	2.711	3.720	1.335	0.826	3.906	1.769
Foreign Exchange Rate (CAD/USD) *1	1.1692	1.1668	1.3724	1.4851	1.2118	1.1344	1.0741	1.0670
Purchasing Power Parity (CAD/International Dollar) *1	1.1589	1.2547	1.2164	1.2317	1.2136	1.2055	1.2091	1.2306
Price Indices								
GDP Deflator (2000=100) *3	51.4	84.2	92.2	100.0	112.6	115.4	119.0	123.6
Industry Selling Price Index (2005=100) *2	52.4	75.8	89.0	95.8	100.0	102.4	104.0	108.5
Consumer Price Index (2005=100) *2	41.2	73.2	81.8	89.2	100.0	102.0	104.2	106.7
Growth Rate (%) *3								
Real GDP	2.16	0.19	2.81	5.23	2.88	3.11	2.71	0.40
Population	1.30	1.50	0.83	0.89	0.99	1.04	1.00	1.02
Price								
Industry Selling Price Index	13.4	0.3	7.4	4.3	1.5	2.4	1.6	4.3
Consumer Price Index	10.2	4.8	2.2	2.7	2.2	2.0	2.1	2.4

Source       \*1 : "World Development Indicators", World Bank  
              \*2 : "International Financial Statistics", International Monetary Fund  
              \*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note         : N.A. means "not available"  
              : CAD means Canadian Dollar, USD means United States Dollar  
              : PPP means Purchasing Power Parity



## 3.4 Chile

## Energy Balance Table of Chile in 2008

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	276	-	139	-	-	-	-	-	-
2 Import	4,340	324	10,881	8,048	480	-	382	-	5,481
3 Export	-	-9	-	-1,353	-675	-33	-	-	-585
4 International Marine Bunkers	-	-	-	-	-	-	-	-	-
5 International Aviation Bunkers	-	-	-	-	-	-	-	-	-
6 Stock Changes	-247	-107	22	256	270	2	1	2	-71
7 Total Primary Energy Supply	4,370	208	11,041	6,951	75	-31	382	2	4,825
8 Transfers	-	-	-	-	-	-	-	-	-
9 Total Transformation Sector	-3,970	144	-11,041	7,796	2,503	145	568	86	1,533
9.1 Main Activity Producer	-3,484	-	-	-2,777	-	-	-	-	-2,583
9.2 Autoproducers	-	-	-	-174	-	-	-	-	-37
9.3 Gas Processing	-	-	-	-96	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-11,041	10,842	2,503	145	568	86	4,154
9.5 Coal Transformation	-486	144	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-43	-	-680	-	-112	-	-	-29
11. Discrepancy	-0	-0	-	-166	-5	-0	-0	-1	-1
12 Total Final Energy Consumption	399	310	-	13,901	2,573	2	950	87	6,329
13 Industry Sector	395	310	-	3,425	-	2	-	29	2,236
14 Transport Sector	-	-	-	8,937	2,573	-	950	1	3,912
15 Other Sector	4	-	-	1,324	-	-	-	57	182
15.1 Residential & Commercial	4	-	-	1,324	-	-	-	57	182
15.2 Agriculture	-	-	-	-	-	-	-	-	-
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	-	215	-	-	-	-	-

## Energy Balance Table of Chile in 2007

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	161	-	593	-	-	-	-	-	-
2 Import	3,922	23	11,095	7,199	736	-	263	-	4,701
3 Export	-	-31	-	-1,218	-627	-85	-	-	-297
4 International Marine Bunkers	-	-	-	-	-	-	-	-	-
5 International Aviation Bunkers	-	-	-	-	-	-	-	-	-
6 Stock Changes	-706	-50	-458	-441	-247	1	-52	-	16
7 Total Primary Energy Supply	3,377	-58	11,229	5,539	-137	-84	211	-	4,419
8 Transfers	-	-	-464	464	-	-	-	-	-
9 Total Transformation Sector	-3,001	510	-10,765	7,354	2,508	241	566	98	1,351
9.1 Main Activity Producer	-2,520	-	-	-3,007	-	-	-	-	-2,382
9.2 Autoproducers	-6	-	-	-127	-	-	-	-	-19
9.3 Gas Processing	-	-	-	-59	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-10,765	10,562	2,508	241	566	98	3,752
9.5 Coal Transformation	-475	510	-	-16	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-29	-126	-	-482	-	-156	-	-	-23
11. Discrepancy	-11	12	-0	2	-	-1	1	-1	-
12 Total Final Energy Consumption	336	338	-	12,877	2,371	-	778	97	5,748
13 Industry Sector	326	338	-	3,196	-	-	-	28	2,031
14 Transport Sector	-	-	-	8,200	2,371	-	778	2	3,572
15 Other Sector	10	-	-	1,318	-	-	-	66	145
15.1 Residential & Commercial	4	-	-	1,205	-	-	-	66	110
15.2 Agriculture	-	-	-	-	-	-	-	-	-
15.3 Other	6	-	-	114	-	-	-	-	35
16 Non-energy	-	-	-	163	-	-	-	-	-

Energy Balance Table of Chile in 2008 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	1,969	2,153	-	3	5,117	-	-	9,658
615	1,090	-	-	-	729	-	-	-	-	99	-	24,421
-	-61	-	-	-	-	-	-	-	-	-	-	-1,362
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
289	-237	0	-	-	-	-	-	-	-	-	-	-76
904	793	0	-	-	2,698	2,153	-	3	5,117	99	-	32,640
-	-	-	-	-	-	-	-	-	-	-	-	-
1,692	712	341	-	215	-545	-2,153	-	-3	-539	5,234	-	-5,078
-191	-3	-	-	-	-527	-2,116	-	-3	-22	4,889	-	-4,040
-118	-1	-17	-	-	-	-37	-	-	-518	345	-	-384
-	-96	-	-	-	-	-	-	-	-	-	-	-96
2,002	812	358	-	215	-	-	-	-	-	-	-	-199
-	-	-	-	-	-18	-	-	-	-	-	-	-360
-	-	-	-	-	-	-	-	-	-	-	-	-
-66	-132	-341	-	-	-351	-	-	-	-	-737	-	-1,810
-0	-159	0	-	-	-19	-0	-	-	-	-0	-	-185
2,530	1,215	0	-	215	1,784	-	-	-	4,578	4,596	-	25,568
968	191	0	-	-	241	-	-	-	1,627	3,150	-	9,148
1,499	2	-	-	-	14	-	-	-	-	37	-	8,988
63	1,022	-	-	-	583	-	-	-	2,951	1,409	-	6,271
63	1,022	-	-	-	583	-	-	-	2,951	1,409	-	6,271
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	215	946	-	-	-	-	-	-	1,161

Energy Balance Table of Chile in 2007 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	1,083	1,958	-	-	4,735	-	-	8,529
104	1,118	-	-	277	2,339	-	-	-	-	140	-	24,718
-90	-120	-	-	-	-	-	-	-	-	-	-	-1,250
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
249	-421	0	-	11	-69	-	-	-	-	-	-	-1,724
263	578	0	-	288	3,353	1,958	-	-	4,735	140	-	30,273
-	464	-	-	-	-	-	-	-	-	-	-	0
2,145	375	174	-	-105	-911	-1,958	-	-	-493	5,032	-	-4,233
-183	-	-	-	-443	-882	-1,917	-	-	-24	4,649	-	-3,701
-96	-	-13	-	-	-37	-41	-	-	-470	383	-	-298
-	-59	-	-	-	8	-	-	-	-	-	-	-51
2,439	433	186	-	338	-	-	-	-	-	-	-	-202
-16	-	-	-	-	-	-	-	-	-	-	-	19
-	-	-	-	-	-	-	-	-	-	-	-	-
-43	-86	-174	-	-	-117	-	-	-	-	-611	-	-1,365
-	3	-0	-	0	0	-0	-	-	-0	0	-	4
2,365	1,335	0	-	183	2,326	-	-	-	4,241	4,561	-	24,679
794	322	0	-	21	226	-	-	-	1,452	3,080	-	8,619
1,472	5	-	-	-	23	-	-	-	-	35	-	8,258
99	1,008	-	-	-	545	-	-	-	2,789	1,445	-	6,108
25	1,004	-	-	-	533	-	-	-	2,789	1,425	-	5,956
-	-	-	-	-	-	-	-	-	-	-	-	-
74	5	-	-	-	11	-	-	-	-	21	-	152
-	-	-	-	163	1,532	-	-	-	-	-	-	1,695

## Major Energy Indicators of Chile

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	10,788	13,960	17,569	24,993	29,282	29,701	30,273	32,640
Indigenous Production	7,043	7,763	7,998	10,729	9,310	9,691	8,529	9,658
Import	4,125	7,117	10,790	18,688	23,149	24,504	24,718	24,421
Export	-	-158	-57	-2,483	-1,864	-2,136	-1,250	-1,362
Final Energy Consumption	8,088	10,722	14,586	19,058	21,109	21,984	24,679	25,568
Industry	2,758	3,203	4,615	5,776	7,628	8,442	8,619	9,148
Transport	2,120	3,111	4,696	6,057	7,460	7,417	8,258	8,988
Residential & Commercial	2,427	3,430	4,125	5,320	5,847	6,001	5,956	6,271
Agriculture	626	796	880	1,398	-	-	-	-
Non-energy	154	182	271	454	-	-	1,695	1,161
<b>Coal, Coal Products</b>								
Primary Energy Supply	1,393	2,597	2,209	3,099	2,947	3,441	3,319	4,578
Indigenous Production	743	1,451	690	243	354	277	161	276
Import	650	1,145	1,519	2,975	2,651	3,168	3,945	4,664
Export	-	-	-	-	-28	-6	-31	-9
Transformation Sector	-600	-1,776	-1,577	-2,133	-2,039	-2,504	-2,491	-3,826
Power Generation	-439	-1,649	-1,401	-2,082	-1,965	-2,491	-2,527	-3,484
Final Energy Consumption	498	734	789	791	903	865	674	709
Industry	479	674	748	660	887	850	664	704
Transport	-	-	-	-	0	0	-	-
Residential & Commercial	17	18	7	3	4	5	4	4
Agriculture	-	41	33	128	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	4,919	6,307	8,035	10,001	11,299	11,137	11,229	11,041
Indigenous Production	1,568	882	436	282	175	154	593	139
Import	3,351	5,425	7,599	9,978	11,097	11,483	11,095	10,881
Export	-	-	-	-	-	-	-	-
Transformation Sector	-4,982	-6,151	-7,957	-10,217	-11,037	-11,683	-10,765	-11,041
Petroleum Refineries	-4,982	-6,151	-7,957	-10,217	-11,037	-11,683	-10,765	-11,041
<b>Petroleum Products</b>								
Primary Energy Supply	-256	-373	511	-184	949	650	5,539	6,951
Import	124	547	1,672	1,958	3,935	4,291	7,199	8,048
Export	-	-158	-	-875	-1,836	-2,130	-1,218	-1,353
Transformation Sector	4,387	6,004	7,632	10,567	10,249	11,105	7,354	7,796
Power Generation	-612	-489	-524	-305	-936	-725	-3,134	-2,951
Petroleum Refineries	5,180	6,654	8,399	10,874	11,186	11,832	10,562	10,842
Final Energy Consumption	4,777	5,834	8,455	10,041	10,747	11,217	12,877	13,901
Industry	1,652	1,525	1,991	2,121	2,061	2,619	3,196	3,425
Transport	2,105	3,090	4,670	6,031	7,407	7,353	8,200	8,937
Residential & Commercial	760	889	1,275	1,267	1,173	1,170	1,205	1,324
Agriculture	106	149	248	168	-	-	-	-
Non-energy	154	182	271	454	-	-	163	215
<b>Natural Gas</b>								
Primary Energy Supply	2,308	1,982	1,749	5,427	7,048	7,071	3,353	2,698
Indigenous Production	2,308	1,982	1,807	2,048	1,929	2,054	1,083	1,969
Import	-	-	-	3,674	5,280	5,365	2,339	729
Export	-	-	-57	-	-	-	-	-
Transformation Sector	-411	-1,198	-1,134	-4,190	-4,957	-5,375	-911	-545
Power Generation	-39	-63	-418	-1,653	-2,712	-2,255	-919	-527
Final Energy Consumption	218	268	355	1,104	1,277	1,321	2,326	1,784
Industry	68	63	109	729	758	732	226	241
Transport	-	6	9	8	31	36	23	14
Residential & Commercial	150	200	238	338	442	529	533	583
Agriculture	-	-	-	29	-	-	-	-
Non-energy	-	-	-	-	-	-	1,532	946
<b>Electricity</b>								
Power Generation	1,010	1,579	2,409	3,500	4,514	4,757	5,032	5,234
Thermal	343	715	588	1,379	1,688	1,778	2,581	2,538
Hydro	631	771	1,582	1,646	2,254	2,475	1,958	2,153
Nuclear	-	-	-	-	-	-	-	-
Others	36	93	239	475	571	505	493	542
Final Energy Consumption	837	1,324	2,074	3,147	4,154	4,355	4,561	4,596
Industry	476	764	1,214	1,928	2,800	2,936	3,080	3,150
Transport	15	16	17	19	22	28	35	37
Residential & Commercial	271	433	630	919	1,322	1,376	1,425	1,409
Agriculture	76	112	214	280	-	-	-	-

## Major Economic Indicators of Chile

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	11.18	13.19	14.41	15.42	16.30	16.47	16.64	16.80
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	27.94	40.45	61.35	75.20	92.40	96.64	101.16	104.36
Real Term (Billions of 2000 Price and 2000 PPP)	53.07	76.81	116.50	142.80	175.46	183.52	192.11	198.18
Nominal (Billions of Current USD)	27.57	31.56	71.35	75.20	118.25	146.77	163.88	169.46
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	2,499	3,066	4,257	4,877	5,669	5,869	6,081	6,211
Real Term (2000 Price and 2000 PPP)	4,746	5,823	8,085	9,261	10,766	11,144	11,548	11,794
Nominal (Current USD)	2,466	2,393	4,951	4,877	7,256	8,913	9,851	10,084
Nominal GDP & its Components (Billions of Current CLP) *1								
Gross Domestic Product	1,075.32	9,622.32	28,309.22	40,575.32	66,192.60	77,830.58	85,621.09	88,535.19
Household Final Consumption Expenditure, etc.	760.09	5,886.61	17,270.34	25,897.22	38,546.47	42,301.90	46,660.06	52,481.15
General Government Final Consumption Expenditure	133.89	961.66	2,938.54	5,053.86	7,317.46	8,200.46	9,424.35	10,598.77
Gross Fixed Capital Formation	178.98	2,278.74	7,117.87	8,410.72	14,007.71	15,132.46	17,609.76	21,239.12
Stock Change	47.07	144.41	294.85	457.38	685.08	804.51	602.01	590.01
Exports of Goods and Services	245.39	3,270.24	8,295.39	12,820.21	27,355.08	35,619.35	40,399.42	39,969.70
Imports of Goods and Services	290.10	2,939.59	7,672.55	12,064.06	21,719.20	23,900.83	28,526.96	36,343.57
Real GDP & its Components (Billions of 1986 CLP) *1								
Gross Domestic Product	17,318.50	25,067.26	38,019.30	46,602.20	57,262.64	59,890.97	62,694.08	64,677.02
Household Final Consumption Expenditure, etc.	12,047.04	14,853.03	23,482.62	29,260.37	36,965.16	39,583.11	42,326.84	44,139.29
General Government Final Consumption Expenditure	3,858.20	3,960.60	4,798.35	5,655.05	6,903.25	7,344.99	7,929.61	8,249.43
Gross Fixed Capital Formation	2,826.82	4,402.88	8,431.94	9,205.58	14,044.56	14,374.10	16,100.05	19,235.61
Stock Change	116.68	140.16	387.14	517.92	272.02	827.23	603.07	302.47
Exports of Goods and Services	3,667.88	6,646.52	10,920.20	16,108.37	22,083.52	23,208.48	24,976.47	25,761.67
Imports of Goods and Services	4,330.33	5,156.14	10,555.83	14,197.24	23,005.87	25,446.93	29,241.96	33,011.45
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	5.4	6.5	4.8	4.5	5.1	5.1	4.9	4.9
Industry	41.5	38.9	36.7	35.3	34.0	33.7	32.5	31.7
Services, etc.	59.9	53.8	54.5	55.4	55.6	55.8	56.9	57.6
Manufacturing Production Index (2005=100) *2	42.8	55.2	71.5	80.8	100.0	103.2	107.5	107.7
External Trade (Billions of Current USD) *1								
Exports, f.o.b	4.705	8.372	16.024	19.210	41.267	58.486	67.644	67.788
Imports, c.i.f.	5.797	7.742	15.900	18.507	32.735	38.405	47.125	61.901
Balance of Payments (Billions of Current USD) *2								
Trade Balance	-0.764	1.284	1.381	2.119	10.775	22.780	23.941	8.848
Current Account	-1.971	-0.485	-1.350	-0.898	1.449	7.154	7.458	-2.513
Overall Balance	1.321	2.323	1.139	0.317	1.711	1.998	-3.214	6.461
Foreign Exchange Rate (CLP/USD) *1	39.0000	304.9033	396.7733	539.5875	559.7675	530.2750	522.4642	522.4610
Purchasing Power Parity (CLP/International Dollar) *1	37.5275	153.5113	263.8666	284.1433	333.6903	363.4480	371.9516	364.9691
Price Indices								
GDP Deflator (2003=100) *3	6.2	38.4	74.5	87.1	115.6	130.0	136.6	136.9
Industry Selling Price Index (2005=100) *2	5.3	34.2	58.5	75.4	100.0	107.0	114.1	133.1
Consumer Price Index (2005=100) *2	5.6	35.8	68.5	88.0	100.0	103.4	107.9	117.4
Growth Rate (%) *3								
Real GDP	8.15	3.70	10.63	4.49	5.56	4.59	4.68	3.16
Population	1.45	1.79	1.65	1.23	1.06	1.04	1.03	1.01
Price								
Home & Import Goods Price Index (2000=100)	39.6	21.8	7.6	11.4	5.4	7.0	6.7	16.7
Consumer Price Index	35.1	26.0	8.2	3.8	3.1	3.4	4.4	8.7

Source \*1 : "World Development Indicators", World Bank

\*2 : "International Financial Statistics", International Monetary Fund

\*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note : N.A. means "not available"

: CLP means Chilean Peso, USD means United States Dollar

: PPP means Purchasing Power Parity



## 3.5 China

## Energy Balance Table of People's Republic of China in 2008

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
<b>1 Indigenous Production</b>	1,471,741	-	195,050	-	-	-	-	-	-
<b>2 Import</b>	24,770	0	178,885	46,171	1,995	709	6,488	236	6,369
<b>3 Export</b>	-24,125	-8,366	-4,238	-20,235	-2,042	-1,389	-5,576	-2	-643
<b>4 International Marine Bunkers</b>	-	-	-	-796	-	-	-195	-	-178
<b>5 International Aviation Bunkers</b>	-	-	-	-3,916	-	-	-3,916	-	-
<b>6 Stock Changes</b>	-24,768	-7,471	-14,712	-5,996	-1,957	-	-39	2	-4,182
<b>7 Total Primary Energy Supply</b>	<b>1,447,619</b>	<b>-15,837</b>	<b>354,986</b>	<b>15,228</b>	<b>-2,004</b>	<b>-680</b>	<b>-3,238</b>	<b>236</b>	<b>1,367</b>
<b>8 Transfers</b>	-	-	-	-	-	-	-	-	-
<b>9 Total Transformation Sector</b>	-986,471	80,331	-341,051	319,368	64,461	19,847	11,964	886	134,885
<b>9.1 Main Activity Producer</b>	-673,245	-549	-	-	-	-	-	-	-
<b>9.2 Autoproducers</b>	-65,860	-3,597	-98	-11,963	-1	-	-	-	-1,888
<b>9.3 Gas Processing</b>	-7,087	-1,823	-	-20	-	-	-	-	-
<b>9.4 Petroleum Refineries</b>	-	-	-340,953	331,352	64,463	19,847	11,964	886	136,773
<b>9.5 Coal Transformation</b>	-240,278	86,300	-	-	-	-	-	-	-
<b>9.6 Other Transformation</b>	-	-	-	-	-	-	-	-	-
<b>10. Loss &amp; Own Use</b>	-65,110	-3,430	-8,963	-8,093	-764	-	-	-33	-4,949
<b>11. Discrepancy</b>	4,442	29	-24	2,738	247	0	387	11	-145
<b>12 Total Final Energy Consumption</b>	<b>400,480</b>	<b>61,093</b>	<b>4,948</b>	<b>329,241</b>	<b>61,941</b>	<b>19,167</b>	<b>9,113</b>	<b>1,100</b>	<b>131,158</b>
<b>13 Industry Sector</b>	315,375	55,681	3,377	85,153	7,063	19,167	-	513	22,131
<b>14 Transport Sector</b>	4,368	2	-	130,122	31,275	-	8,654	86	78,023
<b>15 Other Sector</b>	80,737	5,410	-	73,718	23,410	-	459	442	30,554
<b>15.1 Residential &amp; Commercial</b>	63,924	4,902	-	36,306	10,201	-	-	345	7,597
<b>15.2 Agriculture</b>	7,724	361	-	12,934	1,653	-	-	13	11,208
<b>15.3 Other</b>	9,089	147	-	24,479	11,556	-	459	84	11,748
<b>16 Non-energy</b>	-	-	1,571	40,249	194	-	-	59	450

## Energy Balance Table of People's Republic of China in 2007

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
<b>1 Indigenous Production</b>	1,322,584	-	186,318	-	-	-	-	-	-
<b>2 Import</b>	30,633	0	163,160	42,412	-	980	5,150	250	1,654
<b>3 Export</b>	-27,908	-10,435	-3,884	-18,092	-4,662	-1,596	-4,734	-0	-674
<b>4 International Marine Bunkers</b>	-	-	-	-2,793	-	-	-	-	-277
<b>5 International Aviation Bunkers</b>	-	-	-	-3,762	-	-	-3,762	-	-
<b>6 Stock Changes</b>	-5,369	-4,675	-5,244	1,082	431	-	-7	-3	558
<b>7 Total Primary Energy Supply</b>	<b>1,319,940</b>	<b>-15,110</b>	<b>340,351</b>	<b>18,847</b>	<b>-4,231</b>	<b>-616</b>	<b>-3,352</b>	<b>247</b>	<b>1,261</b>
<b>8 Transfers</b>	-	-	-	-	-	-	-	-	-
<b>9 Total Transformation Sector</b>	-956,654	105,124	-328,491	306,020	60,150	20,159	11,886	795	123,703
<b>9.1 Main Activity Producer</b>	-660,037	-943	-	-	-	-	-	-	-
<b>9.2 Autoproducers</b>	-61,982	-9,723	-165	-13,031	-1	-	-	-	-2,360
<b>9.3 Gas Processing</b>	-8,038	-1,823	-	-50	-	-	-	-	-
<b>9.4 Petroleum Refineries</b>	-	-	-328,326	319,100	60,152	20,159	11,886	795	126,063
<b>9.5 Coal Transformation</b>	-226,598	117,613	-	-	-	-	-	-	-
<b>9.6 Other Transformation</b>	-	-	-	-	-	-	-	-	-
<b>10. Loss &amp; Own Use</b>	-46,849	-3,282	-7,693	-6,170	-799	-	-	-32	-2,909
<b>11. Discrepancy</b>	-7,259	-3,440	-35	-434	392	-0	12	-175	-36
<b>12 Total Final Energy Consumption</b>	<b>309,177</b>	<b>83,292</b>	<b>4,132</b>	<b>318,263</b>	<b>55,512</b>	<b>19,543</b>	<b>8,546</b>	<b>835</b>	<b>122,019</b>
<b>13 Industry Sector</b>	236,326	75,872	2,836	84,896	6,938	19,543	-	379	16,417
<b>14 Transport Sector</b>	4,500	4	-	116,165	27,963	-	8,276	100	69,185
<b>15 Other Sector</b>	68,352	7,417	-	78,852	20,421	-	270	302	36,129
<b>15.1 Residential &amp; Commercial</b>	52,376	6,680	-	37,724	8,097	-	-	251	8,254
<b>15.2 Agriculture</b>	11,860	556	-	21,765	2,542	-	-	10	19,128
<b>15.3 Other</b>	4,116	181	-	19,363	9,782	-	270	41	8,746
<b>16 Non-energy</b>	-	-	1,296	38,349	190	-	-	54	288

Energy Balance Table of People's Republic of China in 2008 (Continued)

													unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12	
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total	
-	-	-	-	-	74,759	50,326	17,823	-	6,925	-	-	1,816,625	
21,861	3,111	-	-	5,402	4,286	-	-	-	-	330	-	254,443	
-7,317	-814	-	-	-2,452	-3,021	-	-	-	-	-1,431	-	-61,416	
-423	-	-	-	-	-	-	-	-	-	-	-	-796	
-	-	-	-	-	-	-	-	-	-	-	-	-3,916	
83	97	-	-	-	-	-	-	-	-	-	-	-52,947	
14,203	2,394	-	-	2,949	76,025	50,326	17,823	-	6,925	-1,101	-	1,951,993	
-	-	-	-	-	-	-	-	-	-	-	-	-	
10,981	22,903	9,742	-	43,700	61,374	-50,326	-17,823	-	-3,595	298,152	61,971	-578,070	
-	-	-	-	-	-331	-50,326	-17,823	-	-3,595	278,950	34,606	-432,314	
-6,373	-74	-2,314	-	-1,312	-14,412	-	-	-	-	19,202	27,365	-49,363	
-20	-	-	-	-	76,117	-	-	-	-	-	-	67,187	
17,374	22,977	12,056	-	45,011	-	-	-	-	-	-	-	-9,602	
-	-	-	-	-	-	-	-	-	-	-	-	-153,978	
-	-	-	-	-	-	-	-	-	-	-	-	-	
-740	-875	-420	-	-312	-13,363	-	-	-	-45	-53,208	-8,973	-161,184	
2,389	56	-8	-	-200	-338	-	-	-	-16	-4	-810	6,017	
26,832	24,479	9,315	-	46,137	123,698	-	-	-	3,269	243,839	52,188	1,218,756	
14,296	4,496	9,256	-	8,231	88,727	-	-	-	3,269	167,819	34,764	754,164	
11,428	657	-	-	-	5,891	-	-	-	-	4,918	-	145,300	
172	18,681	-	-	-	25,017	-	-	-	-	71,102	17,425	273,409	
63	18,100	-	-	-	23,069	-	-	-	-	46,556	15,815	190,573	
15	45	-	-	-	-	-	-	-	-	7,629	20	28,667	
95	536	-	-	-	1,948	-	-	-	-	16,917	1,590	54,169	
936	646	59	-	37,906	4,064	-	-	-	-	-	-	45,883	

Energy Balance Table of People's Republic of China in 2007 (Continued)

													unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12	
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total	
-	-	-	-	-	64,462	41,733	16,191	-	6,429	-	-	1,637,717	
24,171	4,865	-	-	5,341	3,743	-	-	-	-	366	-	240,314	
-3,797	-406	-	-	-2,223	-2,421	-	-	-	-	-1,253	-	-63,992	
-2,516	-	-	-	-	-	-	-	-	-	-	-	-2,793	
-	-	-	-	-	-	-	-	-	-	-	-	-3,762	
149	-46	-	-	-	-	-	-	-	-	-	-	-14,206	
18,007	4,413	-	-	3,118	65,784	41,733	16,191	-	6,429	-887	-	1,793,278	
-	-	-	-	-	-	-	-	-	-	-	-	-	
12,652	23,275	9,521	-	43,879	-1,961	-41,733	-16,191	-	-3,462	282,214	62,199	-592,935	
-	-	-	-	-	-	-41,733	-16,191	-	-3,462	264,082	34,718	-423,565	
-6,971	-62	-1,796	-	-1,841	-9,357	-	-	-	-	18,131	27,480	-48,646	
-50	-	-	-	-	7,791	-	-	-	-	-	-	-2,119	
19,672	23,337	11,316	-	45,720	-	-	-	-	-	-	-	-9,226	
-	-	-	-	-	-	-	-	-	-	-	-	-108,985	
-	-	-	-	-	-394	-	-	-	-	-	-	-394	
-749	-982	-386	-	-313	-9,661	-	-	-	-39	-51,319	-10,114	-135,127	
-809	184	-2	-	-0	-916	-	-	-	-2	-58	-1,598	-13,741	
29,100	26,892	9,132	-	46,684	53,248	-	-	-	2,926	229,950	50,486	1,051,475	
17,571	4,261	9,075	-	10,713	28,122	-	-	-	2,926	162,640	34,432	628,050	
9,994	647	-	-	-	979	-	-	-	-	4,574	-	126,222	
376	21,354	-	-	-	20,245	-	-	-	-	62,735	16,055	253,655	
248	20,874	-	-	-	18,747	-	-	-	-	39,152	14,528	169,206	
10	75	-	-	-	-	-	-	-	-	8,419	28	42,628	
118	406	-	-	-	1,498	-	-	-	-	15,164	1,499	41,821	
1,159	629	57	-	35,972	3,903	-	-	-	-	-	-	43,548	

## Major Energy Indicators of People's Republic of China

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	421,007	653,861	857,725	904,583	1,539,359	1,678,153	1,793,278	1,951,993
Indigenous Production	436,251	705,811	871,184	865,531	1,426,025	1,536,025	1,637,717	1,816,625
Import	1,824	8,436	35,416	96,856	184,280	213,760	240,314	254,443
Export	-21,406	-38,922	-44,273	-64,437	-46,884	-68,359	-63,992	-61,416
Final Energy Consumption	318,167	489,786	660,407	634,084	903,638	973,376	1,051,475	1,218,756
Industry	217,327	329,825	409,970	379,343	527,901	576,843	628,050	754,164
Transport	14,999	28,633	36,097	59,486	104,959	113,132	126,222	145,300
Residential & Commercial	75,698	118,373	107,031	95,991	153,385	159,219	169,206	190,573
Agriculture	10,144	12,954	28,403	30,009	40,163	43,039	42,628	28,667
Non-energy	-	-	44,818	40,315	37,421	37,665	43,548	45,883
<b>Coal, Coal Products</b>								
Primary Energy Supply	312,823	512,155	659,176	631,243	1,122,099	1,222,426	1,304,830	1,431,782
Indigenous Production	310,081	539,952	680,379	649,618	1,143,269	1,239,304	1,322,584	1,471,741
Import	995	877	818	1,496	15,686	23,048	30,634	24,770
Export	-3,344	-7,785	-20,334	-40,130	-18,528	-43,008	-38,343	-32,491
Transformation Sector	-67,719	-160,505	-258,749	-332,442	-676,278	-791,534	-851,530	-906,139
Power Generation	-57,524	-119,784	-233,122	-327,372	-583,983	-669,250	-732,685	-743,252
Final Energy Consumption	225,420	338,239	425,458	296,805	367,076	375,586	392,470	461,573
Industry	146,103	224,832	300,542	216,937	278,711	293,303	312,198	371,056
Transport	10,112	11,089	7,052	5,540	5,470	4,764	4,504	4,370
Residential & Commercial	69,205	102,319	81,950	46,771	67,129	61,082	59,056	68,827
Agriculture	-	-	11,201	8,919	11,788	12,258	12,416	8,085
Non-energy	-	-	14,014	15,277	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	92,231	117,828	147,952	213,834	299,315	322,492	340,351	354,986
Indigenous Production	105,948	138,448	150,047	163,003	181,353	184,766	186,318	195,050
Import	366	2,926	17,090	70,267	126,817	145,175	163,160	178,885
Export	-13,309	-24,014	-18,227	-10,306	-8,067	-6,337	-3,884	-4,238
Transformation Sector	-84,432	-110,969	-144,197	-204,047	-290,621	-310,698	-328,491	-341,051
Petroleum Refineries	-78,692	-109,722	-143,536	-203,057	-290,405	-310,460	-328,326	-340,953
<b>Petroleum Products</b>								
Primary Energy Supply	-4,268	-3,531	10,302	10,235	19,828	24,481	18,847	15,228
Import	463	4,634	17,452	24,960	41,484	44,985	42,412	46,171
Export	-4,753	-7,123	-5,194	-10,229	-16,710	-15,260	-18,092	-20,235
Transformation Sector	62,976	96,269	123,550	182,654	264,109	283,070	306,020	319,368
Power Generation	-14,928	-11,140	-17,032	-15,203	-19,899	-17,577	-13,031	-11,963
Petroleum Refineries	77,904	107,409	140,582	198,116	284,152	300,781	319,100	331,352
Final Energy Consumption	49,729	80,586	121,619	186,631	277,903	301,060	318,263	329,241
Industry	32,880	47,912	30,019	62,920	77,324	85,486	84,896	85,153
Transport	4,638	16,534	27,414	51,238	94,924	103,592	116,165	130,122
Residential & Commercial	4,524	7,070	8,653	20,292	30,270	33,335	37,724	36,306
Agriculture	7,687	9,070	12,185	15,287	21,175	22,615	21,765	12,934
Non-energy	-	-	24,245	17,566	32,856	32,959	38,349	40,249
<b>Natural Gas</b>								
Primary Energy Supply	13,285	14,242	16,709	22,401	44,665	51,903	65,784	76,025
Indigenous Production	13,285	14,242	16,709	25,323	47,429	54,513	64,462	74,759
Import	-	-	-	-	-	88	3,743	4,286
Export	-	-	-	-2,922	-2,764	-2,698	-2,421	-3,021
Transformation Sector	-223	515	13,078	6,691	2,492	2,374	-1,961	61,374
Power Generation	-223	-680	-1,823	-4,855	-5,092	-5,482	-9,357	-14,743
Final Energy Consumption	12,158	13,205	27,667	24,087	38,454	45,062	53,248	123,698
Industry	11,917	11,084	20,919	14,147	20,241	24,399	28,122	88,727
Transport	9	47	62	93	863	757	979	5,891
Residential & Commercial	232	2,074	3,015	5,187	12,328	15,298	18,747	23,069
Agriculture	-	-	2	-	-	-	-	-
Non-energy	-	-	3,501	4,577	3,420	3,420	3,903	4,064
<b>Electricity</b>								
Power Generation	27,447	53,440	86,695	116,428	214,823	246,452	282,214	298,152
Thermal	22,060	42,540	68,025	94,348	173,981	201,513	231,622	238,290
Hydro	5,387	10,900	16,395	19,134	34,143	37,478	41,733	50,326
Nuclear	-	-	1,114	1,454	4,612	4,764	5,397	5,941
Others	-	-	1,161	1,491	2,087	2,698	3,462	3,595
Final Energy Consumption	24,718	52,150	60,634	90,621	169,807	199,419	229,950	243,839
Industry	20,284	40,392	40,300	59,109	116,274	138,215	162,640	167,819
Transport	241	964	1,568	2,419	3,701	4,019	4,574	4,918
Residential & Commercial	1,736	6,911	10,367	17,771	30,763	35,250	39,152	46,556
Agriculture	2,457	3,884	5,011	5,789	7,181	8,145	8,419	7,629

## Major Economic Indicators of People's Republic of China

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	981.24	1,135.19	1,204.86	1,262.65	1,303.72	1,311.02	1,317.89	1,324.66
Gross Domestic Product *4								
Real Term (Billions of 2000 Price and 2000 USD)	182.94	444.59	792.78	1,198.47	1,893.34	2,112.96	2,387.65	2,602.54
Real Term (Billions of 2000 Price and 2000 PPP)	454.21	1,103.85	1,968.34	2,975.59	4,700.84	5,246.13	5,928.13	6,461.66
Nominal (Billions of Current USD)	303.36	390.28	727.94	1,198.47	2,235.91	2,657.87	3,382.25	4,327.02
GDP per Capita *4								
Real Term (2000 Price and 2000 USD)	186	392	658	949	1,452	1,612	1,812	1,965
Real Term (2000 Price and 2000 PPP)	463	972	1,634	2,357	3,606	4,002	4,498	4,878
Nominal (Current USD)	309	344	604	949	1,715	2,027	2,566	3,267
Nominal GDP & its Components (Billions of Current CNY) *1								
Gross Domestic Product	454.56	1,866.78	6,079.37	9,921.50	18,321.75	21,192.35	25,730.56	30,067.00
Household Final Consumption Expenditure, etc.	233.12	945.09	2,836.97	4,585.46	7,121.75	8,047.69	9,360.29	10,839.22
General Government Final Consumption Expenditure	67.67	263.96	837.85	1,566.14	2,660.52	3,011.84	3,519.09	4,072.04
Gross Fixed Capital Formation	132.24	482.78	2,088.50	3,384.44	7,730.48	9,015.08	10,543.59	12,620.95
Stock Change	27.73	191.92	458.51	99.84	334.15	425.12	548.35	740.28
Exports of Goods and Services	48.40	355.49	1,402.70	2,314.32	6,857.71	8,465.21	10,210.83	10,990.85
Imports of Goods and Services	50.06	290.46	1,268.32	2,075.29	5,835.08	6,799.47	7,871.70	8,566.66
Real GDP & its Components (Billions of 1990 CNY) *1								
Gross Domestic Product	1,514.47	3,680.58	6,563.03	9,921.50	15,673.99	17,492.18	19,766.16	21,545.11
Household Final Consumption Expenditure, etc.	827.03	1,987.14	3,270.84	4,585.46	6,178.02	6,695.44	7,363.69	7,968.49
General Government Final Consumption Expenditure	239.61	552.82	963.99	1,566.14	2,307.96	2,505.76	2,768.45	2,993.58
Gross Fixed Capital Formation	435.37	891.59	2,244.74	3,384.44	6,069.82	6,720.21	7,455.06	8,112.85
Stock Change	90.73	352.83	490.94	99.84	262.37	316.89	387.72	475.86
Exports of Goods and Services	356.34	618.52	1,176.68	2,314.32	6,475.65	7,595.80	8,285.97	7,494.55
Imports of Goods and Services	226.28	456.97	1,173.39	2,075.29	4,979.51	5,471.00	5,674.26	4,913.28
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	37.3	27.9	19.2	15.1	11.6	10.9	10.0	9.7
Industry	34.1	34.8	43.5	45.9	48.4	49.0	49.7	49.9
Services, etc.	28.6	37.3	37.3	39.0	40.1	40.1	40.3	40.5
Industrial Production Index (2000=100) *3*4	10.9	27.3	61.5	100.0	167.6	189.2	217.4	238.1
External Trade (Billions of Current USD) *1								
Exports, f.o.b.	18.099	62.091	148.780	249.203	761.953	968.969	1,218.635	1,428.488
Imports, c.i.f.	19.941	53.345	132.084	225.094	659.953	791.461	955.950	1,133.040
Balance of Payments (Billions of Current USD) *2								
Trade Balance	N.A.	9.165	18.050	34.474	134.189	217.746	315.381	360.682
Current Account	N.A.	11.997	1.618	20.518	160.818	253.268	371.833	426.107
Overall Balance	N.A.	12.047	22.469	10.693	207.342	246.855	461.691	418.993
Foreign Exchange Rate (CNY/USD) *1	1.4984	4.7832	8.3514	8.2785	8.1943	7.9734	7.6075	6.9487
Purchasing Power Parity (CNY/International Dollar) *1	1.8534	2.0724	3.3538	3.3343	3.4476	3.4619	3.6223	3.8015
Price Indices								
GDP Deflator (2000=100) *4	30.0	50.7	92.6	100.0	116.9	121.2	130.2	139.6
Wholesale Price Index (1995=100) *4	29.6	51.8	100.0	98.7	108.5	111.8	115.2	123.2
Consumer Price Index (1995=100) *4	30.4	58.3	100.0	99.5	100.9	101.9	105.8	112.0
Growth Rate (%)								
Real GDP *4	7.80	3.80	10.90	8.40	10.40	11.60	13.00	9.00
Population *4	1.26	1.48	1.09	0.79	0.59	0.56	0.52	0.51
Price *4								
Wholesale Price Index	0.5	4.1	14.9	2.8	4.9	3.0	3.1	6.9
Consumer Price Index	6.0	2.1	14.8	-1.5	0.8	1.0	3.8	5.9

Source           \*1 : "World Development Indicators", World Bank  
                  \*2 : "International Financial Statistics", International Monetary Fund  
                  \*3 : "China Statistics Yearbook", China Statistical Publishing House  
                  \*4 : Calculated from \*1, \*2 and \*3 by the Coordinating Agency

Note             : N.A. means "not available"  
                  : CNY means Yuan Renminbi, USD means United States Dollar  
                  : PPP means Purchasing Power Parity



## 3.6 Hong Kong, China

## Energy Balance Table of Hong Kong, China in 2008

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	-	-	-	-	-	-	-	-	-
2 Import	7,146	-	-	15,852	384	338	5,055	20	2,852
3 Export	-0	-	-	-838	-36	-	-181	-	-181
4 International Marine Bunkers	-	-	-	-6,911	-	-	-	-	-1,222
5 International Aviation Bunkers	-	-	-	-3,758	-	-	-3,758	-	-
6 Stock Changes	-296	-	-	-428	4	13	-266	-	32
7 Total Primary Energy Supply	6,850	-	-	3,917	352	351	849	20	1,481
8 Transfers	-	-	-	-	-	-	-	-	-
9 Total Transformation Sector	-6,850	-	-	-387	-	-351	-	-	-6
9.1 Main Activity Producer	-6,850	-	-	-36	-	-	-	-	-6
9.2 Autoproducers	-	-	-	-	-	-	-	-	-
9.3 Gas Processing	-	-	-	-351	-	-351	-	-	-
9.4 Petroleum Refineries	-	-	-	-	-	-	-	-	-
9.5 Coal Transformation	-	-	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-	-	-	-	-	-	-	-
11. Discrepancy	-0	-	-	-766	83	0	-844	-	356
12 Total Final Energy Consumption	-	-	-	2,764	435	-	5	20	1,831
13 Industry Sector	-	-	-	453	-	-	-	-	453
14 Transport Sector	-	-	-	2,084	435	-	5	-	1,289
15 Other Sector	-	-	-	227	-	-	-	20	88
15.1 Residential & Commercial	-	-	-	227	-	-	-	20	88
15.2 Agriculture	-	-	-	-	-	-	-	-	-
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	-	-	-	-	-	-	-

## Energy Balance Table of Hong Kong, China in 2007

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	-	-	-	-	-	-	-	-	-
2 Import	7,723	-	-	17,667	404	292	5,233	20	3,872
3 Export	-0	-	-	-960	-37	-	-150	-	-127
4 International Marine Bunkers	-	-	-	-8,355	-	-	-	-	-2,127
5 International Aviation Bunkers	-	-	-	-3,808	-	-	-3,808	-	-
6 Stock Changes	-245	-	-	-619	-11	70	-343	-	-100
7 Total Primary Energy Supply	7,478	-	-	3,924	356	362	933	20	1,518
8 Transfers	-	-	-	-	-	-	-	-	-
9 Total Transformation Sector	-7,478	-	-	-393	-	-363	-	-	-6
9.1 Main Activity Producer	-7,478	-	-	-30	-	-	-	-	-6
9.2 Autoproducers	-	-	-	-	-	-	-	-	-
9.3 Gas Processing	-	-	-	-363	-	-363	-	-	-
9.4 Petroleum Refineries	-	-	-	-	-	-	-	-	-
9.5 Coal Transformation	-	-	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-	-	-	-	-	-	-	-
11. Discrepancy	-0	-	-	-595	100	0	-928	1	478
12 Total Final Energy Consumption	-	-	-	2,936	456	-	5	22	1,990
13 Industry Sector	-	-	-	321	-	-	-	-	321
14 Transport Sector	-	-	-	2,369	456	-	5	-	1,573
15 Other Sector	-	-	-	245	-	-	-	22	96
15.1 Residential & Commercial	-	-	-	245	-	-	-	22	96
15.2 Agriculture	-	-	-	-	-	-	-	-	-
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	-	-	-	-	-	-	-

Energy Balance Table of Hong Kong, China in 2008 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	-	-	-	-	98	-	-	98
6,775	428	-	-	-	2,041	-	-	-	5	972	-	26,015
-439	-	-	-	-	-	-	-	-	-2	-306	-	-1,145
-5,689	-	-	-	-	-	-	-	-	-	-	-	-6,911
-	-	-	-	-	-	-	-	-	-	-	-	-3,758
-256	46	-	-	-	-171	-	-	-	-	-	-	-895
391	474	-	-	-	1,870	-	-	-	100	666	-	13,402
-	-	-	-	-	-	-	-	-	-	-	-	-
-30	-	-	-	-	-1,277	-	-	-	-98	3,586	-	-5,025
-30	-	-	-	-	-1,500	-	-	-	-	3,483	-	-4,903
-	-	-	-	-	-	-	-	-	-98	103	-	6
-	-	-	-	-	223	-	-	-	-	-	-	-127
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-629	-	-629
-361	-0	-	-	-	-0	-	-	-	-0	-103	-	-869
-	474	-	-	-	593	-	-	-	3	3,520	-	6,879
-	-	-	-	-	19	-	-	-	-	291	-	764
-	355	-	-	-	-	-	-	-	-	60	-	2,144
-	118	-	-	-	573	-	-	-	3	3,169	-	3,971
-	118	-	-	-	573	-	-	-	3	3,169	-	3,971
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

Energy Balance Table of Hong Kong, China in 2007 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	-	-	-	-	98	-	-	98
7,426	419	-	-	-	2,041	-	-	-	5	942	-	28,378
-646	-	-	-	-	-	-	-	-	-2	-347	-	-1,309
-6,228	-	-	-	-	-	-	-	-	-	-	-	-8,355
-	-	-	-	-	-	-	-	-	-	-	-	-3,808
-280	44	-	-	-	-171	-	-	-	-	-	-	-1,036
272	464	-	-	-	1,870	-	-	-	100	595	-	13,968
-	-	-	-	-	-	-	-	-	-	-	-	-
-24	-	-	-	-	-1,289	-	-	-	-98	3,668	-	-5,588
-24	-	-	-	-	-1,518	-	-	-	-	3,571	-	-5,456
-	-	-	-	-	-	-	-	-	-98	98	-	0
-	-	-	-	-	230	-	-	-	-	-	-	-133
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-653	-	-653
-248	-0	-	-	-	-0	-	-	-	-0	-98	-	-693
-	464	-	-	-	581	-	-	-	3	3,513	-	7,034
-	-	-	-	-	19	-	-	-	-	313	-	654
-	335	-	-	-	-	-	-	-	-	60	-	2,429
-	128	-	-	-	562	-	-	-	3	3,141	-	3,951
-	128	-	-	-	562	-	-	-	3	3,141	-	3,951
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

## Major Energy Indicators of Hong Kong, China

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	4,608	8,904	10,401	12,526	14,094	13,627	13,968	13,402
Indigenous Production	-	-	-	-	81	93	98	98
Import	6,195	12,918	22,159	19,786	25,210	26,740	28,378	26,015
Export	-199	-2,123	-7,837	-1,557	-1,763	-1,577	-1,309	-1,145
Final Energy Consumption	2,779	4,950	6,427	8,637	6,696	6,840	7,034	6,879
Industry	1,040	1,516	1,373	1,714	574	546	654	764
Transport	827	1,397	2,284	3,521	2,334	2,414	2,429	2,144
Residential & Commercial	892	2,025	2,754	3,389	3,660	3,880	3,951	3,971
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Coal, Coal Products</b>								
Primary Energy Supply	20	6,008	5,751	4,125	6,870	6,851	7,478	6,850
Indigenous Production	-	-	-	-	-	-	-	-
Import	21	5,362	5,467	3,658	6,826	7,182	7,723	7,146
Export	-1	-1	-1	-24	-0	-0	-0	-0
Transformation Sector	-	-5,996	-5,742	-4,121	-6,869	-6,851	-7,478	-6,850
Power Generation	-	-5,996	-5,742	-4,121	-6,869	-6,851	-7,478	-6,850
Final Energy Consumption	20	12	9	4	1	0	-	-
Industry	-	-	-	-	1	0	-	-
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	-	-	-	-	-	-	-	-
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	-	-	-	-	-	-	-	-
Indigenous Production	-	-	-	-	-	-	-	-
Import	-	-	-	-	-	-	-	-
Export	-	-	-	-	-	-	-	-
Transformation Sector	-	-	-	-	-	-	-	-
Petroleum Refineries	-	-	-	-	-	-	-	-
<b>Petroleum Products</b>								
Primary Energy Supply	4,614	3,051	4,113	5,618	4,552	3,971	3,924	3,917
Import	6,174	7,556	16,022	13,245	15,405	16,436	17,667	15,852
Export	-172	-1,967	-7,708	-1,431	-1,377	-1,187	-960	-838
Transformation Sector	-2,871	-489	-694	-684	-756	-627	-393	-387
Power Generation	-2,789	-126	-169	-37	-38	-37	-30	-36
Petroleum Refineries	-	-	-	-	-	-	-	-
Final Energy Consumption	1,745	2,565	3,378	4,951	2,665	2,790	2,936	2,764
Industry	674	908	869	1,269	204	191	321	453
Transport	827	1,397	2,284	3,521	2,210	2,355	2,369	2,084
Residential & Commercial	243	260	225	161	122	243	245	227
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Natural Gas</b>								
Primary Energy Supply	-	-	16	2,007	2,033	2,164	1,870	1,870
Indigenous Production	-	-	-	-	-	-	-	-
Import	-	-	22	2,007	2,033	2,185	2,041	2,041
Export	-	-	-	-	-	-	-	-
Transformation Sector	76	324	456	-1,447	-1,447	-1,583	-1,289	-1,277
Power Generation	-	-	-16	-2,007	-2,032	-2,042	-1,518	-1,500
Final Energy Consumption	76	324	472	560	586	581	581	593
Industry	5	13	21	21	19	19	19	19
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	71	311	451	539	567	562	562	573
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Electricity</b>								
Power Generation	1,088	2,488	2,400	2,694	3,307	3,540	3,668	3,586
Thermal	1,088	2,488	2,400	2,694	3,266	3,494	3,571	3,489
Hydro	-	-	-	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-
Others	-	-	-	-	41	46	98	98
Final Energy Consumption	939	2,049	2,567	3,121	3,444	3,469	3,513	3,520
Industry	361	596	483	424	350	335	313	291
Transport	-	-	-	-	123	58	60	60
Residential & Commercial	578	1,454	2,077	2,689	2,971	3,076	3,141	3,169
Agriculture	-	-	-	-	-	-	-	-

## Major Economic Indicators of Hong Kong, China

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	5.06	5.70	6.16	6.67	6.81	6.86	6.93	6.98
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	60.15	115.16	148.51	169.12	207.09	221.62	235.76	241.34
Real Term (Billions of 2000 Price and 2000 PPP)	62.45	119.57	154.19	175.60	215.02	230.11	244.79	250.58
Nominal (Billions of Current USD)	28.82	76.89	144.23	169.12	177.77	189.93	207.07	215.35
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	11,880	20,188	24,123	25,375	30,395	32,320	34,041	34,587
Real Term (2000 Price and 2000 PPP)	12,335	20,961	25,047	26,346	31,559	33,558	35,345	35,912
Nominal (Current USD)	5,692	13,479	23,429	25,375	26,092	27,699	29,898	30,863
Nominal GDP & its Components (Billions of Current HKD) *1								
Gross Domestic Product	143.40	598.95	1,115.74	1,317.65	1,382.59	1,475.36	1,615.43	1,676.93
Household Final Consumption Expenditure, etc.	85.41	342.17	691.71	777.14	804.94	863.59	972.03	1,014.18
General Government Final Consumption Expenditure	8.71	43.14	93.62	120.17	121.44	123.03	130.40	139.54
Gross Fixed Capital Formation	46.23	156.16	334.36	347.38	289.17	322.69	325.35	329.76
Stock Change	3.75	5.73	45.66	14.40	-4.76	-2.13	12.84	11.75
Exports of Goods and Services	127.48	782.38	1,597.77	1,887.70	2,747.14	3,032.41	3,359.58	3,562.83
Imports of Goods and Services	128.17	730.62	1,647.38	1,829.14	2,575.33	2,864.24	3,184.76	3,381.13
Real GDP & its Components (Billions of 2000 HKD) *1								
Gross Domestic Product	412.15	789.09	1,017.55	1,158.81	1,418.94	1,518.54	1,615.43	1,653.64
Household Final Consumption Expenditure, etc.	260.77	507.73	701.41	770.33	845.46	895.55	972.03	986.32
General Government Final Consumption Expenditure	42.28	78.57	104.51	117.14	126.28	126.63	130.40	132.67
Gross Fixed Capital Formation	114.47	176.69	266.97	278.84	293.61	314.53	325.35	323.82
Stock Change	12.90	7.10	46.10	14.80	-4.82	-1.43	12.84	9.57
Exports of Goods and Services	238.22	785.22	1,427.51	1,835.25	2,833.47	3,100.94	3,359.58	3,449.28
Imports of Goods and Services	229.56	755.52	1,517.80	1,847.04	2,674.52	2,917.73	3,184.76	3,248.02
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	N.A.	N.A.	N.A.	0.1	0.1	0.1	0.1	0.0
Industry	N.A.	N.A.	N.A.	12.5	8.7	7.9	7.4	7.1
Services, etc.	N.A.	N.A.	N.A.	93.5	85.9	88.6	86.7	87.2
Manufacturing Production (2005=100) *2	#N/A	145.1	149.0	121.1	100.0	102.2	100.8	94.0
External Trade (Billions of Current USD) *1								
Exports, f.o.b.	20,323	82,390	173,871	202,683	292,119	322,669	349,386	370,242
Imports, c.i.f.	22,994	84,725	196,072	214,042	300,160	335,754	370,132	392,962
Balance of Payments (Billions of Current USD) *2								
Trade Balance	N.A.	N.A.	N.A.	-8.193	-7.627	-14.033	-19.701	-23.117
Current Account	N.A.	N.A.	N.A.	6.993	20.181	22.928	25.532	29.317
Overall Balance	N.A.	N.A.	N.A.	10.044	1.378	6.016	14.704	33.948
Foreign Exchange Rate (HKD/USD) *1	4.9761	7.7898	7.7358	7.7912	7.7773	7.7678	7.8014	7.7868
Purchasing Power Parity (HKD/International Dollar) *1	4.2524	6.1382	7.8573	7.5037	5.6878	5.4945	5.5073	5.4673
Price Indices								
GDP Deflator (2007=100) *3	34.8	75.9	109.6	113.7	97.4	97.2	100.0	101.4
Producer Price Index (2005=100) *2	#N/A	94.8	105.5	101.7	100.0	102.2	105.3	111.2
Consumer Price Index (2005=100) *2	#N/A	63.6	100.1	107.1	100.0	102.0	104.1	108.6
Growth Rate (%) *3								
Real GDP	10.31	3.90	2.29	7.95	7.08	7.02	6.38	2.37
Population	2.71	0.32	2.00	0.89	0.44	0.64	1.00	0.75
Price								
Producer Price Index	N.A.	N.A.	2.8	0.2	0.7	2.2	3.0	5.6
Consumer Price Index	N.A.	N.A.	9.0	-3.8	0.9	2.0	2.0	4.3

Source \*1 : "World Development Indicators", World Bank  
\*2 : "International Financial Statistics", International Monetary Fund  
\*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note : N.A. means "not available"  
: HKD means Hong Kong Dollar, USD means United States Dollar  
: PPP means Purchasing Power Parity

## Energy Price of Hong Kong, China in 2008

## Currency Exchange Rate

	Local currency / US Dollar	
<b>Currency Exchange Rate</b>		
<b>Local Currency Unit</b>		HK\$

## IMPORT PRICES

## WHOLESALE PRICES

## CONSUMER PRICES

	Unit	Amount		Unit	Amount		Unit	Amount
<b>Coal and Coal Products</b>			<b>Coal and Coal Products</b>			<b>Coal and Coal Products</b>		
Coking Coal			Coking Coal			Coking Coal		
Anthracite	HK\$ / t	2,045.00	Anthracite			Anthracite		
Other bituminous coal	HK\$ / t	574.00	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		
<b>Oil and Oil Products</b>			Gas Works Gas			Gas Works Gas		
Crude Oil			<b>Oil and Oil Products</b>			<b>Oil and Oil Products</b>		
Natural Gas Liquids			Crude Oil			Crude Oil		
Ethane			Natural Gas Liquids			Natural Gas Liquids		
LPG	HK\$ / kg	6.91	Ethane			Ethane		
Naphtha			LPG			LPG	HK\$ / kg	17.93
Motor Gasoline	HK\$ / l	5.86	Naphtha			Naphtha		
Aviation Gasoline			Motor Gasoline			Motor Gasoline	HK\$ / l	14.68
Gasoline Type Jet Fuel			Aviation Gasoline			Aviation Gasoline		
Kerosene Type Jet Fuel	HK\$ / l	6.14	Gasoline Type Jet Fuel			Gasoline Type Jet Fuel		
Other Kerosene			Kerosene Type Jet Fuel			Kerosene Type Jet Fuel		
Gas/Diesel Oil			Other Kerosene			Other Kerosene		
Fuel Oil	HK\$ / l	4.11	Gas/Diesel Oil			Gas/Diesel Oil		
White Spirit SBP			Fuel Oil			Fuel Oil		
Lubricants			White Spirit SBP			White Spirit SBP		
Bitumen			Lubricants			Lubricants		
Paraffin Waxes			Bitumen			Bitumen		
Petroleum Coke			Paraffin Waxes			Paraffin Waxes		
<b>Natural Gas</b>			Petroleum Coke			Petroleum Coke		
Natural Gas	HK\$ / kg	1.78	<b>Natural Gas</b>			<b>Natural Gas</b>		
Liquefied Natural Gas			Natural Gas			Natural Gas		
Compressed Natural Gas			Liquefied Natural Gas			Liquefied Natural Gas		
<b>Electricity</b>			Compressed Natural Gas			Compressed Natural Gas		
Electricity			<b>Electricity</b>			<b>Electricity</b>		
<b>Other Energy Products</b>			Electricity			Industrial	HK ¢ / kwh	86.40
Gas oil, diesel oil and naphtha	HK\$ / l	5.51	<b>Other Energy Products</b>			Commercial	HK ¢ / kwh	97.66
						Residential	HK ¢ / kwh	94.84
						*Average		
						<b>Other Energy Products</b>		
						Enviromental diesel oil (road)	HK\$ / l	10.33

## 3.7 Indonesia

## Energy Balance Table of Indonesia in 2008

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	134,652	-	55,318	1,087	-	-	-	-	-
2 Import	63	-	12,839	20,618	7,075	-	656	275	9,525
3 Export	-94,080	-	-20,619	-	-	-	-	-	-
4 International Marine Bunkers	-	-	-	-	-	-	-	-	-
5 International Aviation Bunkers	-	-	-	-	-	-	-	-	-
6 Stock Changes	-	-	976	-	-	-	-	-	-
<b>7 Total Primary Energy Supply</b>	<b>40,635</b>	<b>-</b>	<b>48,514</b>	<b>21,705</b>	<b>7,075</b>	<b>-</b>	<b>656</b>	<b>275</b>	<b>9,525</b>
8 Transfers	-	-	-	-	-	-	-	-	-
9 Total Transformation Sector	-18,277	21	-47,601	34,958	9,691	-	1,491	6,317	5,229
9.1 Main Activity Producer	-18,252	-	-	-9,692	-	-	-	-	-6,508
9.2 Autoproducers	-	-	-	-	-	-	-	-	-
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-47,601	44,650	9,691	-	1,491	6,317	11,737
9.5 Coal Transformation	-25	21	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-	-939	-78	-32	-	-	-13	-29
11. Discrepancy	0	-	26	-2,309	-582	-	54	-43	-26
<b>12 Total Final Energy Consumption</b>	<b>22,357</b>	<b>21</b>	<b>-</b>	<b>54,276</b>	<b>16,152</b>	<b>-</b>	<b>2,201</b>	<b>6,536</b>	<b>14,698</b>
13 Industry Sector	22,357	21	-	6,288	-	-	-	373	4,318
14 Transport Sector	-	-	-	26,001	16,152	-	2,201	2	7,618
15 Other Sector	-	-	-	11,197	-	-	-	6,160	2,763
15.1 Residential & Commercial	-	-	-	8,555	-	-	-	5,904	608
15.2 Agriculture	-	-	-	-	-	-	-	-	-
15.3 Other	-	-	-	2,642	-	-	-	256	2,155
16 Non-energy	-	-	-	10,790	-	-	-	-	-

Note: Others excludes non-commercial biomass supply and consumption.

## Energy Balance Table of Indonesia in 2007

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	121,445	-	46,073	-	-	-	-	-	-
2 Import	38	-	15,483	21,743	6,115	-	958	826	11,608
3 Export	-89,646	-	-17,633	-6,284	-6	-	-	-0	-147
4 International Marine Bunkers	-	-	-	-	-	-	-	-	-
5 International Aviation Bunkers	-	-	-	-	-	-	-	-	-
6 Stock Changes	2,501	-	212	-167	-723	-	35	511	683
<b>7 Total Primary Energy Supply</b>	<b>34,337</b>	<b>-</b>	<b>44,134</b>	<b>15,292</b>	<b>5,385</b>	<b>-</b>	<b>992</b>	<b>1,337</b>	<b>12,144</b>
8 Transfers	-	-	-620	620	-	-	-	-	-
9 Total Transformation Sector	-18,138	24	-43,789	35,908	10,237	-	1,061	6,648	5,013
9.1 Main Activity Producer	-18,110	-	-	-10,278	-	-	-	-	-7,602
9.2 Autoproducers	-	-	-	-	-	-	-	-	-
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-43,789	46,186	10,237	-	1,061	6,648	12,615
9.5 Coal Transformation	-28	24	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-6	-61	-86	-31	-	-	-16	-34
11. Discrepancy	-0	0	336	-0	-0	-	-	-0	0
<b>12 Total Final Energy Consumption</b>	<b>16,199</b>	<b>17</b>	<b>-</b>	<b>51,733</b>	<b>15,591</b>	<b>-</b>	<b>2,053</b>	<b>7,969</b>	<b>17,123</b>
13 Industry Sector	16,199	17	-	7,613	-	-	-	455	5,091
14 Transport Sector	-	-	-	26,501	15,591	-	2,053	3	8,818
15 Other Sector	-	-	-	12,318	-	-	-	7,510	3,214
15.1 Residential & Commercial	-	-	-	9,191	-	-	-	7,199	705
15.2 Agriculture	-	-	-	-	-	-	-	-	-
15.3 Other	-	-	-	3,127	-	-	-	312	2,509
16 Non-energy	-	-	-	5,301	-	-	-	-	-

Note: Others excludes non-commercial biomass supply and consumption.

Energy Balance Table of Indonesia in 2008 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	1,087	-	-	-	72,604	991	-	7,146	-	-	-	271,799
2,588	499	-	-	-	-	-	-	-	-	-	-	33,520
-	-	-	-	-	-33,873	-	-	-	-	-	-	-148,572
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	976
2,588	1,586	-	-	-	38,731	991	-	7,146	-	-	-	157,722
-	-	-	-	-	-	-	-	-	-	-	-	-
509	931	-	-	10,790	-12,689	-991	-	-7,146	-	12,852	-	-38,874
-3,183	-	-	-	-	-5,961	-991	-	-7,146	-	12,852	-	-29,191
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-6,727	-	-	-	-	-	-	-6,727
3,693	931	-	-	10,790	-	-	-	-	-	-	-	-2,952
-	-	-	-	-	-	-	-	-	-	-	-	-5
-3	-	-	-	-	-12,030	-	-	-	-	-1,498	-	-14,545
-1,395	-316	-	-	-	-1,424	-	-	-	-	-251	-	-3,958
1,699	2,200	-	-	10,790	12,589	-	-	-	-	11,103	-	100,345
1,440	157	-	-	-	9,452	-	-	-	-	4,125	-	42,244
28	-	-	-	-	17	-	-	-	-	7	-	26,025
232	2,043	-	-	-	68	-	-	-	-	6,970	-	18,236
-	2,043	-	-	-	68	-	-	-	-	6,970	-	15,594
-	-	-	-	-	-	-	-	-	-	-	-	-
232	-	-	-	-	-	-	-	-	-	-	-	2,642
-	-	-	-	10,790	3,051	-	-	-	-	-	-	13,841

Energy Balance Table of Indonesia in 2007 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	63,537	971	-	6,038	-	-	-	238,064
2,066	78	-	-	92	-	-	-	-	-	-	-	37,263
-129	-328	-	-	-5,672	-30,563	-	-	-	-	-	-	-144,127
-	-	-	-	-	-	-	-	-	-	-	-	-
-778	105	-	-	-	-	-	-	-	-	-	-	2,546
1,159	-145	-	-	-5,580	32,975	971	-	6,038	-	-	-	133,746
-	620	-	-	-	-	-	-	-	-	-	-	-
1,090	978	-	-	10,881	-11,707	-971	-	-6,038	-	12,250	-	-32,462
-2,676	-	-	-	-	-4,793	-971	-	-6,038	-	12,250	-	-27,940
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-6,915	-	-	-	-	-	-	-6,915
3,767	978	-	-	10,881	-	-	-	-	-	-	-	2,397
-	-	-	-	-	-	-	-	-	-	-	-	-4
-	-	-	-	-	-	-	-	-	-	-	-	-
-4	-	-	-	-	-9,966	-	-	-	-	-2,036	-	-12,154
0	-	-	-	0	-1,390	-	-	-	-	221	-	-833
2,244	1,453	-	-	5,301	9,912	-	-	-	-	10,435	-	88,297
1,902	165	-	-	-	7,658	-	-	-	-	3,939	-	35,427
37	-	-	-	-	6	-	-	-	-	7	-	26,515
306	1,288	-	-	-	51	-	-	-	-	6,488	-	18,857
-	1,288	-	-	-	51	-	-	-	-	6,488	-	15,730
-	-	-	-	-	-	-	-	-	-	-	-	-
306	-	-	-	-	-	-	-	-	-	-	-	3,127
-	-	-	-	5,301	2,197	-	-	-	-	-	-	7,498

## Major Energy Indicators of Indonesia

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	30,869	52,788	82,017	100,760	130,970	130,520	133,746	157,722
Indigenous Production	92,083	119,434	168,134	183,995	206,158	228,760	238,064	271,799
Import	7,367	9,999	15,761	21,403	41,760	33,291	37,263	33,520
Export	-68,076	-75,853	-100,911	-103,804	-115,627	-131,531	-144,127	-148,572
Final Energy Consumption	20,879	33,492	48,711	63,093	74,750	74,906	88,297	100,345
Industry	6,756	11,767	19,678	22,658	29,104	30,239	35,427	42,244
Transport	6,037	10,741	16,112	20,975	25,858	25,512	26,515	26,025
Residential & Commercial	7,138	7,133	9,628	14,457	14,905	14,410	15,730	15,594
Agriculture	-	-	-	-	-	-	-	-
Non-energy	948	3,456	2,877	4,605	4,526	4,366	7,498	13,841
<b>Coal, Coal Products</b>								
Primary Energy Supply	166	4,056	6,579	10,956	23,742	27,315	34,337	40,635
Indigenous Production	200	5,785	23,955	44,007	82,754	105,348	121,445	134,652
Import	26	663	547	272	53	60	38	63
Export	-59	-2,392	-17,924	-33,323	-57,745	-78,093	-89,646	-94,080
Transformation Sector	-	-2,252	-3,183	-10,052	-13,959	-15,095	-18,114	-18,257
Power Generation	-	-2,252	-3,163	-10,048	-13,956	-15,092	-18,110	-18,252
Final Energy Consumption	75	1,149	1,116	2,053	8,499	11,543	16,217	22,378
Industry	61	1,110	1,076	1,821	8,486	11,527	16,217	22,378
Transport	14	0	-	-	-	-	-	-
Residential & Commercial	-	-	2	17	13	16	-	-
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	39	16	215	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	30,739	38,632	41,784	49,852	49,041	46,672	44,134	48,514
Indigenous Production	76,731	70,733	72,904	68,981	48,137	48,922	46,073	55,318
Import	4,387	6,085	9,107	10,660	20,471	15,768	15,483	12,839
Export	-50,379	-38,186	-40,227	-29,789	-19,567	-18,019	-17,633	-20,619
Transformation Sector	-25,704	-36,471	-39,246	-49,298	-44,642	-44,402	-43,789	-47,601
Petroleum Refineries	-25,704	-36,471	-39,246	-49,298	-44,642	-44,402	-43,789	-47,601
<b>Petroleum Products</b>								
Primary Energy Supply	-5,189	-8,666	-8,436	694	13,873	11,634	15,292	21,705
Import	2,955	3,251	6,107	10,471	21,235	17,462	21,743	20,618
Export	-7,637	-11,125	-13,576	-8,942	-7,363	-5,829	-6,284	-
Transformation Sector	24,640	36,586	41,497	45,445	37,089	37,131	35,908	34,958
Power Generation	-1,690	-3,764	-2,676	-4,501	-9,259	-8,709	-10,278	-9,692
Petroleum Refineries	25,865	38,041	41,588	48,490	46,348	45,840	46,186	44,650
Final Energy Consumption	17,854	24,217	32,699	43,585	45,952	43,021	51,733	54,276
Industry	4,751	6,317	8,739	10,948	10,444	8,717	7,613	6,288
Transport	6,023	10,739	16,100	20,955	25,852	25,507	26,501	26,001
Residential & Commercial	6,687	6,379	7,715	10,873	9,656	8,797	9,191	8,555
Agriculture	-	-	-	-	-	-	-	-
Non-energy	393	782	-	755	-	-	5,301	10,790
<b>Natural Gas</b>								
Primary Energy Supply	4,827	16,889	38,832	34,048	37,710	38,352	32,975	38,731
Indigenous Production	14,828	41,040	68,017	65,798	68,663	67,942	63,537	72,604
Import	-	-	-	-	-	-	-	-
Export	-10,002	-24,151	-29,185	-31,750	-30,953	-29,590	-30,563	-33,873
Transformation Sector	-1,278	-5,616	-18,190	-9,590	-11,300	-11,659	-11,707	-12,689
Power Generation	-	-249	-9,515	-10,468	-3,423	-3,752	-4,793	-5,961
Final Energy Consumption	2,326	5,504	7,831	8,089	11,093	10,657	9,912	12,589
Industry	1,664	2,862	4,951	4,407	6,523	6,244	7,658	9,452
Transport	-	1	13	20	5	5	6	17
Residential & Commercial	107	5	7	28	39	43	51	68
Agriculture	-	-	-	-	-	-	-	-
Non-energy	554	2,636	2,861	3,634	4,526	4,366	2,197	3,051
<b>Electricity</b>								
Power Generation	855	3,245	7,889	10,561	10,952	11,447	12,250	12,852
Thermal	529	2,216	6,337	9,120	9,459	10,053	10,675	11,146
Hydro	325	935	1,136	862	925	821	971	991
Nuclear	-	-	-	-	-	-	-	-
Others	-	94	417	579	568	573	604	715
Final Energy Consumption	624	2,624	7,065	9,365	9,205	9,684	10,435	11,103
Industry	280	1,478	4,913	5,482	3,651	3,751	3,939	4,125
Transport	-	1	-	-	-	-	7	7
Residential & Commercial	344	749	1,905	3,538	5,197	5,554	6,488	6,970
Agriculture	-	-	-	-	-	-	-	-

Note: Total excludes non-commercial biomass supply and consumption.

## Major Economic Indicators of Indonesia

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	146.58	177.39	191.50	205.28	219.21	221.95	224.67	227.35
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	58.82	109.15	159.38	165.02	207.89	219.33	233.10	247.23
Real Term (Billions of 2000 Price and 2000 PPP)	176.49	327.49	478.21	495.12	623.75	658.06	699.38	741.78
Nominal (Billions of Current USD)	78.01	114.43	202.13	165.02	285.87	364.57	432.04	510.78
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	401	615	832	804	948	988	1,038	1,087
Real Term (2000 Price and 2000 PPP)	1,204	1,846	2,497	2,412	2,845	2,965	3,113	3,263
Nominal (Current USD)	532	645	1,056	804	1,304	1,643	1,923	2,247
Nominal GDP & its Components (Billions of Current IDR) *1								
Gross Domestic Product	48,913	210,866	454,514	1,389,770	2,774,281	3,339,217	3,949,321	4,954,029
Household Final Consumption Expenditure, etc.	25,594	119,802	279,876	856,798	1,785,596	2,092,656	2,510,504	3,019,459
General Government Final Consumption Expenditure	5,148	18,649	35,584	90,780	224,981	288,080	329,760	416,867
Gross Fixed Capital Formation	10,550	59,758	129,217	275,882	655,854	805,786	986,215	1,369,583
Stock Change	1,223	4,911	15,900	33,283	39,975	42,382	-1,053	7,664
Exports of Goods and Services	16,718	53,409	119,593	569,490	945,122	1,036,316	1,162,974	1,474,508
Imports of Goods and Services	9,886	50,046	125,657	423,318	830,083	855,588	1,003,271	1,418,105
Real GDP & its Components (Billions of 2000 IDR) *1								
Gross Domestic Product	495,380	919,241	1,342,285	1,389,769	1,750,815	1,847,127	1,963,092	2,082,104
Household Final Consumption Expenditure, etc.	226,405	480,808	726,185	856,798	1,043,805	1,076,928	1,130,847	1,191,191
General Government Final Consumption Expenditure	50,448	84,219	97,353	90,780	134,626	147,564	153,310	169,297
Gross Fixed Capital Formation	99,861	214,557	346,858	275,881	393,501	403,719	441,614	493,222
Stock Change	-5,472	-17,177	-24,459	33,283	33,508	29,027	-243	3,865
Exports of Goods and Services	275,262	301,744	512,137	569,490	793,613	868,257	942,431	1,031,866
Imports of Goods and Services	167,806	255,995	488,016	423,318	639,702	694,605	756,895	832,820
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	25.1	19.4	15.1	15.6	14.5	14.2	13.8	13.7
Industry	37.4	41.0	44.0	45.9	44.1	43.7	43.0	42.1
Services, etc.	36.5	39.1	40.8	38.5	41.4	42.1	43.1	44.3
Manufacturing Production Index (2005=100)	24.5	56.9	100.8	84.1	100.0	98.4	103.8	N.A.
External Trade (Billions of Current USD) *1								
Exports, f.o.b.	21,909	25,675	45,417	65,403	86,996	103,527	118,014	139,281
Imports, c.i.f.	10,834	21,837	40,630	43,595	75,533	80,346	92,778	126,177
Balance of Payments (Billions of Current USD) *2								
Trade Balance	N.A.	5,352	6,533	25,042	17,534	29,660	32,754	22,916
Current Account	N.A.	-2,988	-6,431	7,992	0,278	10,860	10,493	0,126
Overall Balance	0,000	2,251	1,573	3,926	-2,111	14,958	12,706	-1,918
Foreign Exchange Rate (IDR/USD) *1	626.99	1,842.81	2,248.61	8,421.78	9,704.74	9,159.32	9,141.00	9,698.96
Purchasing Power Parity (IDR/International Dollar) *1	513.29	789.03	1,032.07	2,806.92	3,934.26	4,348.60	4,712.61	5,456.25
Price Indices								
GDP Deflator (2000=100) *3	9.9	22.9	33.9	100.0	158.5	180.8	201.2	237.9
Wholesale Price Index (2005=100) *2	6.7	16.7	22.5	66.2	100.0	113.7	130.4	164.6
Consumer Price Index (2005=100) *2	8.1	18.4	28.2	64.1	100.0	113.1	120.3	132.4
Growth Rate (%) *3								
Real GDP	8.72	9.00	8.40	4.92	5.69	5.50	6.28	6.06
Population	2.17	1.68	1.47	1.37	1.28	1.25	1.22	1.19
Price								
Wholesale Price Index	26.8	10.0	11.4	12.5	15.3	13.7	14.7	26.2
Consumer Price Index	18.0	7.8	9.4	3.7	10.5	13.1	6.3	10.1

Source \*1 : "World Development Indicators", World Bank  
\*2 : "International Financial Statistics", International Monetary Fund  
\*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note : N.A. means "not available"  
: IDR means Rupiah, USD means United States Dollar  
: PPP means Purchasing Power Parity



## 3.8 Japan

## Energy Balance Table of Japan in 2008

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	627	-	855	-	-	-	-	-	-
2 Import	117,013	1,106	210,089	44,300	450	18,633	201	222	198
3 Export	-	-650	-	-19,440	-594	-27	-3,091	-444	-10,674
4 International Marine Bunkers	-	-	-	-5,272	-	-	-	-	-13
5 International Aviation Bunkers	-	-	-	-6,081	-	-	-6,081	-	-
6 Stock Changes	-1,103	-	-1,862	-208	69	-165	-56	712	-329
7 Total Primary Energy Supply	116,537	456	209,082	13,299	-75	18,441	-9,026	491	-10,818
8 Transfers	-	-	-	-	-	-	-	-	-
9 Total Transformation Sector	-98,604	28,406	-208,548	175,123	44,645	15,712	13,796	17,107	39,583
9.1 Main Activity Producer	-49,962	-4,265	-9,439	-14,605	-	-	-	-2	-127
9.2 Autoproducers	-9,056	-3,053	-	-9,717	-	-1,248	-	-39	-
9.3 Gas Processing	-	-	-	-946	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-204,517	206,593	44,645	22,455	13,796	17,148	39,710
9.5 Coal Transformation	-39,587	35,724	-	-706	-	-	-	-	-
9.6 Other Transformation	-	-	5,408	-5,496	-	-5,496	-	-	-
10. Loss & Own Use	-170	-3,285	-	-12,001	-1	-59	-	-62	-37
11. Discrepancy	-1,827	-4,140	-533	-359	437	-1,250	28	-112	374
12 Total Final Energy Consumption	15,935	21,437	-	176,063	45,006	32,843	4,798	17,423	29,102
13 Industry Sector	15,935	20,748	-	59,951	96	32,843	-	3,317	3,370
14 Transport Sector	-	-	-	78,677	44,910	-	4,798	-	24,136
15 Other Sector	-	689	-	32,958	-	-	-	14,106	1,596
15.1 Residential & Commercial	-	689	-	27,049	-	-	-	12,318	173
15.2 Agriculture	-	-	-	4,000	-	-	-	1,690	784
15.3 Other	-	-	-	1,910	-	-	-	97	639
16 Non-energy	-	-	-	4,476	-	-	-	-	-

## Energy Balance Table of Japan in 2007

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	722	-	833	-	-	-	-	-	-
2 Import	111,588	1,392	206,464	45,290	767	20,934	756	283	278
3 Export	-	-1,072	-	-13,740	-335	-23	-2,061	-607	-6,715
4 International Marine Bunkers	-	-	-	-5,939	-	-	-	-	-103
5 International Aviation Bunkers	-	-	-	-6,205	-	-	-6,205	-	-
6 Stock Changes	-	-	2,370	732	-33	-142	17	459	-99
7 Total Primary Energy Supply	112,310	320	209,668	20,139	398	20,769	-7,493	135	-6,639
8 Transfers	-	-	-	-	-	-	-	-	-
9 Total Transformation Sector	-96,991	28,224	-209,104	180,213	45,860	16,420	12,259	19,122	36,709
9.1 Main Activity Producer	-48,517	-4,740	-7,787	-12,584	-	-	-	-9	-130
9.2 Autoproducers	-8,757	-2,839	-	-10,184	-	-1,325	-	-44	-
9.3 Gas Processing	-	-	-	-967	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-206,946	210,233	45,860	23,469	12,259	19,176	36,839
9.5 Coal Transformation	-39,718	35,803	-	-560	-	-	-	-	-
9.6 Other Transformation	-	-	5,630	-5,724	-	-5,724	-	-	-
10. Loss & Own Use	-170	-3,242	-	-12,979	-	-46	-	-99	-36
11. Discrepancy	744	-3,442	-564	535	721	-1,281	89	3	510
12 Total Final Energy Consumption	15,892	21,860	-	187,908	46,980	35,863	4,855	19,162	30,545
13 Industry Sector	15,892	20,998	-	64,526	148	35,863	-	3,725	3,611
14 Transport Sector	-	-	-	82,163	46,833	-	4,855	-	25,254
15 Other Sector	-	862	-	36,172	-	-	-	15,436	1,680
15.1 Residential & Commercial	-	862	-	29,669	-	-	-	13,462	190
15.2 Agriculture	-	-	-	4,385	-	-	-	1,866	821
15.3 Other	-	-	-	2,118	-	-	-	108	669
16 Non-energy	-	-	-	5,046	-	-	-	-	-

Energy Balance Table of Japan in 2008 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	3,482	7,017	65,605	3,302	8,251	-	-	89,139
5,244	15,967	-	-	3,385	81,307	-	-	-	-	-	-	453,815
-3,680	-166	-	-	-764	-	-	-	-	-	-	-	-20,090
-5,242	-	-	-	-18	-	-	-	-	-	-	-	-5,272
-	-	-	-	-	-	-	-	-	-	-	-	-6,081
18	-405	-	-	-52	-10	-	-	-	-	-	-	-3,184
-3,660	15,395	-	-	2,551	84,779	7,017	65,605	3,302	8,251	-	-	508,327
-	-	-	-	-	-	-	-	-	-	-	-	-
26,287	3,666	7,521	-	6,808	-53,778	-7,017	-65,605	-2,790	-8,249	101,359	658	-139,044
-13,835	-640	-	-	-	-51,332	-6,376	-65,605	-2,410	-1,390	84,774	658	-119,951
-7,106	-81	-1,096	-	-147	-3,524	-641	-	-380	-6,859	16,585	-	-16,643
-	-946	-0	-	-	1,078	-	-	-	-	-	-	131
47,227	5,333	8,617	-	7,661	-	-	-	-	-	-	-	2,076
-	-	-	-	-706	-	-	-	-	-	-	-	-4,568
-	-	-	-	-	-	-	-	-	-	-	-	-88
-1,798	-673	-7,522	-	-1,848	-3,067	-	-	-	-	-11,578	-	-30,101
-119	428	1	-	-147	1,316	-	-	-	3,029	-866	-78	-3,459
20,710	18,817	-	-	7,364	29,250	-	-	512	3,031	88,916	580	335,724
9,142	8,295	-	-	2,888	14,707	-	-	-	3,009	38,119	-	152,470
3,673	1,160	-	-	-	-	-	-	-	-	1,842	-	80,519
7,894	9,362	-	-	-	14,543	-	-	512	22	48,954	580	98,258
5,195	9,362	-	-	-	14,543	-	-	512	22	48,625	580	92,019
1,526	-	-	-	-	-	-	-	-	-	329	-	4,329
1,173	-	-	-	-	-	-	-	-	-	-	-	1,910
-	-	-	-	4,476	-	-	-	-	-	-	-	4,476

Energy Balance Table of Japan in 2007 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	3,448	7,313	72,710	3,551	7,785	-	-	96,361
3,663	15,494	-	-	3,115	78,437	-	-	-	-	-	-	443,171
-3,101	-129	-	-	-768	-	-	-	-	-	-	-	-14,811
-5,808	-	-	-	-28	-	-	-	-	-	-	-	-5,939
-	-	-	-	-	-	-	-	-	-	-	-	-6,205
201	276	-	-	54	-19	-	-	-	-	-	-	3,083
-5,044	15,640	-	-	2,372	81,865	7,313	72,710	3,551	7,785	-	-	515,660
-	-	-	-	-	-	-	-	-	-	-	-	-
30,416	3,877	8,401	-	7,149	-52,735	-7,313	-72,710	-2,983	-7,850	101,293	674	-139,281
-11,912	-533	-	-	-	-50,517	-6,664	-72,710	-2,598	-1,240	85,192	674	-121,492
-7,581	-101	-953	-	-180	-3,315	-649	-	-385	-6,610	16,101	-	-16,637
-	-967	-0	-	-	1,097	-	-	-	-	-	-	130
49,909	5,479	9,354	-	7,888	-	-	-	-	-	-	-	3,286
-	-	-	-	-560	-	-	-	-	-	-	-	-4,475
-	-	-	-	-	-	-	-	-	-	-	-	-94
-2,062	-696	-8,350	-	-1,691	-3,266	-	-	-	-	-11,748	-	-31,405
-193	867	-51	-	-131	2,622	-0	-	0	3,102	-1,294	-82	1,621
23,117	19,688	-	-	7,699	28,487	-	-	568	3,037	88,251	592	346,595
9,499	9,028	-	-	2,653	13,961	-	-	-	3,008	38,348	-	156,733
4,007	1,215	-	-	-	-	-	-	-	-	1,829	-	83,992
9,611	9,445	-	-	-	14,526	-	-	568	29	48,074	592	100,824
6,572	9,445	-	-	-	14,526	-	-	568	29	47,736	592	93,982
1,698	-	-	-	-	-	-	-	-	-	339	-	4,723
1,341	-	-	-	-	-	-	-	-	-	-	-	2,118
-	-	-	-	5,046	-	-	-	-	-	-	-	5,046

## Major Energy Indicators of Japan

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	351,745	430,597	488,304	506,788	521,184	517,860	515,660	508,327
Indigenous Production	48,709	72,578	94,829	101,967	99,662	103,691	96,361	89,139
Import	319,945	376,440	417,131	424,865	440,407	440,888	443,171	453,815
Export	-16,707	-14,834	-23,158	-18,018	-9,705	-10,492	-14,811	-20,090
Final Energy Consumption	251,799	303,145	337,411	357,508	356,848	354,057	346,595	335,724
Industry	131,376	140,776	150,362	160,749	156,222	156,147	156,733	152,470
Transport	51,466	68,141	78,806	84,468	86,520	85,843	83,992	80,519
Residential & Commercial	54,206	74,657	89,200	95,458	100,212	99,326	93,982	92,019
Agriculture	8,175	11,231	11,292	9,988	5,954	5,280	4,723	4,329
Non-energy	6,571	8,339	7,751	6,845	5,219	5,081	5,046	4,476
<b>Coal, Coal Products</b>								
Primary Energy Supply	63,565	75,641	82,827	90,989	110,816	106,359	112,630	116,993
Indigenous Production	12,522	5,890	3,593	1,674	567	685	722	627
Import	51,439	70,045	81,045	90,986	110,603	107,524	112,980	118,119
Export	-1,465	-1,039	-1,995	-1,488	-1,099	-1,321	-1,072	-650
Transformation Sector	-20,520	-32,516	-41,222	-49,618	-68,846	-67,766	-68,768	-70,198
Power Generation	-10,689	-24,751	-33,953	-44,901	-65,552	-63,905	-64,853	-66,336
Final Energy Consumption	37,439	39,154	37,618	39,318	36,391	36,758	37,752	37,372
Industry	36,446	38,389	36,578	38,414	35,461	35,773	36,890	36,683
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	992	765	1,040	904	929	984	862	689
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	219,555	200,317	234,712	218,284	214,674	210,085	209,668	209,082
Indigenous Production	426	554	758	642	794	779	833	855
Import	219,405	200,267	234,050	216,923	212,130	210,313	206,464	210,089
Export	-	-	-	-	-	-	-	-
Transformation Sector	-216,698	-199,036	-231,024	-218,532	-214,624	-209,265	-209,104	-208,548
Petroleum Refineries	-202,533	-180,435	-215,641	-210,772	-213,946	-208,379	-206,946	-204,517
<b>Petroleum Products</b>								
Primary Energy Supply	13,248	46,840	30,261	35,081	29,336	26,211	20,139	13,299
Import	29,468	64,444	52,010	54,172	49,604	50,047	45,290	44,300
Export	-15,242	-13,795	-21,163	-16,529	-8,606	-9,171	-13,740	-19,440
Transformation Sector	156,639	141,230	178,448	187,346	186,316	183,295	180,213	175,123
Power Generation	-42,852	-33,288	-29,361	-24,516	-23,828	-21,547	-22,768	-24,321
Petroleum Refineries	203,921	178,475	211,914	215,580	217,666	212,320	210,233	206,593
Final Energy Consumption	157,936	181,556	203,413	208,952	204,164	196,851	187,908	176,063
Industry	65,073	63,618	71,062	74,943	71,328	68,024	64,526	59,951
Transport	50,157	66,446	76,984	82,593	84,669	83,991	82,163	78,677
Residential & Commercial	28,079	32,223	36,709	35,007	34,604	32,421	29,669	27,049
Agriculture	8,054	10,930	10,908	9,564	5,623	4,955	4,385	4,000
Non-energy	6,571	8,339	7,751	6,845	5,219	5,081	5,046	4,476
<b>Natural Gas</b>								
Primary Energy Supply	21,748	43,479	51,975	64,940	70,913	76,039	81,865	84,779
Indigenous Production	2,115	1,803	1,948	2,157	2,855	3,061	3,448	3,482
Import	19,633	41,684	50,027	62,784	68,070	73,004	78,437	81,307
Export	-	-	-	-	-	-	-	-
Transformation Sector	-11,602	-28,790	-33,261	-42,175	-46,401	-46,929	-52,735	-53,778
Power Generation	-15,892	-32,457	-37,355	-45,970	-48,190	-48,220	-53,832	-54,855
Final Energy Consumption	9,228	14,055	18,479	22,242	24,758	27,182	28,487	29,250
Industry	2,180	3,977	6,471	8,618	9,998	12,053	13,961	14,707
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	7,047	10,078	12,008	13,624	14,759	15,128	14,526	14,543
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Electricity</b>								
Power Generation	48,677	71,693	82,828	92,239	99,064	99,969	101,293	101,359
Thermal	33,036	45,439	48,951	54,976	57,260	56,320	61,411	63,763
Hydro	7,828	7,827	7,124	7,479	7,372	8,230	7,313	7,017
Nuclear	7,174	17,008	25,007	27,776	25,455	26,433	24,237	21,868
Others	638	1,419	1,747	2,009	8,977	8,986	8,332	8,711
Final Energy Consumption	44,024	64,052	73,825	82,912	87,874	89,583	88,251	88,916
Industry	25,216	31,971	33,823	36,289	36,968	37,794	38,348	38,119
Transport	1,309	1,696	1,823	1,875	1,851	1,852	1,829	1,842
Residential & Commercial	17,395	30,115	37,876	44,420	48,724	49,612	47,736	48,625
Agriculture	104	270	304	328	331	325	339	329

## Major Economic Indicators of Japan

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	116.78	123.54	125.44	126.87	127.77	127.76	127.77	127.70
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	2,800.61	4,122.34	4,445.37	4,667.45	4,979.55	5,081.11	5,202.70	5,166.28
Real Term (Billions of 2000 Price and 2000 PPP)	1,950.27	2,870.68	3,095.63	3,250.28	3,467.62	3,538.34	3,623.02	3,597.66
Nominal (Billions of Current USD)	1,055.26	3,018.27	5,247.61	4,667.45	4,552.19	4,362.58	4,380.38	4,910.86
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	23,981	33,369	35,439	36,789	38,972	39,772	40,719	40,455
Real Term (2000 Price and 2000 PPP)	16,700	23,237	24,678	25,619	27,139	27,696	28,356	28,172
Nominal (Current USD)	9,036	24,432	41,834	36,789	35,627	34,148	34,283	38,455
Nominal GDP & its Components (Billions of Current JPY) *1								
Gross Domestic Product	239,271	437,023	493,588	502,990	501,734	507,365	515,805	507,584
Household Final Consumption Expenditure, etc.	129,364	229,538	271,656	282,772	285,936	289,594	290,445	N.A.
General Government Final Consumption Expenditure	33,616	58,574	74,663	84,942	90,602	90,703	92,417	N.A.
Gross Fixed Capital Formation	77,058	142,233	138,090	126,634	116,885	118,467	120,670	N.A.
Stock Change	1,439	2,539	2,222	1,326	1,356	2,253	3,640	N.A.
Exports of Goods and Services	32,817	45,863	45,230	55,256	71,913	81,756	90,830	N.A.
Imports of Goods and Services	35,036	41,690	38,272	47,940	64,957	75,408	82,198	N.A.
Real GDP & its Components (Billions of 2000 JPY) *1								
Gross Domestic Product	301,809	444,246	479,058	502,990	536,624	547,568	560,672	556,747
Household Final Consumption Expenditure, etc.	169,091	242,432	271,491	282,772	300,398	304,973	307,010	N.A.
General Government Final Consumption Expenditure	44,503	62,783	74,041	84,942	94,843	95,203	97,110	N.A.
Gross Fixed Capital Formation	83,294	135,213	130,343	126,634	124,158	124,739	126,053	N.A.
Stock Change	N.A.							
Exports of Goods and Services	22,833	35,988	42,043	55,256	73,584	80,700	87,505	N.A.
Imports of Goods and Services	17,668	33,685	39,918	47,940	57,863	60,307	61,222	N.A.
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	3.1	2.4	1.7	1.8	1.6	1.5	1.5	N.A.
Industry	36.6	37.0	33.3	32.4	31.8	31.9	31.7	N.A.
Services, etc.	60.3	60.6	64.9	65.7	66.6	66.5	66.7	N.A.
Industrial Production Index (2005=100) *2	67.2	99.1	94.0	98.4	100.0	104.4	107.3	103.8
External Trade (Billions of Current USD) *1								
Exports, f.o.b.	130,441	287,581	443,116	479,249	594,941	646,725	714,327	782,337
Imports, c.i.f.	141,296	235,368	335,882	379,511	515,866	579,064	622,243	761,984
Balance of Payments (Billions of Current USD) *2								
Trade Balance	2,130	69,283	131,787	116,716	93,958	81,303	104,752	38,131
Current Account	-10,750	44,078	111,044	119,660	165,783	170,517	210,490	156,634
Overall Balance	5,026	-9,090	58,611	48,955	22,325	31,982	36,524	30,880
Foreign Exchange Rate (JPY/USD) *1	226.74	144.79	94.06	107.77	110.22	116.30	117.75	103.36
Purchasing Power Parity (JPY/International Dollar) *1	229.58	188.20	174.61	154.75	129.55	124.34	120.02	116.46
Price Indices								
GDP Deflator (2000=100) *3	79.3	98.4	103.0	100.0	93.5	92.7	92.0	91.2
Wholesale Price Index (2005=100) *2	116.1	110.8	106.5	102.4	100.0	102.2	104.0	108.7
Consumer Price Index (2005=100) *2	76.8	94.1	100.7	102.2	100.0	100.2	100.3	101.7
Growth Rate (%) *3								
Real GDP	2.82	5.20	1.96	2.86	1.93	2.04	2.39	-0.70
Population	0.79	0.34	0.38	0.17	0.01	-0.01	0.01	-0.05
Price								
Wholesale Price Index	14.9	1.5	-0.8	0.0	1.7	2.2	1.7	4.6
Consumer Price Index	7.8	3.1	-0.1	-0.7	-0.3	0.2	0.1	1.4

Source       \*1 : "World Development Indicators", World Bank  
              \*2 : "International Financial Statistics", International Monetary Fund  
              \*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note         : N.A. means "not available"  
              : JPY means Yen, USD means United States Dollar  
              : PPP means Purchasing Power Parity



## 3.9 Republic of Korea

## Energy Balance Table of Republic of Korea in 2008

	1	2	3	4	4.1	4.2	4.3	4.4	4.5
	Coal	Coal Products	Crude Oil & NGL	Petroleum Products	Mogas	Naphtha	Jet Fuel	Kerosene	Diesel Oil
1 Indigenous Production	1,276	-	536	-	-	-	-	-	-
2 Import	61,017	490	118,857	26,340	-	18,643	34	36	158
3 Export	-	-	-243	-44,712	-3,861	-2,781	-10,305	-319	-17,859
4 International Marine Bunkers	-	-	-	-9,132	-	-	-	-	-880
5 International Aviation Bunkers	-	-	-	-3,806	-	-	-3,806	-	-
6 Stock Changes	268	-	901	878	179	-47	141	167	605
7 Total Primary Energy Supply	62,561	490	120,052	-30,432	-3,682	15,814	-13,936	-116	-17,976
8 Transfers	-	-	-	2,672	762	843	169	-185	-48
9 Total Transformation Sector	-57,734	5,925	-128,625	120,467	10,853	20,746	14,531	4,131	36,460
9.1 Main Activity Producer	-38,504	-	-	-2,734	-	-345	-	-83	-27
9.2 Autoproducers	-1,676	-2,782	-	-365	-	-	-	-4	-
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-128,789	123,620	10,853	21,091	14,531	4,218	36,488
9.5 Coal Transformation	-17,553	8,707	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	164	-54	-	-	-	-	-
10. Loss & Own Use	-	-2,005	-33	-5,680	-	-	-	-6	-18
11. Discrepancy	196	-0	8,606	-9,340	-74	-8,014	-85	-117	-125
12 Total Final Energy Consumption	5,023	4,410	-	77,686	7,860	29,390	679	3,706	18,293
13 Industry Sector	5,023	3,357	-	6,463	-	-	-	322	1,177
14 Transport Sector	-	-	-	27,780	7,860	-	275	8	14,426
15 Other Sector	-	1,053	-	9,195	-	-	404	3,349	2,689
15.1 Residential & Commercial	-	1,053	-	6,460	-	-	1	3,054	801
15.2 Agriculture	-	-	-	1,135	-	-	-	281	757
15.3 Other	-	-	-	1,601	-	-	403	14	1,131
16 Non-energy	-	-	-	34,248	-	29,390	-	28	-

## Energy Balance Table of Republic of Korea in 2007

	1	2	3	4	4.1	4.2	4.3	4.4	4.5
	Coal	Coal Products	Crude Oil & NGL	Petroleum Products	Mogas	Naphtha	Jet Fuel	Kerosene	Diesel Oil
1 Indigenous Production	1,328	-	581	-	-	-	-	-	-
2 Import	54,117	358	120,849	24,364	-	17,419	-	66	214
3 Export	-	-	-27	-39,317	-1,903	-3,573	-9,695	-165	-14,055
4 International Marine Bunkers	-	-	-	-9,680	-	-	-	-	-1,066
5 International Aviation Bunkers	-	-	-	-3,169	-	-	-3,169	-	-
6 Stock Changes	505	-	670	181	-14	151	-137	160	-247
7 Total Primary Energy Supply	55,949	358	122,073	-27,621	-1,916	13,996	-13,000	60	-15,155
8 Transfers	-	-	-	1,938	765	492	284	-334	60
9 Total Transformation Sector	-51,550	5,304	-130,696	121,192	9,060	23,602	14,221	3,810	34,889
9.1 Main Activity Producer	-34,051	-	-	-4,563	-	-281	-	-101	-24
9.2 Autoproducers	-1,491	-2,614	-	-522	-	-	-	-9	-
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-130,786	126,350	9,060	23,883	14,221	3,922	34,914
9.5 Coal Transformation	-16,008	7,918	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	90	-73	-	-	-	-1	-1
10. Loss & Own Use	-	-1,841	-35	-5,155	-	-	-	-39	-25
11. Discrepancy	380	-0	8,657	-9,621	-104	-8,786	-33	18	-113
12 Total Final Energy Consumption	4,779	3,821	-	80,732	7,804	29,305	1,471	3,516	19,656
13 Industry Sector	4,779	2,820	-	7,301	-	-	-	322	1,174
14 Transport Sector	-	-	-	29,347	7,804	-	1,040	8	15,351
15 Other Sector	-	1,001	-	9,949	-	-	432	3,159	3,131
15.1 Residential & Commercial	-	1,001	-	6,749	-	-	1	2,832	900
15.2 Agriculture	-	-	-	1,273	-	-	-	313	856
15.3 Other	-	-	-	1,926	-	-	430	14	1,375
16 Non-energy	-	-	-	34,135	-	29,305	-	27	-

Energy Balance Table of Republic of Korea in 2008 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	195	478	39,340	106	2,925	-	-	44,856
1,100	6,370	-	-	-	33,347	-	-	-	26	-	-	240,077
-5,396	-36	-	-	-4,156	-	-	-	-	-	-	-	-44,955
-8,252	-	-	-	-	-	-	-	-	-	-	-	-9,132
-	-	-	-	-	-	-	-	-	-	-	-	-3,806
-12	-147	-	-	-8	-1,723	-	-	-	-	-	-	325
-12,560	6,186	-	-	-4,164	31,818	478	39,340	106	2,951	-	-	227,364
176	598	397	-	-40	-	-	-	-	-	-	-	2,672
20,121	3,392	2,771	-	7,462	-14,088	-478	-39,340	-62	-670	38,393	4,816	-71,397
-2,279	-	-	-	-	-13,839	-478	-39,340	-54	-115	36,151	1,448	-57,467
-361	-	-	-	-	-450	-	-	-8	-451	2,242	3,369	-122
-	-	-	-	-	201	-	-	-	-	-	-	201
22,761	3,392	2,771	-	7,515	-	-	-	-	-	-	-	-5,169
-	-	-	-	-	-	-	-	-	-	-	-	-8,846
-	-	-	-	-54	-	-	-	-	-105	-	-	6
-2,265	-101	-3,168	-	-121	-403	-	-	-	-	-3,268	-82	-11,471
-80	-613	-	-	-232	254	-	-	0	-0	-109	-13	-406
5,392	9,462	-	-	2,905	17,582	-	-	44	2,281	35,015	4,722	146,762
4,136	720	-	-	108	5,472	-	-	1	1,889	17,875	2,996	43,075
531	4,679	-	-	-	715	-	-	-	-	191	-	28,686
724	2,029	-	-	-	11,395	-	-	43	392	16,949	1,726	40,753
588	2,017	-	-	-	11,389	-	-	43	392	16,228	1,726	37,292
96	1	-	-	-	5	-	-	-	-	564	-	1,704
41	11	-	-	-	-	-	-	-	-	157	-	1,758
-	2,034	-	-	2,797	-	-	-	-	-	-	-	34,248

Energy Balance Table of Republic of Korea in 2007 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	317	434	37,249	79	2,696	-	-	42,683
892	5,774	-	-	-	29,915	-	-	-	29	-	-	229,632
-6,524	-51	-	-	-3,352	-	-	-	-	-	-	-	-39,344
-8,614	-	-	-	-	-	-	-	-	-	-	-	-9,680
-	-	-	-	-	-	-	-	-	-	-	-	-3,169
200	91	-	-	-23	899	-	-	-	-	-	-	2,255
-14,046	5,814	-	-	-3,374	31,131	434	37,249	79	2,725	-	-	222,378
105	466	178	-	-78	-	-	-	-	-	-	-	1,938
23,173	3,335	2,278	-	6,824	-14,342	-434	-37,249	-38	-552	36,749	4,744	-66,873
-4,156	-	-	-	-	-13,862	-434	-37,249	-33	-105	34,481	1,461	-54,356
-513	-	-	-	-	-528	-	-	-5	-390	2,268	3,283	2
-	-	-	-	-	48	-	-	-	-	-	-	48
27,842	3,335	2,278	-	6,895	-	-	-	-	-	-	-	-4,436
-	-	-	-	-	-	-	-	-	-	-	-	-8,090
-	-	-	-	-71	-	-	-	-	-57	-	-	-40
-2,467	-44	-2,456	-	-123	-326	-	-	-	-	-3,060	-141	-10,557
-373	83	-	-	-313	349	-	-	-0	-6	-47	-13	-302
6,391	9,653	-	-	2,935	16,812	-	-	40	2,167	33,642	4,590	146,584
4,976	718	-	-	112	4,710	-	-	1	1,778	17,245	2,998	41,633
487	4,656	-	-	-	576	-	-	-	-	211	-	30,134
928	2,299	-	-	-	11,527	-	-	40	389	16,185	1,592	40,682
726	2,289	-	-	-	11,523	-	-	40	389	15,515	1,592	36,809
104	1	-	-	-	4	-	-	-	-	518	-	1,795
98	9	-	-	-	-	-	-	-	-	152	-	2,079
-	1,980	-	-	2,823	-	-	-	-	-	-	-	34,135

## Major Energy Indicators of Republic of Korea

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	38,321	93,088	144,991	185,799	210,263	213,635	222,378	227,364
Indigenous Production	9,215	22,622	21,382	32,734	43,050	43,846	42,683	44,856
Import	29,598	73,943	150,500	205,987	211,274	225,059	229,632	240,077
Export	-10	-3,795	-15,748	-40,939	-35,741	-39,132	-39,344	-44,955
Final Energy Consumption	35,685	64,908	104,684	126,353	140,124	141,553	146,584	146,762
Industry	15,567	19,279	29,240	37,786	38,793	40,205	41,633	43,075
Transport	4,672	14,556	24,235	26,233	29,175	29,183	30,134	28,686
Residential & Commercial	12,956	21,635	28,179	32,247	37,638	36,640	36,809	37,292
Agriculture	17	1,656	2,908	3,623	1,892	1,776	1,795	1,704
Non-energy	316	6,725	16,999	24,992	30,314	31,703	34,135	34,248
<b>Coal, Coal Products</b>								
Primary Energy Supply	12,539	25,558	26,611	39,448	49,471	52,610	56,307	63,051
Indigenous Production	8,139	7,576	2,465	1,790	1,214	1,210	1,328	1,276
Import	4,689	15,725	28,151	38,451	46,902	50,377	54,475	61,507
Export	-	-	-	-	-	-	-	-
Transformation Sector	-734	-13,163	-17,322	-29,637	-41,148	-44,119	-46,246	-51,809
Power Generation	-734	-5,955	-11,854	-23,576	-33,078	-36,107	-38,156	-42,963
Final Energy Consumption	11,805	11,717	7,407	8,351	7,476	8,322	8,600	9,433
Industry	3,471	3,052	6,041	7,785	6,522	7,218	7,599	8,380
Transport	2	-	-	-	-	-	-	-
Residential & Commercial	8,332	8,665	1,365	566	954	1,104	1,001	1,053
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	22,901	43,239	89,909	126,493	118,805	121,842	122,073	120,052
Indigenous Production	-	-	-	670	534	571	581	536
Import	22,901	42,672	89,239	125,809	117,338	122,758	120,849	118,857
Export	-	-	-25	-99	-3	-2	-27	-243
Transformation Sector	-22,534	-41,836	-91,973	-131,881	-126,084	-129,061	-130,696	-128,625
Petroleum Refineries	-22,534	-41,836	-91,973	-131,881	-126,096	-129,109	-130,786	-128,789
<b>Petroleum Products</b>								
Primary Energy Supply	1,805	6,495	1,217	-27,455	-26,315	-31,211	-27,621	-30,432
Import	2,008	12,841	24,836	24,629	20,897	22,346	24,364	26,340
Export	-10	-3,795	-15,723	-40,840	-35,738	-39,130	-39,317	-44,712
Transformation Sector	18,038	39,028	81,786	118,734	117,743	120,866	121,192	120,467
Power Generation	-6,639	-4,512	-9,892	-6,670	-5,657	-5,276	-5,085	-3,100
Petroleum Refineries	24,692	43,540	91,946	125,628	123,424	126,157	126,350	123,620
Final Energy Consumption	21,052	43,661	77,543	79,838	79,587	78,553	80,732	77,686
Industry	10,143	10,900	13,879	11,006	7,972	7,855	7,301	6,463
Transport	4,636	14,469	24,097	26,058	28,628	28,513	29,347	27,780
Residential & Commercial	3,800	8,980	17,036	13,154	9,096	7,313	6,749	6,460
Agriculture	-	1,531	2,618	3,156	1,414	1,269	1,273	1,135
Non-energy	316	6,725	16,999	24,992	30,314	31,703	34,135	34,248
<b>Natural Gas</b>								
Primary Energy Supply	-	2,725	8,323	17,011	27,415	28,694	31,131	31,818
Indigenous Production	-	-	-	-	441	393	317	195
Import	-	2,681	8,261	17,071	26,112	29,550	29,915	33,347
Export	-	-	-	-	-	-	-	-
Transformation Sector	13	-2,037	-4,168	-5,757	-11,076	-12,607	-14,342	-14,088
Power Generation	-	-2,037	-4,168	-5,757	-11,076	-12,680	-14,390	-14,289
Final Energy Consumption	13	674	3,996	10,928	15,986	16,300	16,812	17,582
Industry	-	73	532	2,882	4,168	4,366	4,710	5,472
Transport	-	-	-	-	323	452	576	715
Residential & Commercial	13	601	3,464	8,035	11,470	11,457	11,523	11,389
Agriculture	-	-	-	11	24	25	4	5
Non-energy	-	-	-	-	-	-	-	-
<b>Electricity</b>								
Power Generation	3,203	9,062	15,812	24,951	33,488	34,746	36,749	38,393
Thermal	2,730	3,921	9,469	14,900	19,932	20,961	23,366	24,173
Hydro	171	547	471	482	446	449	434	478
Nuclear	302	4,594	5,823	9,465	12,750	12,921	12,416	13,113
Others	-	0	49	103	359	414	533	628
Final Energy Consumption	2,815	8,117	14,041	22,628	30,756	31,936	33,642	35,015
Industry	1,954	4,970	8,004	12,934	15,820	16,294	17,245	17,875
Transport	34	87	138	175	224	218	211	191
Residential & Commercial	810	2,935	5,610	9,063	14,110	14,797	15,515	16,228
Agriculture	17	125	290	456	455	482	518	564

## Major Economic Indicators of Republic of Korea

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	38.12	42.87	45.09	47.01	48.14	48.30	48.46	48.61
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	128.03	295.60	430.55	533.39	664.39	698.80	734.48	750.81
Real Term (Billions of 2000 Price and 2000 PPP)	194.29	448.59	653.37	809.43	1,008.24	1,060.45	1,114.60	1,139.38
Nominal (Billions of Current USD)	63.83	263.78	517.12	533.39	844.87	951.77	1,049.24	929.12
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	3,358	6,895	9,548	11,347	13,802	14,469	15,158	15,447
Real Term (2000 Price and 2000 PPP)	5,096	10,464	14,489	17,219	20,945	21,957	23,002	23,441
Nominal (Current USD)	1,674	6,153	11,468	11,347	17,551	19,707	21,653	19,115
Nominal GDP & its Components (Billions of Current KRW) *1								
Gross Domestic Product	38,775	186,691	398,838	603,236	865,241	908,744	975,013	1,023,938
Household Final Consumption Expenditure, etc.	24,251	94,968	208,462	330,390	465,431	494,918	530,264	557,595
General Government Final Consumption Expenditure	4,825	22,054	44,687	72,101	120,010	131,901	143,262	156,328
Gross Fixed Capital Formation	12,492	69,234	148,820	180,748	249,690	260,651	278,168	299,664
Stock Change	-158	801	1,411	3,616	7,176	8,537	8,750	21,938
Exports of Goods and Services	12,433	52,187	114,978	232,633	339,757	360,625	408,754	541,266
Imports of Goods and Services	15,496	54,195	119,336	215,398	316,378	348,023	394,026	553,949
Real GDP & its Components (Billions of 2000 KRW) *1								
Gross Domestic Product	166,733	384,963	560,705	694,628	865,241	910,049	956,515	977,787
Household Final Consumption Expenditure, etc.	107,072	230,340	335,390	387,035	465,431	487,439	512,095	516,808
General Government Final Consumption Expenditure	33,813	61,477	81,220	96,290	120,010	127,909	134,807	140,488
Gross Fixed Capital Formation	42,567	136,791	215,728	214,018	249,690	258,199	269,080	264,627
Stock Change	-2,476	-5,653	19,808	5,959	7,176	10,017	8,649	15,329
Exports of Goods and Services	17,910	50,066	101,218	212,433	339,757	378,375	426,071	450,499
Imports of Goods and Services	27,306	77,615	153,381	217,624	316,378	352,088	393,207	407,587
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	9.2	5.4	4.1	3.6	3.0	2.9	2.9	2.9
Industry	25.0	30.5	30.4	31.6	33.8	34.3	34.6	34.5
Services, etc.	60.0	55.8	55.4	54.2	52.9	52.5	52.5	52.6
Industrial Production Index (2005=100) *2	10.5	31.8	47.9	74.3	100.0	108.4	115.9	119.8
External Trade (Billions of Current USD) *1								
Exports, f.o.b.	17,512	65,016	125,058	172,267	284,419	325,465	371,489	422,007
Imports, c.i.f.	22,292	69,844	135,119	160,481	261,238	309,383	356,846	435,275
Balance of Payments (Billions of Current USD) *2								
Trade Balance	-4.613	-2.461	-4.365	16.954	32.683	27.905	28.168	5.669
Current Account	-5.312	-2.014	-8.665	12.251	14.981	5.385	5.876	-5.777
Overall Balance	0.184	-1.208	7.039	23.790	19.864	22.090	15.128	-56.446
Foreign Exchange Rate (KRW/USD) *1	607.43	707.76	771.27	1,130.96	1,024.12	954.79	929.26	1,102.05
Purchasing Power Parity (KRW/International Dollar) *1	386.09	531.89	691.07	745.26	788.92	762.97	757.19	761.65
Price Indices								
GDP Deflator (2005=100) *3	23.3	48.5	71.1	86.8	100.0	99.9	101.9	104.7
Producer Price Index (2005=100)*2	47.0	64.8	75.7	91.0	100.0	100.9	102.3	111.1
Consumer Price Index (2005=100)*2	28.2	51.7	69.9	84.9	100.0	102.2	104.8	109.7
Growth Rate (%) *3								
Real GDP	-1.49	9.16	9.17	8.49	3.96	5.18	5.11	2.22
Population	1.57	1.15	1.44	0.84	0.21	0.33	0.33	0.31
Price								
Producer Price Index	39.0	4.2	4.7	2.0	2.1	0.9	1.4	8.6
Consumer Price Index	28.7	8.6	4.5	2.3	2.8	2.2	2.5	4.7

Source       \*1 : "World Development Indicators", World Bank  
              \*2 : "International Financial Statistics", International Monetary Fund  
              \*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note         : N.A. means "not available"  
              : KRW means Won, USD means United States Dollar  
              : PPP means Purchasing Power Parity



## 3.10 Malaysia

## Energy Balance Table of Malaysia in 2008

	1	2	3	4	4.1	4.2	4.3	4.4	4.5
	Coal	Coal Products	Crude Oil & NGL	Petroleum Products	Mogas	Naphtha	Jet Fuel	Kerosene	Diesel Oil
1 Indigenous Production	676	-	35,513	2,356	-	-	-	38	113
2 Import	8,310	-	8,565	7,370	3,509	-	25	98	1,502
3 Export	-176	-	-14,994	-9,517	-176	-	-980	-149	-1,150
4 International Marine Bunkers	-	-	-	-66	-	-	-	-	-16
5 International Aviation Bunkers	-	-	-	-	-	-	-	-	-
6 Stock Changes	-695	-	144	-115	42	-	-19	-18	-98
7 Total Primary Energy Supply	8,114	-	29,229	28	3,375	-	-974	-31	350
8 Transfers	-	-	-	-	-	-	-	-	-
9 Total Transformation Sector	-6,894	-	-26,740	25,917	5,063	-	3,136	241	8,996
9.1 Main Activity Producer	-6,894	-	-	-479	-	-	-	-	-298
9.2 Autoproducers	-	-	-	-63	-	-	-	-	-63
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-26,740	26,459	5,063	-	3,136	241	9,357
9.5 Coal Transformation	-	-	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-	-	-993	-	-	-	-	-
11. Discrepancy	244	-	-2,488	-519	398	-	-52	-136	-186
12 Total Final Energy Consumption	1,464	-	-	24,433	8,835	-	2,111	73	9,160
13 Industry Sector	1,464	-	-	5,262	49	-	-	25	3,387
14 Transport Sector	-	-	-	16,175	8,782	-	2,111	-	5,279
15 Other Sector	-	-	-	2,167	4	-	-	48	494
15.1 Residential & Commercial	-	-	-	1,900	-	-	-	48	250
15.2 Agriculture	-	-	-	267	4	-	-	-	245
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	-	830	-	-	-	-	-

## Energy Balance Table of Malaysia in 2007

	1	2	3	4	4.1	4.2	4.3	4.4	4.5
	Coal	Coal Products	Crude Oil & NGL	Petroleum Products	Mogas	Naphtha	Jet Fuel	Kerosene	Diesel Oil
1 Indigenous Production	492	-	34,514	2,475	-	-	-	33	91
2 Import	7,203	-	9,597	8,445	4,021	-	-	47	1,456
3 Export	-233	-	-17,023	-9,768	-1,555	-	-	-194	-872
4 International Marine Bunkers	-	-	-	-70	-	-	-	-	-17
5 International Aviation Bunkers	-	-	-	-905	-905	-	-	-	-
6 Stock Changes	108	-	-155	329	68	-	-	7	45
7 Total Primary Energy Supply	7,570	-	26,932	507	1,630	-	-	-107	702
8 Transfers	-	-	-	-	-	-	-	-	-
9 Total Transformation Sector	-6,400	-	-26,667	23,840	8,416	-	-	230	8,627
9.1 Main Activity Producer	-6,400	-	-	-513	-	-	-	-	-314
9.2 Autoproducers	-	-	-	-83	-	-	-	-	-83
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-26,667	25,280	8,416	-	-	230	9,024
9.5 Coal Transformation	-	-	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-844	-	-	-	-	-
10. Loss & Own Use	-	-	-	-	-	-	-	-	-
11. Discrepancy	-6	-	-266	-449	-205	-	-	-50	172
12 Total Final Energy Consumption	1,163	-	-	23,898	9,841	-	-	74	9,501
13 Industry Sector	1,163	-	-	6,059	47	-	-	26	3,981
14 Transport Sector	-	-	-	14,646	9,790	-	-	-	4,854
15 Other Sector	-	-	-	2,348	4	-	-	48	667
15.1 Residential & Commercial	-	-	-	2,082	-	-	-	48	422
15.2 Agriculture	-	-	-	266	4	-	-	-	245
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	-	845	-	-	-	-	-

Energy Balance Table of Malaysia in 2008 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	1,876	-	-	330	57,022	642	-	-	-	-	-	96,208
1,060	171	-	-	1,005	4,447	-	-	-	-	9	-	28,701
-533	-1,652	-	-	-4,876	-21,600	-	-	-	-	-50	-	-46,337
-44	-	-	-	-6	-	-	-	-	-	-	-	-66
-	-	-	-	-	-	-	-	-	-	-	-	-
6	-10	-	-	-18	-	-	-	-	-	-	-	-666
489	385	-	-	-3,566	39,869	642	-	-	-	-41	-	77,839
-	-	-	-	-	-	-	-	-	-	-	-	-
1,812	1,207	990	-	4,472	-27,982	-642	-	-	-	9,563	-	-26,778
-180	-	-	-	-	-13,300	-642	-	-	-	9,103	-	-12,211
-	-	-	-	-	-1,004	-	-	-	-	460	-	-607
-	-	-	-	-	-13,679	-	-	-	-	-	-	-13,679
1,992	1,207	990	-	4,472	-	-	-	-	-	-	-	-281
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-2	-990	-	-	-1,411	-	-	-	-	-772	-	-3,175
-338	-116	-	-	-89	-1	-	-	-	-	-768	-	-3,532
1,963	1,474	-	-	817	10,474	-	-	-	-	7,983	-	44,354
1,701	99	-	-	-	8,257	-	-	-	-	3,685	-	18,667
3	-	-	-	-	189	-	-	-	-	15	-	16,378
259	1,362	-	-	-	36	-	-	-	-	4,283	-	6,486
241	1,362	-	-	-	36	-	-	-	-	4,264	-	6,200
18	-	-	-	-	-	-	-	-	-	19	-	286
-	-	-	-	-	-	-	-	-	-	-	-	-
-	13	-	-	817	1,993	-	-	-	-	-	-	2,823

Energy Balance Table of Malaysia in 2007 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	2,059	-	-	291	50,961	558	-	-	-	-	-	89,000
1,922	320	-	-	680	4,922	-	-	-	-	-	-	30,167
-1,340	-2,083	-	-	-3,724	-27,016	-	-	-	-	-195	-	-54,236
-48	-	-	-	-5	-	-	-	-	-	-	-	-70
-	-	-	-	-	-	-	-	-	-	-	-	-905
-	3	-	-	206	-	-	-	-	-	-	-	282
534	299	-	-	-2,552	28,866	558	-	-	-	-195	-	64,239
-	-	-	-	-	-	-	-	-	-	-	-	-
1,789	1,223	97	-	3,457	-18,930	-558	-	-	-	8,714	-	-20,001
-199	-	-	-	-	-11,298	-558	-	-	-	8,253	-	-10,516
-	-	-	-	-	-1,032	-	-	-	-	461	-	-655
-	-	-	-	-	-6,600	-	-	-	-	-	-	-6,600
1,988	1,227	937	-	3,457	-	-	-	-	-	-	-	-1,387
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-4	-839	-	-	-	-	-	-	-	-	-	-844
-	-	-	-	-	-791	-	-	-	-	-610	-	-1,401
-123	-72	-88	-	-83	247	-	-	-	-	-230	-	-704
2,200	1,450	9	-	822	9,392	-	-	-	-	7,680	-	42,133
1,903	92	9	-	-	5,403	-	-	-	-	3,585	-	16,210
3	-	-	-	-	133	-	-	-	-	3	-	14,783
294	1,335	-	-	-	1,943	-	-	-	-	4,091	-	8,382
278	1,335	-	-	-	31	-	-	-	-	4,091	-	6,204
17	-	-	-	-	-	-	-	-	-	-	-	266
-	-	-	-	-	1,913	-	-	-	-	-	-	1,913
-	23	-	-	822	1,913	-	-	-	-	-	-	2,758

## Major Energy Indicators of Malaysia

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	10,298	20,342	32,230	49,918	61,730	59,318	64,239	77,839
Indigenous Production	16,072	46,529	62,388	79,473	91,969	87,561	89,000	96,208
Import	6,752	9,708	11,128	16,271	23,687	24,493	30,167	28,701
Export	-11,759	-35,090	-39,423	-43,637	-54,323	-52,868	-54,236	-46,337
Final Energy Consumption	6,130	12,516	21,004	28,123	37,536	38,912	42,133	44,354
Industry	2,870	5,276	8,060	11,401	14,960	15,911	16,210	18,667
Transport	2,143	4,756	6,667	10,496	15,319	14,799	14,783	16,378
Residential & Commercial	826	1,646	2,837	3,867	4,498	5,422	6,204	6,200
Agriculture	-	-	446	104	101	238	266	286
Non-energy	269	838	2,994	2,249	2,027	1,844	2,758	2,823
<b>Coal, Coal Products</b>								
Primary Energy Supply	53	1,355	1,612	2,308	6,620	6,020	7,570	8,114
Indigenous Production	-	70	85	242	408	486	492	676
Import	53	1,424	1,588	1,943	6,277	5,829	7,203	8,310
Export	-	-28	-50	-19	-42	-60	-233	-176
Transformation Sector	-	-813	-957	-1,495	-5,260	-5,095	-6,400	-6,894
Power Generation	-	-813	-957	-1,495	-5,260	-5,095	-6,400	-6,894
Final Energy Consumption	53	513	712	991	1,280	1,141	1,163	1,464
Industry	53	513	712	991	1,280	1,141	1,163	1,464
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	-	-	-	-	-	-	-	-
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	5,783	10,024	17,476	24,137	26,799	25,802	26,932	29,229
Indigenous Production	13,707	30,629	35,090	33,835	36,746	34,986	34,514	35,513
Import	4,034	2,244	2,116	7,709	8,242	8,043	9,597	8,565
Export	-11,619	-22,949	-19,833	-17,254	-19,073	-17,330	-17,023	-14,994
Transformation Sector	-5,901	-9,980	-16,960	-22,164	-24,551	-24,971	-26,667	-26,740
Petroleum Refineries	-5,901	-9,980	-16,960	-22,164	-24,551	-24,971	-26,667	-26,740
<b>Petroleum Products</b>								
Primary Energy Supply	2,098	1,824	-1,351	-3,496	1,400	556	507	28
Import	2,658	6,031	7,411	6,619	7,954	7,726	8,445	7,370
Export	-132	-3,413	-7,261	-8,533	-8,417	-9,520	-9,768	-9,517
Transformation Sector	3,347	7,425	16,669	21,634	20,774	21,795	23,840	25,917
Power Generation	-2,346	-2,989	-2,338	-966	-575	-820	-596	-542
Petroleum Refineries	5,693	10,414	16,686	20,954	21,349	23,459	25,280	26,459
Final Energy Consumption	5,295	9,195	14,982	18,007	22,995	22,361	23,898	24,433
Industry	2,432	3,481	4,945	5,278	5,496	5,129	6,059	5,262
Transport	2,143	4,756	6,662	10,485	15,228	14,689	14,646	16,175
Residential & Commercial	429	729	999	1,398	906	1,606	2,082	1,900
Agriculture	-	-	446	104	101	238	266	267
Non-energy	269	229	1,930	737	632	-	845	830
<b>Natural Gas</b>								
Primary Energy Supply	2,237	6,801	13,960	26,370	26,414	26,386	28,866	39,869
Indigenous Production	2,245	15,487	26,678	44,797	51,992	49,449	50,961	57,022
Import	-	-	-	-	1,213	2,895	4,922	4,447
Export	-8	-8,686	-12,264	-17,831	-26,791	-25,957	-27,016	-21,600
Transformation Sector	-33	-2,397	-12,258	-20,971	-19,189	-17,507	-18,930	-27,982
Power Generation	-33	-1,361	-6,414	-12,110	-11,948	-11,982	-12,330	-14,304
Final Energy Consumption	35	1,093	1,935	3,862	6,322	8,142	9,392	10,474
Industry	1	452	577	2,327	4,815	6,168	5,403	8,257
Transport	-	-	5	7	86	105	133	189
Residential & Commercial	34	32	289	16	26	25	31	36
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	609	1,064	1,512	1,395	1,844	1,913	1,993
<b>Electricity</b>								
Power Generation	864	1,979	3,909	5,952	7,508	7,721	8,714	9,563
Thermal	744	1,636	3,374	5,353	7,011	7,167	8,156	8,922
Hydro	120	343	535	599	497	554	558	642
Nuclear	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-
Final Energy Consumption	747	1,715	3,375	5,263	6,940	7,268	7,680	7,983
Industry	384	830	1,826	2,805	3,369	3,473	3,585	3,685
Transport	-	-	-	4	5	5	3	15
Residential & Commercial	363	885	1,549	2,453	3,565	3,790	4,091	4,264
Agriculture	-	-	-	-	-	-	-	19

## Major Economic Indicators of Malaysia

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	13.76	18.10	20.59	23.27	25.63	26.09	26.56	27.01
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	26.41	47.21	74.22	93.79	118.22	125.05	132.99	139.16
Real Term (Billions of 2000 Price and 2000 PPP)	59.55	106.42	167.32	211.44	266.52	281.91	299.81	313.72
Nominal (Billions of Current USD)	24.94	44.02	88.83	93.79	137.95	156.41	186.72	222.05
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	1,919	2,608	3,604	4,030	4,612	4,792	5,008	5,151
Real Term (2000 Price and 2000 PPP)	4,327	5,879	8,125	9,085	10,398	10,803	11,290	11,613
Nominal (Current USD)	1,812	2,432	4,314	4,030	5,382	5,994	7,031	8,220
Nominal GDP & its Components (Billions of Current MYR) *1								
Gross Domestic Product	54.29	119.08	222.47	356.40	522.45	573.74	641.86	740.72
Household Final Consumption Expenditure, etc.	27.93	61.69	106.61	155.94	234.23	257.41	292.72	N.A.
General Government Final Consumption Expenditure	8.68	16.43	27.53	36.23	64.52	68.53	78.30	N.A.
Gross Fixed Capital Formation	16.26	39.35	96.97	90.14	107.19	119.60	139.14	N.A.
Stock Change	-1.38	-0.81	0.12	5.62	-2.77	0.58	1.65	N.A.
Exports of Goods and Services	30.77	88.76	209.32	427.00	613.69	669.78	707.16	N.A.
Imports of Goods and Services	29.46	86.24	218.08	358.53	494.42	542.15	577.11	N.A.
Real GDP & its Components (Billions of 1987 MYR) *1								
Gross Domestic Product	100.38	179.38	282.04	356.40	449.25	475.19	505.35	528.80
Household Final Consumption Expenditure, etc.	58.14	90.51	134.05	155.94	216.25	230.22	255.03	N.A.
General Government Final Consumption Expenditure	14.66	21.58	31.39	36.23	58.40	61.26	65.30	N.A.
Gross Fixed Capital Formation	24.72	49.62	113.24	90.14	99.27	107.12	117.38	N.A.
Stock Change	0.50	-1.16	0.15	5.62	-3.08	0.11	-5.92	N.A.
Exports of Goods and Services	49.02	133.15	280.77	427.00	554.26	592.90	617.63	N.A.
Imports of Goods and Services	50.09	121.42	289.12	358.53	475.84	516.41	544.06	N.A.
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	20.4	15.7	10.0	8.6	8.0	7.9	7.6	N.A.
Industry	37.5	41.8	45.0	48.3	46.5	45.9	44.6	N.A.
Services, etc.	41.4	42.2	44.9	43.1	45.5	46.1	47.8	N.A.
Industrial Production Index (2005=100) *2	13.4	31.6	52.9	78.4	100.0	104.5	106.9	106.8
External Trade (Billions of Current USD) *1								
Exports, f.o.b.	12.958	29.452	73.914	98.229	140.980	160.676	176.211	199.516
Imports, c.i.f.	10.820	29.258	77.691	81.963	114.625	131.152	146.982	156.896
Balance of Payments (Billions of Current USD) *2								
Trade Balance	2.393	2.525	-0.103	20.827	33.156	37.441	37.190	51.261
Current Account	-0.266	-0.870	-8.644	8.488	19.980	26.200	29.243	38.914
Overall Balance	0.464	1.951	-1.763	-1.009	3.620	6.864	13.144	-3.450
Foreign Exchange Rate (MYR/USD) *1	2.1769	2.7049	2.5044	3.8000	3.7871	3.6682	3.4376	3.3358
Purchasing Power Parity (MYR/International Dollar) *1	1.6883	1.3712	1.4438	1.6856	1.7339	1.7441	1.7867	1.9290
Price Indices								
GDP Deflator (2000=100) *3	54.1	66.4	78.9	100.0	116.3	120.7	127.0	140.1
Producer Price Index (2005=100) *2	#N/A	61.2	72.3	83.8	100.0	106.7	112.6	124.0
Consumer Price Index (2005=100) *2	47.2	64.7	78.6	91.7	100.0	103.6	105.7	111.5
Growth Rate (%) *3								
Real GDP	7.44	9.01	9.83	8.86	5.33	5.77	6.35	4.64
Population	2.42	2.84	2.57	2.28	1.83	1.80	1.77	1.73
Price								
Producer Price Index	N.A.	0.9	5.5	3.1	6.9	6.7	5.5	10.2
Consumer Price Index	6.7	2.6	3.5	1.5	3.0	3.6	2.0	5.4

Source \*1 : "World Development Indicators", World Bank  
\*2 : "International Financial Statistics", International Monetary Fund  
\*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note : N.A. means "not available"  
: MYR means Malaysian Ringgit, USD means United States Dollar  
: PPP means Purchasing Power Parity



## 3.11 Mexico

## Energy Balance Table of Mexico in 2008

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	5,504	-	163,112	-	-	-	-	-	-
2 Import	2,128	213	471	26,993	14,820	233	238	-	3,754
3 Export	-	-2	-77,826	-6,782	-9	-2,862	-278	-	-395
4 International Marine Bunkers	-	-	-	-1,032	-	-	-	-	-935
5 International Aviation Bunkers	-	-	-	-3,179	-26	-	-3,153	-	-
6 Stock Changes	-1,045	725	-638	281	-33	-	56	-	261
<b>7 Total Primary Energy Supply</b>	<b>6,587</b>	<b>937</b>	<b>85,119</b>	<b>16,280</b>	<b>14,752</b>	<b>-2,629</b>	<b>-3,137</b>	<b>-</b>	<b>2,685</b>
8 Transfers	-	-	-10,619	11,762	2,642	-	-249	19	-
9 Total Transformation Sector	-6,448	1,048	-78,010	57,379	19,951	4,159	3,119	1	17,528
9.1 Main Activity Producer	-5,023	-	-	-11,420	-	-	-	-	-254
9.2 Autoproducers	-	-132	-	-	-	-	-	-	-
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-78,010	68,799	19,951	4,159	3,119	1	17,783
9.5 Coal Transformation	-1,426	1,180	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-27	-	-6,793	-399	-	-	-	-898
11. Discrepancy	-0	-	3,511	-2,375	-1,404	0	267	1	-40
<b>12 Total Final Energy Consumption</b>	<b>139</b>	<b>1,958</b>	<b>-</b>	<b>76,253</b>	<b>35,542</b>	<b>1,531</b>	<b>-</b>	<b>21</b>	<b>19,276</b>
13 Industry Sector	139	1,958	-	6,820	-	-	-	-	1,380
14 Transport Sector	-	-	-	51,714	35,542	-	-	-	15,179
15 Other Sector	-	-	-	10,953	-	-	-	21	2,717
15.1 Residential & Commercial	-	-	-	8,218	-	-	-	20	104
15.2 Agriculture	-	-	-	2,735	-	-	-	1	2,613
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	-	6,766	-	1,531	-	-	-

## Energy Balance Table of Mexico in 2007

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	6,000	-	179,381	-	-	-	-	-	-
2 Import	2,677	174	557	24,535	13,348	325	168	-	3,754
3 Export	-4	-2	-93,230	-5,749	-17	-3,300	-165	-	-395
4 International Marine Bunkers	-	-	-	-1,035	-	-	-	-	-935
5 International Aviation Bunkers	-	-	-	-3,321	-25	-	-3,296	-	-
6 Stock Changes	-325	577	-233	-168	-352	-	-21	17	261
<b>7 Total Primary Energy Supply</b>	<b>8,348</b>	<b>749</b>	<b>86,475</b>	<b>14,262</b>	<b>12,954</b>	<b>-2,975</b>	<b>-3,314</b>	<b>17</b>	<b>2,685</b>
8 Transfers	-	-	-11,458	12,677	2,839	-	-152	24	-
9 Total Transformation Sector	-8,206	1,117	-78,453	56,153	20,205	4,733	3,221	2	17,528
9.1 Main Activity Producer	-6,795	-	-	-14,032	-	-	-	-	-254
9.2 Autoproducers	-	-104	-	-	-	-	-	-	-
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-78,453	70,184	20,205	4,733	3,221	2	17,783
9.5 Coal Transformation	-1,411	1,221	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-25	-	-6,884	-404	-	-	-	-898
11. Discrepancy	0	-	3,436	-62	-1,571	-1	245	2	-40
<b>12 Total Final Energy Consumption</b>	<b>143</b>	<b>1,840</b>	<b>-</b>	<b>76,147</b>	<b>34,023</b>	<b>1,757</b>	<b>-</b>	<b>45</b>	<b>19,276</b>
13 Industry Sector	143	1,840	-	7,790	-	-	-	1	1,380
14 Transport Sector	-	-	-	50,357	34,023	-	-	-	15,179
15 Other Sector	-	-	-	11,115	-	-	-	44	2,717
15.1 Residential & Commercial	-	-	-	8,389	-	-	-	43	104
15.2 Agriculture	-	-	-	2,726	-	-	-	1	2,613
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	-	6,885	-	1,757	-	-	-

Energy Balance Table of Mexico in 2008 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	41,206	3,369	2,555	6,225	8,238	-	-	230,210
1,802	3,507	-	-	2,640	11,559	-	-	-	-	30	-	41,396
-3,234	-5	-	-	-	-893	-	-	-	-	-125	-	-85,628
-96	-	-	-	-1	-	-	-	-	-	-	-	-1,032
-	-	-	-	-	-	-	-	-	-	-	-	-3,179
-35	6	-	-	25	-358	-	-	-	-	-	-	-1,035
-1,562	3,508	-	-	2,664	51,515	3,369	2,555	6,225	8,238	-95	-	180,731
-	6,473	-	2,878	-	-	-	-	-	-	-	-	1,143
5,394	993	3,251	-	2,981	-24,174	-3,369	-2,555	-6,092	-1,035	22,267	-	-40,990
-10,415	-	-	-	-751	-21,167	-3,345	-2,555	-6,090	-	20,285	-	-29,314
-	-	-	-	-	-3,007	-25	-	-2	-1,035	1,982	-	-2,219
-	-	-	-	-	-	-	-	-	-	-	-	-
15,810	993	3,251	-	3,732	-	-	-	-	-	-	-	-9,211
-	-	-	-	-	-	-	-	-	-	-	-	-246
-	-	-	-	-	-	-	-	-	-	-	-	-
-1,951	-181	-3,251	-	-113	-13,330	-	-	-	-	-4,960	-	-25,110
67	-725	-	-	-542	-831	-	-	0	-0	-	-	304
1,948	10,068	-	2,878	4,990	13,180	-	-	133	7,203	17,212	-	116,079
1,862	925	-	-	2,654	8,474	-	-	-	1,361	10,558	-	29,310
86	906	-	-	-	754	-	-	-	-	95	-	52,563
-	8,215	-	-	-	974	-	-	133	5,843	6,558	-	24,461
-	8,094	-	-	-	974	-	-	133	5,843	5,861	-	21,029
-	121	-	-	-	-	-	-	-	-	697	-	3,432
-	-	-	-	-	-	-	-	-	-	-	-	-
-	21	-	2,878	2,336	2,978	-	-	-	-	-	-	9,744

Energy Balance Table of Mexico in 2007 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	42,151	2,346	2,716	6,499	8,250	-	-	247,342
928	3,278	-	-	2,735	9,349	-	-	-	-	24	-	37,316
-1,834	-38	-	-	-	-1,227	-	-	-	-	-125	-	-100,337
-99	-	-	-	-1	-	-	-	-	-	-	-	-1,035
-	-	-	-	-	-	-	-	-	-	-	-	-3,321
-50	-14	-	-	-10	-45	-	-	-	-	-	-	-195
-1,055	3,226	-	-	2,724	50,228	2,346	2,716	6,499	8,250	-101	-	179,771
-	7,040	-	2,926	-	-	-	-	-	-	-	-	1,219
3,465	1,073	3,259	-	2,665	-22,821	-2,346	-2,716	-6,391	-1,126	22,658	-	-42,130
-12,999	-	-	-	-778	-20,018	-2,326	-2,716	-6,389	-	19,993	-	-32,281
-	-	-	-	-	-2,803	-20	-	-2	-1,126	2,665	-	-1,390
-	-	-	-	-	-	-	-	-	-	-	-	-
16,465	1,073	3,259	-	3,443	-	-	-	-	-	-	-	-8,268
-	-	-	-	-	-	-	-	-	-	-	-	-190
-	-	-	-	-	-	-	-	-	-	-	-	-
-1,996	-195	-3,259	-	-130	-12,428	-	-	-	-	-5,668	-	-25,006
2,073	-760	-	-	-10	-1,180	-0	-	0	0	-	-	2,194
2,487	10,384	-	2,926	5,249	13,798	-	-	108	7,124	16,889	-	116,049
2,385	956	-	-	3,069	9,311	-	-	-	1,176	9,877	-	30,137
102	1,053	-	-	-	727	-	-	-	-	102	-	51,186
-	8,354	-	-	-	967	-	-	108	5,947	6,910	-	25,047
-	8,242	-	-	-	967	-	-	108	5,947	6,180	-	21,591
-	112	-	-	-	-	-	-	-	-	730	-	3,456
-	-	-	-	-	-	-	-	-	-	-	-	-
-	21	-	2,926	2,180	2,793	-	-	-	-	-	-	9,678

## Major Energy Indicators of Mexico

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	97,158	121,276	129,126	148,691	173,886	176,538	179,771	180,731
Indigenous Production	149,022	193,435	200,996	225,941	258,327	255,720	247,342	230,210
Import	1,792	5,648	8,453	25,215	30,668	34,557	37,316	41,396
Export	-52,824	-75,521	-77,347	-96,856	-110,862	-109,759	-100,337	-85,628
Final Energy Consumption	65,089	82,891	90,134	100,212	108,042	112,462	116,049	116,079
Industry	18,331	26,161	25,225	29,303	29,077	30,452	30,137	29,310
Transport	23,518	28,530	31,156	36,788	45,089	47,609	51,186	52,563
Residential & Commercial	12,963	16,215	19,327	20,781	21,096	21,608	21,591	21,029
Agriculture	2,288	2,241	2,267	2,837	3,180	3,292	3,456	3,432
Non-energy	5,063	9,053	12,158	10,503	9,600	9,501	9,678	9,744
<b>Coal, Coal Products</b>								
Primary Energy Supply	2,355	3,467	5,367	6,846	9,113	9,081	9,097	7,524
Indigenous Production	1,725	3,387	4,325	5,415	5,159	5,510	6,000	5,504
Import	642	235	736	1,699	3,787	3,900	2,851	2,342
Export	-50	-6	-1	-4	-4	-4	-6	-2
Transformation Sector	-777	-1,836	-3,497	-5,440	-7,348	-7,133	-7,089	-5,401
Power Generation	-	-1,725	-3,347	-4,782	-7,067	-6,919	-6,899	-5,155
Final Energy Consumption	1,549	1,555	1,843	1,378	1,741	1,922	1,983	2,097
Industry	1,549	1,555	1,843	1,378	1,741	1,922	1,983	2,097
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	-	-	-	-	-	-	-	-
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	58,310	82,018	83,498	78,348	92,069	88,059	86,475	85,119
Indigenous Production	102,752	152,756	155,286	171,117	197,237	190,491	179,381	163,112
Import	-	-	-	352	382	465	557	471
Export	-43,934	-70,432	-71,596	-92,202	-105,474	-103,206	-93,230	-77,826
Transformation Sector	-53,022	-73,637	-75,037	-66,466	-85,996	-77,543	-78,453	-78,010
Petroleum Refineries	-53,007	-73,637	-75,037	-66,466	-85,996	-77,543	-78,453	-78,010
<b>Petroleum Products</b>								
Primary Energy Supply	-1,507	-1,753	-2,307	11,842	9,737	11,317	14,262	16,280
Import	1,097	4,994	6,182	20,703	18,807	21,450	24,535	26,993
Export	-2,286	-4,915	-5,398	-4,431	-5,063	-6,149	-5,749	-6,782
Transformation Sector	45,570	50,097	52,846	44,043	54,492	57,742	56,153	57,379
Power Generation	-9,784	-15,119	-15,775	-21,943	-16,708	-13,324	-14,032	-11,420
Petroleum Refineries	48,726	65,215	68,621	65,986	71,200	71,066	70,184	68,799
Final Energy Consumption	39,064	51,210	54,939	62,563	69,734	72,524	76,147	76,253
Industry	5,251	7,445	6,560	7,176	7,154	7,495	7,790	6,820
Transport	23,481	28,461	30,418	36,058	44,353	46,818	50,357	51,714
Residential & Commercial	5,491	7,113	9,003	9,368	8,417	8,576	8,389	8,218
Agriculture	1,966	1,665	1,692	2,157	2,428	2,547	2,726	2,735
Non-energy	2,876	6,527	7,267	7,804	7,383	7,089	6,885	6,766
<b>Natural Gas</b>								
Primary Energy Supply	28,582	23,127	25,361	33,521	43,187	48,684	50,228	51,515
Indigenous Production	35,137	22,757	24,111	31,350	36,048	40,256	42,151	41,206
Import	-	370	1,435	2,370	7,684	8,697	9,349	11,559
Export	-6,555	-	-185	-204	-211	-289	-1,227	-893
Transformation Sector	-10,175	-3,432	-5,356	-8,980	-16,931	-19,735	-22,821	-24,174
Power Generation	-2,837	-3,432	-5,356	-8,980	-16,931	-19,735	-22,821	-24,174
Final Energy Consumption	12,840	14,166	15,242	15,153	13,454	14,340	13,798	13,180
Industry	7,532	10,828	8,928	11,035	9,703	10,348	9,311	8,474
Transport	-	-	654	638	635	689	727	754
Residential & Commercial	470	811	768	781	900	890	967	974
Agriculture	-	-	-	-	-	-	-	-
Non-energy	1,912	2,527	4,891	2,699	2,216	2,412	2,793	2,978
<b>Electricity</b>								
Power Generation	5,320	9,962	12,442	16,901	20,950	21,673	22,658	22,267
Thermal	3,802	7,247	8,852	12,012	15,869	16,536	17,621	16,380
Hydro	1,439	2,019	2,367	2,849	2,379	2,614	2,346	3,369
Nuclear	-	255	733	714	939	944	905	852
Others	79	441	489	1,325	1,763	1,580	1,786	1,666
Final Energy Consumption	4,497	8,617	10,280	13,943	15,837	16,412	16,889	17,212
Industry	2,458	4,592	5,888	8,551	9,202	9,551	9,877	10,558
Transport	37	69	84	92	102	102	102	95
Residential & Commercial	1,680	2,688	3,732	4,620	5,781	6,014	6,180	5,861
Agriculture	322	577	575	679	753	745	730	697

## Major Economic Indicators of Mexico

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	67.57	83.23	91.15	97.97	103.09	104.22	105.28	106.35
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	345.56	413.33	445.85	581.43	636.77	667.43	688.81	701.01
Real Term (Billions of 2000 Price and 2000 PPP)	535.72	640.77	691.19	901.37	987.17	1,034.70	1,067.84	1,086.76
Nominal (Billions of Current USD)	194.77	262.71	286.70	581.43	846.99	948.86	1,022.82	1,088.13
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	5,114	4,966	4,892	5,935	6,177	6,404	6,543	6,592
Real Term (2000 Price and 2000 PPP)	7,928	7,699	7,583	9,201	9,576	9,928	10,143	10,219
Nominal (Current USD)	2,883	3,157	3,146	5,935	8,216	9,104	9,715	10,232
Nominal GDP & its Components (Billions of Current MXN) *1								
Gross Domestic Product	4.47	738.90	1,840.43	5,497.74	9,230.40	10,341.87	11,177.53	12,110.56
Household Final Consumption Expenditure, etc.	2.91	514.12	1,232.00	3,682.55	6,142.08	6,709.61	7,312.58	7,935.60
General Government Final Consumption Expenditure	0.45	61.95	191.98	612.62	996.66	1,082.04	1,143.49	1,248.98
Gross Fixed Capital Formation	1.11	132.11	296.71	1,174.30	1,849.84	2,143.03	2,322.40	2,678.04
Stock Change	0.11	38.88	70.80	137.90	345.04	505.61	579.96	513.44
Exports of Goods and Services	0.48	137.44	558.80	1,700.95	2,507.35	2,904.14	3,164.34	3,424.22
Imports of Goods and Services	0.58	145.60	509.86	1,810.58	2,641.66	3,037.58	3,345.24	3,689.74
Real GDP & its Components (Billions of 1993 MXN) *1								
Gross Domestic Product	4,401.39	5,264.47	5,678.67	7,405.55	8,110.44	8,500.94	8,773.22	8,928.63
Household Final Consumption Expenditure, etc.	2,571.46	3,074.12	3,234.39	4,783.16	5,580.85	5,891.04	6,140.45	6,219.98
General Government Final Consumption Expenditure	544.76	726.14	810.49	907.62	899.45	902.39	911.21	930.52
Gross Fixed Capital Formation	996.27	884.23	815.96	1,520.51	1,645.21	1,803.70	1,904.73	2,050.62
Stock Change	447.38	178.86	95.79	446.47	138.63	121.23	71.22	74.93
Exports of Goods and Services	256.45	543.86	994.52	1,907.59	2,280.31	2,527.15	2,683.05	2,710.15
Imports of Goods and Services	481.67	572.45	827.56	2,016.13	2,434.00	2,744.57	2,937.44	3,057.58
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	4.6	4.4	4.3	3.6	3.6	3.6	3.5	3.6
Industry	31.2	31.3	30.3	33.0	30.9	31.0	30.6	30.3
Services, etc.	57.4	59.0	59.8	58.6	60.3	60.2	60.6	61.0
Industrial Production Index (2005=100) *2	56.4	67.2	70.2	99.6	100.0	105.7	107.8	107.2
External Trade (Billions of Current USD) *1								
Exports, f.o.b.	18.031	40.711	79.542	166.367	214.207	249.961	271.821	291.807
Imports, c.i.f.	22.144	43.548	75.858	182.702	232.245	268.093	295.201	323.151
Balance of Payments (Billions of Current USD) *2								
Trade Balance	-3.056	-0.881	7.089	-8.337	-7.587	-6.133	-10.074	-17.261
Current Account	-10.422	-7.451	-1.576	-18.766	-4.564	-4.461	-8.413	-15.903
Overall Balance	0.817	2.218	-16.312	7.126	6.965	-1.303	10.250	7.731
Foreign Exchange Rate (MXN/USD) *1	0.0230	2.8126	6.4194	9.4556	10.8979	10.8992	10.9282	11.1297
Purchasing Power Parity (MXN/International Dollar) *1	0.0168	1.4368	2.9331	6.0993	7.1269	7.3719	7.4857	7.8158
Price Indices								
GDP Deflator (2003=100) *3	0.1	14.0	32.4	74.2	113.8	121.7	127.4	135.6
Wholesale Price Index (2005=100) *2	0.3	15.2	32.9	74.0	100.0	106.6	110.5	117.7
Consumer Price Index (2005=100) *2	0.1	14.6	32.8	78.6	100.0	103.6	107.7	113.3
Growth Rate (%)								
Real GDP *3	9.23	5.07	-6.22	6.60	3.20	4.81	3.20	1.77
Population *3	2.51	1.91	1.79	1.43	1.02	1.10	1.02	1.02
Price *2								
Wholesale Price Index	24.5	21.7	38.6	7.8	4.2	6.6	3.6	6.5
Consumer Price Index	26.4	26.7	35.0	9.5	4.0	3.6	4.0	5.1

Source \*1 : "World Development Indicators", World Bank

\*2 : "International Financial Statistics", International Monetary Fund

\*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note

: N.A. means "not available"

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

: PPP means Purchasing Power Parity



## 3.12 New Zealand

## Energy Balance Table of New Zealand in 2008

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	2,891	-	2,900	-	-	-	-	-	-
2 Import	316	-	4,959	2,320	926	-	256	-	840
3 Export	-1,800	-	-2,630	-210	-30	-	-	-	-
4 International Marine Bunkers	-	-	-	-343	-	-	-	-	-44
5 International Aviation Bunkers	-	-	-	-856	-	-	-856	-	-
6 Stock Changes	285	-	57	-23	-1	-	-1	-	-21
7 Total Primary Energy Supply	1,693	-	5,285	889	895	-	-601	-	775
8 Transfers	-	-	-79	81	-22	-	-27	9	-
9 Total Transformation Sector	-1,335	94	-5,335	5,347	1,601	-	947	1	1,778
9.1 Main Activity Producer	-965	-	-	-32	-	-	-	-	-32
9.2 Autoproducers	-6	-136	-	-	-	-	-	-	-
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-5,335	5,378	1,601	-	947	1	1,809
9.5 Coal Transformation	-363	230	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-50	-	-362	-	-	-	-	-
11. Discrepancy	214	0	130	-11	55	-	-15	-8	5
12 Total Final Energy Consumption	572	44	-	5,943	2,529	-	305	2	2,558
13 Industry Sector	424	44	-	487	80	-	-	2	332
14 Transport Sector	-	-	-	4,695	2,420	-	305	-	1,917
15 Other Sector	148	-	-	437	29	-	-	-	309
15.1 Residential & Commercial	109	-	-	208	11	-	-	-	99
15.2 Agriculture	39	-	-	143	18	-	-	-	125
15.3 Other	-	-	-	85	-	-	-	-	85
16 Non-energy	-	-	-	323	-	-	-	-	-

## Energy Balance Table of New Zealand in 2007

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	2,828	-	2,068	-	-	-	-	-	-
2 Import	385	-	4,698	2,428	1,100	-	258	-	840
3 Export	-1,461	-	-1,667	-123	-15	-	-	-	-
4 International Marine Bunkers	-	-	-	-315	-	-	-	-	-44
5 International Aviation Bunkers	-	-	-	-884	-	-	-884	-	-
6 Stock Changes	-210	-	-101	-40	-32	-	5	-2	-21
7 Total Primary Energy Supply	1,541	-	4,998	1,066	1,054	-	-621	-2	775
8 Transfers	-	-	-107	112	-	-	-	1	-1
9 Total Transformation Sector	-977	101	-4,907	5,095	1,516	-	890	3	1,778
9.1 Main Activity Producer	-584	-	-	-32	-	-	-	-	-32
9.2 Autoproducers	-6	-147	-	-	-	-	-	-	-
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-4,907	5,126	1,516	-	890	3	1,809
9.5 Coal Transformation	-387	249	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-53	-	-348	-	-	-	-	-
11. Discrepancy	-29	0	17	72	26	-	48	1	6
12 Total Final Energy Consumption	534	48	-	5,996	2,595	-	317	3	2,558
13 Industry Sector	402	48	-	452	39	-	-	3	332
14 Transport Sector	-	-	-	4,823	2,527	-	317	-	1,917
15 Other Sector	133	-	-	436	29	-	-	-	309
15.1 Residential & Commercial	100	-	-	204	7	-	-	-	99
15.2 Agriculture	32	-	-	145	20	-	-	-	125
15.3 Other	-	-	-	87	1	-	-	-	85
16 Non-energy	-	-	-	285	-	-	-	-	-

Energy Balance Table of New Zealand in 2008 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	3,438	1,919	-	3,899	1,034	-	-	16,081
41	115	-	-	142	-	-	-	-	-	-	-	7,595
-180	-	-	-	-	-	-	-	-	-	-	-	-4,640
-299	-	-	-	-	-	-	-	-	-	-	-	-343
-	-	-	-	-	-	-	-	-	-	-	-	-856
-	-3	-	-	4	-	-	-	-	-	-	-	318
-439	112	-	-	146	3,438	1,919	-	3,899	1,034	-	-	18,156
-1	84	-	-	37	-	-	-	-	-	-	-	1
518	-	327	-	174	-1,810	-1,919	-	-3,658	-167	3,765	29	-4,990
-	-	-	-	-	-1,679	-1,918	-	-3,658	-34	3,622	-	-4,663
-	-	-	-	-	-131	-1	-	-	-134	142	29	-237
-	-	-	-	-	-	-	-	-	-	-	-	-
518	-	327	-	174	-	-	-	-	-	-	-	43
-	-	-	-	-	-	-	-	-	-	-	-	-134
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-327	-	-34	-169	-	-	-	-	-462	-	-1,044
-49	0	-	-	-0	-6	-	-	-0	0	-	-29	298
30	196	-	-	323	1,452	-	-	241	866	3,302	-	12,421
14	59	-	-	-	632	-	-	139	675	1,223	-	3,623
14	39	-	-	-	4	-	-	-	-	46	-	4,745
1	98	-	-	-	198	-	-	102	192	2,034	-	3,111
1	98	-	-	-	164	-	-	102	192	1,820	-	2,595
-	-	-	-	-	34	-	-	-	-	151	-	368
-	-	-	-	-	-	-	-	-	-	63	-	149
-	-	-	-	323	618	-	-	-	-	-	-	942

Energy Balance Table of New Zealand in 2007 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	3,650	2,033	-	3,333	1,021	-	-	14,933
-	96	-	-	133	-	-	-	-	-	-	-	7,511
-108	-	-	-	-	-	-	-	-	-	-	-	-3,251
-272	-	-	-	-	-	-	-	-	-	-	-	-315
-	-	-	-	-	-	-	-	-	-	-	-	-884
8	1	-	-	1	-	-	-	-	-	-	-	-352
-371	97	-	-	134	3,650	2,033	-	3,333	1,021	-	-	17,642
-	114	-	-	-2	-	-	-	-	-	-	-	5
407	-	304	-	197	-2,105	-2,033	-	-3,092	-168	3,762	33	-4,293
-	-	-	-	-	-1,977	-2,032	-	-3,092	-35	3,616	-	-4,136
-	-	-	-	-	-128	-1	-	-	-134	146	33	-237
-	-	-	-	-	-	-	-	-	-	-	-	-
407	-	304	-	197	-	-	-	-	-	-	-	219
-	-	-	-	-	-	-	-	-	-	-	-	-139
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-304	-	-44	-143	-	-	-	-	-442	-	-987
3	-11	-	-	-0	36	-0	-	-0	0	0	-33	63
39	199	-	-	285	1,437	-	-	241	853	3,320	-	12,429
10	67	-	-	-	666	-	-	139	660	1,265	-	3,630
27	35	-	-	-	6	-	-	-	-	45	-	4,875
1	97	-	-	-	257	-	-	102	193	2,010	-	3,130
1	97	-	-	-	218	-	-	102	193	1,813	-	2,629
-	-	-	-	-	39	-	-	-	-	147	-	364
-	-	-	-	-	-	-	-	-	-	50	-	137
-	-	-	-	285	509	-	-	-	-	-	-	794

## Major Energy Indicators of New Zealand

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	9,501	13,863	15,506	17,486	17,101	17,574	17,642	18,156
Indigenous Production	6,031	12,565	13,213	14,989	13,277	13,997	14,933	16,081
Import	4,058	3,816	5,106	5,931	7,399	7,506	7,511	7,595
Export	-86	-1,694	-2,067	-2,552	-2,493	-2,773	-3,251	-4,640
Final Energy Consumption	7,301	9,295	11,067	12,787	12,127	12,368	12,429	12,421
Industry	2,472	3,189	3,298	3,148	3,368	3,461	3,630	3,623
Transport	2,269	2,960	3,644	4,183	4,866	4,948	4,875	4,745
Residential & Commercial	1,964	1,930	2,100	2,475	2,574	2,592	2,629	2,595
Agriculture	448	240	263	327	362	385	364	368
Non-energy	148	843	1,595	2,426	716	816	794	942
<b>Coal, Coal Products</b>								
Primary Energy Supply	1,113	1,133	1,126	1,042	2,003	2,093	1,541	1,693
Indigenous Production	1,179	1,389	2,108	2,333	3,057	3,471	2,828	2,891
Import	-	5	-	-	557	630	385	316
Export	-66	-225	-983	-1,122	-1,684	-1,954	-1,461	-1,800
Transformation Sector	-152	-204	-253	-440	-1,501	-1,431	-876	-1,241
Power Generation	-127	-204	-253	-440	-1,361	-1,299	-738	-1,107
Final Energy Consumption	851	945	876	604	533	576	582	616
Industry	556	819	662	492	411	431	450	468
Transport	2	-	2	-	-	-	-	-
Residential & Commercial	291	95	189	98	95	101	100	109
Agriculture	3	10	23	14	27	45	32	39
Non-energy	-	-	-	-	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	3,030	5,007	5,371	5,452	5,208	5,184	4,998	5,285
Indigenous Production	337	2,599	2,152	1,922	1,065	1,044	2,068	2,900
Import	2,746	3,293	4,168	4,724	4,829	4,779	4,698	4,959
Export	-	-965	-1,053	-1,219	-622	-741	-1,667	-2,630
Transformation Sector	-3,102	-4,968	-5,335	-5,265	-5,096	-5,295	-4,907	-5,335
Petroleum Refineries	-3,102	-4,968	-5,335	-5,265	-5,096	-5,295	-4,907	-5,335
<b>Petroleum Products</b>								
Primary Energy Supply	865	-770	56	257	734	816	1,066	889
Import	1,312	519	938	1,208	2,013	2,097	2,428	2,320
Export	-20	-504	-31	-211	-186	-77	-123	-210
Transformation Sector	2,865	4,885	4,887	5,266	5,435	5,290	5,095	5,347
Power Generation	-	-6	-14	-	-1	-5	-32	-32
Petroleum Refineries	2,865	4,891	4,901	5,266	5,436	5,295	5,126	5,378
Final Energy Consumption	3,660	3,944	4,714	5,207	5,953	6,008	5,996	5,943
Industry	488	273	308	315	372	379	452	487
Transport	2,256	2,898	3,606	4,145	4,822	4,900	4,823	4,695
Residential & Commercial	376	172	183	139	175	145	204	208
Agriculture	393	171	163	186	176	166	145	143
Non-energy	147	317	351	306	286	317	285	323
<b>Natural Gas</b>								
Primary Energy Supply	760	3,897	3,856	5,057	3,201	3,313	3,650	3,438
Indigenous Production	763	3,897	3,856	5,056	3,201	3,313	3,650	3,438
Import	-	-	-	-	-	-	-	-
Export	-	-	-	-	-	-	-	-
Transformation Sector	-316	-2,511	-1,643	-1,841	-1,724	-1,751	-2,105	-1,810
Power Generation	-332	-1,240	-1,032	-1,841	-1,724	-1,751	-2,105	-1,810
Final Energy Consumption	407	1,295	2,017	3,048	1,298	1,398	1,437	1,452
Industry	311	531	535	497	533	611	666	632
Transport	8	57	31	2	4	4	6	4
Residential & Commercial	84	181	207	415	293	244	218	164
Agriculture	1	-	-	14	38	40	39	34
Non-energy	2	526	1,245	2,120	430	499	509	618
<b>Electricity</b>								
Power Generation	1,952	2,775	3,095	3,375	3,694	3,749	3,762	3,765
Thermal	49	439	370	827	1,218	1,219	1,180	1,231
Hydro	1,648	1,994	2,368	2,101	2,006	2,027	2,033	1,919
Nuclear	-	-	-	-	-	-	-	-
Others	254	342	358	447	470	503	550	615
Final Energy Consumption	1,670	2,390	2,677	3,006	3,261	3,312	3,320	3,302
Industry	645	961	1,135	1,213	1,265	1,260	1,265	1,223
Transport	3	5	5	37	40	44	45	46
Residential & Commercial	971	1,365	1,396	1,532	1,717	1,808	1,813	1,820
Agriculture	51	59	77	113	121	134	147	151

## Major Economic Indicators of New Zealand

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	3.11	3.45	3.67	3.86	4.13	4.18	4.23	4.27
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	32.89	39.61	46.17	52.66	63.79	64.96	66.97	66.23
Real Term (Billions of 2000 Price and 2000 PPP)	50.14	60.40	70.38	80.28	97.25	99.04	102.09	100.97
Nominal (Billions of Current USD)	22.87	43.91	61.30	52.66	111.14	107.59	130.43	127.81
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	10,566	11,489	12,568	13,649	15,431	15,524	15,837	15,514
Real Term (2000 Price and 2000 PPP)	16,108	17,516	19,160	20,809	23,525	23,667	24,145	23,652
Nominal (Current USD)	7,346	12,736	16,689	13,649	26,886	25,710	30,847	29,940
Nominal GDP & its Components (Billions of Current NZD) *1								
Gross Domestic Product	23.48	73.61	93.42	115.91	157.85	165.90	177.47	181.84
Household Final Consumption Expenditure, etc.	13.90	44.64	54.55	68.69	93.31	98.54	103.50	N.A.
General Government Final Consumption Expenditure	4.82	14.06	16.34	20.26	28.52	30.84	33.30	N.A.
Gross Fixed Capital Formation	4.89	14.92	20.60	23.60	38.10	39.06	41.42	N.A.
Stock Change	-0.03	-0.15	1.18	1.42	1.11	-0.23	1.39	0.00
Exports of Goods and Services	6.90	19.76	27.13	41.16	43.81	48.20	51.39	N.A.
Imports of Goods and Services	7.19	19.57	26.37	39.22	47.51	50.65	52.95	N.A.
Real GDP & its Components (Billions of 2000 NZD) *1								
Gross Domestic Product	72.40	87.20	101.62	115.91	140.41	142.99	147.40	145.78
Household Final Consumption Expenditure, etc.	44.04	52.58	59.59	68.69	86.69	89.11	91.96	N.A.
General Government Final Consumption Expenditure	14.26	16.70	18.03	20.26	24.47	25.46	26.56	N.A.
Gross Fixed Capital Formation	10.64	16.02	20.68	23.60	34.70	33.90	35.50	N.A.
Stock Change	N.A.	N.A.						
Exports of Goods and Services	16.19	23.95	32.22	41.16	48.26	49.74	51.19	N.A.
Imports of Goods and Services	14.31	23.44	31.85	39.22	57.78	56.84	62.28	N.A.
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	7.4	8.8	8.5	8.3	7.8	7.7	7.3	N.A.
Industry	27.8	25.7	25.2	23.5	22.9	22.1	22.2	N.A.
Services, etc.	N.A.	N.A.						
Manufacturing Production Index (2005=100) *2	55.1	58.9	83.1	87.8	100.0	96.4	97.7	96.9
External Trade (Billions of Current USD) *1								
Exports, f.o.b.	5.421	9.394	13.645	13.272	21.730	22.409	26.931	30.586
Imports, c.i.f.	5.473	9.501	13.957	13.906	26.219	26.424	30.890	34.366
Balance of Payments (Billions of Current USD) *2								
Trade Balance	0.303	0.815	0.817	0.609	-2.577	-1.997	-1.786	-1.612
Current Account	-0.973	-1.453	-3.065	-2.679	-9.229	-9.120	-10.542	-11.237
Overall Balance	-0.314	1.014	0.391	-0.143	2.417	4.255	3.088	-4.903
Foreign Exchange Rate (NZD/USD) *1	1.0267	1.6762	1.5239	2.2011	1.4203	1.5421	1.3607	1.4227
Purchasing Power Parity (NZD/International Dollar) *1	0.8675	1.5269	1.4637	1.4438	1.5350	1.5209	1.5404	1.5626
Price Indices								
GDP Deflator (2000=100) *3	32.4	84.4	91.9	100.0	112.4	116.0	120.4	124.7
Industry Input Price Index (2005=100) *2	31.2	73.6	79.3	89.3	100.0	105.2	108.9	119.8
Consumer Price Index (2005=100) *2	26.8	73.8	81.7	88.4	100.0	103.2	105.8	109.9
Growth Rate (%) *3								
Real GDP	0.90	0.04	4.18	2.36	2.96	1.83	3.09	-1.10
Population	0.13	1.47	1.47	0.59	1.14	1.23	1.04	0.96
Price								
Industry Input Price Index	22.9	4.7	0.8	8.3	5.4	5.2	3.6	10.0
Consumer Price Index	17.1	6.1	3.8	3.0	3.2	3.2	2.6	3.9

Source \*1 : "World Development Indicators", World Bank

\*2 : "International Financial Statistics", International Monetary Fund

\*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note

: N.A. means "not available"

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

: PPP means Purchasing Power Parity

## Energy Price of New Zealand in 2008

## Currency Exchange Rate

	Local currency / US Dollar	
<b>Currency Exchange Rate</b>		
<b>Local Currency Unit</b>		\$NZ

## IMPORT PRICES

## WHOLESALE PRICES

## CONSUMER PRICES

	Unit	Amount		Unit	Amount		Unit	Amount
<b>Coal and Coal Products</b>			<b>Coal and Coal Products</b>			<b>Coal and Coal Products</b>		
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		
<b>Oil and Oil Products</b>			Gas Works Gas			Gas Works Gas		
Crude Oil	bbl	64.5	<b>Oil and Oil Products</b>			<b>Oil and Oil Products</b>		
Natural Gas Liquids			Crude Oil			Crude Oil		
Ethane			Natural Gas Liquids			Natural Gas Liquids		
LPG			Ethane			Ethane		
Naphtha			LPG			LPG		
Motor Gasoline	litre *	1.0	Naphtha			Naphtha		
Aviation Gasoline			Motor Gasoline			Motor Gasoline	litre ***	1.8794
Gasoline Type Jet Fuel			Aviation Gasoline			Aviation Gasoline		
Kerosene Type Jet Fuel			Gasoline Type Jet Fuel			Gasoline Type Jet Fuel		
Other Kerosene			Kerosene Type Jet Fuel			Kerosene Type Jet Fuel		
Gas/Diesel Oil	litre	0.8	Other Kerosene			Other Kerosene		
Fuel Oil			Gas/Diesel Oil	litre	1.2815	Gas/Diesel Oil	litre	1.2815
White Spirit SBP			Fuel Oil	litre **	0.9164	Fuel Oil		
Lubricants			White Spirit SBP			White Spirit SBP		
Bitumen			Lubricants			Lubricants		
Paraffin Waxes			Bitumen			Bitumen		
Petroleum Coke			Paraffin Waxes			Paraffin Waxes		
<b>Natural Gas</b>			Petroleum Coke			Petroleum Coke		
Natural Gas			<b>Natural Gas</b>			<b>Natural Gas</b>		
Liquefied Natural Gas			Natural Gas			Natural Gas	GJ	40.95
Compressed Natural Gas			Liquefied Natural Gas			Liquefied Natural Gas		
<b>Electricity</b>			Compressed Natural Gas			Compressed Natural Gas		
Electricity			<b>Electricity</b>			<b>Electricity</b>		
<b>Other Energy Products</b>			Electricity	kWh	0.078	Industrial		
			<b>Other Energy Products</b>			Commercial	kWh	0.1519
						Residential	kWh	0.2369
						Others		
						<b>Other Energy Products</b>		

\* regular petrol price

\*\* heavy fuel oil

\*\*\* premium petrol price

### 3.13 Papua New Guinea

## Energy Balance Table of Papua New Guinea in 2008

	1	2	3	4	4.1	4.2	4.3	4.4	4.5
	Coal	Coal Products	Crude Oil & NGL	Petroleum Products	Mogas	Naphtha	Jet Fuel	Kerosene	Diesel Oil
1 Indigenous Production	-	-	2,102	-	-	-	-	-	-
2 Import	-	-	870	755	83	-	-	27	413
3 Export	-	-	-2,044	-	-	-	-	-	-
4 International Marine Bunkers	-	-	-	-	-	-	-	-	-
5 International Aviation Bunkers	-	-	-	-	-	-	-	-	-
6 Stock Changes	-	-	-85	-26	-4	-8	1	-	-6
7 Total Primary Energy Supply	-	-	844	729	79	-8	1	27	408
8 Transfers	-	-	-12	12	11	-3	-11	10	4
9 Total Transformation Sector	-	-	-799	240	-	210	91	-	117
9.1 Main Activity Producer	-	-	-	-83	-	-	-	-	-41
9.2 Autoproducers	-	-	-	-489	-	-	-	-	-216
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-799	813	-	210	91	-	374
9.5 Coal Transformation	-	-	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-	-	-14	-	-	-	-	-5
11. Discrepancy	-	-	-29	-0	-0	0	0	0	0
12 Total Final Energy Consumption	-	-	4	967	90	199	81	37	524
13 Industry Sector	-	-	4	576	-	199	-	-	351
14 Transport Sector	-	-	-	348	90	-	81	-	172
15 Other Sector	-	-	-	42	-	-	-	37	-
15.1 Residential & Commercial	-	-	-	-	-	-	-	-	-
15.2 Agriculture	-	-	-	-	-	-	-	-	-
15.3 Other	-	-	-	42	-	-	-	37	-
16 Non-energy	-	-	-	-	-	-	-	-	-

## Energy Balance Table of Papua New Guinea in 2007

	1	2	3	4	4.1	4.2	4.3	4.4	4.5
	Coal	Coal Products	Crude Oil & NGL	Petroleum Products	Mogas	Naphtha	Jet Fuel	Kerosene	Diesel Oil
1 Indigenous Production	-	-	1,987	-	-	-	-	-	-
2 Import	-	-	778	753	16	-	-	37	387
3 Export	-	-	-1,487	-172	-	-130	-	-	-1
4 International Marine Bunkers	-	-	-	-	-	-	-	-	-
5 International Aviation Bunkers	-	-	-	-	-	-	-	-	-
6 Stock Changes	-	-	-454	30	-1	10	-	-	13
7 Total Primary Energy Supply	-	-	824	611	16	-120	-	37	400
8 Transfers	-	-	-12	13	47	-39	-	-	3
9 Total Transformation Sector	-	-	-800	187	27	173	82	-	135
9.1 Main Activity Producer	-	-	-	-104	-	-	-	-	-51
9.2 Autoproducers	-	-	-	-469	-	-	-	-	-206
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-800	760	27	173	82	-	392
9.5 Coal Transformation	-	-	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-	-	-17	-	-	-	-	-5
11. Discrepancy	-	-	-0	0	-0	1	-	0	-0
12 Total Final Energy Consumption	-	-	12	794	90	16	82	37	532
13 Industry Sector	-	-	12	399	-	16	-	-	357
14 Transport Sector	-	-	-	353	90	-	82	-	175
15 Other Sector	-	-	-	42	-	-	-	37	-
15.1 Residential & Commercial	-	-	-	-	-	-	-	-	-
15.2 Agriculture	-	-	-	-	-	-	-	-	-
15.3 Other	-	-	-	42	-	-	-	37	-
16 Non-energy	-	-	-	-	-	-	-	-	-

Energy Balance Table of Papua New Guinea in 2008 (Continued)

											unit: ktoe	
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	338	74	-	-	-	-	-	2,513
221	11	-	-	-	-	-	-	-	-	-	-	1,625
-	-	-	-	-	-	-	-	-	-	-	-	-2,044
-	-	-	-	-	-	-	-	-	-	-	-	-
-8	-1	-	-	-	-	-	-	-	-	-	-	-111
213	10	-	-	-	338	74	-	-	-	-	-	1,984
1	-	-	-	-	-	-	-	-	-	-	-	0
-194	9	8	-	-	-120	-74	-	-	-	269	-	-483
-42	-	-	-	-	-	-43	-	-	-	62	-	-63
-274	-	-	-	-	-120	-31	-	-	-	207	-	-434
-	-	-	-	-	-	-	-	-	-	-	-	-
121	9	8	-	-	-	-	-	-	-	-	-	14
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-2	-8	-	-	-217	-	-	-	-	-18	-	-250
-1	0	-	-	-	0	-	-	-	-	0	-	-29
19	17	-	-	-	-	-	-	-	-	251	-	1,222
14	13	-	-	-	-	-	-	-	-	178	-	758
6	-	-	-	-	-	-	-	-	-	-	-	348
-	5	-	-	-	-	-	-	-	-	73	-	115
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	5	-	-	-	-	-	-	-	-	73	-	115
-	-	-	-	-	-	-	-	-	-	-	-	-

Energy Balance Table of Papua New Guinea in 2007 (Continued)

											unit: ktoe	
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	326	74	-	-	-	-	-	2,387
299	14	-	-	-	-	-	-	-	-	-	-	1,532
-40	-2	-	-	-	-	-	-	-	-	-	-	-1,659
-	-	-	-	-	-	-	-	-	-	-	-	-
6	1	-	-	-	-	-	-	-	-	-	-	-425
264	14	-	-	-	326	74	-	-	-	-	-	1,835
1	-	-	-	-	-	-	-	-	-	-	-	1
-246	4	11	-	-	-108	-74	-	-	-	268	-	-528
-53	-	-	-	-	-	-44	-	-	-	72	-	-77
-263	-	-	-	-	-108	-30	-	-	-	196	-	-411
-	-	-	-	-	-	-	-	-	-	-	-	-
70	4	11	-	-	-	-	-	-	-	-	-	-41
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-1	-11	-	-	-217	-	-	-	-	-18	-	-253
0	0	-	-	-	-	-	-	-	-	-0	-	-0
20	18	-	-	-	-	-	-	-	-	249	-	1,055
14	12	-	-	-	-	-	-	-	-	177	-	588
6	-	-	-	-	-	-	-	-	-	-	-	353
-	5	-	-	-	-	-	-	-	-	72	-	114
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	5	-	-	-	-	-	-	-	-	72	-	114
-	-	-	-	-	-	-	-	-	-	-	-	-

## Major Energy Indicators of Papua New Guinea

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	631	865	921	1,123	1,611	1,638	1,835	1,984
Indigenous Production	27	4,612	4,897	3,866	2,780	3,201	2,387	2,513
Import	625	796	731	908	1,597	1,648	1,532	1,625
Export	-	-4,512	-4,694	-3,651	-2,767	-2,917	-1,659	-2,044
Final Energy Consumption	441	613	689	880	1,013	1,028	1,055	1,222
Industry	161	190	271	480	542	553	588	758
Transport	211	209	251	306	342	344	353	348
Residential & Commercial	29	35	79	82	-	-	-	-
Agriculture	29	81	77	-	-	-	-	-
Non-energy	-	1	12	12	-	-	-	-
<b>Coal, Coal Products</b>								
Primary Energy Supply	-	1	-	-	-	-	-	-
Indigenous Production	-	-	-	-	-	-	-	-
Import	-	1	-	-	-	-	-	-
Export	-	-	-	-	-	-	-	-
Transformation Sector	-	-	-	-	-	-	-	-
Power Generation	-	-	-	-	-	-	-	-
Final Energy Consumption	-	1	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	-	-	-	-	-	-	-	-
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	1	-	-	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	-	-	10	-	1,036	1,084	824	844
Indigenous Production	-	4,500	4,717	3,651	2,462	2,867	1,987	2,102
Import	-	-	-	-	917	993	778	870
Export	-	-4,500	-4,694	-3,651	-2,344	-2,482	-1,487	-2,044
Transformation Sector	-	-	-24	-	-993	-1,060	-800	-799
Petroleum Refineries	-	-	-24	-	-993	-1,060	-800	-799
<b>Petroleum Products</b>								
Primary Energy Supply	604	752	731	908	257	220	611	729
Import	625	795	731	908	680	655	753	755
Export	-	-12	-	-	-423	-435	-172	-
Transformation Sector	-264	-346	-82	-222	527	562	187	240
Power Generation	-264	-346	-104	-222	-474	-498	-573	-573
Petroleum Refineries	-	-	22	-	1,000	1,060	760	813
Final Energy Consumption	338	398	571	686	760	775	794	967
Industry	80	87	197	338	370	381	399	576
Transport	211	209	251	306	342	344	353	348
Residential & Commercial	19	24	35	30	-	-	-	-
Agriculture	27	76	77	-	-	-	-	-
Non-energy	-	-	12	12	-	-	-	-
<b>Natural Gas</b>								
Primary Energy Supply	-	72	83	119	241	259	326	338
Indigenous Production	-	72	83	119	241	259	326	338
Import	-	-	-	-	-	-	-	-
Export	-	-	-	-	-	-	-	-
Transformation Sector	-	-	-83	-119	-120	-111	-108	-120
Power Generation	-	-	-83	-119	-120	-111	-108	-120
Final Energy Consumption	-	72	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	-	-	-	-	-	-	-	-
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Electricity</b>								
Power Generation	108	154	136	204	258	259	268	269
Thermal	81	114	39	108	182	185	193	196
Hydro	27	40	75	80	77	74	74	74
Nuclear	-	-	-	-	-	-	-	-
Others	-	-	22	16	-	-	-	-
Final Energy Consumption	103	142	117	194	240	241	249	251
Industry	81	103	74	142	172	172	177	178
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	10	11	43	52	-	-	-	-
Agriculture	2	5	-	-	-	-	-	-

## Major Economic Indicators of Papua New Guinea

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	3.20	4.13	4.71	5.39	6.12	6.27	6.42	6.58
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	2.07	2.34	3.54	3.50	3.79	3.89	4.15	4.42
Real Term (Billions of 2000 Price and 2000 PPP)	5.48	6.21	9.38	9.28	10.06	10.32	10.99	11.71
Nominal (Billions of Current USD)	2.55	3.22	4.84	3.50	4.90	5.60	6.31	8.24
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	646	567	751	650	620	621	645	672
Real Term (2000 Price and 2000 PPP)	1,713	1,504	1,992	1,723	1,644	1,646	1,712	1,781
Nominal (Current USD)	796	780	1,028	650	801	894	983	1,253
Nominal GDP & its Components (Billions of Current PGK) *1								
Gross Domestic Product	1.71	3.08	6.19	9.74	15.19	17.13	18.72	22.25
Household Final Consumption Expenditure, etc.	1.05	1.82	2.70	4.34	8.72	8.88	10.50	12.95
General Government Final Consumption Expenditure	0.41	0.76	1.06	1.61	2.01	2.07	2.13	2.23
Gross Fixed Capital Formation	0.39	0.77	1.21	1.99	2.75	3.10	3.38	4.02
Stock Change	0.04	-0.02	0.15	0.14	0.26	0.29	0.30	0.30
Exports of Goods and Services	0.74	1.25	3.78	6.44	11.19	14.06	15.22	16.13
Imports of Goods and Services	0.91	1.51	2.71	4.79	9.74	11.27	12.81	13.37
Real GDP & its Components (Billions of 1983 PGK) *1								
Gross Domestic Product	4.58	5.19	7.83	7.75	8.40	8.62	9.18	9.78
Household Final Consumption Expenditure, etc.	3.28	3.06	3.59	3.30	N.A.	N.A.	N.A.	N.A.
General Government Final Consumption Expenditure	1.17	1.10	1.14	1.45	N.A.	N.A.	N.A.	N.A.
Gross Fixed Capital Formation	1.28	1.33	1.46	1.78	N.A.	N.A.	N.A.	N.A.
Stock Change	0.09	-0.04	0.20	0.13	N.A.	N.A.	N.A.	N.A.
Exports of Goods and Services	2.01	2.54	5.08	5.23	N.A.	N.A.	N.A.	N.A.
Imports of Goods and Services	3.70	2.90	3.32	4.14	N.A.	N.A.	N.A.	N.A.
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	35.9	39.1	34.5	39.4	37.3	36.7	35.7	35.1
Industry	25.4	22.5	31.2	31.4	32.5	32.6	33.0	33.2
Services, etc.	39.6	40.1	34.0	23.8	24.6	25.2	26.0	26.5
Industrial Production Index (2005=100)	N.A.							
External Trade (Billions of Current USD) *1								
Exports, f.o.b.	1.031	1.177	2.654	2.096	3.273	4.166	4.681	5.700
Imports, c.i.f.	1.176	1.193	1.452	1.151	1.729	2.260	2.990	3.550
Balance of Payments (Billions of Current USD) *2								
Trade Balance	-0.035	0.069	1.408	1.095	1.753	N.A.	N.A.	N.A.
Current Account	-0.289	-0.076	0.492	0.345	0.423	N.A.	N.A.	N.A.
Overall Balance	-0.084	0.022	-0.039	0.104	-0.282	N.A.	N.A.	N.A.
Foreign Exchange Rate (PGK/USD) *1	0.6709	0.9550	1.2798	2.7822	3.1019	3.0567	2.9653	2.7001
Purchasing Power Parity (PGK/International Dollar) *1	0.5772	0.6069	0.7172	1.0491	1.3359	1.4225	1.4208	1.5516
Price Indices								
GDP Deflator (1998=100) *3	37.3	59.3	79.1	125.6	180.8	198.8	203.9	227.4
Wholesale Price Index (2005=100)	N.A.							
Consumer Price Index (2005=100) *2	15.8	27.7	39.2	68.6	100.0	102.4	103.3	114.4
Growth Rate (%) *3								
Real GDP	-2.30	-3.01	-3.31	-2.49	3.60	2.58	6.51	6.55
Population	2.35	2.60	2.70	2.69	2.51	2.48	2.44	2.40
Price								
Wholesale Price Index	N.A.							
Consumer Price Index	12.1	7.0	17.3	15.6	1.8	2.4	0.9	10.8

Source \*1 : "World Development Indicators", World Bank  
\*2 : "International Financial Statistics", International Monetary Fund  
\*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note : N.A. means "not available"  
: PGK means Kina, USD means United States Dollar  
: PPP means Purchasing Power Parity



## 3.14 Peru

## Energy Balance Table of Peru in 2008

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	99	-	5,611	-	-	-	-	-	-
2 Import	475	174	4,979	1,882	108	-	64	-	1,438
3 Export	-	-	-925	-3,155	-1,197	-	-445	-	-153
4 International Marine Bunkers	-	-	-	-	-	-	-	-	-
5 International Aviation Bunkers	-	-	-	-	-	-	-	-	-
6 Stock Changes	176	-	-135	-1,087	-392	-	-66	-	-545
7 Total Primary Energy Supply	749	174	9,531	-2,360	-1,481	-	-447	-	740
8 Transfers	-	-	-1,402	1,469	462	-	-	-	224
9 Total Transformation Sector	-251	-78	-9,146	8,018	1,622	-	631	41	2,732
9.1 Main Activity Producer	-251	-	-	-497	-	-	-	-	-126
9.2 Autoproducers	-	-	-	-194	-	-	-	-0	-130
9.3 Gas Processing	-	-	-275	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-8,871	8,708	1,622	-	631	42	2,988
9.5 Coal Transformation	-	-78	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-	-	-359	-13	-	-	-	-107
11. Discrepancy	3	-18	1,018	355	358	-	-1	0	-5
12 Total Final Energy Consumption	502	77	-	7,123	948	-	183	42	3,583
13 Industry Sector	502	77	-	1,591	-	-	-	-	595
14 Transport Sector	-	-	-	4,252	936	-	183	-	2,946
15 Other Sector	-	-	-	1,022	12	-	-	42	42
15.1 Residential & Commercial	-	-	-	725	-	-	-	42	-
15.2 Agriculture	-	-	-	29	12	-	-	-	9
15.3 Other	-	-	-	268	-	-	-	-	33
16 Non-energy	-	-	-	257	-	-	-	-	-

Note: Others excludes non-commercial biomass supply and consumption.

## Energy Balance Table of Peru in 2007

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	78	-	5,386	-	-	-	-	-	-
2 Import	672	197	5,805	1,299	91	-	1	-	996
3 Export	-	-	-1,442	-2,783	-1,116	-	-421	-	-152
4 International Marine Bunkers	-	-	-	-	-	-	-	-	-
5 International Aviation Bunkers	-	-	-	-189	-	-	-189	-	-
6 Stock Changes	74	-3	-55	-1,595	-514	-	-42	-	-537
7 Total Primary Energy Supply	825	193	9,694	-3,268	-1,539	-	-651	-	307
8 Transfers	-	-	-1,326	1,589	765	-	-	-	139
9 Total Transformation Sector	-242	-146	-9,098	8,218	1,726	-	652	63	2,803
9.1 Main Activity Producer	-242	-	-	-234	-	-	-	-	-45
9.2 Autoproducers	-	-	-	-133	-	-	-	-	-124
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-9,098	8,584	1,726	-	652	63	2,972
9.5 Coal Transformation	-	-146	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-	-	-382	-13	-	-	-	-106
11. Discrepancy	0	-17	730	215	-0	-	-0	-0	-3
12 Total Final Energy Consumption	583	30	-	6,371	939	-	-	63	3,140
13 Industry Sector	583	30	-	1,665	25	-	-	6	543
14 Transport Sector	-	-	-	3,545	800	-	-	-	2,558
15 Other Sector	0	-	-	1,047	114	-	-	57	38
15.1 Residential & Commercial	0	-	-	790	114	-	-	57	14
15.2 Agriculture	-	-	-	13	-	-	-	-	5
15.3 Other	-	-	-	244	-	-	-	1	19
16 Non-energy	-	-	-	114	-	-	-	-	-

Note: Others excludes non-commercial biomass supply and consumption.

Energy Balance Table of Peru in 2008 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	3,321	1,637	-	7	200	-	-	10,876
18	134	-	-	120	-	-	-	-	0	-	-	7,510
-1,325	-19	-	-	-15	-	-	-	-	-	-	-	-4,080
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
17	-63	-	-	-39	-	-	-	-	-	-	-	-1,046
-1,290	52	-	-	66	3,321	1,637	-	7	200	-	-	13,260
-	768	-	-	15	-	-	-	-	-	-	-	66
2,429	234	149	-	180	-2,040	-1,637	-	-7	-201	2,837	-	-2,506
-370	-	-	-	-	-1,969	-1,600	-	-	-	2,633	-	-1,683
-34	-	-30	-	-	-72	-37	-	-7	-151	203	-	-257
-	-	-	-	-	-	-	-	-	-	-	-	-275
2,833	234	179	-	180	-	-	-	-	-	-	-	-162
-	-	-	-	-	-	-	-	-	-	-	-	-78
-	-	-	-	-	-	-	-	-	-50	-	-	-50
-90	-0	-145	-	-3	-543	-	-	-	-	-274	-	-1,175
6	1	-4	-	-	-0	-	-	-	1	-0	-	1,358
1,054	1,055	-	-	257	737	-	-	-	-	2,563	-	11,002
794	202	-	-	-	594	-	-	-	-	1,397	-	4,162
18	169	-	-	-	130	-	-	-	-	-	-	4,382
241	684	-	-	-	13	-	-	-	-	1,166	-	2,201
-	684	-	-	-	5	-	-	-	-	1,105	-	1,836
7	-	-	-	-	-	-	-	-	-	41	-	69
234	1	-	-	-	8	-	-	-	-	20	-	296
-	-	-	-	257	-	-	-	-	-	-	-	257

Energy Balance Table of Peru in 2007 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	2,597	2,101	-	7	355	-	-	10,525
-	97	-	-	114	-	-	-	-	0	-	-	7,973
-1,075	-3	-	-	-15	-	-	-	-	-	-	-	-4,225
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-189
-264	-58	-	-	-180	-	-	-	-	-	-	-	-1,579
-1,339	36	-	-	-81	2,597	2,101	-	7	356	-	-	12,505
-	658	-	-	27	-	-	-	-	-	-	-	263
2,474	225	105	-	171	-1,624	-1,685	-	-7	-218	2,582	-	-2,220
-189	-	-	-	-	-1,564	-1,682	-	-	-	2,425	-	-1,296
-9	-	-	-	-	-60	-3	-	-7	-137	157	-	-183
-	-	-	-	-	-	-	-	-	-	-	-	-
2,672	225	105	-	171	-	-	-	-	-	-	-	-513
-	-	-	-	-	-	-	-	-	-	-	-	-146
-	-	-	-	-	-	-	-	-	-81	-	-	-81
-87	-	-173	-	-3	-437	-	-	-	-	-261	-	-1,080
150	-0	69	-	-	-0	-416	-	-	-138	-0	-	373
1,199	918	-	-	114	535	-	-	-	-	2,321	-	9,841
947	144	-	-	-	454	-	-	-	-	1,269	-	4,000
18	169	-	-	-	46	-	-	-	-	-	-	3,591
233	605	-	-	-	36	-	-	-	-	1,052	-	2,135
2	604	-	-	-	14	-	-	-	-	1,001	-	1,805
8	0	-	-	-	-	-	-	-	3	34	-	50
224	0	-	-	-	22	-	-	-	-	17	-	283
-	-	-	-	114	-	-	-	-	-	-	-	114

## Major Energy Indicators of Peru

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	8,185	7,537	9,450	10,690	11,127	10,978	12,505	13,260
Indigenous Production	11,095	8,193	8,124	7,832	8,064	9,268	10,525	10,876
Import	195	1,668	4,346	5,397	6,515	7,042	7,973	7,510
Export	-3,191	-2,267	-2,561	-2,094	-3,677	-3,562	-4,225	-4,080
Final Energy Consumption	6,214	6,208	7,692	8,843	8,971	8,972	9,841	11,002
Industry	2,224	1,958	2,562	3,336	3,454	3,615	4,000	4,162
Transport	2,260	2,499	3,055	3,030	3,491	3,424	3,591	4,382
Residential & Commercial	1,216	1,274	1,330	1,566	1,649	1,667	1,805	1,836
Agriculture	184	107	132	107	34	0	50	69
Non-energy	120	80	217	122	-	215	114	257
<b>Coal, Coal Products</b>								
Primary Energy Supply	142	145	375	630	928	784	1,018	923
Indigenous Production	29	68	35	12	30	75	78	99
Import	124	71	338	588	807	712	869	648
Export	-	-	-	-	-	-	-	-
Transformation Sector	32	6	-57	-180	-330	-382	-388	-329
Power Generation	-	-	-	-99	-230	-233	-242	-251
Final Energy Consumption	53	100	290	430	591	397	613	579
Industry	53	93	282	430	591	397	613	579
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	-	7	8	-	0	0	0	-
Agriculture	-	-	-	0	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	7,532	7,149	6,974	7,268	8,258	9,342	9,694	9,531
Indigenous Production	9,869	6,493	6,151	4,829	4,074	5,456	5,386	5,611
Import	-	888	2,419	3,090	4,698	5,330	5,805	4,979
Export	-2,383	-150	-1,419	-687	-609	-1,256	-1,442	-925
Transformation Sector	-7,379	-7,432	-7,473	-7,740	-7,782	-8,701	-9,098	-9,146
Petroleum Refineries	-7,379	-7,432	-7,473	-7,740	-7,782	-8,701	-9,098	-8,871
<b>Petroleum Products</b>								
Primary Energy Supply	-686	-1,389	162	-199	-2,019	-2,885	-3,268	-2,360
Import	71	709	1,589	1,720	1,010	1,000	1,299	1,882
Export	-808	-2,117	-1,142	-1,407	-3,068	-2,306	-2,783	-3,155
Transformation Sector	6,411	6,689	6,463	7,077	7,365	7,805	8,218	8,018
Power Generation	-857	-760	-926	-686	-608	-471	-367	-691
Petroleum Refineries	7,268	7,449	7,389	7,763	7,973	8,277	8,584	8,708
Final Energy Consumption	5,332	5,020	6,292	6,868	6,299	6,202	6,371	7,123
Industry	1,669	1,210	1,631	2,021	1,609	1,787	1,665	1,591
Transport	2,260	2,499	3,055	3,030	3,491	3,417	3,545	4,252
Residential & Commercial	918	854	894	1,027	868	783	790	725
Agriculture	155	87	100	65	34	0	13	29
Non-energy	120	80	217	122	-	215	114	257
<b>Natural Gas</b>								
Primary Energy Supply	594	757	827	1,547	2,221	1,859	2,597	3,321
Indigenous Production	594	757	827	1,547	2,221	1,859	2,597	3,321
Import	-	-	-	-	-	-	-	-
Export	-	-	-	-	-	-	-	-
Transformation Sector	-150	-135	-97	-411	-1,558	-1,148	-1,624	-2,040
Power Generation	-55	-75	-58	-226	-1,263	-1,043	-1,624	-2,040
Final Energy Consumption	80	74	3	1	179	334	535	737
Industry	41	28	-	-	179	321	454	594
Transport	-	-	-	-	0	7	46	130
Residential & Commercial	39	46	3	1	0	6	14	5
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Electricity</b>								
Power Generation	863	1,132	1,449	1,713	2,194	2,354	2,582	2,837
Thermal	260	257	337	322	534	564	753	1,041
Hydro	603	875	1,112	1,391	1,546	1,685	1,685	1,637
Nuclear	-	-	-	-	-	-	-	-
Others	-	-	-	-	114	105	144	158
Final Energy Consumption	749	1,014	1,106	1,490	1,900	2,038	2,321	2,563
Industry	461	627	649	884	1,075	1,110	1,269	1,397
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	259	367	424	538	780	877	1,001	1,105
Agriculture	29	20	32	42	-	-	34	41

Note: Total excludes non-commercial biomass supply and consumption.

## Major Economic Indicators of Peru

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	17.33	21.78	23.94	26.00	27.84	28.18	28.51	28.84
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	39.13	36.12	47.17	53.34	65.49	70.56	76.81	84.31
Real Term (Billions of 2000 Price and 2000 PPP)	93.02	85.88	112.15	126.80	155.70	167.75	182.62	200.45
Nominal (Billions of Current USD)	20.66	28.97	53.67	53.34	79.39	92.32	107.52	129.18
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	2,258	1,659	1,970	2,051	2,353	2,504	2,694	2,924
Real Term (2000 Price and 2000 PPP)	5,368	3,944	4,684	4,876	5,593	5,954	6,406	6,951
Nominal (Current USD)	1,192	1,330	2,241	2,051	2,852	3,277	3,772	4,480
Nominal GDP & its Components (Billions of Current PEN) *1								
Gross Domestic Product	0.00	5.44	120.93	186.14	261.65	302.26	336.34	377.76
Household Final Consumption Expenditure, etc.	0.00	4.01	86.00	132.46	173.05	186.64	206.35	237.60
General Government Final Consumption Expenditure	0.00	0.43	11.79	19.72	26.30	28.81	30.71	33.78
Gross Fixed Capital Formation	0.00	0.88	29.10	37.61	47.97	58.39	72.76	98.49
Stock Change	0.00	0.02	0.92	-0.08	-1.16	2.19	4.34	0.72
Exports of Goods and Services	0.00	0.86	15.23	29.79	65.65	86.23	96.92	102.30
Imports of Goods and Services	0.00	0.75	22.07	33.80	50.15	60.01	75.21	100.02
Real GDP & its Components (Billions of 1994 PEN) *1								
Gross Domestic Product	88.80	81.98	107.06	121.06	148.64	160.15	174.35	191.37
Household Final Consumption Expenditure, etc.	64.02	60.90	78.22	86.20	102.86	109.48	118.62	129.10
General Government Final Consumption Expenditure	7.19	7.38	9.41	11.56	13.53	14.56	15.22	15.82
Gross Fixed Capital Formation	16.36	13.72	25.47	23.74	27.70	32.91	40.59	51.50
Stock Change	3.49	0.21	0.91	-0.05	-0.67	1.27	2.50	2.28
Exports of Goods and Services	9.03	9.26	13.29	20.08	32.51	32.77	34.82	37.65
Imports of Goods and Services	11.28	9.50	20.23	20.48	27.28	30.85	37.42	44.88
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	6.3	8.5	8.2	9.4	8.8	8.8	8.4	8.2
Industry	26.4	25.9	27.8	27.5	29.0	28.8	29.2	29.3
Services, etc.	57.6	56.4	53.8	53.5	52.4	52.6	52.9	52.9
Manufacturing Production Index (2005=100) *2	70.6	55.2	72.6	78.7	100.0	107.5	119.4	130.2
External Trade (Billions of Current USD) *1								
Exports, f.o.b.	3.898	3.230	5.575	7.028	17.368	23.830	27.882	31.529
Imports, c.i.f.	2.573	2.634	7.584	7.415	12.502	15.312	20.494	29.981
Balance of Payments (Billions of Current USD) *2								
Trade Balance	0.826	0.399	-2.241	-0.403	5.286	8.934	8.356	3.090
Current Account	-0.101	-1.419	-4.625	-1.546	1.148	2.755	1.505	-4.180
Overall Balance	0.279	-2.141	-0.590	-0.130	1.411	3.221	10.344	3.457
Foreign Exchange Rate (PEN/USD) *1	0.0000	0.1879	2.2533	3.4900	3.2958	3.2740	3.1280	2.9244
Purchasing Power Parity (PEN/International Dollar) *1	0.0000	0.0777	1.1709	1.4679	1.4865	1.5441	1.5370	1.5396
Price Indices								
GDP Deflator (1994=100) *3	0.0	6.6	112.9	153.8	176.0	188.7	192.9	197.4
Wholesale Price Index (2005=100) *2	0.0	5.4	66.0	91.1	100.0	103.2	105.8	115.2
Consumer Price Index (2005=100) *2	0.0	3.6	65.2	90.9	100.0	102.0	103.8	109.8
Growth Rate (%) *3								
Real GDP	3.08	-5.14	8.61	2.95	6.83	7.74	8.87	9.76
Population	2.60	2.10	1.81	1.55	1.27	1.22	1.18	1.15
Price								
Wholesale Price Index	N.A.	6,737.4	10.5	4.3	2.3	3.2	2.5	8.9
Consumer Price Index	59.1	7,481.7	11.1	3.8	1.6	2.0	1.8	5.8

Source       \*1 : "World Development Indicators", World Bank  
              \*2 : "International Financial Statistics", International Monetary Fund  
              \*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note         : N.A. means "not available"  
              : PEN means Nuevo Sol, USD means United States Dollar  
              : PPP means Purchasing Power Parity



## 3.15 Philippines

## Energy Balance Table of Philippines in 2008

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	1,905	-	715	-	-	-	-	-	-
2 Import	4,791	-	9,283	6,097	1,345	-	416	60	2,407
3 Export	-472	-	-653	-2,369	-148	-140	-10	-	-95
4 International Marine Bunkers	-	-	-	-227	-	-	-	-	-45
5 International Aviation Bunkers	-	-	-	-953	-	-	-953	-	-
6 Stock Changes	-	-	-347	586	194	-11	-	107	214
7 Total Primary Energy Supply	6,225	-	8,997	3,134	1,391	-152	-547	167	2,482
8 Transfers	-	-	-374	373	-	-	-	-	-
9 Total Transformation Sector	-4,558	-	-8,718	7,509	1,611	19	707	131	3,113
9.1 Main Activity Producer	-4,558	-	-	-1,083	-	-	-	-	-155
9.2 Autoproducers	-	-	-	-	-	-	-	-	-
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-8,718	8,591	1,611	19	707	131	3,268
9.5 Coal Transformation	-	-	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-	-	-373	-	-	-	-	-
11. Discrepancy	131	-	95	91	-257	133	11	-137	-323
12 Total Final Energy Consumption	1,798	-	-	10,733	2,744	-	171	161	5,272
13 Industry Sector	1,798	-	-	1,539	0	-	-	8	570
14 Transport Sector	-	-	-	7,437	2,743	-	171	-	4,278
15 Other Sector	-	-	-	1,667	2	-	-	153	423
15.1 Residential & Commercial	-	-	-	1,413	-	-	-	152	187
15.2 Agriculture	-	-	-	38	0	-	-	0	31
15.3 Other	-	-	-	216	2	-	-	0	206
16 Non-energy	-	-	-	89	-	-	-	-	-

## Energy Balance Table of Philippines in 2007

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	1,791	-	827	-	-	-	-	-	-
2 Import	4,079	-	10,331	5,588	1,426	-	373	51	2,147
3 Export	422	-	-801	-2,563	-94	-80	-33	-	-69
4 International Marine Bunkers	-	-	-	-234	-	-	-	-	-46
5 International Aviation Bunkers	-	-	-	-1,027	-	-	-1,027	-	-
6 Stock Changes	-	-	326	-49	-114	36	-	7	-129
7 Total Primary Energy Supply	6,292	-	10,683	1,715	1,218	-44	-687	58	1,903
8 Transfers	-	-	-	-	-	-	-	-	-
9 Total Transformation Sector	-3,972	-	-10,045	8,445	1,559	67	722	161	3,367
9.1 Main Activity Producer	-3,972	-	-	-1,045	-	-	-	-	-145
9.2 Autoproducers	-	-	-	-	-	-	-	-	-
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-10,045	9,490	1,559	67	722	161	3,512
9.5 Coal Transformation	-	-	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-	-411	-	-	-	-	-	-
11. Discrepancy	-901	-	-227	922	97	-23	5	-22	17
12 Total Final Energy Consumption	1,419	-	-	11,082	2,873	-	40	197	5,286
13 Industry Sector	1,419	-	-	2,136	-	-	-	16	727
14 Transport Sector	-	-	-	7,163	2,869	-	40	-	4,048
15 Other Sector	-	-	-	1,689	4	-	-	181	512
15.1 Residential & Commercial	-	-	-	1,320	-	-	-	179	175
15.2 Agriculture	-	-	-	199	2	-	-	1	179
15.3 Other	-	-	-	170	2	-	-	1	157
16 Non-energy	-	-	-	94	-	-	-	-	-

Energy Balance Table of Philippines in 2008 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	3,192	846	-	9,227	6,919	-	-	22,805
1,026	743	-	-	98	-	-	-	-	9	-	-	20,180
-1,096	-9	-	-	-870	-	-	-	-	-	-	-	-3,494
-182	-	-	-	-	-	-	-	-	-	-	-	-227
-	-	-	-	-	-	-	-	-	-	-	-	-953
78	24	-	-	-18	-	-	-	-	-	-	-	239
-174	758	-	-	-791	3,192	846	-	9,227	6,928	-	-	38,549
-	-	-	-	373	-	-	-	-	-	-	-	-2
1,380	328	-	-	222	-2,854	-846	-	-9,227	-1,331	5,231	-	-14,796
-927	-	-	-	-	-2,854	-	-	-	-	5,231	-	-3,264
-	-	-	-	-	-	-846	-	-9,227	-	-	-	-10,073
-	-	-	-	-	-	-	-	-	-	-	-	-
2,307	328	-	-	222	-	-	-	-	-	-	-	-127
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-1,331	-	-	-1,331
-	-	-	-	-373	-164	-	-	-	-	-999	-	-1,535
30	-24	-	-	659	-104	-	-	-	-5	0	-	208
1,235	1,061	-	-	89	70	-	-	-	5,592	4,232	-	22,425
872	89	-	-	-	70	-	-	-	1,287	1,465	-	6,158
178	68	-	-	-	0	-	-	-	-	10	-	7,447
185	904	-	-	-	-	-	-	-	4,306	2,757	-	8,730
170	904	-	-	-	-	-	-	-	4,306	2,647	-	8,366
6	-	-	-	-	-	-	-	-	-	97	-	135
8	-	-	-	-	-	-	-	-	-	13	-	229
-	-	-	-	89	-	-	-	-	-	-	-	89

Energy Balance Table of Philippines in 2007 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	3,033	736	-	8,790	6,985	-	-	22,162
683	796	-	-	112	-	-	-	-	2	-	-	20,000
-1,399	-	-	-	-888	-	-	-	-	-	-	-	-2,943
-188	-	-	-	-	-	-	-	-	-	-	-	-234
-	-	-	-	-	-	-	-	-	-	-	-	-1,027
156	-3	-	-	-3	-	-	-	-	-	-	-	277
-747	793	-	-	-779	3,033	736	-	8,790	6,987	-	-	38,235
-	-	-	-	-	-	-	-	-	-	-	-	-
2,147	264	-	-	158	-2,720	-736	-	-8,790	-1,293	5,127	-	-13,984
-900	-	-	-	-	-2,720	-736	-	-8,790	-	5,127	-	-12,137
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
3,047	264	-	-	158	-	-	-	-	-	-	-	-554
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-1,293	-	-	-1,293
-	-	-	-	-	-282	-	-	-	-	-998	-	-1,690
148	-16	-	-	715	46	-	-	-	0	-	-	-159
1,548	1,042	-	-	94	77	-	-	-	5,694	4,129	-	22,401
1,212	180	-	-	-	77	-	-	-	1,250	1,397	-	6,279
161	44	-	-	-	-	-	-	-	-	9	-	7,172
174	818	-	-	-	-	-	-	-	4,444	2,723	-	8,856
148	818	-	-	-	-	-	-	-	4,444	2,681	-	8,445
17	-	-	-	-	-	-	-	-	-	42	-	242
9	-	-	-	-	-	-	-	-	-	-	-	170
-	-	-	-	94	-	-	-	-	-	-	-	94

## Major Energy Indicators of Philippines

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	12,441	28,309	32,903	38,969	37,805	37,446	38,235	38,549
Indigenous Production	2,703	17,222	15,820	19,552	21,381	21,378	22,162	22,805
Import	10,525	12,555	18,709	21,760	18,943	19,385	20,000	20,180
Export	-133	-641	-960	-1,753	-1,954	-2,365	-2,943	-3,494
Final Energy Consumption	9,041	19,474	22,706	23,502	22,371	21,713	22,401	22,425
Industry	4,666	4,896	5,659	5,611	5,355	5,473	6,279	6,158
Transport	2,289	4,290	6,897	7,695	7,867	7,314	7,172	7,447
Residential & Commercial	1,129	10,005	9,831	9,898	8,782	8,579	8,445	8,366
Agriculture	-	90	62	45	59	61	242	135
Non-energy	792	214	243	259	59	71	94	89
<b>Coal, Coal Products</b>								
Primary Energy Supply	269	1,358	1,584	4,539	5,230	5,316	6,292	6,225
Indigenous Production	151	649	681	715	1,520	1,243	1,791	1,905
Import	118	709	903	3,824	3,710	4,073	4,079	4,791
Export	-	-	-	-	-	-	422	-472
Transformation Sector	-47	-559	-750	-3,784	-4,134	-3,714	-3,972	-4,558
Power Generation	-47	-559	-750	-3,784	-4,134	-3,714	-3,972	-4,558
Final Energy Consumption	82	696	894	840	1,184	1,324	1,419	1,798
Industry	82	696	894	840	1,184	1,324	1,419	1,798
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	-	-	-	-	-	-	-	-
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	9,146	10,825	15,673	15,121	10,493	10,298	10,683	8,997
Indigenous Production	462	229	126	55	765	702	827	715
Import	8,684	10,597	15,755	15,033	10,301	10,354	10,331	9,283
Export	-	-	-91	-	-738	-678	-801	-653
Transformation Sector	-8,809	-10,242	-15,126	-14,721	-9,958	-9,897	-10,045	-8,718
Petroleum Refineries	-8,809	-10,242	-15,126	-14,721	-9,958	-9,897	-10,045	-8,718
<b>Petroleum Products</b>								
Primary Energy Supply	937	-220	633	527	2,984	2,397	1,715	3,134
Import	1,723	1,249	2,051	2,903	4,931	4,957	5,588	6,097
Export	-133	-641	-869	-1,753	-1,216	-1,687	-2,563	-2,369
Transformation Sector	5,522	7,939	11,081	12,333	8,126	8,409	8,445	7,509
Power Generation	-2,547	-2,135	-3,825	-1,925	-1,411	-1,032	-1,045	-1,083
Petroleum Refineries	8,069	10,074	14,906	14,258	9,537	9,441	9,490	8,591
Final Energy Consumption	7,671	7,833	11,458	12,592	11,374	10,616	11,082	10,733
Industry	3,878	2,439	2,918	2,664	1,669	1,547	2,136	1,539
Transport	2,289	4,290	6,895	7,690	7,860	7,305	7,163	7,437
Residential & Commercial	625	864	1,358	1,964	1,520	1,457	1,320	1,413
Agriculture	-	47	30	20	16	20	199	38
Non-energy	792	214	243	259	59	71	94	89
<b>Natural Gas</b>								
Primary Energy Supply	-	-	4	9	2,701	2,530	3,033	3,192
Indigenous Production	-	-	4	9	2,701	2,530	3,033	3,192
Import	-	-	-	-	-	-	-	-
Export	-	-	-	-	-	-	-	-
Transformation Sector	-	-	-4	-9	-2,492	-2,311	-2,720	-2,854
Power Generation	-	-	-4	-9	-2,492	-2,311	-2,720	-2,854
Final Energy Consumption	-	-	-	-	12	53	77	70
Industry	-	-	-	-	12	53	77	70
Transport	-	-	-	-	0	-	-	0
Residential & Commercial	-	-	-	-	-	-	-	-
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Electricity</b>								
Power Generation	1,538	2,264	2,886	3,895	4,865	4,883	5,127	5,231
Thermal	1,056	1,079	1,822	2,224	3,290	3,124	3,507	3,457
Hydro	303	521	536	671	721	855	736	846
Nuclear	-	-	-	-	-	-	-	-
Others	179	664	528	1,000	853	905	884	928
Final Energy Consumption	1,287	1,824	2,287	3,144	3,884	3,928	4,129	4,232
Industry	706	855	942	1,135	1,325	1,344	1,397	1,465
Transport	-	-	2	5	8	8	9	10
Residential & Commercial	505	926	1,311	1,979	2,508	2,535	2,681	2,647
Agriculture	-	43	32	25	42	41	42	97

## Major Economic Indicators of Philippines

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	48.11	62.43	69.97	77.69	85.50	87.10	88.72	90.35
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	47.58	56.23	62.59	75.91	94.52	99.57	106.62	110.71
Real Term (Billions of 2000 Price and 2000 PPP)	111.42	131.68	146.58	177.78	221.35	233.18	249.68	259.27
Nominal (Billions of Current USD)	32.45	44.31	74.12	75.91	98.83	117.53	144.04	167.48
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	989	901	895	977	1,106	1,143	1,202	1,225
Real Term (2000 Price and 2000 PPP)	2,316	2,109	2,095	2,288	2,589	2,677	2,814	2,870
Nominal (Current USD)	674	710	1,059	977	1,156	1,349	1,624	1,854
Nominal GDP & its Components (Billions of Current PHP) *1								
Gross Domestic Product	243.75	1,077.24	1,905.95	3,354.73	5,444.04	6,031.16	6,647.34	7,423.21
Household Final Consumption Expenditure, etc.	156.82	767.06	1,411.90	2,335.54	3,772.25	4,229.50	4,611.88	5,281.07
General Government Final Consumption Expenditure	22.10	108.84	217.05	438.86	527.05	589.93	653.76	716.54
Gross Fixed Capital Formation	66.35	248.95	423.20	710.49	783.40	846.65	977.24	1,089.73
Stock Change	4.55	11.21	4.70	-0.42	10.59	28.70	45.21	41.76
Exports of Goods and Services	57.46	296.42	692.95	1,858.58	2,589.74	2,850.90	2,826.57	2,736.31
Imports of Goods and Services	69.40	358.55	842.07	1,794.72	2,816.24	2,893.20	2,810.17	2,872.57
Real GDP & its Components (Billions of 1985 PHP) *1								
Gross Domestic Product	609.77	720.69	802.22	972.96	1,211.45	1,276.16	1,366.49	1,418.95
Household Final Consumption Expenditure, etc.	397.40	531.77	622.99	752.07	947.51	999.73	1,058.18	1,107.57
General Government Final Consumption Expenditure	50.18	57.04	65.81	79.65	77.20	85.21	90.81	93.75
Gross Fixed Capital Formation	150.72	165.36	184.67	240.06	209.33	217.49	241.11	248.09
Stock Change	10.35	7.59	2.46	-1.00	4.14	6.80	10.91	8.15
Exports of Goods and Services	154.75	217.87	344.18	445.67	565.74	641.46	676.10	663.32
Imports of Goods and Services	179.48	269.15	428.48	490.77	643.84	655.71	628.56	643.57
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	23.5	22.3	21.5	19.8	19.1	18.8	18.4	18.3
Industry	40.5	35.5	35.4	35.5	32.8	32.5	32.4	32.8
Services, etc.	36.0	42.2	43.1	44.8	48.2	48.7	49.2	48.9
Manufacturing Production Index (2005=100) *2	#N/A	23.4	47.2	68.9	100.0	101.6	98.2	100.9
External Trade (Billions of Current USD) *1								
Exports, f.o.b.	5.741	8.117	17.502	39.783	41.255	47.410	50.466	49.025
Imports, c.i.f.	8.295	13.042	28.341	37.027	49.487	54.078	57.996	59.170
Balance of Payments (Billions of Current USD) *2								
Trade Balance	-1.939	-4.020	-8.944	-5.971	-7.773	-6.732	-8.391	-12.885
Current Account	-1.917	-2.695	-1.980	-2.225	1.984	5.347	7.119	3.897
Overall Balance	0.891	-0.045	1.235	-0.477	1.662	5.242	8.707	0.097
Foreign Exchange Rate (PHP/USD) *1	7.5114	24.3105	25.7145	44.1923	55.0855	51.3143	46.1484	44.3233
Purchasing Power Parity (PHP/International Dollar) *1	4.0517	10.0246	14.1193	18.8704	21.7549	22.1660	22.2182	23.3911
Price Indices								
GDP Deflator (1985=100) *3	40.0	149.5	237.6	344.8	449.4	472.6	486.5	523.1
Wholesale Price Index (2005=100) *2	#N/A	#N/A	46.2	65.5	100.0	111.1	110.4	114.8
Consumer Price Index (2005=100) *2	9.9	35.5	56.4	77.0	100.0	106.2	109.2	119.4
Growth Rate (%) *3								
Real GDP	5.15	3.04	4.68	5.97	4.95	5.34	7.08	3.84
Population	2.74	2.46	2.22	2.04	1.89	1.88	1.86	1.84
Price								
Wholesale Price Index	N.A.	N.A.	4.2	17.6	9.1	11.1	-0.7	4.1
Consumer Price Index	18.2	12.7	6.7	4.0	7.6	6.2	2.8	9.3

Source \*1 : "World Development Indicators", World Bank  
\*2 : "International Financial Statistics", International Monetary Fund  
\*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note : N.A. means "not available"  
: PHP means Philippine Peso, USD means United States Dollar  
: PPP means Purchasing Power Parity



## 3.16 Russia

## Energy Balance Table of Russia in 2008

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	152,768	-	488,601	-	-	-	-	-	-
2 Import	16,995	114	2,468	994	258	-	-	-	256
3 Export	-53,368	-2,098	-244,313	-98,066	-4,773	-	-	-	-38,883
4 International Marine Bunkers	-	-	-	-	-	-	-	-	-
5 International Aviation Bunkers	-	-	-	-6,067	-	-	-6,067	-	-
6 Stock Changes	-4,417	-41	-3,504	380	204	-	-	-	-238
7 Total Primary Energy Supply	111,978	-2,026	243,251	-102,760	-4,311	-	-6,067	-	-38,865
8 Transfers	-	-	-	-	-	-	-	-	-
9 Total Transformation Sector	-101,775	16,073	-243,983	214,282	38,134	12,882	12,135	77	69,168
9.1 Main Activity Producer	-60,705	-	-	-4,095	-	-	-	-	-673
9.2 Autoproducers	-18,055	-4,700	-732	-7,772	-	-	-	-	-1,449
9.3 Gas Processing	-	-	-	-4,227	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-243,251	236,623	38,134	12,882	12,135	77	71,290
9.5 Coal Transformation	-23,015	20,773	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-6,247	-	-	-	-	-
10. Loss & Own Use	-630	-1,517	-583	-12,979	-	-	-	-	-2,782
11. Discrepancy	-0	-0	1,371	-1	-	-	-	-	0
12 Total Final Energy Consumption	9,573	12,531	56	98,542	33,823	12,882	6,067	77	27,521
13 Industry Sector	3,598	12,488	20	5,476	-	-	-	-	1,941
14 Transport Sector	-	-	17	58,954	33,823	-	6,067	-	18,177
15 Other Sector	5,975	43	19	12,868	-	-	-	77	7,403
15.1 Residential & Commercial	5,884	43	-	8,460	-	-	-	77	3,549
15.2 Agriculture	87	-	8	3,574	-	-	-	-	3,533
15.3 Other	3	-	11	834	-	-	-	-	321
16 Non-energy	-	-	-	21,244	-	12,882	-	-	-

## Energy Balance Table of Russia in 2007

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	146,084	-	490,119	-	-	-	-	-	-
2 Import	12,878	117	2,706	37	16	-	-	-	-
3 Export	-53,661	-2,201	-259,872	-95,100	-6,427	-	-	-	-38,079
4 International Marine Bunkers	-	-	-	-	-	-	-	-	-
5 International Aviation Bunkers	-	-	-	-5,697	-	-	-5,697	-	-
6 Stock Changes	-956	-107	697	-27	-372	-	-	-	-72
7 Total Primary Energy Supply	104,344	-2,191	233,651	-100,786	-6,784	-	-5,697	-	-38,151
8 Transfers	-	-	-	-	-	-	-	-	-
9 Total Transformation Sector	-96,103	18,923	-230,497	215,785	37,593	12,096	11,394	78	66,655
9.1 Main Activity Producer	-51,489	-	-	-3,668	-	-	-	-	-
9.2 Autoproducers	-19,244	-5,002	-702	-9,601	-	-	-	-	-1,966
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-229,794	229,679	37,593	12,096	11,394	78	68,622
9.5 Coal Transformation	-25,370	23,925	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-625	-	-	-	-	-
10. Loss & Own Use	-586	-666	-3,114	-13,904	-	-	-	-	-2,805
11. Discrepancy	0	-1	0	0	0	-	-	-	-
12 Total Final Energy Consumption	7,655	16,065	40	101,096	30,810	12,096	5,698	78	25,699
13 Industry Sector	3,301	16,061	12	20,599	-	-	-	-	2,619
14 Transport Sector	-	-	8	51,100	30,810	-	5,698	-	13,612
15 Other Sector	4,354	5	20	14,149	-	-	-	78	9,468
15.1 Residential & Commercial	4,265	5	-	9,053	-	-	-	78	4,860
15.2 Agriculture	82	-	20	4,332	-	-	-	-	4,191
15.3 Other	7	-	-	764	-	-	-	-	417
16 Non-energy	-	-	-	15,248	-	12,096	-	-	-

Energy Balance Table of Russia in 2008 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	534,677	14,505	42,500	400	6,169	-	-	1,239,621
315	165	-	-	-	6,393	-	-	-	-	267	-	27,231
-53,019	-1,391	-	-	-	-157,795	-	-	-	-	-1,783	-	-557,424
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-6,067
502	-89	-	-	-	-17,081	-	-	-	64	-	-	-24,600
-52,201	-1,315	-	-	-	366,194	14,505	42,500	400	6,233	-1,516	-	678,760
-	-	-	-	-	-	-	-	-	-	-	-	-
57,148	6,634	8,852	-	9,253	-213,704	-14,505	-42,500	-400	-3,819	89,640	133,422	-167,268
-3,423	-	-	-	-	-193,868	-14,381	-42,500	-400	-	84,804	55,924	-175,222
-5,442	-26	-854	-	-	-18,283	-124	-	-	-3,819	4,836	77,499	28,852
-	-	-4,227	-	-	-	-	-	-	-	-	-	-4,227
66,013	12,907	13,933	-	9,253	-	-	-	-	-	-	-	-6,628
-	-	-	-	-	-	-	-	-	-	-	-	-2,242
-	-6,247	-	-	-	-1,553	-	-	-	-	-	-	-7,800
-1,850	-145	-8,202	-	-	-18,594	-	-	-	-117	-24,222	-9,920	-68,562
0	-1	-0	-	-	50	-	-	-	-0	-	-1,945	-526
3,097	5,173	650	-	9,253	133,947	-	-	-	2,297	63,901	121,557	442,405
1,702	316	627	-	890	30,130	-	-	-	269	30,967	40,578	123,527
488	399	-	-	-	35,410	-	-	-	-	7,146	-	101,527
907	4,458	23	-	-	44,657	-	-	-	2,028	25,788	80,978	172,356
388	4,423	23	-	-	43,821	-	-	-	1,795	24,453	78,155	162,610
6	35	-	-	-	836	-	-	-	232	1,335	2,824	8,897
513	-	-	-	-	-	-	-	-	1	-	-	849
-	-	-	-	8,363	23,750	-	-	-	-	-	-	44,994

Energy Balance Table of Russia in 2007 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	521,998	15,435	41,730	418	6,582	-	-	1,222,366
21	-	-	-	-	5,989	-	-	-	-	488	-	22,215
-49,219	-1,375	-	-	-	-155,008	-	-	-	-	-1,588	-	-567,430
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-5,697
419	-1	-	-	-	-6,912	-	-	-	97	-	-	-7,208
-48,778	-1,376	-	-	-	366,067	15,435	41,730	418	6,679	-1,101	-	664,246
-	-	-	-	-	-	-	-	-	-	-	-	-
54,380	11,559	13,167	-	8,862	-215,482	-15,435	-41,730	-418	-3,793	87,319	146,749	-134,681
-3,668	-	-	-	-	-195,089	-15,334	-41,730	-418	-	82,710	50,732	-174,287
-6,613	-84	-937	-	-	-18,974	-101	-	-	-3,793	4,609	96,017	43,209
-	-	-	-	-	-	-	-	-	-	-	-	-
64,661	12,267	14,105	-	8,862	-	-	-	-	-	-	-	-115
-	-	-	-	-	-	-	-	-	-	-	-	-1,445
-	-625	-	-	-	-1,419	-	-	-	-	-	-	-2,044
-2,780	-142	-8,176	-	-	-19,411	-	-	-	-100	-25,937	-28,160	-91,877
-0	-0	-	-	0	-2	-	-	-	0	-	-	-2
2,822	10,040	4,991	-	8,862	131,172	-	-	-	2,786	60,281	118,589	437,685
1,568	2,583	4,968	-	8,862	26,849	-	-	-	372	30,339	44,586	142,118
461	519	-	-	-	34,953	-	-	-	-	7,452	-	93,512
664	3,915	23	-	-	45,271	-	-	-	2,415	22,491	74,003	162,707
272	3,819	23	-	-	44,325	-	-	-	1,908	21,076	71,001	151,634
45	96	-	-	-	946	-	-	-	380	1,391	2,960	10,111
347	-	-	-	-	-	-	-	-	126	23	42	962
129	3,023	-	-	-	24,100	-	-	-	-	-	-	39,347

## Major Energy Indicators of Russia

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	-	-	609,078	609,286	636,041	660,560	664,246	678,760
Indigenous Production	-	-	940,394	966,406	1,184,697	1,210,785	1,222,366	1,239,621
Import	-	-	25,461	31,550	21,942	22,826	22,215	27,231
Export	-	-	-339,830	-379,289	-553,094	-554,735	-567,430	-557,424
Final Energy Consumption	-	-	456,957	418,256	409,277	431,453	437,685	442,405
Industry	-	-	167,417	150,377	136,601	142,564	142,118	123,527
Transport	-	-	76,921	75,295	84,162	92,531	93,512	101,527
Residential & Commercial	-	-	169,687	162,465	145,234	149,671	151,634	162,610
Agriculture	-	-	24,290	13,734	9,849	9,623	10,111	8,897
Non-energy	-	-	7,474	8,157	24,016	36,554	39,347	44,994
<b>Coal, Coal Products</b>								
Primary Energy Supply	-	-	102,186	110,815	103,338	106,685	102,153	109,953
Indigenous Production	-	-	103,569	117,020	138,974	143,178	146,084	152,768
Import	-	-	9,252	14,034	12,405	14,195	12,995	17,109
Export	-	-	-13,132	-21,748	-45,646	-51,280	-55,862	-55,466
Transformation Sector	-	-	-78,497	-89,215	-84,864	-85,643	-77,180	-85,702
Power Generation	-	-	-68,681	-80,809	-76,822	-81,624	-75,735	-83,460
Final Energy Consumption	-	-	24,592	20,780	17,934	19,863	23,720	22,104
Industry	-	-	16,195	10,561	12,530	14,479	19,362	16,086
Transport	-	-	0	-	-	-	-	-
Residential & Commercial	-	-	6,198	8,783	5,235	5,248	4,270	5,927
Agriculture	-	-	268	252	113	133	82	87
Non-energy	-	-	13	727	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	-	-	189,332	183,850	216,841	228,702	233,651	243,251
Indigenous Production	-	-	306,632	323,300	468,711	478,206	490,119	488,601
Import	-	-	8,547	5,921	2,438	2,332	2,706	2,468
Export	-	-	-122,948	-145,136	-253,850	-249,687	-259,872	-244,313
Transformation Sector	-	-	-183,189	-179,860	-213,894	-225,826	-230,497	-243,983
Petroleum Refineries	-	-	-183,189	-178,793	-213,129	-225,048	-229,794	-243,251
<b>Petroleum Products</b>								
Primary Energy Supply	-	-	-47,062	-58,413	-93,914	-95,839	-100,786	-102,760
Import	-	-	3,174	312	27	44	37	994
Export	-	-	-46,465	-53,848	-84,276	-88,116	-95,100	-98,066
Transformation Sector	-	-	140,129	155,815	191,508	205,478	215,785	214,282
Power Generation	-	-	-37,572	-22,175	-16,002	-15,988	-13,269	-11,867
Petroleum Refineries	-	-	177,701	177,990	207,510	222,220	229,679	236,623
Final Energy Consumption	-	-	84,481	87,272	84,478	97,176	101,096	98,542
Industry	-	-	10,572	19,270	18,192	18,504	20,599	5,476
Transport	-	-	41,938	43,107	43,153	51,573	51,100	58,954
Residential & Commercial	-	-	5,669	5,449	7,409	7,578	9,053	8,460
Agriculture	-	-	10,425	5,903	4,214	4,194	4,332	3,574
Non-energy	-	-	7,461	7,429	2,597	14,855	15,248	21,244
<b>Natural Gas</b>								
Primary Energy Supply	-	-	316,635	319,008	349,591	358,625	366,067	366,194
Indigenous Production	-	-	480,551	470,739	515,726	525,756	521,998	534,677
Import	-	-	2,908	10,526	6,200	5,815	5,989	6,393
Export	-	-	-154,019	-156,592	-167,386	-163,852	-155,008	-157,795
Transformation Sector	-	-	-189,787	-185,982	-205,791	-211,312	-215,482	-213,704
Power Generation	-	-	-189,787	-185,982	-203,738	-209,664	-214,063	-212,150
Final Energy Consumption	-	-	118,151	117,173	128,025	130,665	131,172	133,947
Industry	-	-	39,751	42,763	30,112	31,587	26,849	30,130
Transport	-	-	29,369	26,939	33,837	33,560	34,953	35,410
Residential & Commercial	-	-	47,594	45,579	41,693	43,331	44,325	43,821
Agriculture	-	-	636	506	549	487	946	836
Non-energy	-	-	-	-	21,419	21,699	24,100	23,750
<b>Electricity</b>								
Power Generation	-	-	74,096	75,704	81,965	85,638	87,319	89,640
Thermal	-	-	46,233	46,356	49,871	52,592	54,139	57,109
Hydro	-	-	15,171	14,222	15,016	15,074	15,435	14,505
Nuclear	-	-	8,646	11,355	12,989	13,597	13,910	14,167
Others	-	-	4,045	3,771	4,090	4,375	3,835	3,859
Final Energy Consumption	-	-	53,176	52,333	55,898	58,600	60,281	63,901
Industry	-	-	27,005	26,867	28,369	30,406	30,339	30,967
Transport	-	-	5,604	5,239	7,153	7,385	7,452	7,146
Residential & Commercial	-	-	16,006	17,629	18,908	19,343	21,076	24,453
Agriculture	-	-	4,561	2,598	1,448	1,442	1,391	1,335

## Major Economic Indicators of Russia

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	139.01	148.29	148.14	146.30	143.15	142.50	142.10	141.95
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	N.A.	385.90	239.72	259.72	349.86	376.80	407.32	430.13
Real Term (Billions of 2000 Price and 2000 PPP)	N.A.	1,656.65	1,029.09	1,114.94	1,501.93	1,617.58	1,748.61	1,846.53
Nominal (Billions of Current USD)	N.A.	N.A.	313.33	259.72	764.57	989.43	1,294.38	1,676.59
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	N.A.	2,602	1,618	1,775	2,444	2,644	2,866	3,030
Real Term (2000 Price and 2000 PPP)	N.A.	11,172	6,947	7,621	10,492	11,351	12,305	13,008
Nominal (Current USD)	N.A.	N.A.	2,115	1,775	5,341	6,943	9,109	11,811
Nominal GDP & its Components (Billions of Current RUR) *1								
Gross Domestic Product	N.A.	0.64	1,428.50	7,305.60	21,625.40	26,903.50	33,111.40	41,668.00
Household Final Consumption Expenditure, etc.	N.A.	0.31	744.10	3,374.30	10,728.20	13,117.90	16,158.80	20,363.30
General Government Final Consumption Expenditure	N.A.	0.13	272.50	1,102.50	3,590.70	4,589.20	5,702.60	7,038.90
Gross Fixed Capital Formation	N.A.	0.18	301.10	1,232.00	3,836.90	4,980.60	6,982.40	9,178.50
Stock Change	N.A.	0.01	62.30	133.70	501.80	768.10	1,049.20	1,692.60
Exports of Goods and Services	N.A.	0.12	418.40	3,218.90	7,607.30	9,079.30	10,042.90	12,843.00
Imports of Goods and Services	N.A.	0.12	369.90	1,755.80	4,648.30	5,656.70	7,188.90	9,157.20
Real GDP & its Components (Billions of 2000 RUR) *1								
Gross Domestic Product	N.A.	10,855.15	6,743.05	7,305.60	9,841.36	10,599.15	11,457.68	12,099.31
Household Final Consumption Expenditure, etc.	N.A.	3,644.80	3,357.54	3,374.30	5,333.65	5,928.58	6,728.34	7,494.28
General Government Final Consumption Expenditure	N.A.	1,466.92	1,031.55	1,102.50	1,186.20	1,214.66	1,255.96	1,287.36
Gross Fixed Capital Formation	N.A.	6,142.42	1,542.16	1,232.00	1,960.91	2,313.87	2,802.10	3,090.71
Stock Change	N.A.	771.03	304.46	133.70	198.12	246.73	298.79	422.59
Exports of Goods and Services	N.A.	3,926.52	2,514.27	3,218.90	4,954.69	5,316.38	5,656.63	5,667.94
Imports of Goods and Services	N.A.	4,678.68	1,901.89	1,755.80	4,041.35	4,902.16	6,206.14	7,304.63
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	N.A.	5.5	6.0	5.8	5.4	5.2	4.9	5.1
Industry	N.A.	42.6	33.1	33.9	33.6	32.7	31.8	31.1
Services, etc.	N.A.	37.8	49.6	49.7	49.6	50.5	51.3	51.9
Industrial Production Index (2000=100)	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.	N.A.	N.A.	81.095	105.565	243.798	303.551	354.403	471.763
Imports, c.i.f.	N.A.	N.A.	60.945	44.659	125.434	164.281	223.486	291.971
Balance of Payments (Billions of Current USD) *2								
Trade Balance	N.A.	N.A.	19.816	60.172	118.364	139.269	130.915	179.742
Current Account	N.A.	N.A.	6.963	46.839	84.602	94.686	77.768	103.722
Overall Balance	N.A.	N.A.	-8.325	13.923	64.968	107.466	148.928	-38.919
Foreign Exchange Rate (RUR/USD) *1	N.A.	N.A.	4.5592	28.1292	28.2844	27.1910	25.5808	24.8529
Purchasing Power Parity (RUR/International Dollar) *1	N.A.	0.0005	1.5073	6.5525	12.7361	14.2533	15.8029	18.4355
Price Indices								
GDP Deflator (2000=100) *3	N.A.	0.0	21.2	100.0	219.7	253.8	289.0	344.4
Producer Price Index (2005=100) *3	N.A.	N.A.	10.2	44.3	100.0	112.4	128.2	155.7
Consumer Price Index (2000=100) *3	N.A.	N.A.	10.3	50.1	100.0	109.7	119.6	136.4
Growth Rate (%)								
Real GDP (*3)	N.A.	-3.00	-4.14	10.00	6.40	7.70	8.10	5.60
Population (*3)	0.71	0.39	-0.13	0.00	-0.49	-0.45	-0.28	-0.11
Price (*2)								
Producer Price Index	N.A.	N.A.	236.5	46.5	20.6	12.4	14.1	21.4
Consumer Price Index	N.A.	N.A.	197.5	20.8	12.7	9.7	9.0	14.1

Source \*1 : "World Development Indicators", World Bank  
\*2 : "International Financial Statistics", International Monetary Fund  
\*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note : N.A. means "not available"  
: RUR means Russian Ruble, USD means United States Dollar  
: PPP means Purchasing Power Parity

## Energy Price of Russian Federation in 2008

## Currency Exchange Rate

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

IMPORT PRICES <sup>1)</sup>WHOLESALE PRICES <sup>2)</sup>

## CONSUMER PRICES

	Unit	Amount		Unit	Amount		Unit	Amount
<b>Coal and Coal Products</b>			<b>Coal and Coal Products</b>			<b>Coal and Coal Products</b>		
Coking Coal	USD/ton	219	Coking Coal	RUB/ton	4,505.00	Coking Coal		
Anthracite	USD/ton	158	Anthracite			Anthracite		
Other bituminous coal	USD/ton	218	Other bituminous coal			Other bituminous coal		
Sub-bituminous Coal		-	Sub-bituminous Coal			Sub-bituminous Coal		
Lignite	USD/ton	24	Lignite	RUB/ton	667.00	Lignite		
Peat	USD/ton	361	Peat			Peat		
Patent Fuel	USD/ton	707	Patent Fuel			Patent Fuel <sup>3)</sup>	RUB/ton	2,431.97
Coke	USD/ton	524	Coke			Coke		
Coal Tar	USD/ton	875	Coal Tar			Coal Tar		
BKB/PB	USD/ton	6,716	BKB/PB			BKB/PB		
<b>Oil and Oil Products</b>			<b>Gas Works Gas</b>			<b>Gas Works Gas</b>		
Crude Oil	USD/ton	357	<b>Oil and Oil Products</b>			<b>Oil and Oil Products</b>		
Natural Gas Liquids	USD/ton	357	Crude Oil	RUB/ton	3,025.00	Crude Oil		
Ethane	USD/ton	2,563	Natural Gas Liquids			Natural Gas Liquids		
LPG	USD/ton	524	Ethane			Ethane		
Naphtha		-	LPG			LPG		
Motor Gasoline	USD/ton	924	Naphtha			Naphtha		
Aviation Gasoline	USD/ton	1,946	Motor Gasoline	RUB/ton	24,834	Motor Gasoline <sup>4)</sup>	RUB/litre	22.84
Gasoline Type Jet Fuel		-	Aviation Gasoline			Aviation Gasoline		
Kerosene Type Jet Fuel	USD/ton	831	Gasoline Type Jet Fuel			Gasoline Type Jet Fuel		
Other Kerosene	USD/ton	2,222	Kerosene Type Jet Fuel			Kerosene Type Jet Fuel		
Gas/Diesel Oil	USD/ton	1,072	Other Kerosene			Other Kerosene		
Fuel Oil	USD/ton	529	Gas/Diesel Oil	RUB/ton	20,286	Gas/Diesel Oil		
White Spirit SBP	USD/ton	1,458	Fuel Oil	RUB/ton	6,325	Fuel Oil		
Lubricants	USD/ton	2,390	White Spirit SBP			White Spirit SBP		
Bitumen	USD/ton	593	Lubricants	RUB/ton	36,423.00	Lubricants		
Paraffin Waxes	USD/ton	2,144	Bitumen			Bitumen		
Petroleum Coke	USD/ton	408	Paraffin Waxes			Paraffin Waxes		
<b>Natural Gas</b>			Petroleum Coke			Petroleum Coke		
Natural Gas	USD/1000m3	219	<b>Natural Gas</b>			<b>Natural Gas</b>		
Liquefied Natural Gas	USD/ton	622	Natural Gas	RUB/1000m3	2,312.00	Natural Gas <sup>5)</sup>	RUB/month-person	30.20
Compressed Natural Gas		-	Liquefied Natural Gas			Liquefied Natural Gas <sup>5)</sup>	RUB/month-person	110.94
<b>Electricity</b>			Compressed Natural Gas			Compressed Natural Gas <sup>5)</sup>	RUB/balloon 50 litre	361.23
Electricity	USD/MWh	19	<b>Electricity</b>			<b>Electricity</b>		
<b>Other Energy Products</b>			Electricity	RUB/100kWh	128.00	Industrial		
Charcoal	USD/ton	662	<b>Other Energy Products</b>			Commercial		
						Residential <sup>6)</sup>	RUB/100 kWh	165.39
						Others		
						<b>Other Energy Products</b>		

1) By the data of the RF Federal Customs Service with taking into account the data on merchandise trade of the Republic of Belarus in US Dollars.

2) Acquisition price by the industrial organisations for own use as at the end of the period, in roubles.

3) Coal for population.

4) Grade AH-95 and higher (i.e. octane level - 95 and higher)

5) Tariff for population.

6) In flats without electric ranges.

## 3.17 Singapore

## Energy Balance Table of Singapore in 2008

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	-	-	-	-	-	-	-	-	-
2 Import	-	-	50,271	72,760	10,392	4,296	3,364	303	8,724
3 Export	-	-	-70	-69,540	-14,105	-2,160	-8,364	-1,077	-19,876
4 International Marine Bunkers	-	-	-	-34,936	-	-	-	-	-
5 International Aviation Bunkers	-	-	-	-	-	-	-	-	-
6 Stock Changes	-	-	-	-	-	-	-	-	-
7 Total Primary Energy Supply	-	-	50,201	-31,717	-3,713	2,136	-4,999	-774	-11,152
8 Transfers	-	-	-	-	-	-	-	-	-
9 Total Transformation Sector	-	-	-50,201	45,221	4,892	4,810	8,779	872	11,687
9.1 Main Activity Producer	-	-	-	-1,522	-	-	-	-	-60
9.2 Autoproducers	-	-	-	-	-	-	-	-	-
9.3 Gas Processing	-	-	-	-128	-	-128	-	-	-
9.4 Petroleum Refineries	-	-	-50,201	46,871	4,892	4,938	8,779	872	11,747
9.5 Coal Transformation	-	-	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-	-	-717	-	-	-	-	-
11. Discrepancy	-	-	-	0	0	-0	-	-0	-0
12 Total Final Energy Consumption	-	-	-	12,787	1,180	6,946	3,780	98	535
13 Industry Sector	-	-	-	7,043	-	6,946	-	98	-
14 Transport Sector	-	-	-	5,494	1,180	-	3,780	-	535
15 Other Sector	-	-	-	-	-	-	-	-	-
15.1 Residential & Commercial	-	-	-	-	-	-	-	-	-
15.2 Agriculture	-	-	-	-	-	-	-	-	-
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	-	250	-	-	-	-	-

Note: Above Energy Balance Table were estimated by C.A.

## Energy Balance Table of Singapore in 2007

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	-	-	-	-	-	-	-	-	-
2 Import	-	-	51,246	60,479	9,026	3,738	2,697	303	6,204
3 Export	-	-	-94	-62,448	-12,382	-1,894	-7,676	-1,077	-17,556
4 International Marine Bunkers	-	-	-	-31,546	-	-	-	-	-
5 International Aviation Bunkers	-	-	-	-	-	-	-	-	-
6 Stock Changes	-	-	-	-	-	-	-	-	-
7 Total Primary Energy Supply	-	-	51,152	-33,515	-3,356	1,844	-4,979	-774	-11,352
8 Transfers	-	-	-	-	-	-	-	-	-
9 Total Transformation Sector	-	-	-51,152	46,760	4,522	4,920	8,700	871	11,882
9.1 Main Activity Producer	-	-	-	-1,734	-	-	-	-	-46
9.2 Autoproducers	-	-	-	-	-	-	-	-	-
9.3 Gas Processing	-	-	-	-128	-	-128	-	-	-
9.4 Petroleum Refineries	-	-	-51,152	48,622	4,522	5,048	8,700	871	11,928
9.5 Coal Transformation	-	-	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-	-	-717	-	-	-	-	-
11. Discrepancy	-	-	-0	-0	0	-	-0	-0	-0
12 Total Final Energy Consumption	-	-	-	12,527	1,166	6,764	3,721	97	530
13 Industry Sector	-	-	-	6,861	-	6,764	-	97	-
14 Transport Sector	-	-	-	5,417	1,166	-	3,721	-	530
15 Other Sector	-	-	-	-	-	-	-	-	-
15.1 Residential & Commercial	-	-	-	-	-	-	-	-	-
15.2 Agriculture	-	-	-	-	-	-	-	-	-
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	-	250	-	-	-	-	-

Note: Above Energy Balance Table were estimated by C.A.

Energy Balance Table of Singapore in 2008 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	-	-	-	-	136	-	-	136
44,646	6	-	-	1,028	6,167	-	-	-	-	-	-	129,198
-19,692	-653	-	-	-3,613	-	-	-	-	-	-	-	-69,610
-34,936	-	-	-	-	-	-	-	-	-	-	-	-34,936
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-9,982	-646	-	-	-2,585	6,167	-	-	-	136	-	-	24,788
-	-	-	-	-	-	-	-	-	-	-	-	-
9,982	646	717	-	2,835	-6,055	-	-	-	-136	3,588	-	-7,584
-1,462	-	-	-	-	-6,167	-	-	-	-136	3,588	-	-4,238
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	113	-	-	-	-	-	-	-15
11,445	646	717	-	2,835	-	-	-	-	-	-	-	-3,331
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-717	-	-	-	-	-	-	-	-325	-	-1,042
0	-0	-	-	0	0	-	-	-	-	-33	-	-33
-	-	-	-	250	113	-	-	-	-	3,230	-	16,129
-	-	-	-	-	48	-	-	-	-	1,332	-	8,423
-	-	-	-	-	-	-	-	-	-	-	-	5,494
-	-	-	-	-	64	-	-	-	-	1,898	-	1,963
-	-	-	-	-	64	-	-	-	-	1,894	-	1,959
-	-	-	-	-	-	-	-	-	-	4	-	4
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	250	-	-	-	-	-	-	-	250

Energy Balance Table of Singapore in 2007 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	-	-	-	-	104	-	-	104
38,013	8	-	-	490	5,960	-	-	-	-	-	-	117,685
-18,352	-692	-	-	-2,818	-	-	-	-	-	-	-	-62,542
-31,546	-	-	-	-	-	-	-	-	-	-	-	-31,546
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-11,886	-684	-	-	-2,328	5,960	-	-	-	104	-	-	23,701
-	-	-	-	-	-	-	-	-	-	-	-	-
11,886	684	717	-	2,578	-5,849	-	-	-	-104	3,538	-	-6,809
-1,688	-	-	-	-	-5,960	-	-	-	-104	3,538	-	-4,261
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	110	-	-	-	-	-	-	-18
13,574	684	717	-	2,578	-	-	-	-	-	-	-	-2,531
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-717	-	-	-	-	-	-	-	-319	-	-1,036
-0	-	-	-	0	0	-	-	-	-	-32	-	-32
-	-	-	-	250	110	-	-	-	-	3,186	-	15,824
-	-	-	-	-	47	-	-	-	-	1,343	-	8,251
-	-	-	-	-	-	-	-	-	-	-	-	5,417
-	-	-	-	-	63	-	-	-	-	1,843	-	1,906
-	-	-	-	-	63	-	-	-	-	1,839	-	1,902
-	-	-	-	-	-	-	-	-	-	4	-	4
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	250	-	-	-	-	-	-	-	250

## Major Energy Indicators of Singapore

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	1,070	8,392	12,569	17,520	22,991	23,845	23,701	24,788
Indigenous Production	2	19	50	101	194	295	104	136
Import	29,359	59,503	79,202	79,752	106,612	112,813	117,685	129,198
Export	-22,640	-36,556	-47,342	-39,565	-55,719	-58,260	-62,542	-69,610
Final Energy Consumption	1,163	3,817	4,843	6,466	14,744	15,251	15,824	16,129
Industry	343	1,907	2,589	3,514	8,058	8,100	8,251	8,423
Transport	440	863	1,046	1,258	4,726	5,075	5,417	5,494
Residential & Commercial	294	763	980	1,441	1,707	1,823	1,902	1,959
Agriculture	-	-	2	3	4	4	4	4
Non-energy	86	284	227	250	250	250	250	250
<b>Coal, Coal Products</b>								
Primary Energy Supply	-	-	0	0	1	5	-	-
Indigenous Production	-	-	-	-	-	-	-	-
Import	-	-	17	0	1	5	-	-
Export	-	-	-16	-0	-	-	-	-
Transformation Sector	-	-	-	-	-1	-5	-	-
Power Generation	-	-	-	-	-	-	-	-
Final Energy Consumption	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	-	-	-	-	-	-	-	-
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	24,182	41,286	51,984	41,585	54,738	52,745	51,152	50,201
Indigenous Production	-	-	-	-	-	-	-	-
Import	24,255	41,286	52,046	41,585	54,738	52,745	51,246	50,271
Export	-73	-0	-62	-	-	-	-94	-70
Transformation Sector	-30,180	-43,571	-51,984	-41,585	-54,738	-52,745	-51,152	-50,201
Petroleum Refineries	-30,180	-43,571	-51,984	-41,585	-54,738	-52,745	-51,152	-50,201
<b>Petroleum Products</b>								
Primary Energy Supply	-23,107	-32,914	-40,640	-25,108	-37,176	-34,848	-33,515	-31,717
Import	5,104	18,217	25,964	37,225	46,639	54,414	60,479	72,760
Export	-22,559	-36,555	-47,264	-39,565	-55,719	-58,260	-62,448	-69,540
Transformation Sector	25,754	36,072	43,151	32,613	49,632	47,668	46,760	45,221
Power Generation	-1,575	-3,388	-3,460	-5,563	-1,724	-1,212	-1,734	-1,522
Petroleum Refineries	27,381	39,530	46,710	38,305	51,484	49,008	48,622	46,871
Final Energy Consumption	600	2,542	3,019	3,856	11,688	12,084	12,527	12,787
Industry	73	1,296	1,763	2,372	6,713	6,760	6,861	7,043
Transport	440	847	1,029	1,234	4,726	5,075	5,417	5,494
Residential & Commercial	-	115	-	-	-	-	-	-
Agriculture	-	-	-	-	-	-	-	-
Non-energy	86	284	227	250	250	250	250	250
<b>Natural Gas</b>								
Primary Energy Supply	-	-	1,176	942	5,234	5,649	5,960	6,167
Indigenous Production	-	-	-	-	-	-	-	-
Import	-	-	1,176	942	5,234	5,649	5,960	6,167
Export	-	-	-	-	-	-	-	-
Transformation Sector	43	56	-1,090	-836	-5,138	-5,541	-5,849	-6,055
Power Generation	-	-	-1,176	-942	-5,234	-5,649	-5,960	-6,167
Final Energy Consumption	38	55	84	105	96	108	110	113
Industry	16	32	53	66	55	46	47	48
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	22	23	30	39	41	62	63	64
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Electricity</b>								
Power Generation	599	1,343	1,913	2,723	3,286	3,392	3,538	3,588
Thermal	597	1,324	1,863	2,622	3,092	3,097	3,433	3,451
Hydro	-	-	-	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-
Others	2	19	50	101	194	295	104	136
Final Energy Consumption	525	1,221	1,741	2,505	2,960	3,058	3,186	3,230
Industry	253	580	772	1,076	1,290	1,294	1,343	1,332
Transport	-	16	17	25	-	-	-	-
Residential & Commercial	272	625	949	1,401	1,666	1,761	1,839	1,894
Agriculture	-	-	2	3	4	4	4	4

## Major Economic Indicators of Singapore

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	2.41	3.05	3.52	4.03	4.27	4.40	4.59	4.84
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	21.83	44.66	68.23	92.72	114.69	124.27	133.92	135.46
Real Term (Billions of 2000 Price and 2000 PPP)	31.42	64.29	98.22	133.47	165.10	178.89	192.78	195.00
Nominal (Billions of Current USD)	11.73	36.84	84.29	92.72	120.95	139.18	166.95	181.94
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	9,042	14,658	19,359	23,019	26,886	28,234	29,185	27,991
Real Term (2000 Price and 2000 PPP)	13,017	21,101	27,868	33,137	38,704	40,644	42,014	40,294
Nominal (Current USD)	4,859	12,091	23,915	23,019	28,354	31,621	36,384	37,595
Nominal GDP & its Components (Billions of Current SGD) *1								
Gross Domestic Product	25.12	66.78	119.47	159.84	201.31	221.14	251.61	257.42
Household Final Consumption Expenditure, etc.	12.91	30.91	50.49	67.53	81.78	87.27	97.00	105.55
General Government Final Consumption Expenditure	2.45	6.76	10.10	17.34	21.42	23.45	24.45	27.53
Gross Fixed Capital Formation	10.23	22.00	40.33	48.90	42.90	48.77	60.42	73.34
Stock Change	1.43	2.77	0.87	4.32	-2.15	-4.35	-8.22	6.18
Exports of Goods and Services	N.A.	N.A.	N.A.	N.A.	476.00	538.34	579.12	603.24
Imports of Goods and Services	N.A.	N.A.	N.A.	N.A.	418.47	471.50	499.43	554.14
Real GDP & its Components (Billions of 1995 SGD) *1								
Gross Domestic Product	37.63	77.00	117.63	159.84	197.72	214.23	230.87	233.52
Household Final Consumption Expenditure, etc.	N.A.	N.A.	N.A.	N.A.	81.15	N.A.	N.A.	N.A.
General Government Final Consumption Expenditure	N.A.	N.A.	N.A.	N.A.	20.23	N.A.	N.A.	N.A.
Gross Fixed Capital Formation	N.A.	N.A.	N.A.	N.A.	43.54	N.A.	N.A.	N.A.
Stock Change	N.A.	N.A.	N.A.	N.A.	-7.60	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.
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	1.0	0.3	0.2	0.1	0.1	0.1	0.1	0.1
Industry	35.6	32.5	32.6	33.1	30.7	31.4	31.2	30.6
Services, etc.	55.3	59.1	59.5	59.8	62.5	62.0	61.9	63.5
Manufacturing Production Index (2005=100) *2	19.9	38.8	57.6	81.4	100.0	111.9	118.4	113.5
External Trade (Billions of Current USD) *1								
Exports, f.o.b.	19.376	52.730	118.268	137.804	229.649	271.807	299.298	338.176
Imports, c.i.f.	24.007	60.774	124.507	134.545	200.047	238.710	263.155	319.780
Balance of Payments (Billions of Current USD) *2								
Trade Balance	-2.971	-1.633	8.459	13.956	36.336	42.789	47.051	30.912
Current Account	-1.563	3.122	14.377	10.719	27.418	35.407	39.110	27.181
Overall Balance	0.663	5.431	8.637	6.822	12.315	17.008	19.640	13.067
Foreign Exchange Rate (SGD/USD) *1	2.1412	1.8125	1.4174	1.7240	1.6644	1.5889	1.5071	1.4149
Purchasing Power Parity (SGD/International Dollar) *1	1.4803	1.2728	1.3208	1.1976	1.0786	1.0594	1.0892	1.0785
Price Indices								
GDP Deflator (1995=100) *3	66.7	86.7	101.6	100.0	101.8	103.2	109.0	110.2
Wholesale Price Index (2005=100) *2	106.9	93.1	81.3	87.7	100.0	105.0	105.3	113.2
Consumer Price Index (2005=100) *2	65.3	81.7	92.6	96.9	100.0	101.0	103.1	109.9
Growth Rate (%) *3								
Real GDP	9.71	9.22	8.15	10.06	7.31	8.35	7.77	1.15
Population	1.26	3.96	3.09	1.75	2.38	3.18	4.25	5.47
Price								
Wholesale Price Index	19.6	1.7	0.0	10.1	9.7	5.0	0.3	7.5
Consumer Price Index	8.5	3.5	1.7	1.4	0.4	1.0	2.1	6.5

Source       \*1 : "World Development Indicators", World Bank  
              \*2 : "International Financial Statistics", International Monetary Fund  
              \*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note         : N.A. means "not available"  
              : SGD means Singapore Dollar, USD means United States Dollar  
              : PPP means Purchasing Power Parity



## 3.18 Chinese Taipei

Energy Balance Table of Chinese Taipei in 2008

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	-	-	14	-	-	-	-	-	-
2 Import	39,246	267	47,865	15,679	-	11,347	-	-	-
3 Export	-	-59	-	-17,393	-4,395	-69	-2,079	-	-9,306
4 International Marine Bunkers	-	-	-	-1,798	-	-	-	-	-171
5 International Aviation Bunkers	-	-	-	-1,856	-	-	-1,856	-	-
6 Stock Changes	-745	20	-639	523	93	285	-	0	107
7 Total Primary Energy Supply	38,501	228	47,241	-4,846	-4,302	11,564	-3,935	0	-9,370
8 Transfers	-	-	-	-6,661	-14	-3,822	-15	-0	-341
9 Total Transformation Sector	-33,115	1,983	-47,351	51,042	11,631	8,131	4,276	-	14,547
9.1 Main Activity Producer	-22,871	-	-	-2,545	-	-	-	-	-127
9.2 Autoproducers	-6,301	-477	-	-1,063	-	-	-	-	-
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-47,351	54,651	11,631	8,131	4,276	-	14,674
9.5 Coal Transformation	-3,944	2,460	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-682	-803	-	-1,871	-2	-	-	-0	-41
11. Discrepancy	97	31	110	224	103	-56	-76	9	-61
12 Total Final Energy Consumption	4,801	1,439	-	37,889	7,416	15,817	250	9	4,734
13 Industry Sector	4,801	1,439	-	4,030	6	-	-	0	149
14 Transport Sector	-	-	-	11,427	7,369	-	87	-	3,745
15 Other Sector	-	-	-	2,801	41	-	163	9	840
15.1 Residential & Commercial	-	-	-	2,341	41	-	163	9	398
15.2 Agriculture	-	-	-	4	0	-	-	-	1
15.3 Other	-	-	-	456	-	-	-	-	441
16 Non-energy	-	-	-	19,631	-	15,817	-	-	-

Energy Balance Table of Chinese Taipei in 2007

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	-	-	16	-	-	-	-	-	-
2 Import	40,087	370	51,955	16,007	-	10,343	-	-	-
3 Export	-	-7	-	-17,779	-4,966	-	-1,946	-	-9,070
4 International Marine Bunkers	-	-	-	-2,087	-	-	-	-	-189
5 International Aviation Bunkers	-	-	-	-2,103	-	-	-2,103	-	-
6 Stock Changes	-150	-8	230	57	34	-173	-	-1	155
7 Total Primary Energy Supply	39,938	355	52,202	-5,906	-4,932	10,170	-4,049	-1	-9,104
8 Transfers	-	-	-	-1,390	4,745	-3,943	-10	-	-31
9 Total Transformation Sector	-34,017	2,148	-52,049	49,644	7,973	9,307	4,263	-	14,224
9.1 Main Activity Producer	-23,223	-	-	-2,704	-	-	-	-	-121
9.2 Autoproducers	-6,924	-543	-	-1,250	-	-	-	-	-
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-52,049	53,598	7,973	9,307	4,263	-	14,345
9.5 Coal Transformation	-3,871	2,691	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-886	-829	-	-2,352	-2	-	-	-0	-46
11. Discrepancy	250	-369	-153	827	31	-	96	14	-173
12 Total Final Energy Consumption	5,285	1,305	-	40,824	7,815	15,535	300	13	4,870
13 Industry Sector	5,285	1,305	-	5,120	7	-	-	1	167
14 Transport Sector	-	-	-	12,076	7,766	-	130	-	3,932
15 Other Sector	-	-	-	2,771	43	-	170	12	770
15.1 Residential & Commercial	-	-	-	2,406	42	-	170	12	428
15.2 Agriculture	-	-	-	4	0	-	-	-	1
15.3 Other	-	-	-	361	-	-	-	-	342
16 Non-energy	-	-	-	20,856	-	15,535	-	-	-

Energy Balance Table of Chinese Taipei in 2008 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	318	688	10,639	133	1,934	-	-	13,727
1,786	1,194	-	-	1,351	12,473	-	-	-	-	-	-	115,530
-475	-358	-	-	-712	-	-	-	-	-	-	-	-17,452
-1,625	-	-	-	-2	-	-	-	-	-	-	-	-1,798
-	-	-	-	-	-	-	-	-	-	-	-	-1,856
22	16	-	-	-	-90	-	-	-	-	-	-	-932
-292	853	-	-	637	12,700	688	10,639	133	1,934	-	-	107,218
-2,176	-48	-	-	-245	-	-	-	-	-	-	-	-6,661
6,770	1,935	1,251	-	2,502	-10,200	-687	-10,639	-	-1,934	20,541	-	-30,361
-2,419	-	-	-	-	-9,294	-687	-10,639	-	-	17,324	-	-28,713
-581	-	-31	-	-451	-140	-	-	-	-1,934	3,216	-	-6,699
-	-	-	-	-	-767	-	-	-	-	-	-	-767
9,769	1,935	1,282	-	2,954	-	-	-	-	-	-	-	7,300
-	-	-	-	-	-	-	-	-	-	-	-	-1,483
-	-	-	-	-	-	-	-	-	-	-	-	-
-511	-66	-1,251	-	-	-453	-1	-	-0	-	-1,844	-	-5,654
138	-3	-	-	170	-11	0	-	-34	-	-628	-	-210
3,928	2,672	-	-	3,064	2,036	-	-	99	-	18,069	-	64,332
3,357	507	-	-	12	871	-	-	-	-	10,068	-	21,209
148	79	-	-	-	-	-	-	-	-	95	-	11,521
424	1,324	-	-	-	1,165	-	-	99	-	7,906	-	11,971
405	1,324	-	-	-	1,165	-	-	99	-	7,683	-	11,287
3	0	-	-	-	-	-	-	-	-	141	-	144
15	-	-	-	-	-	-	-	-	-	83	-	539
-	763	-	-	3,052	-	-	-	-	-	-	-	19,631

Energy Balance Table of Chinese Taipei in 2007 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	371	718	10,565	133	2,446	-	-	14,249
2,437	1,306	-	-	1,921	11,393	-	-	-	90	-	-	119,902
-306	-365	-	-	-1,128	-	-	-	-	-	-	-	-17,787
-1,894	-	-	-	-5	-	-	-	-	-	-	-	-2,087
-	-	-	-	-	-	-	-	-	-	-	-	-2,103
44	-1	-	-	-	122	-	-	-	-	-	-	252
281	939	-	-	789	11,886	718	10,565	133	2,536	-	-	112,426
-2,330	200	-	-	-20	-	-	-	-	-	-	-	-1,390
6,858	1,744	1,408	-	3,867	-9,317	-718	-10,565	-38	-2,536	20,908	-	-36,540
-2,583	-	-	-	-	-8,414	-718	-10,565	-37	-	17,296	-	-28,365
-682	-	-35	-	-533	-160	-	-	-1	-2,446	3,613	-	-7,712
-	-	-	-	-	-743	-	-	-	-	-	-	-743
10,123	1,744	1,443	-	4,400	-	-	-	-	-	-	-	1,550
-	-	-	-	-	-	-	-	-	-	-	-	-1,180
-	-	-	-	-	-	-	-	-	-90	-	-	-90
-713	-183	-1,408	-	-	-367	-1	-	-0	-	-1,967	-	-6,402
796	-9	-0	-	72	-150	1	-	0	-	-652	-	-247
4,892	2,691	-	-	4,708	2,051	-	-	95	-	18,289	-	67,848
4,273	673	-	-	-	929	-	-	-	-	10,265	-	22,903
186	62	-	-	-	-	-	-	-	-	71	-	12,148
433	1,344	-	-	-	1,122	-	-	95	-	7,953	-	11,941
410	1,344	-	-	-	1,122	-	-	95	-	7,728	-	11,351
3	0	-	-	-	-	-	-	-	-	138	-	141
20	-	-	-	-	-	-	-	-	-	88	-	449
-	613	-	-	4,708	-	-	-	-	-	-	-	20,856

## Major Energy Indicators of Chinese Taipei

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	24,618	45,260	61,068	77,650	104,593	107,963	112,426	107,218
Indigenous Production	5,654	10,748	10,913	11,476	13,152	13,389	14,249	13,727
Import	20,642	39,723	57,083	78,713	111,997	115,142	119,902	115,530
Export	-297	-335	-1,350	-2,294	-15,590	-14,937	-17,787	-17,452
Final Energy Consumption	16,522	29,085	37,658	52,227	62,206	63,321	67,848	64,332
Industry	9,922	15,667	19,946	29,441	23,798	24,802	22,903	21,209
Transport	2,845	6,518	9,290	10,834	12,657	12,640	12,148	11,521
Residential & Commercial	2,567	4,992	6,678	9,041	9,466	9,397	11,351	11,287
Agriculture	764	1,033	1,022	948	127	137	141	144
Non-energy	741	1,306	884	8,063	13,632	14,009	20,856	19,631
<b>Coal, Coal Products</b>								
Primary Energy Supply	1,571	10,562	16,041	27,493	39,183	41,069	40,293	38,729
Indigenous Production	1,516	278	139	49	-	-	-	-
Import	37	11,389	17,655	27,911	39,715	41,097	40,457	39,513
Export	-5	-0	-	-	-	-	-7	-59
Transformation Sector	-785	-4,641	-8,156	-18,605	-30,217	-31,428	-31,870	-31,132
Power Generation	-1,489	-5,145	-8,820	-19,428	-28,585	-29,650	-30,690	-29,649
Final Energy Consumption	1,799	5,903	7,881	8,391	6,706	7,254	6,589	6,240
Industry	1,712	5,897	7,881	8,388	6,706	7,254	6,589	6,240
Transport	3	-	-	-	-	-	-	-
Residential & Commercial	75	6	-	0	-	-	-	-
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	49	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	17,839	20,512	28,885	36,188	54,303	51,927	52,202	47,241
Indigenous Production	181	156	53	32	29	21	16	14
Import	17,605	21,105	28,679	36,876	54,576	52,199	51,955	47,865
Export	-	-	-	-	-	-	-	-
Transformation Sector	-17,839	-20,512	-28,885	-36,188	-54,431	-52,244	-52,049	-47,351
Petroleum Refineries	-17,839	-20,512	-28,885	-36,188	-54,431	-52,244	-52,049	-47,351
<b>Petroleum Products</b>								
Primary Energy Supply	1,251	3,189	2,532	-2,424	-12,004	-8,947	-5,906	-4,846
Import	3,001	6,467	7,795	8,757	7,864	11,173	16,007	15,679
Export	-292	-335	-1,350	-2,294	-15,590	-14,937	-17,779	-17,393
Transformation Sector	10,661	14,359	19,573	33,331	50,566	48,932	49,644	51,042
Power Generation	-5,217	-4,825	-6,653	-6,171	-3,882	-4,559	-3,954	-3,609
Petroleum Refineries	15,878	19,184	26,226	39,502	54,448	53,491	53,598	54,651
Final Energy Consumption	10,213	15,889	19,198	28,576	36,692	36,669	40,824	37,889
Industry	5,049	5,803	6,712	12,868	7,319	7,321	5,120	4,030
Transport	2,816	6,481	9,250	10,740	12,542	12,552	12,076	11,427
Residential & Commercial	1,232	1,836	1,667	2,255	759	538	2,406	2,341
Agriculture	701	895	846	754	4	4	4	4
Non-energy	741	1,306	884	8,015	13,632	14,009	20,856	19,631
<b>Natural Gas</b>								
Primary Energy Supply	1,569	1,728	3,642	5,596	10,476	10,957	11,886	12,700
Indigenous Production	1,569	1,045	754	598	487	412	371	318
Import	-	762	2,953	5,169	9,842	10,673	11,393	12,473
Export	-	-	-	-	-	-	-	-
Transformation Sector	-	-1,232	-2,027	-3,378	-8,113	-8,489	-9,317	-10,200
Power Generation	-	-241	-1,210	-3,393	-7,518	-7,738	-8,575	-9,434
Final Energy Consumption	1,339	926	1,534	1,490	1,986	2,010	2,051	2,036
Industry	1,078	392	841	682	862	900	929	871
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	261	534	693	808	1,124	1,110	1,122	1,165
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Electricity</b>								
Power Generation	3,664	7,481	10,570	15,897	19,561	20,242	20,908	20,541
Thermal	2,700	3,922	6,738	11,790	13,957	14,305	14,184	14,373
Hydro	252	704	764	763	680	685	718	687
Nuclear	712	2,855	3,068	3,345	3,472	3,463	3,522	3,546
Others	-	-	-	-	1,451	1,788	2,484	1,934
Final Energy Consumption	3,171	6,367	9,045	13,770	16,734	17,296	18,289	18,069
Industry	2,083	3,575	4,511	7,504	8,911	9,327	10,265	10,068
Transport	26	37	40	94	115	88	71	95
Residential & Commercial	999	2,616	4,318	5,978	7,494	7,656	7,728	7,683
Agriculture	63	139	176	195	122	133	138	141

## Major Economic Indicators of Chinese Taipei

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	17.81	20.35	21.30	22.22	22.69	22.79	22.87	22.94
Gross Domestic Product *2								
Real Term (Billions of 2000 Price and 2000 USD)	80.91	168.70	239.14	308.78	368.47	388.50	411.74	414.76
Real Term (Billions of 2000 Price and 2000 PPP)	123.75	258.05	365.78	472.32	563.61	594.25	629.80	634.41
Nominal (Billions of Current USD)	42.21	163.41	266.92	308.78	357.39	375.61	397.94	386.44
GDP per Capita *2								
Real Term (2000 Price and 2000 USD)	4,544	8,289	11,225	13,899	16,239	17,047	18,006	18,078
Real Term (2000 Price and 2000 PPP)	6,951	12,679	17,170	21,260	24,839	26,075	27,542	27,652
Nominal (Current USD)	2,371	8,029	12,529	13,899	15,751	16,481	17,403	16,844
Nominal GDP & its Components (Billions of Current TWD) *1								
Gross Domestic Product	1,519.95	4,430.06	7,277.55	10,187.39	11,740.28	12,243.47	12,910.51	12,698.50
Private Consumption, etc.	790.88	2,388.85	4,159.17	5,987.73	7,090.74	7,248.34	7,506.47	7,626.27
General Government Consumption	240.88	769.31	1,064.95	1,362.91	1,463.23	1,469.30	1,521.10	1,564.39
Fixed Investment	458.48	1,048.75	1,897.74	2,524.44	2,635.45	2,730.67	2,841.35	2,685.66
Stock Change	47.47	30.68	44.51	91.20	32.40	46.28	14.46	193.55
Exports of Goods & NF Services	783.27	2,025.42	3,421.52	5,392.44	7,341.71	8,325.72	9,304.06	9,226.47
Imports of Goods & NF Services	801.03	1,832.95	3,310.33	5,171.33	6,823.25	7,576.84	8,276.93	8,597.84
Real GDP & its Components (Billions of 2001 TWD) *1								
Gross Domestic Product	2,549.74	5,316.58	7,536.28	9,731.21	11,612.09	12,243.47	12,975.99	13,070.90
Private Consumption, etc.	1,462.14	3,150.89	4,595.89	6,149.54	7,141.82	7,248.34	7,399.43	7,357.07
General Government Consumption	517.89	1,080.76	1,258.65	1,437.46	1,479.82	1,469.30	1,499.97	1,510.13
Fixed Investment	671.30	1,371.51	2,181.81	2,812.74	2,728.70	2,730.67	2,745.80	2,439.03
Stock Change	50.60	39.53	53.14	107.49	34.22	46.28	12.87	151.82
Exports of Goods & NF Services	816.57	2,221.05	3,407.84	5,355.03	7,473.09	8,325.72	9,120.88	9,172.14
Imports of Goods & NF Services	968.76	2,547.17	3,961.04	6,131.05	7,245.56	7,576.84	7,802.96	7,559.29
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	8.4	4.0	3.3	2.0	1.7	1.6	1.5	1.6
Industry	42.8	38.9	33.1	30.5	31.3	31.3	31.4	29.2
Services, etc.	48.8	57.0	63.5	67.5	67.1	67.1	67.1	69.2
Industrial Production Index (2006=100) *1	24.6	46.0	58.6	77.3	95.7	100.0	108.3	106.7
External Trade (Billions of Current USD) *1								
Exports	19.878	67.425	113.342	151.950	198.432	224.017	246.677	255.629
Imports, c.i.f.	19.760	54.786	104.012	140.732	182.614	202.698	219.252	240.448
Balance of Payments (Billions of Current USD) *1								
Trade Balance	0.118	14.807	13.235	13.672	12.803	20.654	26.650	18.123
Current Account	-0.913	10.923	5.474	8.899	17.578	26.300	32.975	25.122
Overall Balance	-0.319	-3.918	-3.931	2.477	17.461	26.182	32.879	24.788
Foreign Exchange Rate (TWD/USD) *1	36.01	27.11	27.27	32.99	32.85	32.60	32.44	32.86
Purchasing Power Parity (TWD/International Dollar) *3	N.A.	N.A.	N.A.	21.5691	N.A.	N.A.	N.A.	N.A.
Price Indices								
GDP Deflator (2006=100) *2	59.6	83.3	96.6	104.7	101.1	100.0	99.5	97.2
Wholesale Price Index (2006=100) *2	87.8	83.1	90.2	86.9	94.7	100.0	106.5	112.0
Consumer Price Index (2006=100) *2	55.2	74.5	89.6	96.1	99.4	100.0	101.8	105.4
Growth Rate (%) *2								
Real GDP	7.32	6.87	6.38	5.80	4.70	5.44	5.98	0.73
Population	1.87	1.22	0.84	0.83	0.33	0.44	0.34	0.33
Price								
Wholesale Price Index	21.5	-0.6	7.4	1.8	0.6	5.6	6.5	5.2
Consumer Price Index	19.0	4.1	3.7	1.3	2.3	0.6	1.8	3.5

Source \*1 : "Taiwan Statistics Data Book", Council for Economic Planning and Development (Chinese Taipei)

\*2 : Calculated from \*1 by the Coordinating Agency with IEA Energy Statistics

\*3 : PPP in 2000 is estimated by IEA data.

Note

: N.A. means "not available"

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

: PPP means Purchasing Power Parity

## Energy Price of Chinese Taipei in 2008

## Currency Exchange Rate

	Local currency / USD	
<b>Currency Exchange Rate</b>		
<b>Local Currency Unit</b>		NTD

## IMPORT PRICES

## WHOLESALE PRICES

## CONSUMER PRICES

	Unit	Amount		Unit	Amount		Unit	Amount
<b>Coal and Coal Products</b>			<b>Coal and Coal Products</b>			<b>Coal and Coal Products</b>		
Coking Coal	USD/ton	239.44	Coking Coal			Coking Coal		
Anthracite	USD/ton	135.64	Anthracite			Anthracite		
Other bituminous coal	USD/ton	118.49	Other bituminous coal			Other bituminous coal		
Sub-bituminous Coal	USD/ton	107.01	Sub-bituminous Coal			Sub-bituminous Coal		
Lignite			Lignite			Lignite		
Peat			Peat			Peat		
Patent Fuel			Patent Fuel			Patent Fuel		
Coke	USD/ton	523.02	Coke			Coke		
Coal Tar			Coal Tar			Coal Tar		
BKB/PB			BKB/PB			BKB/PB		
<b>Oil and Oil Products</b>			Gas Works Gas			Gas Works Gas		
Crude Oil	USD/bbl	96.73	<b>Oil and Oil Products</b>			<b>Oil and Oil Products</b>		
Natural Gas Liquids			Crude Oil			Crude Oil		
Ethane			Natural Gas Liquids			Natural Gas Liquids		
LPG	USD/ton	860.77	Ethane			Ethane		
Naphtha	USD/ton	901.99	LPG	NTD/kg	16.46	LPG	NTD/kg	16.46
Motor Gasoline			Naphtha			Naphtha		
Aviation Gasoline			Motor Gasoline	NTD/L	19.12	Motor Gasoline	NTD/L	21.37
Gasoline Type Jet Fuel			Aviation Gasoline			Aviation Gasoline		
Kerosene Type Jet Fuel			Gasoline Type Jet Fuel			Gasoline Type Jet Fuel		
Other Kerosene			Kerosene Type Jet Fuel			Kerosene Type Jet Fuel		
Gas/Diesel Oil			Other Kerosene	NTD/L	29.50	Other Kerosene	NTD/L	29.50
Fuel Oil	USD/kL	951.26	Gas/Diesel Oil	NTD/L	16.12	Gas/Diesel Oil	NTD/L	17.10
White Spirit SBP			Fuel Oil	NTD/L	9.60	Fuel Oil	NTD/L	14.32
Lubricants			White Spirit SBP			White Spirit SBP		
Bitumen			Lubricants			Lubricants		
Paraffin Waxes			Bitumen			Bitumen		
Petroleum Coke			Paraffin Waxes			Paraffin Waxes		
<b>Natural Gas</b>			Petroleum Coke			Petroleum Coke		
Natural Gas			<b>Natural Gas</b>			<b>Natural Gas</b>		
Liquefied Natural Gas	USD/ton	746.26	Natural Gas	NTD/m <sup>3</sup>	15.11	Natural Gas	NTD/m <sup>3</sup>	16.30
Compressed Natural Gas			Liquefied Natural Gas	NTD/m <sup>3</sup>	16.81	Liquefied Natural Gas		
<b>Electricity</b>			Compressed Natural Gas			Compressed Natural Gas		
Electricity			<b>Electricity</b>			<b>Electricity</b>		
<b>Other Energy Products</b>			Electricity	NTD/kWh	2.30	Industrial	NTD/kWh	2.12
			<b>Other Energy Products</b>			Commercial	NTD/kWh	3.10
						Residential	NTD/kWh	2.10
						Others		
						<b>Other Energy Products</b>		

## 3.19 Thailand

## Energy Balance Table of Thailand in 2008

	1	2	3	4	4.1	4.2	4.3	4.4	4.5
	Coal	Coal Products	Crude Oil & NGL	Petroleum Products	Mogas	Naphtha	Jet Fuel	Kerosene	Diesel Oil
1 Indigenous Production	4,787	-	11,954	3,228	-	-	-	-	-
2 Import	4,781	5,338	40,893	366	-	-	40	-	78
3 Export	-	47	-2,520	-9,071	-1,112	-	-1,111	-90	-3,291
4 International Marine Bunkers	-	-	-	-	-	-	-	-	-
5 International Aviation Bunkers	-	-	-	-3,574	-	-	-3,574	-	-
6 Stock Changes	-	-	-	711	-38	-	-12	63	137
7 Total Primary Energy Supply	9,568	5,385	50,327	-8,340	-1,149	-	-4,658	-27	-3,077
8 Transfers	-	-	-	-	-	-	-	-	-
9 Total Transformation Sector	-7,522	-14	-49,565	38,003	6,354	-	4,952	160	18,395
9.1 Main Activity Producer	-6,924	-	-	-379	-	-	-	-	-39
9.2 Autoproducers	-598	-14	-	-8	-	-	-	-	-1
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-49,565	38,678	6,354	-	4,952	160	18,435
9.5 Coal Transformation	-	-	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-287	-	-	-	-	-
10. Loss & Own Use	-	-	-	-	-	-	-	-	-
11. Discrepancy	136	-95	2,362	122	152	-	-45	673	-82
12 Total Final Energy Consumption	2,182	5,277	3,125	29,785	5,357	-	249	807	15,236
13 Industry Sector	2,182	5,277	-	3,880	22	-	-	494	977
14 Transport Sector	-	-	-	19,011	5,285	-	249	-	10,882
15 Other Sector	-	-	-	6,172	50	-	-	313	3,377
15.1 Residential & Commercial	-	-	-	2,739	-	-	-	313	-
15.2 Agriculture	-	-	-	3,433	50	-	-	-	3,377
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	3,125	722	-	-	-	-	-

Note: Others excludes non-commercial biomass supply and consumption.

## Energy Balance Table of Thailand in 2007

	1	2	3	4	4.1	4.2	4.3	4.4	4.5
	Coal	Coal Products	Crude Oil & NGL	Petroleum Products	Mogas	Naphtha	Jet Fuel	Kerosene	Diesel Oil
1 Indigenous Production	5,204	-	11,008	3,061	-	-	-	-	-
2 Import	5,026	4,004	40,217	825	121	-	35	-	165
3 Export	-	-	-2,724	-6,552	-1,176	-	-367	-34	-2,319
4 International Marine Bunkers	-	-	-	-	-	-	-	-	-
5 International Aviation Bunkers	-	-	-	-3,778	-	-	-3,778	-	-
6 Stock Changes	-	-	3,221	-768	-38	-	12	-69	-142
7 Total Primary Energy Supply	10,230	4,004	51,722	-7,212	-1,094	-	-4,098	-103	-2,296
8 Transfers	-	-	-	-	-	-	-	-	-
9 Total Transformation Sector	-6,850	-98	-48,197	36,391	6,484	-	4,351	120	18,398
9.1 Main Activity Producer	-6,850	-98	-	-908	-	-	-	-	-21
9.2 Autoproducers	-	-	-	-	-	-	-	-	-
9.3 Gas Processing	-	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-48,197	37,299	6,484	-	4,351	120	18,419
9.5 Coal Transformation	-	-	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	-	-	-	-	-	-	-
10. Loss & Own Use	-	-	-	-	-	-	-	-	-
11. Discrepancy	-285	-83	-181	77	78	-	0	-0	-0
12 Total Final Energy Consumption	3,095	3,824	3,345	29,255	5,468	-	253	16	16,102
13 Industry Sector	3,095	3,824	-	3,981	16	-	-	9	976
14 Transport Sector	-	-	-	19,645	5,396	-	253	-	11,763
15 Other Sector	-	-	-	5,630	56	-	-	7	3,362
15.1 Residential & Commercial	-	-	-	2,205	-	-	-	7	-
15.2 Agriculture	-	-	-	3,424	56	-	-	-	3,362
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	3,345	-	-	-	-	-	-

Note: Others excludes non-commercial biomass supply and consumption.

Energy Balance Table of Thailand in 2008 (Continued)

											unit: ktoe	
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	3,228	-	-	-	17,236	612	-	1	1,707	-	-	39,524
241	8	-	-	-	8,261	-	-	-	-	240	-	59,879
-3,443	-25	-	-	-	-	-	-	-	-	-101	-	-11,646
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-3,574
282	280	-	-	-	-	-	-	-	-	-	-	711
-2,919	3,490	-	-	-	25,497	612	-	1	1,707	138	-	84,895
-	-	-	-	-	-	-	-	-	-	-	-	-
6,213	1,929	-	-	-	-22,293	-612	-	-1	-1,707	12,679	-	-31,032
-340	-	-	-	-	-19,966	-612	-	-1	-	11,419	-	-16,463
-8	-	-	-	-	-2,327	-	-	-	-1,707	1,260	-	-3,395
-	-	-	-	-	-	-	-	-	-	-	-	-
6,560	2,216	-	-	-	-	-	-	-	-	-	-	-10,887
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-287	-	-	-	-	-	-	-	-	-	-	-287
-	-	-	-	-	-	-	-	-	-	-1,209	-	-1,209
-198	-379	-	-	-	-0	-	-	-	-	-0	-	2,526
3,096	5,040	-	-	-	3,204	-	-	-	-	11,608	-	55,180
1,484	904	-	-	-	2,540	-	-	-	-	4,898	-	18,777
1,608	986	-	-	-	664	-	-	-	-	5	-	19,680
4	2,428	-	-	-	-	-	-	-	-	6,705	-	12,877
1	2,426	-	-	-	-	-	-	-	-	6,617	-	9,357
3	3	-	-	-	-	-	-	-	-	24	-	3,457
-	-	-	-	-	-	-	-	-	-	63	-	63
-	722	-	-	-	-	-	-	-	-	-	-	3,846

Energy Balance Table of Thailand in 2007 (Continued)

											unit: ktoe	
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	3,061	-	-	-	14,611	698	-	2	1,480	-	-	36,063
504	-	-	-	-	8,314	-	-	-	-	386	-	58,772
-2,332	-324	-	-	-	-	-	-	-	-	-80	-	-9,356
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-3,778
-253	-277	-	-	-	-	-	-	-	-	-	-	2,454
-2,081	2,459	-	-	-	22,925	698	-	2	1,480	307	-	84,155
-	-	-	-	-	-	-	-	-	-	-	-	-
5,214	1,824	-	-	-	-20,428	-698	-	-2	-1,480	12,331	-	-29,031
-888	-	-	-	-	-18,224	-698	-	-2	-	11,078	-	-15,701
-	-	-	-	-	-2,204	-	-	-	-1,480	1,252	-	-2,432
-	-	-	-	-	-	-	-	-	-	-	-	-
6,102	1,824	-	-	-	-	-	-	-	-	-	-	-10,898
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-1,224	-	-1,224
-0	-1	-	-	-	-0	-	-	-	-	-0	-	-472
3,133	4,283	-	-	-	2,497	-	-	-	-	11,413	-	53,428
1,562	1,417	-	-	-	2,296	-	-	-	-	5,220	-	18,416
1,565	667	-	-	-	200	-	-	-	-	12	-	19,858
6	2,199	-	-	-	-	-	-	-	-	6,181	-	11,810
2	2,196	-	-	-	-	-	-	-	-	6,098	-	8,303
4	3	-	-	-	-	-	-	-	-	23	-	3,448
-	-	-	-	-	-	-	-	-	-	60	-	60
-	-	-	-	-	-	-	-	-	-	-	-	3,345

## Major Energy Indicators of Thailand

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	11,332	27,991	49,065	60,372	78,337	80,417	84,155	84,895
Indigenous Production	531	11,854	18,485	28,559	34,323	33,537	36,063	39,524
Import	12,012	18,968	33,750	40,086	57,234	58,649	58,772	59,879
Export	-16	-791	-1,174	-5,450	-9,024	-10,250	-9,356	-11,646
Final Energy Consumption	8,500	20,269	34,967	38,675	52,278	51,864	53,428	55,180
Industry	2,759	5,917	11,944	12,833	17,729	17,728	18,416	18,777
Transport	3,506	9,525	16,167	15,945	20,247	19,535	19,858	19,680
Residential & Commercial	991	2,675	4,735	5,731	7,339	7,825	8,303	9,357
Agriculture	1,130	1,820	1,574	2,180	3,208	3,310	3,448	3,457
Non-energy	114	332	548	1,986	3,707	3,409	3,345	3,846
<b>Coal, Coal Products</b>								
Primary Energy Supply	445	3,828	7,064	7,838	10,680	11,847	14,234	14,953
Indigenous Production	408	3,603	5,524	5,196	5,220	4,750	5,204	4,787
Import	60	220	1,515	2,655	5,461	7,097	9,030	10,119
Export	-1	-	-	-	-	-	-	47
Transformation Sector	-331	-2,472	-3,406	-4,204	-4,725	-4,816	-6,948	-7,536
Power Generation	-331	-2,472	-3,406	-4,204	-4,725	-4,816	-6,948	-7,536
Final Energy Consumption	114	1,356	3,658	3,660	6,827	7,569	6,918	7,459
Industry	114	1,356	3,658	3,660	6,827	7,569	6,918	7,459
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	-	-	-	-	-	-	-	-
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	7,745	12,220	24,901	39,400	49,550	51,122	51,722	50,327
Indigenous Production	14	2,112	2,550	5,159	9,893	10,283	11,008	11,954
Import	7,866	10,961	22,840	34,062	41,693	41,773	40,217	40,893
Export	-	-767	-715	-514	-3,453	-3,349	-2,724	-2,520
Transformation Sector	-7,736	-11,687	-24,668	-37,774	-46,494	-48,094	-48,197	-49,565
Petroleum Refineries	-7,736	-11,806	-24,871	-38,169	-46,494	-48,094	-48,197	-49,565
<b>Petroleum Products</b>								
Primary Energy Supply	2,967	5,751	6,636	-7,243	-6,693	-6,935	-7,212	-8,340
Import	4,020	7,731	9,335	1,179	1,980	1,382	825	366
Export	-14	-21	-452	-4,919	-5,516	-6,836	-6,552	-9,071
Transformation Sector	4,288	9,566	18,104	31,530	34,166	35,493	36,391	38,003
Power Generation	-2,982	-2,548	-5,611	-2,344	-1,967	-1,946	-908	-387
Petroleum Refineries	7,270	11,490	22,211	32,193	36,365	37,439	37,299	38,678
Final Energy Consumption	7,255	15,319	24,265	24,420	29,951	28,392	29,255	29,785
Industry	2,090	2,753	4,676	4,335	4,032	3,027	3,981	3,880
Transport	3,506	9,525	16,164	15,939	20,192	19,451	19,645	19,011
Residential & Commercial	417	927	1,444	1,637	1,880	2,016	2,205	2,739
Agriculture	1,128	1,811	1,565	2,167	3,187	3,290	3,424	3,433
Non-energy	114	302	416	342	661	608	-	722
<b>Natural Gas</b>								
Primary Energy Supply	-	5,710	9,833	19,620	22,788	22,097	22,925	25,497
Indigenous Production	-	5,710	9,833	17,685	15,068	14,144	14,611	17,236
Import	-	-	-	1,935	7,720	7,952	8,314	8,261
Export	-	-	-	-	-	-	-	-
Transformation Sector	-	-5,183	-7,567	-14,273	-21,185	-19,946	-20,428	-22,293
Power Generation	-	-4,216	-7,476	-14,106	-21,185	-19,946	-20,428	-22,293
Final Energy Consumption	-	267	787	1,389	2,067	2,151	2,497	3,204
Industry	-	266	784	1,386	2,017	2,071	2,296	2,540
Transport	-	-	3	2	50	80	200	664
Residential & Commercial	-	-	-	-	-	-	-	-
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Electricity</b>								
Power Generation	1,241	3,799	6,885	8,254	11,369	11,932	12,331	12,679
Thermal	1,131	3,370	6,308	7,735	9,684	10,026	10,153	10,360
Hydro	109	428	577	518	499	699	698	612
Nuclear	-	-	-	-	-	-	-	-
Others	-	1	0	0	1,187	1,207	1,480	1,707
Final Energy Consumption	1,131	3,297	6,125	7,562	10,387	10,951	11,413	11,608
Industry	555	1,542	2,826	3,452	4,853	5,061	5,220	4,898
Transport	-	-	-	3	5	5	12	5
Residential & Commercial	574	1,747	3,291	4,094	5,459	5,808	6,098	6,617
Agriculture	2	8	9	13	21	21	23	24

Note: Total excludes non-commercial biomass supply and consumption.

## Major Economic Indicators of Thailand

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	47.26	56.67	60.14	62.35	65.95	66.51	66.98	67.39
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	37.27	79.36	120.01	122.73	157.38	165.48	173.64	177.92
Real Term (Billions of 2000 Price and 2000 PPP)	93.27	198.57	300.27	307.08	393.80	414.06	434.48	445.18
Nominal (Billions of Current USD)	32.35	85.34	168.02	122.73	176.35	207.23	247.11	272.43
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	789	1,400	1,995	1,968	2,387	2,488	2,592	2,640
Real Term (2000 Price and 2000 PPP)	1,973	3,504	4,993	4,925	5,972	6,226	6,487	6,606
Nominal (Current USD)	685	1,506	2,794	1,968	2,674	3,116	3,689	4,043
Nominal GDP & its Components (Billions of Current THB) *1								
Gross Domestic Product	662.48	2,183.54	4,186.21	4,922.73	7,092.89	7,850.19	8,529.84	9,075.49
Household Final Consumption Expenditure, etc.	433.58	1,234.98	2,225.74	2,762.93	4,060.41	4,379.07	4,556.99	4,997.73
General Government Final Consumption Expenditure	81.43	205.35	414.40	557.81	843.65	925.99	1,038.77	1,128.23
Gross Fixed Capital Formation	183.99	881.76	1,719.12	1,081.42	2,049.82	2,203.97	2,249.94	2,488.94
Stock Change	9.07	21.21	43.04	42.74	180.34	15.94	4.12	131.41
Exports of Goods and Services	159.73	745.29	1,751.67	3,287.28	5,218.08	5,777.55	6,198.22	6,954.92
Imports of Goods and Services	201.18	909.46	2,033.89	2,862.30	5,297.47	5,503.77	5,544.48	6,703.19
Real GDP & its Components (Billions of 1988 THB) *1								
Gross Domestic Product	913.73	1,945.37	2,941.74	3,008.40	3,858.02	4,056.55	4,256.56	4,361.40
Household Final Consumption Expenditure, etc.	607.23	1,110.93	1,601.69	1,623.72	2,109.34	2,176.21	2,213.92	2,273.09
General Government Final Consumption Expenditure	106.94	171.94	232.46	277.13	344.92	352.51	386.62	404.54
Gross Fixed Capital Formation	269.63	759.87	1,236.09	597.44	902.42	937.28	950.97	962.35
Stock Change	6.45	20.65	42.89	25.64	76.60	6.85	2.02	58.56
Exports of Goods and Services	195.23	709.65	1,386.11	1,947.08	2,554.38	2,788.03	3,006.05	3,159.12
Imports of Goods and Services	271.20	806.98	1,543.60	1,497.67	2,155.98	2,227.74	2,326.65	2,523.96
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	19.9	13.6	9.4	10.3	9.0	9.0	8.7	8.8
Industry	30.1	37.8	43.0	44.4	46.9	47.1	47.6	48.0
Services, etc.	50.0	48.6	47.6	45.3	44.0	43.8	43.7	43.2
Industrial Production Index (2000=100)	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.	6.505	23.068	56.439	69.057	110.936	129.722	152.098	177.844
Imports, c.i.f.	9.214	33.045	70.786	61.924	118.178	128.773	139.966	178.655
Balance of Payments (Billions of Current USD) *2								
Trade Balance	-1.902	-6.751	-7.968	11.701	3.388	13.844	26.762	17.870
Current Account	-2.076	-7.281	-13.582	9.313	-7.647	2.316	15.678	1.698
Overall Balance	-0.206	3.235	7.159	-1.806	5.417	12.669	17.077	24.440
Foreign Exchange Rate (THB/USD) *1	20.4764	25.5855	24.9152	40.1118	40.2201	37.8820	34.5182	33.3133
Purchasing Power Parity (THB/International Dollar) *1	13.1548	13.4752	15.1386	16.0310	15.9321	16.2475	16.3841	16.6550
Price Indices								
GDP Deflator (1988=100) *3	72.5	112.2	142.3	163.6	183.8	193.5	200.4	208.1
Wholesale Price Index (2005=100) *2	41.2	55.6	66.7	79.2	100.0	107.1	110.5	124.2
Consumer Price Index (2005=100) *2	37.4	57.5	72.7	89.4	100.0	104.6	107.0	112.8
Growth Rate (%) *3								
Real GDP	5.17	11.17	9.24	4.75	4.60	5.15	4.93	2.46
Population	2.24	1.37	0.97	0.85	1.02	0.85	0.71	0.61
Price								
Wholesale Price Index	20.1	3.5	8.2	3.9	9.1	7.1	3.2	12.4
Consumer Price Index	19.7	5.9	5.8	1.6	4.5	4.6	2.2	5.5

Source       \*1 : "World Development Indicators", World Bank  
              \*2 : "International Financial Statistics", International Monetary Fund  
              \*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note         : N.A. means "not available"  
              : THB means Baht, USD means United States Dollar  
              : PPP means Purchasing Power Parity

## Energy Price of Thailand in 2008

## Currency Exchange Rate

	Local currency / US Dollar	
<b>Currency Exchange Rate</b>		
<b>Local Currency Unit</b>		฿

## IMPORT PRICES

## WHOLESALE PRICES

## CONSUMER PRICES

	Unit	Amount		Unit	Amount		Unit	Amount
<b>Coal and Coal Products</b>			<b>Coal and Coal Products</b>			<b>Coal and Coal Products</b>		
Coking Coal			Coking Coal			Coking Coal		
Anthracite			Anthracite			Anthracite	฿/ton	5,287
Other bituminous coal			Other bituminous coal			Other bituminous coal	฿/ton	1,984
Sub-bituminous Coal			Sub-bituminous Coal			Sub-bituminous Coal	฿/ton	2,393
Lignite			Lignite	฿/ton	500.00	Lignite	฿/ton	544
Peat			Peat			Peat		
Patent Fuel			Patent Fuel			Patent Fuel		
Coke			Coke			Coke	฿/ton	19,746
Coal Tar			Coal Tar			Coal Tar		
BKB/PB			BKB/PB			BKB/PB		
<b>Oil and Oil Products</b>			Gas Works Gas			Gas Works Gas		
Crude Oil	USD / bbl	101.44	<b>Oil and Oil Products</b>			<b>Oil and Oil Products</b>		
Natural Gas Liquids			Crude Oil			Crude Oil		
Ethane			Natural Gas Liquids			Natural Gas Liquids		
LPG	฿ / kg	32.80	Ethane			Ethane		
Naphtha			LPG	฿ / kg	13.68	LPG	฿ / litre	9.79
Motor Gasoline			Naphtha			Naphtha		
Aviation Gasoline			Motor Gasoline	฿ / litre	32.45	Motor Gasoline (ULG 95)	฿ / litre	35.33
Gasoline Type Jet Fuel			Aviation Gasoline			Aviation Gasoline	฿ / litre	28.62
Kerosene Type Jet Fuel			Gasoline Type Jet Fuel			Gasoline Type Jet Fuel		
Other Kerosene			Kerosene Type Jet Fuel			Kerosene Type Jet Fuel		
Gas/Diesel Oil	฿ / litre	26.28	Other Kerosene	฿ / litre	30.85	Other Kerosene	฿ / litre	38.34
Fuel Oil	฿ / litre	18.71	Gas/Diesel Oil	฿ / litre	29.43	Gas/Diesel Oil (HSD)	฿ / litre	30.39
White Spirit SBP			Fuel Oil	฿ / litre	19.43	Fuel Oil (1500)	฿ / litre	22.90
Lubricants			White Spirit SBP			White Spirit SBP		
Bitumen			Lubricants			Lubricants		
Paraffin Waxes			Bitumen			Bitumen		
Petroleum Coke			Paraffin Waxes			Paraffin Waxes		
<b>Natural Gas</b>			Petroleum Coke			Petroleum Coke		
Natural Gas			<b>Natural Gas</b>			<b>Natural Gas</b>		
Liquefied Natural Gas			Natural Gas			Natural Gas	฿/MMBTU	368.00
Compressed Natural Gas			Liquefied Natural Gas			Liquefied Natural Gas		
<b>Electricity</b>			Compressed Natural Gas			Compressed Natural Gas		
Electricity			<b>Electricity</b>			<b>Electricity</b>		
<b>Other Energy Products</b>			Electricity			Industrial	฿ / kWh	2.52
			<b>Other Energy Products</b>			Commercial	฿ / kWh	3.19
						Residential	฿ / kWh	3.13
						Others	฿ / kWh	3.43
						<b>Other Energy Products</b>		
						Charcoal	฿ / kg	7
						Paddy Husk	฿ / kg	2
						Bagasse	฿/ton	400
						Agricultural waste	฿ / kg	1

## 3.20 United States of America

## Energy Balance Table of United States of America in 2008

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	579,299	-	312,865	-	-	-	-	-	-
2 Import	18,844	2,252	588,267	92,452	45,701	4,175	3,345	85	7,508
3 Export	-46,998	-1,224	-6,495	-85,297	-9,145	-	-3,491	-257	-27,744
4 International Marine Bunkers	-	-	-	-22,597	-	-	-	-	-4,350
5 International Aviation Bunkers	-	-	-	-23,816	-	-	-23,816	-	-
6 Stock Changes	-6,315	-94	-4,572	2	683	74	50	99	-1,405
7 Total Primary Energy Supply	544,830	934	890,065	-39,256	37,238	4,249	-23,912	-73	-25,991
8 Transfers	-	-	-24,501	25,198	-22,087	-	-	-	-
9 Total Transformation Sector	-512,549	3,269	-850,947	879,035	401,291	7,362	76,010	842	218,728
9.1 Main Activity Producer	-492,094	-507	-	-11,147	-	-	-102	-72	-1,711
9.2 Autoproducers	-2,776	-827	-	-529	-	-	-	-5	-70
9.3 Gas Processing	-1,884	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-869,196	890,712	401,291	7,362	76,112	920	220,510
9.5 Coal Transformation	-15,795	4,602	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	18,249	-	-	-	-	-	-
10. Loss & Own Use	-204	-1,823	-	-50,092	-13	-	-27	-	-92
11. Discrepancy	-7,613	15	-14,617	-716	-87	-	0	-	105
12 Total Final Energy Consumption	24,464	2,395	-	814,169	416,342	11,611	52,072	769	192,750
13 Industry Sector	22,731	2,395	-	34,394	4,099	-	-	17	20,649
14 Transport Sector	-	-	-	597,582	409,203	-	52,072	-	135,817
15 Other Sector	1,733	-	-	52,879	3,040	-	-	752	36,284
15.1 Residential & Commercial	1,733	-	-	37,708	1,104	-	-	732	24,131
15.2 Agriculture	-	-	-	15,172	1,936	-	-	20	12,153
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	-	129,314	-	11,611	-	-	-

## Energy Balance Table of United States of America in 2007

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
1 Indigenous Production	568,497	-	317,454	-	-	-	-	-	-
2 Import	20,670	1,538	597,916	108,061	48,345	4,277	8,713	161	11,423
3 Export	-33,788	-902	-5,830	-65,725	-6,795	-	-2,053	-426	-13,563
4 International Marine Bunkers	-	-	-	-30,224	-	-	-	-	-7,015
5 International Aviation Bunkers	-	-	-	-23,759	-	-	-23,759	-	-
6 Stock Changes	-1,243	32	1,381	3,596	-1,009	-35	242	76	1,623
7 Total Primary Energy Supply	554,136	668	910,920	-8,051	40,541	4,241	-16,857	-188	-7,532
8 Transfers	-	-	-46,629	47,528	-3,193	-	-	-	-
9 Total Transformation Sector	-521,619	7,775	-853,968	867,569	391,869	9,428	73,787	1,773	211,221
9.1 Main Activity Producer	-418,909	-82,378	-	-15,487	-	-	-148	-74	-2,091
9.2 Autoproducers	-2,582	-1,073	-	-743	-	-	-	-15	-74
9.3 Gas Processing	-1,771	-	-	-	-	-	-	-	-
9.4 Petroleum Refineries	-	-	-867,073	883,798	391,869	9,428	73,935	1,862	213,386
9.5 Coal Transformation	-98,357	91,226	-	-	-	-	-	-	-
9.6 Other Transformation	-	-	13,105	-	-	-	-	-	-
10. Loss & Own Use	-242	-1,884	-	-52,507	-27	-	-29	-	-112
11. Discrepancy	-8,569	-2,269	-10,323	-2,435	-870	-0	-1	0	-1,290
12 Total Final Energy Consumption	23,706	4,290	-	852,104	428,321	13,669	56,900	1,585	202,287
13 Industry Sector	21,955	4,290	-	31,129	4,148	-	-	217	20,092
14 Transport Sector	-	-	-	621,921	419,443	-	56,900	-	145,056
15 Other Sector	1,751	-	-	55,600	4,729	-	-	1,368	37,140
15.1 Residential & Commercial	1,703	-	-	39,678	1,479	-	-	1,336	25,610
15.2 Agriculture	48	-	-	15,922	3,251	-	-	32	11,529
15.3 Other	-	-	-	-	-	-	-	-	-
16 Non-energy	-	-	-	143,455	-	13,669	-	-	-

Energy Balance Table of United States of America in 2008 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	472,764	24,252	218,332	22,361	84,376	-	-	1,714,249
20,696	1,183	-	8	9,751	92,335	-	-	-	1,685	4,904	-	800,739
-19,813	-	-	-	-24,846	-23,076	-	-	-	-1,442	-2,071	-	-166,603
-18,248	-	-	-	-	-	-	-	-	-	-	-	-22,597
-	-	-	-	-	-	-	-	-	-	-	-	-23,816
1,283	-254	-	-804	276	904	-	-	-	-297	-	-	-10,372
-16,081	929	-	-795	-14,819	542,927	24,252	218,332	22,361	84,322	2,833	-	2,291,599
-	25,320	-	17,894	4,071	-	-	-	-	-	-	-	697
29,366	21,036	38,945	467	84,987	-167,115	-24,252	-218,332	-19,829	-38,845	375,743	12,746	-561,076
-5,513	-	-	-	-3,748	-155,341	-24,100	-218,332	-19,700	-13,461	362,550	12,746	-559,386
-139	-	-	-	-315	-12,951	-152	-	-129	-5,959	13,193	-	-10,130
-	-	-	-	-	1,177	-	-	-	-	-	-	-707
35,018	21,036	38,945	467	89,050	-	-	-	-	-	-	-	21,515
-	-	-	-	-	-	-	-	-	-	-	-	-11,193
-	-	-	-	-	-	-	-	-	-19,425	-	-	-1,176
-262	-530	-37,729	-4	-11,436	-45,055	-	-	-	-	-50,598	-5,781	-153,553
-813	-0	-	0	79	-3,014	-0	-	-	-1	-15	0	-25,960
12,209	46,755	1,217	17,563	62,882	327,743	-	-	2,533	45,476	327,963	6,965	1,551,707
8,866	763	-	-	-	116,356	-	-	126	32,044	78,681	5,503	292,230
75	415	-	-	-	15,751	-	-	-	-	662	-	613,995
3,268	9,536	-	-	-	185,751	-	-	2,407	13,432	248,619	1,462	506,283
3,268	8,473	-	-	-	185,751	-	-	2,407	13,075	233,572	1,462	475,708
-	1,063	-	-	-	-	-	-	-	357	-	-	15,529
-	-	-	-	-	-	-	-	-	-	15,047	-	15,047
-	36,042	1,217	17,563	62,882	9,885	-	-	-	-	-	-	139,199

Energy Balance Table of United States of America in 2007 (Continued)

												unit: ktoe
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	-	-	-	-	449,905	23,697	218,027	20,074	79,871	-	-	1,677,525
21,843	1,090	-	8	12,201	107,228	-	-	-	1,140	4,420	-	840,973
-18,702	-	-	-	-24,186	-18,873	-	-	-	-579	-1,732	-	-127,430
-23,209	-	-	-	-	-	-	-	-	-	-	-	-30,224
-	-	-	-	-	-	-	-	-	-	-	-	-23,759
751	250	-	296	1,402	4,451	-	-	-	-143	-	-	8,074
-19,317	1,340	-	304	-10,583	542,711	23,697	218,027	20,074	80,289	2,688	-	2,345,159
-	26,332	-	18,133	6,256	-	-	-	-	-	-	-	899
28,573	21,669	40,388	513	88,347	-171,969	-23,697	-218,027	-17,714	-33,103	374,086	13,177	-577,489
-9,095	-	-	-	-4,079	-159,405	-23,549	-218,027	-17,629	-13,052	360,405	13,177	-574,856
-253	-	-	-	-400	-13,756	-148	-	-85	-6,101	13,681	-	-10,806
-	-	-	-	-	1,193	-	-	-	-	-	-	-578
37,921	21,669	40,388	513	92,826	-	-	-	-	-	-	-	16,725
-	-	-	-	-	-	-	-	-	-	-	-	-7,131
-	-	-	-	-	-	-	-	-	-13,949	-	-	-844
-342	-513	-39,251	-5	-12,229	-44,227	-	-	-	-	-47,756	-5,977	-152,591
-258	1	-1	-	-15	-4,724	-	-	0	-2	-1	0	-28,323
8,655	48,829	1,136	18,946	71,776	321,791	-	-	2,360	47,185	329,018	7,200	1,587,655
6,163	509	-	-	-	116,875	-	-	118	34,421	79,879	5,689	294,356
88	434	-	-	-	15,078	-	-	-	-	703	-	637,701
2,404	9,958	-	-	-	179,909	-	-	2,242	12,764	248,435	1,511	502,213
2,404	8,849	-	-	-	179,909	-	-	2,242	12,395	234,656	1,511	472,094
-	1,109	-	-	-	-	-	-	-	369	-	-	16,340
-	-	-	-	-	-	-	-	-	-	13,780	-	13,780
-	37,927	1,136	18,946	71,776	9,929	-	-	-	-	-	-	153,384

## Major Energy Indicators of United States of America

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	1,748,648	1,916,495	2,069,336	2,275,941	2,327,793	2,305,428	2,345,159	2,291,599
Indigenous Production	1,481,448	1,653,987	1,661,372	1,669,749	1,640,014	1,663,055	1,677,525	1,714,249
Import	376,915	452,509	536,156	702,062	841,978	842,856	840,973	800,739
Export	-88,326	-110,606	-102,783	-95,684	-105,877	-113,384	-127,430	-166,603
Final Energy Consumption	1,434,285	1,291,622	1,376,753	1,545,626	1,572,358	1,567,467	1,587,655	1,551,707
Industry	594,201	281,801	270,019	329,457	282,391	296,478	294,356	292,230
Transport	470,315	487,565	529,341	590,374	628,258	632,610	637,701	613,995
Residential & Commercial	356,887	369,191	421,032	457,146	472,099	450,990	472,094	475,708
Agriculture	-	14,405	15,203	14,104	16,791	17,734	16,340	15,529
Non-energy	-	119,048	140,752	153,033	159,875	156,959	153,384	139,199
<b>Coal, Coal Products</b>								
Primary Energy Supply	371,742	460,199	473,961	533,627	558,412	550,515	554,803	545,764
Indigenous Production	445,217	542,320	529,785	536,856	565,282	577,566	568,497	579,299
Import	1,105	2,119	5,421	10,014	19,598	23,188	22,208	21,096
Export	-59,177	-67,987	-57,033	-38,315	-29,460	-29,491	-34,691	-48,222
Transformation Sector	-305,433	-406,761	-452,304	-514,084	-512,196	-507,126	-513,843	-509,281
Power Generation	-290,071	-391,176	-434,672	-498,080	-503,961	-496,078	-504,942	-496,204
Final Energy Consumption	113,084	53,691	27,565	29,737	28,624	28,289	27,996	26,859
Industry	100,038	44,053	24,766	27,519	26,091	26,733	26,245	25,126
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	3,482	3,899	2,798	2,217	2,103	1,534	1,703	1,733
Agriculture	-	-	-	-	430	23	48	-
Non-energy	-	-	-	-	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	741,462	783,541	819,672	887,052	911,612	917,935	910,920	890,065
Indigenous Production	490,831	432,544	397,856	365,606	322,545	317,807	317,454	312,865
Import	268,423	351,037	419,075	524,256	599,493	604,718	597,916	588,267
Export	-14,570	-2,100	-2,274	-6,151	-4,911	-5,605	-5,830	-6,495
Transformation Sector	-701,883	-755,275	-778,880	-838,485	-853,366	-856,896	-853,968	-850,947
Petroleum Refineries	-701,883	-755,275	-781,367	-841,472	-860,851	-867,258	-867,073	-869,196
<b>Petroleum Products</b>								
Primary Energy Supply	66,318	-26,699	-34,115	-15,906	17,564	-3,948	-8,051	-39,256
Import	82,411	62,247	41,817	75,823	117,923	112,647	108,061	92,452
Export	-13,107	-36,779	-39,156	-44,383	-53,109	-59,620	-65,725	-85,297
Transformation Sector	652,021	726,569	768,168	819,580	844,674	866,436	867,569	879,035
Power Generation	-62,925	-27,247	-15,133	-29,565	-30,044	-15,943	-16,230	-11,676
Petroleum Refineries	714,946	753,816	783,300	849,145	874,719	882,379	883,798	890,712
Final Energy Consumption	759,089	683,288	726,454	798,743	855,741	857,334	852,104	814,169
Industry	228,529	44,253	26,764	25,661	35,150	35,494	31,129	34,394
Transport	455,308	471,796	512,619	574,812	613,448	617,802	621,921	597,582
Residential & Commercial	72,669	47,676	45,287	48,562	45,480	39,298	39,678	37,708
Agriculture	-	14,405	15,203	14,104	16,172	17,419	15,922	15,172
Non-energy	-	105,158	126,582	135,604	145,491	147,321	143,455	129,314
<b>Natural Gas</b>								
Primary Energy Supply	473,432	438,370	507,382	547,851	507,155	502,216	542,711	542,927
Indigenous Production	451,504	418,210	434,578	446,947	421,558	431,698	449,905	472,764
Import	22,826	35,170	65,790	87,781	100,874	97,231	107,228	92,335
Export	-1,120	-1,976	-3,534	-5,574	-16,694	-16,581	-18,873	-23,076
Transformation Sector	-86,421	-88,608	-127,375	-135,773	-153,459	-157,104	-171,969	-167,115
Power Generation	-86,421	-89,762	-128,613	-136,917	-154,656	-158,371	-173,162	-168,292
Final Energy Consumption	376,869	303,077	326,450	359,988	317,072	304,330	321,791	327,743
Industry	190,395	109,917	112,129	137,920	107,001	113,441	116,875	116,356
Transport	14,739	15,414	16,391	15,182	14,164	14,175	15,078	15,751
Residential & Commercial	171,000	163,855	183,759	189,458	181,522	167,077	179,909	185,751
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	13,890	14,170	17,429	14,384	9,638	9,929	9,885
<b>Electricity</b>								
Power Generation	196,478	276,801	308,062	348,529	369,316	369,871	374,086	375,743
Thermal	150,263	157,406	174,229	231,904	248,292	248,688	253,848	252,633
Hydro	23,719	24,851	29,056	24,079	25,622	27,321	23,697	24,252
Nuclear	21,811	53,127	62,006	69,295	70,425	70,900	72,676	72,777
Others	685	41,418	42,772	23,251	24,977	22,962	23,866	26,080
Final Energy Consumption	180,358	226,487	261,610	300,954	319,590	320,176	329,018	327,963
Industry	70,353	74,523	89,559	98,222	79,449	78,837	79,879	78,681
Transport	268	355	331	380	646	633	703	662
Residential & Commercial	109,736	151,610	171,720	202,337	226,550	228,009	234,656	233,572
Agriculture	-	-	-	-	-	-	-	-

## Major Economic Indicators of United States of America

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	227.23	249.62	266.28	282.17	295.56	298.36	301.29	304.06
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	5,128.00	7,055.00	7,972.80	9,764.80	10,936.70	11,240.60	11,468.00	11,513.87
Real Term (Billions of 2000 Price and 2000 PPP)	5,128.00	7,055.00	7,972.80	9,764.80	10,936.70	11,240.60	11,468.00	11,513.87
Nominal (Billions of Current USD)	2,768.90	5,757.20	7,342.30	9,764.80	12,364.10	13,116.50	13,741.60	14,093.31
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	22,568	28,263	29,942	34,606	37,003	37,674	38,063	37,867
Real Term (2000 Price and 2000 PPP)	22,568	28,263	29,942	34,606	37,003	37,674	38,063	37,867
Nominal (Current USD)	12,186	23,064	27,574	34,606	41,833	43,962	45,609	46,350
Nominal GDP & its Components (Billions of Current USD) *1								
Gross Domestic Product	2,768.90	5,757.20	7,342.30	9,764.80	12,364.10	13,116.50	13,741.60	14,093.31
Household Final Consumption Expenditure, etc.	1,757.10	3,839.90	4,975.80	6,739.40	8,694.10	9,207.20	9,710.20	N.A.
General Government Final Consumption Expenditure	463.80	978.80	1,125.30	1,404.10	1,960.40	2,087.60	2,218.60	N.A.
Gross Fixed Capital Formation	565.20	1,003.40	1,301.60	1,944.20	2,380.00	2,529.60	2,523.80	N.A.
Stock Change	-4.30	13.10	30.90	56.50	43.20	49.40	-3.20	N.A.
Exports of Goods and Services	280.80	552.40	812.20	1,096.30	1,311.50	1,480.80	1,662.40	N.A.
Imports of Goods and Services	293.80	630.30	903.60	1,475.80	2,025.10	2,238.10	2,370.20	N.A.
Real GDP & its Components (Billions of 2000 USD) *1								
Gross Domestic Product	5,128.00	7,055.00	7,972.80	9,764.80	10,936.70	11,240.60	11,468.00	11,513.87
Household Final Consumption Expenditure, etc.	3,388.40	4,742.30	5,419.20	6,739.40	7,795.10	8,028.50	8,248.60	N.A.
General Government Final Consumption Expenditure	957.10	1,293.80	1,288.90	1,404.10	1,595.20	1,623.60	1,654.90	N.A.
Gross Fixed Capital Formation	769.90	1,073.50	1,335.60	2,000.80	2,163.00	2,204.20	2,111.00	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	323.50	552.50	778.20	1,096.30	1,205.30	1,314.80	1,425.90	N.A.
Imports of Goods and Services	310.90	607.10	849.10	1,475.80	1,821.90	1,930.50	1,972.40	N.A.
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	1.0	1.0	0.9	1.1	1.2	1.1	1.1	N.A.
Industry	25.4	22.9	22.7	22.5	20.6	20.6	20.2	N.A.
Services, etc.	71.7	70.2	68.6	69.5	71.3	71.5	72.1	N.A.
Industrial Production Index (2005=100) *2	52.5	64.8	75.0	96.7	100.0	102.3	103.8	101.5
External Trade (Billions of Current USD) *1								
Exports, f.o.b.	225,566	393,592	584,743	781,918	904,289	1,036,635	1,162,479	1,300,532
Imports, c.i.f.	256,984	516,987	770,852	1,259,300	1,732,706	1,918,077	2,020,403	2,165,982
Balance of Payments (Billions of Current USD) *2								
Trade Balance	-25,533	-110,262	-172,330	-452,061	-787,056	-843,544	-826,914	-836,271
Current Account	2,127	-78,952	-113,561	-417,425	-748,688	-803,548	-726,571	-706,066
Overall Balance	8,144	2,233	9,747	0,295	-14,100	-2,392	0,125	4,839
Foreign Exchange Rate (USD/USD) *1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Purchasing Power Parity (USD/International Dollar) *1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Price Indices								
GDP Deflator (2000=100) *3	54.0	81.6	92.1	100.0	113.1	116.7	119.8	122.4
Wholesale Price Index (2005=100) *2	57.1	73.9	79.3	84.3	100.0	104.7	109.7	120.5
Consumer Price Index (2005=100) *2	55.2	73.7	78.3	86.1	100.0	103.4	108.1	116.1
Growth Rate (%) *3								
Real GDP	-0.24	1.86	2.54	3.69	2.94	2.78	2.02	0.40
Population	0.96	1.14	1.20	1.12	0.86	0.95	0.98	0.92
Price								
Wholesale Price Index	14.1	3.6	3.6	5.8	7.3	4.7	4.8	9.8
Consumer Price Index	14.2	5.4	1.9	4.7	5.8	3.4	4.5	7.4

Source \*1 : "World Development Indicators", World Bank

\*2 : "International Financial Statistics", International Monetary Fund

\*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note : N.A. means "not available"

: USD means United States Dollar

: PPP means Purchasing Power Parity

## Energy Price of United States in 2008

## Currency Exchange Rate

Currency Exchange Rate	Local currency / USD	-
Local Currency Unit		USD

## IMPORT PRICES

## WHOLESALE PRICES

## CONSUMER PRICES

	Unit	Amount		Unit	Amount		Unit	Amount
<b>Coal and Coal Products</b>			<b>Coal and Coal Products</b>			<b>Coal and Coal Products</b>		
Coking Coal			Coking Coal			Coking Coal		
Anthracite			Anthracite	USS/Short ton	60.76	Anthracite		
Other bituminous coal			Other bituminous coal	USS/Short ton	51.39	Other bituminous coal		
Sub-bituminous Coal			Sub-bituminous Coal	USS/Short ton	12.31	Sub-bituminous Coal		
Lignite			Lignite	USS/Short ton	16.50	Lignite		
Peat			Peat			Peat		
Patent Fuel			Patent Fuel			Patent Fuel		
Coke	USS/Short ton	465.15	Coke	USS/Short ton	268.84	Coke		
Coal Tar			Coal Tar			Coal Tar		
BKB/PB			BKB/PB			BKB/PB		
<b>Oil and Oil Products</b>			Gas Works Gas			Gas Works Gas		
Crude Oil	USD / Barrel	92.77	<b>Oil and Oil Products</b>			<b>Oil and Oil Products</b>		
Natural Gas Liquids			Crude Oil	USD / Barrel	94.74	Crude Oil		
Ethane			Natural Gas Liquids			Natural Gas Liquids		
LPG			Ethane			Ethane		
Naphtha			LPG	USD / Gallon	1.44	LPG	USD / Gallon	1.89
Motor Gasoline			Naphtha			Naphtha		
Aviation Gasoline			Motor Gasoline	USD / Gallon	2.59	Motor Gasoline	USD / Gallon	2.78
Gasoline Type Jet Fuel			Aviation Gasoline	USD / Gallon	3.34	Aviation Gasoline	USD / Gallon	3.27
Kerosene Type Jet Fuel			Gasoline Type Jet Fuel			Gasoline Type Jet Fuel		
Other Kerosene			Kerosene Type Jet Fuel	USD / Gallon	3.02	Kerosene Type Jet Fuel	USD / Gallon	3.05
Gas/Diesel Oil			Other Kerosene	USD / Gallon	2.85	Other Kerosene	USD / Gallon	3.28
Fuel Oil			Gas/Diesel Oil	USD / Gallon	2.99	Gas/Diesel Oil	USD / Gallon	3.15
White Spirit SBP			Fuel Oil	USD / Gallon	1.87	Fuel Oil	USD / Gallon	1.96
Lubricants			White Spirit SBP			White Spirit SBP		
Bitumen			Lubricants			Lubricants		
Paraffin Waxes			Bitumen			Bitumen		
Petroleum Coke			Paraffin Waxes			Paraffin Waxes		
<b>Natural Gas</b>			Petroleum Coke			Petroleum Coke		
Natural Gas	USD / 1000ft3	8.57	<b>Natural Gas</b>			<b>Natural Gas</b>		
Liquefied Natural Gas	USD / 1000ft3	10.03	Natural Gas	USD / 1000ft3	9.18	Natural Gas	USD / 1000ft3	13.89
Compressed Natural Gas			Liquefied Natural Gas			Liquefied Natural Gas		
<b>Electricity</b>			Compressed Natural Gas			Compressed Natural Gas		
Electricity			<b>Electricity</b>			<b>Electricity</b>		
<b>Other Energy Products</b>			Electricity			Industrial	cents/kwh	6.83
	USS/Short ton	59.83	<b>Other Energy Products</b>			Commercial	cents/kwh	10.36
						Residential	cents/kwh	11.26
						Others	cents/kwh	10.74
						<b>Other Energy Products</b>		

## 3.21 Viet Nam

## Energy Balance Table of Viet Nam in 2008

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
<b>1 Indigenous Production</b>	22,275	-	15,172	691	-	-	-	-	-
<b>2 Import</b>	385	66	-	14,757	3,691	-	568	153	6,741
<b>3 Export</b>	-10,839	-	-14,000	-1,053	-189	-	-72	-35	-377
<b>4 International Marine Bunkers</b>	-	-	-	-	-	-	-	-	-
<b>5 International Aviation Bunkers</b>	-	-	-	-	-	-	-	-	-
<b>6 Stock Changes</b>	129	-	-1,173	-	-	-	-	-	-
<b>7 Total Primary Energy Supply</b>	11,951	66	0	14,394	3,502	-	496	118	6,364
<b>8 Transfers</b>	-	-	-	-	-	-	-	-	-
<b>9 Total Transformation Sector</b>	-3,728	-	-	-592	-	-	-	-	-128
<b>9.1 Main Activity Producer</b>	-3,348	-	-	-228	-	-	-	-	-107
<b>9.2 Autoproducers</b>	-380	-	-	-364	-	-	-	-	-21
<b>9.3 Gas Processing</b>	-	-	-	-	-	-	-	-	-
<b>9.4 Petroleum Refineries</b>	-	-	-	-	-	-	-	-	-
<b>9.5 Coal Transformation</b>	-	-	-	-	-	-	-	-	-
<b>9.6 Other Transformation</b>	-	-	-	-	-	-	-	-	-
<b>10. Loss &amp; Own Use</b>	-	-	-	-	-	-	-	-	-
<b>11. Discrepancy</b>	-22	21	-0	3	-1	-	-13	94	-38
<b>12 Total Final Energy Consumption</b>	8,201	88	-	13,806	3,501	-	483	212	6,199
<b>13 Industry Sector</b>	6,762	88	-	2,025	-	-	-	12	1,062
<b>14 Transport Sector</b>	-	-	-	8,622	3,379	-	483	-	4,393
<b>15 Other Sector</b>	1,439	-	-	1,962	122	-	-	200	744
<b>15.1 Residential &amp; Commercial</b>	1,417	-	-	1,453	-	-	-	200	371
<b>15.2 Agriculture</b>	22	-	-	508	122	-	-	-	372
<b>15.3 Other</b>	-	-	-	-	-	-	-	-	-
<b>16 Non-energy</b>	-	-	-	1,197	-	-	-	-	-

Note: Above Energy Balance Table were estimated by C.A.

Others excludes non-commercial biomass supply and consumption.

## Energy Balance Table of Viet Nam in 2007

	1 Coal	2 Coal Products	3 Crude Oil & NGL	4 Petroleum Products	4.1 Mogas	4.2 Naphtha	4.3 Jet Fuel	4.4 Kerosene	4.5 Diesel Oil
<b>1 Indigenous Production</b>	24,186	-	16,207	670	-	-	-	-	-
<b>2 Import</b>	375	64	-	14,834	3,461	0	518	259	6,578
<b>3 Export</b>	-17,854	-	-15,333	-969	-174	-	-66	-32	-347
<b>4 International Marine Bunkers</b>	-	-	-	-	-	-	-	-	-
<b>5 International Aviation Bunkers</b>	-	-	-	-	-	-	-	-	-
<b>6 Stock Changes</b>	2,910	-	-874	-	-	-	-	-	-
<b>7 Total Primary Energy Supply</b>	9,617	64	-0	14,534	3,287	0	452	227	6,231
<b>8 Transfers</b>	-	-	-	-	-	-	-	-	-
<b>9 Total Transformation Sector</b>	-3,592	-	-	-821	-	-	-	-	-206
<b>9.1 Main Activity Producer</b>	-3,208	-	-	-388	-	-	-	-	-182
<b>9.2 Autoproducers</b>	-383	-	-	-433	-	-	-	-	-25
<b>9.3 Gas Processing</b>	-	-	-	-	-	-	-	-	-
<b>9.4 Petroleum Refineries</b>	-	-	-	-	-	-	-	-	-
<b>9.5 Coal Transformation</b>	-	-	-	-	-	-	-	-	-
<b>9.6 Other Transformation</b>	-	-	-	-	-	-	-	-	-
<b>10. Loss &amp; Own Use</b>	-	-	-	-	-	-	-	-	-
<b>11. Discrepancy</b>	-0	-	0	-0	0	-	-	0	-
<b>12 Total Final Energy Consumption</b>	6,025	64	-	13,713	3,287	0	452	227	6,025
<b>13 Industry Sector</b>	4,668	64	-	2,158	-	-	-	13	1,132
<b>14 Transport Sector</b>	-	-	-	8,078	3,166	-	452	-	4,116
<b>15 Other Sector</b>	1,357	-	-	2,065	121	-	-	214	777
<b>15.1 Residential &amp; Commercial</b>	1,336	-	-	1,559	-	-	-	214	407
<b>15.2 Agriculture</b>	21	-	-	506	121	-	-	-	370
<b>15.3 Other</b>	-	-	-	-	-	-	-	-	-
<b>16 Non-energy</b>	-	-	-	1,412	-	0	-	-	-

Note: Above Energy Balance Table were estimated by C.A.

Others excludes non-commercial biomass supply and consumption.

Energy Balance Table of Viet Nam in 2008 (Continued)

												unit: ktce
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	278	-	-	412	6,624	2,235	-	-	-	-	-	46,997
2,749	631	-	-	224	-	-	-	-	-	277	-	15,485
-381	-	-	-	-	-216	-	-	-	-	-	-	-26,108
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-1,044
2,368	910	-	-	636	6,408	2,235	-	-	-	277	-	35,331
-	-	-	-	-	-	-	-	-	-	-	-	-
-464	-	-	-	-	-5,693	-2,235	-	-	-	6,282	-	-5,965
-121	-	-	-	-	-5,454	-2,235	-	-	-	5,936	-	-5,329
-343	-	-	-	-	-239	-	-	-	-	346	-	-636
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-175	-	-	-	-	-728	-	-903
-610	10	-	-	561	-0	-	-	-	-	13	-	16
1,294	920	-	-	1,197	540	-	-	-	-	5,844	-	28,479
808	143	-	-	-	540	-	-	-	-	3,026	-	12,441
367	-	-	-	-	-	-	-	-	-	44	-	8,666
119	777	-	-	-	-	-	-	-	-	2,774	-	6,175
105	777	-	-	-	-	-	-	-	-	2,717	-	5,588
14	-	-	-	-	-	-	-	-	-	57	-	587
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	1,197	-	-	-	-	-	-	-	1,197

Energy Balance Table of Viet Nam in 2007 (Continued)

												unit: ktce
4.6	4.7	4.8	4.9	4.10	5	6	7	8	9	10	11	12
Fuel Oil	LPG	Refinery Gas	Ethane	Other Petroleum Products	Gas	Hydro	Nuclear	Geothermal Solar etc.	Others	Electricity	Heat	Total
-	306	-	-	364	6,139	1,968	-	-	-	-	-	49,170
2,299	670	-	-	1,048	-	-	-	-	-	226	-	15,499
-350	-	-	-	-	-486	-	-	-	-	-	-	-34,642
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	2,036
1,949	976	-	-	1,412	5,653	1,968	-	-	-	226	-	32,062
-	-	-	-	-	-	-	-	-	-	-	-	-
-615	-	-	-	-	-4,916	-1,968	-	-	-	5,750	-	-5,547
-206	-	-	-	-	-4,713	-1,968	-	-	-	5,396	-	-4,882
-409	-	-	-	-	-203	-	-	-	-	354	-	-666
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-195	-	-	-	-	-720	-	-915
-0	-	-	-	-0	-	-	-	-	-	0	-	-0
1,334	976	-	-	1,412	542	-	-	-	-	5,256	-	25,600
861	152	-	-	-	542	-	-	-	-	2,765	-	10,197
344	-	-	-	-	-	-	-	-	-	37	-	8,115
129	823	-	-	-	-	-	-	-	-	2,454	-	5,876
115	823	-	-	-	-	-	-	-	-	2,405	-	5,301
14	-	-	-	-	-	-	-	-	-	49	-	576
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	1,412	-	-	-	-	-	-	-	1,412

## Major Energy Indicators of Viet Nam

ktoe

	1980	1990	1995	2000	2005	2006	2007	2008
<b>Total</b>								
Primary Energy Supply	-	5,414	9,083	14,740	25,769	28,769	32,062	35,331
Indigenous Production	-	5,811	13,562	25,777	45,190	48,300	49,170	46,997
Import	-	2,947	5,101	8,885	12,331	12,317	15,499	15,485
Export	-	-3,125	-9,816	-18,650	-30,064	-30,976	-34,642	-26,108
Final Energy Consumption	-	4,212	7,892	11,826	20,905	22,779	25,600	28,479
Industry	-	1,713	3,099	4,653	8,235	9,049	10,197	12,441
Transport	-	1,412	2,484	3,662	6,898	7,560	8,115	8,666
Residential & Commercial	-	815	1,688	2,973	4,926	5,196	5,301	5,588
Agriculture	-	244	366	400	545	581	576	587
Non-energy	-	28	255	137	301	393	1,412	1,197
<b>Coal, Coal Products</b>								
Primary Energy Supply	-	2,212	3,314	4,372	7,082	9,045	9,681	12,017
Indigenous Production	-	2,597	4,676	6,501	18,142	21,790	24,186	22,275
Import	-	-	-	-	57	64	439	452
Export	-	-442	-1,580	-1,821	-10,072	-11,936	-17,854	-10,839
Transformation Sector	-	-888	-710	-1,150	-2,132	-3,517	-3,592	-3,728
Power Generation	-	-888	-710	-1,150	-2,132	-3,517	-3,592	-3,728
Final Energy Consumption	-	1,324	2,603	3,223	4,950	5,528	6,089	8,289
Industry	-	1,019	1,938	2,339	3,734	4,176	4,732	6,849
Transport	-	14	2	-	-	-	-	-
Residential & Commercial	-	226	589	860	1,194	1,331	1,336	1,417
Agriculture	-	64	76	24	22	22	21	22
Non-energy	-	-	-	-	-	-	-	-
<b>Crude Oil</b>								
Primary Energy Supply	-	-0	-	20	0	-	-0	0
Indigenous Production	-	2,750	7,790	16,584	18,935	17,510	16,207	15,172
Import	-	-	-	-	-	-	-	-
Export	-	-2,664	-7,790	-15,701	-18,290	-17,510	-15,333	-14,000
Transformation Sector	-	-	-	-	-	-	-	-
Petroleum Refineries	-	-	-	-	-	-	-	-
<b>Petroleum Products</b>								
Primary Energy Supply	-	2,737	4,673	7,656	12,533	12,777	14,534	14,394
Import	-	2,947	5,101	8,885	12,274	12,170	14,834	14,757
Export	-	-19	-446	-1,128	-415	-	-969	-1,053
Transformation Sector	-	-381	-369	-997	-678	-483	-821	-592
Power Generation	-	-381	-369	-1,310	-678	-483	-821	-592
Petroleum Refineries	-	-	-	-	-	-	-	-
Final Energy Consumption	-	2,356	4,304	6,658	11,855	12,294	13,713	13,806
Industry	-	449	743	1,515	2,499	2,235	2,158	2,025
Transport	-	1,393	2,474	3,641	6,898	7,560	8,078	8,622
Residential & Commercial	-	340	583	1,026	1,685	1,596	1,559	1,453
Agriculture	-	146	249	339	473	511	506	508
Non-energy	-	28	255	137	301	393	1,412	1,197
<b>Natural Gas</b>								
Primary Energy Supply	-	3	186	1,440	4,649	5,108	5,653	6,408
Indigenous Production	-	3	186	1,440	5,935	6,638	6,139	6,624
Import	-	-	-	-	-	-	-	-
Export	-	-	-	-	-1,286	-1,530	-486	-216
Transformation Sector	-	-3	-165	-1,422	-4,549	-4,872	-4,916	-5,693
Power Generation	-	-3	-165	-1,102	-4,549	-4,872	-4,916	-5,693
Final Energy Consumption	-	-	22	18	100	326	542	540
Industry	-	-	22	18	100	326	542	540
Transport	-	-	-	-	-	-	-	-
Residential & Commercial	-	-	-	-	-	-	-	-
Agriculture	-	-	-	-	-	-	-	-
Non-energy	-	-	-	-	-	-	-	-
<b>Electricity</b>								
Power Generation	-	746	1,260	2,284	4,598	5,285	5,750	6,282
Thermal	-	285	350	1,033	3,093	3,530	3,782	4,047
Hydro	-	462	910	1,251	1,505	1,755	1,968	2,235
Nuclear	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-
Final Energy Consumption	-	532	963	1,927	3,967	4,630	5,256	5,844
Industry	-	245	397	782	1,870	2,312	2,765	3,026
Transport	-	5	9	21	-	-	37	44
Residential & Commercial	-	249	516	1,088	2,048	2,270	2,405	2,717
Agriculture	-	34	41	37	49	49	49	57

Note: Total excludes non-commercial biomass supply and consumption.

## Major Economic Indicators of Viet Nam

	1980	1990	1995	2000	2005	2006	2007	2008
Population (Millions) *1	53.70	66.20	72.98	77.64	83.11	84.14	85.15	86.21
Gross Domestic Product *3								
Real Term (Billions of 2000 Price and 2000 USD)	N.A.	15.02	22.28	31.17	44.77	48.45	52.55	55.80
Real Term (Billions of 2000 Price and 2000 PPP)	N.A.	52.84	78.38	109.68	157.52	170.48	184.89	196.31
Nominal (Billions of Current USD)	N.A.	6.47	20.74	31.17	52.92	60.91	71.02	90.64
GDP per Capita *3								
Real Term (2000 Price and 2000 USD)	N.A.	227	305	402	539	576	617	647
Real Term (2000 Price and 2000 PPP)	N.A.	798	1,074	1,413	1,895	2,026	2,171	2,277
Nominal (Current USD)	N.A.	98	284	402	637	724	834	1,051
Nominal GDP & its Components (Billions of Current VND) *1								
Gross Domestic Product	N.A.	41,955	228,892	441,646	839,211	974,266	1,143,715	1,477,717
Household Final Consumption Expenditure, etc.	N.A.	35,559	168,492	293,507	533,141	617,182	740,615	993,972
General Government Final Consumption Expenditure	N.A.	5,177	18,741	28,346	51,652	58,734	69,247	90,904
Gross Fixed Capital Formation	N.A.	N.A.	58,187	122,101	275,841	324,949	437,702	531,987
Stock Change	N.A.	N.A.	3,944	8,670	22,702	33,680	55,598	75,759
Exports of Goods and Services	N.A.	15,120	75,106	243,049	582,069	717,109	879,461	1,155,686
Imports of Goods and Services	N.A.	18,996	95,925	253,927	617,157	761,547	1,060,763	1,400,134
Real GDP & its Components (Billions of 1994 VND) *1								
Gross Domestic Product	N.A.	131,844	195,567	273,666	393,031	425,373	461,344	489,833
Household Final Consumption Expenditure, etc.	N.A.	N.A.	142,916	182,420	254,484	275,723	305,504	333,496
General Government Final Consumption Expenditure	N.A.	N.A.	15,976	18,245	25,620	27,797	30,272	32,549
Gross Fixed Capital Formation	N.A.	N.A.	49,715	78,552	133,141	146,325	181,673	188,647
Stock Change	N.A.	N.A.	3,534	4,944	10,150	13,922	21,518	27,301
Exports of Goods and Services	N.A.	22,632	55,659	141,911	325,707	292,911	325,974	342,432
Imports of Goods and Services	N.A.	30,495	73,536	151,996	350,145	323,462	412,796	444,216
Sectional Shares of Real GDP (%) *1								
Agriculture, Fishery and Forest	N.A.	32	26	23	20	19	18	18
Industry	N.A.	25	30	35	40	41	42	42
Services, etc.	N.A.	43	44	41	40	40	40	41
Industrial Production Index (2005=100)	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.	0.338	2.404	5.449	14.483	32.442	39.826	48.576	62.906
Imports, c.i.f.	1.314	2.752	8.155	15.638	36.761	44.891	62.678	80.416
Balance of Payments (Billions of Current USD) *1								
Trade Balance	N.A.	N.A.	N.A.	0.375	-2.439	-2.776	-10.438	-12.782
Current Account	N.A.	N.A.	N.A.	1.106	-0.560	-0.164	-6.953	-10.706
Overall Balance	N.A.	N.A.	N.A.	0.110	2.130	4.324	10.212	0.474
Foreign Exchange Rate (VND/USD) *1	N.A.	6,482.80	11,038.25	14,167.75	15,858.92	15,994.25	16,105.13	16,302.25
Purchasing Power Parity (VND/International Dollar) *1	N.A.	972.99	3,171.13	4,026.74	4,712.69	4,897.56	5,162.31	6,149.68
Price Indices								
GDP Deflator (1994=100) *3	N.A.	31.8	117.0	161.4	213.5	229.0	247.9	301.7
Wholesale Price Index (2005=100)	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Consumer Price Index (2005=100)	N.A.	N.A.	67.1	80.3	100.0	107.4	116.3	143.2
Growth Rate (%) *3								
Real GDP	N.A.	5.10	9.54	6.79	8.44	8.23	8.46	6.18
Population	2.14	2.20	1.81	0.16	1.31	1.24	1.21	1.24
Price								
Wholesale Price Index	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Consumer Price Index	N.A.	N.A.	N.A.	-1.7	8.3	7.4	8.3	23.1

Source       \*1 : "World Development Indicators", World Bank  
              \*2 : "International Financial Statistics", International Monetary Fund  
              \*3 : Calculated from \*1 and \*2 by the Coordinating Agency

Note         : N.A. means "not available"  
              : VND means Dong, USD means United States Dollar  
              : PPP means Purchasing Power Parity



## 3.22 APEC Region

## 3.2.2.1 Primary Energy Supply Table

## Primary Energy Supply Table in 2008

	Australia	Brunei	Canada	Chile	China	Hong Kong	Indonesia	Japan	Korea
<b>Coal &amp; Coal Products</b>									
Indigenous Production	218,816	-	33,640	276	1,471,741	-	134,652	627	1,276
Import	4	-	11,932	4,664	24,770	7,146	63	118,119	61,507
Export	-163,964	-	-19,520	-9	-32,491	-0	-94,080	-650	-
Stock Change	-1,085	-	216	-354	-32,239	-296	-	-1,103	268
<b>Total</b>	<b>53,771</b>	<b>-</b>	<b>26,268</b>	<b>4,578</b>	<b>1,431,782</b>	<b>6,850</b>	<b>40,635</b>	<b>116,993</b>	<b>63,051</b>
<b>Crude oil &amp; Petroleum Products</b>									
Indigenous Production	23,906	9,346	160,998	139	195,050	-	56,405	855	536
Import	35,725	64	58,340	18,929	225,056	15,852	33,457	254,389	145,197
Export	-16,509	-8,460	-121,050	-1,353	-24,473	-838	-20,619	-19,440	-44,955
Stock Change	333	-104	-210	278	-20,708	-428	976	-2,070	1,780
<b>Total</b>	<b>39,450</b>	<b>757</b>	<b>96,995</b>	<b>17,992</b>	<b>370,214</b>	<b>3,917</b>	<b>70,219</b>	<b>222,380</b>	<b>89,620</b>
<b>Natural Gas</b>									
Indigenous Production	39,391	11,291	143,807	1,969	74,759	-	72,604	3,482	195
Import	4,346	-	12,830	729	4,286	2,041	-	81,307	33,347
Export	-17,854	-8,545	-84,712	-	-3,021	-	-33,873	-	-
Stock Change	-	16	5,145	-	-	-171	-	-10	-1,723
<b>Total</b>	<b>25,883</b>	<b>2,763</b>	<b>77,071</b>	<b>2,698</b>	<b>76,025</b>	<b>1,870</b>	<b>38,731</b>	<b>84,779</b>	<b>31,818</b>
<b>Nuclear Power</b>									
Indigenous Production	-	-	24,484	-	17,823	-	-	65,605	39,340
<b>Hydro Power</b>									
Indigenous Production	1,037	-	32,902	2,153	50,326	-	991	7,017	478
<b>Geothermal, Solar, etc</b>									
Indigenous Production	509	-	331	3	-	-	7,146	3,302	106
<b>Primary Energy</b>									
Indigenous Production	289,137	20,637	407,999	9,658	1,816,625	98	271,799	89,139	44,856
Import	40,075	64	84,766	24,421	254,443	26,015	33,520	453,815	240,077
Export	-198,327	-17,004	-228,998	-1,362	-61,416	-1,145	-148,572	-20,090	-44,955
Stock Change	-751	-87	5,151	-76	-52,947	-895	976	-3,184	325
<b>Total</b>	<b>126,129</b>	<b>3,520</b>	<b>267,835</b>	<b>32,640</b>	<b>1,951,993</b>	<b>13,402</b>	<b>157,722</b>	<b>508,327</b>	<b>227,364</b>

## Primary Energy Supply Table in 2007

	Australia	Brunei	Canada	Chile	China	Hong Kong	Indonesia	Japan	Korea
<b>Coal &amp; Coal Products</b>									
Indigenous Production	217,133	-	34,276	161	1,322,584	-	121,445	722	1,328
Import	27	-	10,496	3,945	30,634	7,723	38	112,980	54,475
Export	-158,314	-	-18,404	-31	-38,343	-0	-89,646	-1,072	-
Stock Change	-6,907	-	46	-756	-10,044	-245	2,501	-	505
<b>Total</b>	<b>51,939</b>	<b>-</b>	<b>26,413</b>	<b>3,319</b>	<b>1,304,830</b>	<b>7,478</b>	<b>34,337</b>	<b>112,630</b>	<b>56,307</b>
<b>Crude oil &amp; Petroleum Products</b>									
Indigenous Production	25,372	9,440	162,519	593	186,318	-	46,073	833	581
Import	33,470	8	56,545	18,294	205,572	17,667	37,225	251,754	145,214
Export	-16,709	-8,704	-119,559	-1,218	-21,975	-960	-23,917	-13,740	-39,344
Stock Change	-452	39	1,390	-899	-4,162	-619	45	3,102	851
<b>Total</b>	<b>37,772</b>	<b>706</b>	<b>99,736</b>	<b>16,768</b>	<b>359,197</b>	<b>3,924</b>	<b>59,425</b>	<b>229,806</b>	<b>94,453</b>
<b>Natural Gas</b>									
Indigenous Production	38,973	11,394	151,404	1,083	64,462	-	63,537	3,448	317
Import	4,598	-	10,798	2,339	3,743	2,041	-	78,437	29,915
Export	-17,774	-8,240	-88,274	-	-2,421	-	-30,563	-	-
Stock Change	-	12	6,690	-69	-	-171	-	-19	899
<b>Total</b>	<b>25,797</b>	<b>3,166</b>	<b>80,619</b>	<b>3,353</b>	<b>65,784</b>	<b>1,870</b>	<b>32,975</b>	<b>81,865</b>	<b>31,131</b>
<b>Nuclear Power</b>									
Indigenous Production	-	-	24,364	-	16,191	-	-	72,710	37,249
<b>Hydro Power</b>									
Indigenous Production	1,248	-	31,889	1,958	41,733	-	971	7,313	434
<b>Geothermal, Solar, etc</b>									
Indigenous Production	379	-	262	-	-	-	6,038	3,551	79
<b>Primary Energy</b>									
Indigenous Production	288,435	20,834	416,542	8,529	1,637,717	98	238,064	96,361	42,683
Import	38,095	8	79,763	24,718	240,314	28,378	37,263	443,171	229,632
Export	-192,796	-16,944	-230,575	-1,250	-63,992	-1,309	-144,127	-14,811	-39,344
Stock Change	-7,359	51	8,125	-1,724	-14,206	-1,036	2,546	3,083	2,255
<b>Total</b>	<b>122,466</b>	<b>3,872</b>	<b>272,697</b>	<b>30,273</b>	<b>1,793,278</b>	<b>13,968</b>	<b>133,746</b>	<b>515,660</b>	<b>222,378</b>

Note: Primary Energy in Indonesia, Peru, Thailand and Viet Nam exclude non-commercial biomass.

Primary Energy Supply Table in 2008 (Continued)

ktoe

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
676	5,504	2,891	-	99	1,905	152,768	-	-	4,787	579,299	22,275	2,631,233
8,310	2,342	316	-	648	4,791	17,109	-	39,513	10,119	21,096	452	332,901
-176	-2	-1,800	-	-	-472	-55,466	-	-59	47	-48,222	-10,839	-427,701
-695	-319	285	-	176	-	-4,458	-	-725	-	-6,409	129	-46,610
8,114	7,524	1,693	-	923	6,225	109,953	-	38,729	14,953	545,764	12,017	2,489,822
37,870	163,112	2,900	2,102	5,611	715	488,601	-	14	15,182	312,865	15,863	1,492,070
15,935	27,464	7,279	1,625	6,861	15,379	3,462	123,031	63,544	41,260	680,719	14,757	1,788,325
-24,511	-84,608	-2,840	-2,044	-4,080	-3,023	-342,379	-69,610	-17,393	-11,592	-91,792	-15,053	-926,621
29	-357	34	-111	-1,222	239	-3,125	-	-116	711	-4,570	-1,173	-29,814
29,256	101,399	6,174	1,573	7,171	12,131	140,491	18,485	42,395	41,987	850,809	14,394	2,177,808
57,022	41,206	3,438	338	3,321	3,192	534,677	-	318	17,236	472,764	6,624	1,487,635
4,447	11,559	-	-	-	-	6,393	6,167	12,473	8,261	92,335	-	280,522
-21,600	-893	-	-	-	-	-157,795	-	-	-	-23,076	-216	-351,586
-	-358	-	-	-	-	-17,081	-	-90	-	904	-	-13,368
39,869	51,515	3,438	338	3,321	3,192	366,194	6,167	12,700	25,497	542,927	6,408	1,403,203
-	2,555	-	-	-	-	42,500	-	10,639	-	218,332	-	421,277
642	3,369	1,919	74	1,637	846	14,505	-	688	612	24,252	2,235	145,683
-	6,225	3,899	-	7	9,227	400	-	133	1	22,361	-	53,651
96,208	230,210	16,081	2,513	10,876	22,805	1,239,621	136	13,727	39,524	1,714,249	46,997	6,382,893
28,701	41,396	7,595	1,625	7,510	20,180	27,231	129,198	115,530	59,879	800,739	15,485	2,412,264
-46,337	-85,628	-4,640	-2,044	-4,080	-3,494	-557,424	-69,610	-17,452	-11,646	-166,603	-26,108	-1,716,935
-666	-1,035	318	-111	-1,046	239	-24,600	-	-932	711	-10,372	-1,044	-90,026
77,839	180,731	18,156	1,984	13,260	38,549	678,760	24,788	107,218	84,895	2,291,599	35,331	6,842,044

Primary Energy Supply Table in 2007 (Continued)

ktoe

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
492	6,000	2,828	-	78	1,791	146,084	-	-	5,204	568,497	24,186	2,452,810
7,203	2,851	385	-	869	4,079	12,995	-	40,457	9,030	22,208	439	320,834
-233	-6	-1,461	-	-	422	-55,862	-	-7	-	-34,691	-17,854	-415,504
108	252	-210	-	71	-	-1,064	-	-157	-	-1,210	2,910	-14,202
7,570	9,097	1,541	-	1,018	6,292	102,153	-	40,293	14,234	554,803	9,681	2,343,937
36,989	179,381	2,068	1,987	5,386	827	490,119	-	16	14,069	317,454	16,876	1,496,900
18,042	25,093	7,126	1,532	7,104	15,919	2,744	111,725	67,962	41,042	705,977	14,834	1,784,846
-26,791	-98,979	-1,790	-1,659	-4,225	-3,364	-354,972	-62,542	-17,779	-9,276	-71,555	-16,302	-915,362
174	-401	-141	-425	-1,650	277	671	-	287	2,454	4,976	-874	4,643
27,439	100,737	6,063	1,435	6,426	12,397	132,865	17,637	46,296	44,510	902,869	14,534	2,214,999
50,961	42,151	3,650	326	2,597	3,033	521,998	-	371	14,611	449,905	6,139	1,430,359
4,922	9,349	-	-	-	-	5,989	5,960	11,393	8,314	107,228	-	285,025
-27,016	-1,227	-	-	-	-	-155,008	-	-	-	-18,873	-486	-349,880
-	-45	-	-	-	-	-6,912	-	122	-	4,451	-	4,956
28,866	50,228	3,650	326	2,597	3,033	366,067	5,960	11,886	22,925	542,711	5,653	1,370,460
-	2,716	-	-	-	-	41,730	-	10,565	-	218,027	-	423,551
558	2,346	2,033	74	2,101	736	15,435	-	718	698	23,697	1,968	135,909
-	6,499	3,333	-	7	8,790	418	-	133	2	20,074	-	49,566
89,000	247,342	14,933	2,387	10,525	22,162	1,222,366	104	14,249	36,063	1,677,525	49,170	6,135,088
30,167	37,316	7,511	1,532	7,973	20,000	22,215	117,685	119,902	58,772	840,973	15,499	2,400,887
-54,236	-100,337	-3,251	-1,659	-4,225	-2,943	-567,430	-62,542	-17,787	-9,356	-127,430	-34,642	-1,690,985
282	-195	-352	-425	-1,579	277	-7,208	-	252	2,454	8,074	2,036	-4,649
64,239	179,771	17,642	1,835	12,505	38,235	664,246	23,701	112,426	84,155	2,345,159	32,062	6,684,313

## 3.22.2 Final Energy Consumption Table

Final Energy Consumption Table in 2008

	Australia	Brunei	Canada	Chile	China	Hong Kong	Indonesia	Japan	Korea
Total	76,431	759	202,222	25,568	1,218,756	6,879	100,345	335,724	146,762
Coal & Coal Products	3,749	-	3,718	709	461,573	-	22,378	37,372	9,433
Crude oil & Petroleum Products	37,517	460	90,753	13,901	334,189	2,764	54,276	176,063	77,686
Natural Gas	12,649	28	52,943	1,784	123,698	593	12,589	29,250	17,582
Electricity	18,244	270	44,615	4,596	243,839	3,520	11,103	88,916	35,015
Others	4,272	-	10,192	4,578	55,457	3	-	4,123	7,046
Industry	26,601	117	54,826	9,148	754,164	764	42,244	152,470	43,075
Coal & Coal Products	3,616	-	3,665	704	371,056	-	22,378	36,683	8,380
Crude oil & Petroleum Products	4,469	70	5,938	3,425	88,530	453	6,288	59,951	6,463
Natural Gas	7,678	-	20,776	241	88,727	19	9,452	14,707	5,472
Electricity	8,159	47	16,204	3,150	167,819	291	4,125	38,119	17,875
Others	2,680	-	8,242	1,627	38,033	-	-	3,009	4,885
Transport	27,610	363	57,215	8,988	145,300	2,144	26,025	80,519	28,686
Coal & Coal Products	92	-	-	-	4,370	-	-	-	-
Crude oil & Petroleum Products	26,873	363	53,655	8,937	130,122	2,084	26,001	78,677	27,780
Natural Gas	403	-	3,199	14	5,891	-	17	-	715
Electricity	242	-	361	37	4,918	60	7	1,842	191
Others	-	-	-	-	-	-	-	-	-
Agriculture	2,109	0	3,839	-	28,667	-	-	4,329	1,704
Coal & Coal Products	-	-	-	-	8,085	-	-	-	-
Crude oil & Petroleum Products	1,945	0	2,522	-	12,934	-	-	4,000	1,135
Natural Gas	3	-	487	-	-	-	-	-	5
Electricity	161	-	829	-	7,629	-	-	329	564
Others	-	-	2	-	20	-	-	-	-
Residential & Commercial	16,088	269	64,828	6,271	190,573	3,971	15,594	92,019	37,292
Coal & Coal Products	41	-	53	4	68,827	-	-	689	1,053
Crude oil & Petroleum Products	897	17	10,240	1,324	36,306	227	8,555	27,049	6,460
Natural Gas	3,874	28	25,365	583	23,069	573	68	14,543	11,389
Electricity	9,683	224	27,221	1,409	46,556	3,169	6,970	48,625	16,228
Others	1,592	-	1,948	2,951	15,815	3	-	1,114	2,161

Final Energy Consumption Table in 2007

	Australia	Brunei	Canada	Chile	China	Hong Kong	Indonesia	Japan	Korea
Total	75,505	733	205,296	24,679	1,051,475	7,034	88,297	346,595	146,584
Coal & Coal Products	3,455	-	3,900	674	392,470	-	16,217	37,752	8,600
Crude oil & Petroleum Products	37,392	436	92,228	12,877	322,395	2,936	51,733	187,908	80,732
Nature Gas/ LNG & Town Gas	12,644	29	55,642	2,326	53,248	581	9,912	28,487	16,812
Electricity	17,769	268	43,258	4,561	229,950	3,513	10,435	88,251	33,642
Others	4,245	-	10,267	4,241	53,412	3	-	4,197	6,797
Industry	26,109	102	57,839	8,619	628,050	654	35,427	156,733	41,633
Coal & Coal Products	3,322	-	3,870	664	312,198	-	16,217	36,890	7,599
Crude oil & Petroleum Products	4,376	54	6,392	3,196	87,733	321	7,613	64,526	7,301
Natural Gas	7,805	-	22,700	226	28,122	19	7,658	13,961	4,710
Electricity	7,977	48	16,605	3,080	162,640	313	3,939	38,348	17,245
Others	2,630	-	8,273	1,452	37,358	-	-	3,008	4,777
Transport	27,564	357	58,119	8,258	126,222	2,429	26,515	83,992	30,134
Coal & Coal Products	85	-	-	-	4,504	-	-	-	-
Crude oil & Petroleum Products	26,856	357	53,628	8,200	116,165	2,369	26,501	82,163	29,347
Natural Gas	395	-	4,143	23	979	-	6	-	576
Electricity	228	-	348	35	4,574	60	7	1,829	211
Others	-	-	-	-	-	-	-	-	-
Agriculture	2,104	0	3,809	-	42,628	-	-	4,723	1,795
Coal & Coal Products	-	-	-	-	12,416	-	-	-	-
Crude oil & Petroleum Products	1,942	0	2,533	-	21,765	-	-	4,385	1,273
Natural Gas	3	-	479	-	-	-	-	-	4
Electricity	160	-	795	-	8,419	-	-	339	518
Others	-	-	2	-	28	-	-	-	-
Residential & Commercial	15,760	265	62,970	5,956	169,206	3,951	15,730	93,982	36,809
Coal & Coal Products	48	-	30	4	59,056	-	-	862	1,001
Crude oil & Petroleum Products	877	17	10,516	1,205	37,724	245	9,191	29,669	6,749
Natural Gas	3,816	29	24,978	533	18,747	562	51	14,526	11,523
Electricity	9,405	220	25,497	1,425	39,152	3,141	6,488	47,736	15,515
Others	1,615	-	1,948	2,789	14,528	3	-	1,189	2,020

Notes: Primary Energy in Indonesia, Peru, Thailand and Viet Nam exclude non-commercial biomass.  
Others includes Non-energy.

Final Energy Consumption Table in 2008 (Continued)

												ktoe
Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
44,354	116,079	12,421	1,222	11,002	22,425	442,405	16,129	64,332	55,180	1,551,707	28,479	4,479,181
1,464	2,097	616	-	579	1,798	22,104	-	6,240	7,459	26,859	8,289	616,437
24,433	76,253	5,943	970	7,123	10,733	98,599	12,787	37,889	32,909	814,169	13,806	1,923,222
10,474	13,180	1,452	-	737	70	133,947	113	2,036	3,204	327,743	540	744,612
7,983	17,212	3,302	251	2,563	4,232	63,901	3,230	18,069	11,608	327,963	5,844	916,277
-	7,337	1,107	-	-	5,592	123,854	-	99	-	54,974	-	278,633
18,667	29,310	3,623	758	4,162	6,158	123,527	8,423	21,209	18,777	292,230	12,441	1,622,696
1,464	2,097	468	-	579	1,798	16,086	-	6,240	7,459	25,126	6,849	514,650
5,262	6,820	487	580	1,591	1,539	5,496	7,043	4,030	3,880	34,394	2,025	248,739
8,257	8,474	632	-	594	70	30,130	48	871	2,540	116,356	540	315,583
3,685	10,558	1,223	178	1,397	1,465	30,967	1,332	10,068	4,898	78,681	3,026	403,267
-	1,361	813	-	-	1,287	40,848	-	-	-	37,673	-	140,457
16,378	52,563	4,745	348	4,382	7,447	101,527	5,494	11,521	19,680	613,995	8,666	1,223,597
-	-	-	-	-	-	-	-	-	-	-	-	4,462
16,175	51,714	4,695	348	4,252	7,437	58,971	5,494	11,427	19,011	597,582	8,622	1,140,216
189	754	4	-	130	0	35,410	-	-	664	15,751	-	63,143
15	95	46	-	-	10	7,146	-	95	5	662	44	15,775
-	-	-	-	-	-	-	-	-	-	-	-	-
286	3,432	368	-	69	135	8,897	4	144	3,457	15,529	587	73,557
-	-	39	-	-	-	87	-	-	-	-	22	8,234
267	2,735	143	-	29	38	3,582	-	4	3,433	15,172	508	48,444
-	-	34	-	-	-	836	-	-	-	-	-	1,365
19	697	151	-	41	97	1,335	4	141	24	-	57	12,079
-	-	-	-	-	-	3,056	-	-	-	357	-	3,434
6,200	21,029	2,595	-	1,836	8,366	162,610	1,959	11,287	9,357	475,708	5,588	1,133,438
-	-	109	-	-	-	5,927	-	-	-	1,733	1,417	79,852
1,900	8,218	208	-	725	1,413	8,460	-	2,341	2,739	37,708	1,453	156,242
36	974	164	-	5	-	43,821	64	1,165	-	185,751	-	311,474
4,264	5,861	1,820	-	1,105	2,647	24,453	1,894	7,683	6,617	233,572	2,717	452,720
-	5,976	294	-	-	4,306	79,950	-	99	-	16,944	-	133,151

Final Energy Consumption Table in 2007 (Continued)

												ktoe
Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
42,133	116,049	12,429	1,055	9,841	22,401	437,685	15,824	67,848	53,428	1,587,655	25,600	4,338,144
1,163	1,983	582	-	613	1,419	23,720	-	6,589	6,918	27,996	6,089	540,142
23,898	76,147	5,996	805	6,371	11,082	101,136	12,527	40,824	32,600	852,104	13,713	1,965,842
9,392	13,798	1,437	-	535	77	131,172	110	2,051	2,497	321,791	542	663,084
7,680	16,889	3,320	249	2,321	4,129	60,281	3,186	18,289	11,413	329,018	5,256	893,677
-	7,232	1,093	-	-	5,694	121,376	-	95	-	56,746	-	275,398
16,210	30,137	3,630	588	4,000	6,279	142,118	8,251	22,903	18,416	294,356	10,197	1,512,251
1,163	1,983	450	-	613	1,419	19,362	-	6,589	6,918	26,245	4,732	450,233
6,059	7,790	452	411	1,665	2,136	20,612	6,861	5,120	3,981	31,129	2,158	269,886
5,403	9,311	666	-	454	77	26,849	47	929	2,296	116,875	542	248,649
3,585	9,877	1,265	177	1,269	1,397	30,339	1,343	10,265	5,220	79,879	2,765	397,575
-	1,176	799	-	-	1,250	44,957	-	-	-	40,229	-	145,909
14,783	51,186	4,875	353	3,591	7,172	93,512	5,417	12,148	19,858	637,701	8,115	1,222,301
-	-	-	-	-	-	-	-	-	-	-	-	4,589
14,646	50,357	4,823	353	3,545	7,163	51,108	5,417	12,076	19,645	621,921	8,078	1,144,719
133	727	6	-	46	-	34,953	-	-	200	15,078	-	57,264
3	102	45	-	-	9	7,452	-	71	12	703	37	15,729
-	-	-	-	-	-	-	-	-	-	-	-	-
266	3,456	364	-	50	242	10,111	4	141	3,448	16,340	576	90,056
-	-	32	-	-	-	82	-	-	-	48	21	12,600
266	2,726	145	-	13	199	4,352	-	4	3,424	15,922	506	59,455
-	-	39	-	-	-	946	-	-	-	-	-	1,471
-	730	147	-	34	42	1,391	4	138	23	-	49	12,789
-	-	-	-	3	-	3,340	-	-	-	369	-	3,742
6,204	21,591	2,629	-	1,805	8,445	151,634	1,902	11,351	8,303	472,094	5,301	1,095,889
-	-	100	-	0	-	4,270	-	-	-	1,703	1,336	68,411
2,082	8,389	204	-	790	1,320	9,053	-	2,406	2,205	39,678	1,559	163,881
31	967	218	-	14	-	44,325	63	1,122	-	179,909	-	301,415
4,091	6,180	1,813	-	1,001	2,681	21,076	1,839	7,728	6,098	234,656	2,405	438,144
-	6,056	295	-	-	4,444	72,910	-	95	-	16,148	-	124,039

## 3.22.3 Demand and Supply Table

## Demand &amp; Supply Table of Coal in 2007

	Australia	Brunei	Canada	Chile	China	Hong Kong	Indonesia	Japan	Korea
Indigenous Production	217,133	-	34,276	161	1,322,584	-	121,445	722	1,328
Import	-	-	10,001	3,922	30,633	7,723	38	111,588	54,117
Export	-158,314	-	-18,288	-	-27,908	-0	-89,646	-	-
Stock Change	-6,401	-	75	-706	-5,369	-245	2,501	-	505
Primary Energy Supply	52,419	-	26,063	3,377	1,319,940	7,478	34,337	112,310	55,949
Coal Transformation	-3,739	-	-2,912	-475	-226,598	-	-28	-39,718	-16,008
Refining	-	-	-	-	-	-	-	-	-
Gas processing	-	-	-	-	-8,038	-	-	-	-
Power Generation (Main Activity Producer)	-44,782	-	-23,527	-2,520	-660,037	-7,478	-18,110	-48,517	-34,051
Power Generation (Autoproducers)	-	-	-5	-6	-61,982	-	-	-8,757	-1,491
Final Energy Consumption	2,518	-	2,499	336	309,177	-	16,199	15,892	4,779

## Demand &amp; Supply Table of Crude Oil in 2007

	Australia	Brunei	Canada	Chile	China	Hong Kong	Indonesia	Japan	Korea
Indigenous Production	25,301	9,424	162,519	593	186,318	-	46,073	833	581
Import	20,740	-	43,239	11,095	163,160	-	15,483	206,464	120,849
Export	-15,103	-8,704	-97,872	-	-3,884	-	-17,633	-	-27
Stock Change	-287	40	2,006	-458	-5,244	-	212	2,370	670
Primary Energy Supply	30,650	760	109,891	11,229	340,351	-	44,134	209,668	122,073
Coal Transformation	-	-	-	-	-	-	-	-	-
Refining	-34,941	-696	-105,746	-10,765	-328,326	-	-43,789	-206,946	-130,786
Gas processing	-	-	-	-	-	-	-	-	-
Power Generation (Main Activity Producer)	-	-	-	-	-	-	-	-7,787	-
Power Generation (Autoproducers)	-	-	-	-	-165	-	-	-	-
Final Energy Consumption	-	-	-	-	4,132	-	-	-	-

## Demand &amp; Supply Table of Natural Gas &amp; LNG in 2007

	Australia	Brunei	Canada	Chile	China	Hong Kong	Indonesia	Japan	Korea
Indigenous Production	38,973	11,394	151,404	1,083	64,462	-	63,537	3,448	317
Import	4,598	-	10,798	2,339	3,743	2,041	-	78,437	29,915
Export	-17,774	-8,240	-88,274	-	-2,421	-	-30,563	-	-
Stock Change	-	12	6,690	-69	-	-171	-	-19	899
Primary Energy Supply	25,797	3,166	80,619	3,353	65,784	1,870	32,975	81,865	31,131
Coal Transformation	-82	-	-	-	-	-	-	-	-
Refining	-	-	-	-	-	-	-	-	-
Gas processing	-264	-92	-1,720	8	7,791	230	-6,915	1,097	48
Power Generation (Main Activity Producer)	-4,987	-1,030	-6,810	-882	-	-1,518	-4,793	-50,517	-13,862
Power Generation (Autoproducers)	-2,841	-863	-1,853	-37	-9,357	-	-	-3,315	-528
Final Energy Consumption	12,644	29	55,642	2,326	53,248	581	9,912	28,487	16,812

Demand &amp; Supply Table of Coal in 2007 (Continued)

												ktoe
Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
492	6,000	2,828	-	78	1,791	146,084	-	-	5,204	568,497	24,186	2,452,810
7,203	2,677	385	-	672	4,079	12,878	-	40,087	5,026	20,670	375	312,074
-233	-4	-1,461	-	-	422	-53,661	-	-	-	-33,788	-17,854	-400,737
108	-325	-210	-	74	-	-956	-	-150	-	-1,243	2,910	-9,433
7,570	8,348	1,541	-	825	6,292	104,344	-	39,938	10,230	554,136	9,617	2,354,713
-	-1,411	-387	-	-	-	-25,370	-	-3,871	-	-98,357	-	-418,874
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-1,771	-	-9,809
-6,400	-6,795	-584	-	-242	-3,972	-51,489	-	-23,223	-6,850	-418,909	-3,208	-1,360,695
-	-	-6	-	-	-	-19,244	-	-6,924	-	-2,582	-383	-101,380
1,163	143	534	-	583	1,419	7,655	-	5,285	3,095	23,706	6,025	401,009

Demand &amp; Supply Table of Crude Oil in 2007 (Continued)

												ktoe
Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
34,514	179,381	2,068	1,987	5,386	827	490,119	-	16	11,008	317,454	16,207	1,490,607
9,597	557	4,698	778	5,805	10,331	2,706	51,246	51,955	40,217	597,916	-	1,356,837
-17,023	-93,230	-1,667	-1,487	-1,442	-801	-259,872	-94	-	-2,724	-5,830	-15,333	-542,726
-155	-233	-101	-454	-55	326	697	-	230	3,221	1,381	-874	3,291
26,932	86,475	4,998	824	9,694	10,683	233,651	51,152	52,202	51,722	910,920	-0	2,308,009
-	-	-	-	-	-	-	-	-	-	-	-	-
-26,667	-78,453	-4,907	-800	-9,098	-10,045	-229,794	-51,152	-52,049	-48,197	-867,073	-	-2,240,229
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-7,787
-	-	-	-	-	-	-702	-	-	-	-	-	-867
-	-	-	12	-	-	40	-	-	3,345	-	-	7,529

Demand &amp; Supply Table of Natural Gas &amp; LNG in 2007 (Continued)

												ktoe
Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
50,961	42,151	3,650	326	2,597	3,033	521,998	-	371	14,611	449,905	6,139	1,430,359
4,922	9,349	-	-	-	-	5,989	5,960	11,393	8,314	107,228	-	285,025
-27,016	-1,227	-	-	-	-	-155,008	-	-	-	-18,873	-486	-349,880
-	-45	-	-	-	-	-6,912	-	122	-	4,451	-	4,956
28,866	50,228	3,650	326	2,597	3,033	366,067	5,960	11,886	22,925	542,711	5,653	1,370,460
-	-	-	-	-	-	-	-	-	-	-	-	-82
-	-	-	-	-	-	-	-	-	-	-	-	-
-6,600	-	-	-	-	-	-	110	-743	-	1,193	-	-5,855
-11,298	-20,018	-1,977	-	-1,564	-2,720	-195,089	-5,960	-8,414	-18,224	-159,405	-4,713	-513,782
-1,032	-2,803	-128	-108	-60	-	-18,974	-	-160	-2,204	-13,756	-203	-58,223
9,392	13,798	1,437	-	535	77	131,172	110	2,051	2,497	321,791	542	663,084

**Demand & Supply Table of Coal in 2008**

	Australia	Brunei	Canada	Chile	China	Hong Kong	Indonesia	Japan	Korea
Indigenous Production	218,816	-	33,640	276	1,471,741	-	134,652	627	1,276
Import	-	-	11,026	4,340	24,770	7,146	63	117,013	61,017
Export	-163,964	-	-19,442	-	-24,125	-0	-94,080	-	-
Stock Change	-1,085	-	26	-247	-24,768	-296	-	-1,103	268
Primary Energy Supply	53,767	-	25,251	4,370	1,447,619	6,850	40,635	116,537	62,561
Coal Transformation	-3,738	-	-2,880	-486	-240,278	-	-25	-39,587	-17,553
Refining	-	-	-	-	-	-	-	-	-
Gas processing	-	-	-	-	-7,087	-	-	-	-
Power Generation (Main Activity Producer)	-45,022	-	-22,196	-3,484	-673,245	-6,850	-18,252	-49,962	-38,504
Power Generation (Autoproducers)	-	-	-5	-	-65,860	-	-	-9,056	-1,676
Final Energy Consumption	2,773	-	2,306	399	400,480	-	22,357	15,935	5,023

**Demand & Supply Table of Crude Oil in 2008**

	Australia	Brunei	Canada	Chile	China	Hong Kong	Indonesia	Japan	Korea
Indigenous Production	23,859	9,330	160,998	139	195,050	-	55,318	855	536
Import	21,339	16	42,554	10,881	178,885	-	12,839	210,089	118,857
Export	-14,992	-8,460	-99,188	-	-4,238	-	-20,619	-	-243
Stock Change	207	-107	-39	22	-14,712	-	976	-1,862	901
Primary Energy Supply	30,412	779	104,325	11,041	354,986	-	48,514	209,082	120,052
Coal Transformation	-	-	-	-	-	-	-	-	-
Refining	-32,713	-777	-96,107	-11,041	-340,953	-	-47,601	-204,517	-128,789
Gas processing	-	-	-	-	-	-	-	-	-
Power Generation (Main Activity Producer)	-	-	-	-	-	-	-	-9,439	-
Power Generation (Autoproducers)	-	-	-	-	-98	-	-	-	-
Final Energy Consumption	-	-	-	-	4,948	-	-	-	-

**Demand & Supply Table of Natural Gas & LNG in 2008**

	Australia	Brunei	Canada	Chile	China	Hong Kong	Indonesia	Japan	Korea
Indigenous Production	39,391	11,291	143,807	1,969	74,759	-	72,604	3,482	195
Import	4,346	-	12,830	729	4,286	2,041	-	81,307	33,347
Export	-17,854	-8,545	-84,712	-	-3,021	-	-33,873	-	-
Stock Change	-	16	5,145	-	-	-171	-	-10	-1,723
Primary Energy Supply	25,883	2,763	77,071	2,698	76,025	1,870	38,731	84,779	31,818
Coal Transformation	-82	-	-	-18	-	-	-	-	-
Refining	-	-	-	-	-	-	-	-	-
Gas processing	-270	0	-1,711	-	76,117	223	-6,727	1,078	201
Power Generation (Main Activity Producer)	-6,100	-1,013	-5,718	-527	-331	-1,500	-5,961	-51,332	-13,839
Power Generation (Autoproducers)	-3,185	-867	-1,904	-	-14,412	-	-	-3,524	-450
Final Energy Consumption	12,649	28	52,943	1,784	123,698	593	12,589	29,250	17,582

Demand &amp; Supply Table of Coal in 2008 (Continued)

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Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
676	5,504	2,891	-	99	1,905	152,768	-	-	4,787	579,299	22,275	2,631,233
8,310	2,128	316	-	475	4,791	16,995	-	39,246	4,781	18,844	385	321,647
-176	-	-1,800	-	-	-472	-53,368	-	-	-	-46,998	-10,839	-415,262
-695	-1,045	285	-	176	-	-4,417	-	-745	-	-6,315	129	-39,833
8,114	6,587	1,693	-	749	6,225	111,978	-	38,501	9,568	544,830	11,951	2,497,785
-	-1,426	-363	-	-	-	-23,015	-	-3,944	-	-15,795	-	-349,091
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-1,884	-	-8,971
-6,894	-5,023	-965	-	-251	-4,558	-60,705	-	-22,871	-6,924	-492,094	-3,348	-1,461,150
-	-	-6	-	-	-	-18,055	-	-6,301	-598	-2,776	-380	-104,712
1,464	139	572	-	502	1,798	9,573	-	4,801	2,182	24,464	8,201	502,969

Demand &amp; Supply Table of Crude Oil in 2008 (Continued)

ktoe

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
35,513	163,112	2,900	2,102	5,611	715	488,601	-	14	11,954	312,865	15,172	1,484,646
8,565	471	4,959	870	4,979	9,283	2,468	50,271	47,865	40,893	588,267	-	1,354,352
-14,994	-77,826	-2,630	-2,044	-925	-653	-244,313	-70	-	-2,520	-6,495	-14,000	-514,209
144	-638	57	-85	-135	-347	-3,504	-	-639	-	-4,572	-1,173	-25,508
29,229	85,119	5,285	844	9,531	8,997	243,251	50,201	47,241	50,327	890,065	0	2,299,281
-	-	-	-	-	-	-	-	-	-	-	-	-
-26,740	-78,010	-5,335	-799	-8,871	-8,718	-243,251	-50,201	-47,351	-49,565	-869,196	-	-2,250,537
-	-	-	-	-275	-	-	-	-	-	-	-	-275
-	-	-	-	-	-	-	-	-	-	-	-	-9,439
-	-	-	-	-	-	-732	-	-	-	-	-	-830
-	-	-	4	-	-	56	-	-	3,125	-	-	8,132

Demand &amp; Supply Table of Natural Gas &amp; LNG in 2008 (Continued)

ktoe

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
57,022	41,206	3,438	338	3,321	3,192	534,677	-	318	17,236	472,764	6,624	1,487,635
4,447	11,559	-	-	-	-	6,393	6,167	12,473	8,261	92,335	-	280,522
-21,600	-893	-	-	-	-	-157,795	-	-	-	-23,076	-216	-351,586
-	-358	-	-	-	-	-17,081	-	-90	-	904	-	-13,368
39,869	51,515	3,438	338	3,321	3,192	366,194	6,167	12,700	25,497	542,927	6,408	1,403,203
-	-	-	-	-	-	-	-	-	-	-	-	-100
-	-	-	-	-	-	-	-	-	-	-	-	-
-13,679	-	-	-	-	-	-	113	-767	-	1,177	-	55,756
-13,300	-21,167	-1,679	-	-1,969	-2,854	-193,868	-6,167	-9,294	-19,966	-155,341	-5,454	-517,378
-1,004	-3,007	-131	-120	-72	-	-18,283	-	-140	-2,327	-12,951	-239	-62,616
10,474	13,180	1,452	-	737	70	133,947	113	2,036	3,204	327,743	540	744,612

## 3.22.4 Power Generation Table

## Power Generation Table in 2008

	Australia	Brunei	Canada	Chile	China	Hong Kong	Indonesia	Japan	Korea
Total	243,387	3,423	644,500	60,858	3,466,882	41,703	149,437	1,179,739	407,884
Thermal	226,049	3,423	155,788	32,085	2,790,078	40,501	129,552	811,891	250,093
Hydro	12,057	-	382,580	24,292	585,187	-	11,528	81,595	5,563
Nuclear	-	-	93,951	-	68,394	-	-	251,744	150,958
Geothermal	-	-	-	-	-	-	8,309	2,814	-
Others	5,281	-	12,181	4,481	23,223	1,201	47	31,694	1,270
Public Utilities	234,791	3,071	590,823	56,848	3,243,607	40,501	149,437	986,889	404,645
Thermal	217,609	3,071	143,981	32,085	2,566,803	40,501	129,552	655,726	247,075
Hydro	12,057	-	349,006	23,871	585,187	-	11,528	74,144	5,563
Nuclear	-	-	93,951	-	68,394	-	-	251,744	150,958
Geothermal	-	-	-	-	-	-	8,309	2,624	-
Others	5,125	-	3,885	891	23,223	-	47	2,651	1,049
Auto Producers	8,596	352	53,677	4,010	223,275	1,201	-	192,850	3,239
Thermal	8,440	352	11,807	-	223,275	-	-	156,165	3,018
Hydro	-	-	33,574	421	-	-	-	7,452	-
Nuclear	-	-	-	-	-	-	-	-	-
Geothermal	-	-	-	-	-	-	-	190	-
Others	156	-	8,296	3,590	-	1,201	-	29,043	221

## Power Generation Table in 2007

	Australia	Brunei	Canada	Chile	China	Hong Kong	Indonesia	Japan	Korea
Total	237,787	3,395	632,225	58,509	3,281,553	45,782	142,441	1,178,998	390,683
Thermal	219,561	3,395	156,552	32,349	2,722,933	44,642	124,097	781,259	241,839
Hydro	14,517	-	370,805	22,763	485,264	-	11,287	85,033	5,042
Nuclear	-	-	93,492	-	62,130	-	-	279,009	142,937
Geothermal	-	-	-	-	-	-	7,021	3,025	-
Others	3,709	-	11,376	3,398	11,226	1,141	36	30,673	865
Public Utilities	230,326	3,045	582,433	54,060	3,070,723	44,642	142,441	991,774	387,267
Thermal	212,223	3,045	144,659	31,682	2,512,103	44,642	124,097	630,093	238,590
Hydro	14,517	-	341,202	22,287	485,264	-	11,287	77,485	5,042
Nuclear	-	-	93,492	-	62,130	-	-	279,009	142,937
Geothermal	-	-	-	-	-	-	7,021	2,825	-
Others	3,586	-	3,080	91	11,226	-	36	2,363	698
Auto Producers	7,461	350	49,792	4,450	210,830	1,141	-	187,224	3,416
Thermal	7,338	350	11,893	667	210,830	-	-	151,167	3,249
Hydro	-	-	29,603	476	-	-	-	7,548	-
Nuclear	-	-	-	-	-	-	-	-	-
Geothermal	-	-	-	-	-	-	-	200	-
Others	123	-	8,296	3,307	-	1,141	-	28,310	167

Power Generation Table in 2008 (Continued)

GWh

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
111,200	258,913	40,679	3,132	32,987	60,821	1,042,327	41,717	238,845	147,427	4,051,323	73,049	12,333,099
103,130	201,797	12,908	2,276	13,659	40,193	707,569	40,991	183,720	125,663	2,821,229	47,031	8,739,629
7,460	39,178	22,312	855	19,040	9,843	168,659	-	7,994	7,113	281,995	25,986	1,726,070
-	9,804	-	-	-	-	163,085	-	40,827	-	837,804	-	1,616,567
-	7,056	4,200	-	-	10,723	465	-	-	2	17,014	-	50,616
610	1,078	1,259	-	287	63	2,549	726	6,304	14,649	93,281	32	200,216
105,852	235,872	40,533	726	30,622	60,821	986,090	41,717	201,445	132,781	4,040,940	69,026	11,689,869
98,326	179,865	12,908	230	12,014	40,193	655,313	40,991	152,261	125,663	2,816,975	43,040	8,214,183
7,460	38,892	22,303	495	18,608	9,843	167,222	-	7,994	7,113	280,230	25,986	1,680,335
-	9,804	-	-	-	-	163,085	-	40,827	-	837,804	-	1,616,567
-	7,056	4,148	-	-	10,723	465	-	-	2	17,014	-	50,341
66	255	1,174	-	-	63	5	726	364	3	88,917	-	128,443
5,348	23,041	146	2,406	2,365	-	56,237	-	37,400	14,646	10,383	4,023	643,229
4,804	21,932	-	2,046	1,646	-	52,256	-	31,460	-	4,254	3,991	525,446
-	286	9	360	432	-	1,437	-	-	-	1,765	-	45,736
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	52	-	-	-	-	-	-	-	-	-	275
544	823	85	-	287	-	2,544	-	5,940	14,646	4,364	32	71,773

Power Generation Table in 2007 (Continued)

GWh

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
101,325	263,465	40,669	3,112	30,025	59,612	1,015,333	41,134	243,120	143,378	4,018,333	66,857	12,029,967
94,840	215,421	12,332	2,249	9,884	40,775	673,823	40,583	186,288	120,702	2,819,499	43,921	8,586,944
6,485	27,276	23,639	863	19,549	8,563	178,982	-	8,350	8,114	275,545	22,884	1,607,150
-	10,421	-	-	-	-	160,039	-	40,539	-	836,634	-	1,625,201
-	7,404	3,555	-	-	10,215	485	-	-	2	16,798	-	48,546
-	2,943	1,143	-	592	59	2,004	551	7,943	14,560	69,857	52	162,127
95,967	232,479	40,515	831	28,200	59,612	961,741	41,134	201,114	128,819	4,006,189	62,739	11,398,240
89,482	187,364	12,332	319	9,093	40,775	623,404	40,583	151,791	120,702	2,813,163	39,855	8,069,996
6,485	27,042	23,630	512	19,107	8,563	177,806	-	8,350	8,114	273,827	22,884	1,565,593
-	10,421	-	-	-	-	160,039	-	40,539	-	836,634	-	1,625,201
-	7,404	3,503	-	-	10,215	485	-	-	2	16,798	-	48,253
-	248	1,050	-	-	59	7	551	433	1	65,767	-	89,197
5,358	30,986	154	2,281	1,824	-	53,592	-	42,007	14,559	12,144	4,118	631,727
5,358	28,057	-	1,930	791	-	50,419	-	34,497	-	6,336	4,066	516,948
-	234	9	351	442	-	1,176	-	-	-	1,718	-	41,556
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	52	-	-	-	-	-	-	-	-	-	293
-	2,695	93	-	592	-	1,997	-	7,509	14,559	4,090	52	72,930

## 3.22.5 Fuel Consumption Table for Power Generation

Fuel Consumption Table for Power Generation in 2008

	Australia	Brunei	Canada	Chile	China	Hong Kong	Indonesia	Japan	Korea
Main Activity Producer	52,046	1,021	30,377	6,788	673,795	8,386	33,905	139,038	54,650
Coal	45,022	-	22,196	3,484	673,245	6,850	18,252	49,962	38,504
Coke	-	-	-	-	-	-	-	-	-
Coke Oven Gas	-	-	-	-	549	-	-	1,135	-
Blast Furnace Gas	433	-	-	-	-	-	-	3,130	-
Crude Oil & NGL	-	-	-	-	-	-	-	9,438	-
LPG	-	-	213	-	-	-	-	-	-
Refinery Gas	-	-	-	-	-	-	-	-	-
Naphtha	-	-	-	-	-	-	-	-	-
Diesel Oil	161	-	1,162	191	-	30	3,183	13,835	2,279
Fuel Oil	-	-	-	3	-	-	-	640	-
Natural Gas	6,100	1,013	5,718	527	-	1,500	5,961	51,332	13,839
Others	330	8	1,089	2,583	-	6	6,508	9,566	27
Auto Producers	3,417	867	1,998	174	91,240	-	-	24,062	5,270
Coal	-	-	5	-	65,860	-	-	9,056	1,676
Coke	-	-	-	-	-	-	-	-	-
Coke Oven Gas	-	-	9	-	3,597	-	-	600	272
Blast Furnace Gas	23	-	9	-	-	-	-	2,453	2,193
Crude Oil & NGL	-	-	-	-	98	-	-	-	-
LPG	-	-	-	17	2,314	-	-	1,096	-
Refinery Gas	-	-	-	-	-	-	-	-	-
Naphtha	-	-	-	-	-	-	-	-	-
Diesel Oil	-	-	-	118	6,373	-	-	7,106	361
Fuel Oil	-	-	-	1	74	-	-	81	-
Natural Gas	3,185	867	1,904	-	9,624	-	-	3,524	450
Others	210	-	71	37	3,300	-	-	147	318

Fuel Consumption Table for Power Generation in 2007

	Australia	Brunei	Canada	Chile	China	Hong Kong	Indonesia	Japan	Korea
Main Activity Producer	50,830	1,037	33,127	6,410	660,980	8,732	33,181	131,897	52,094
Coal	44,782	-	23,527	2,520	660,037	7,478	18,110	48,517	34,051
Coke	-	-	-	-	-	-	-	-	-
Coke Oven Gas	-	-	-	-	491	-	-	1,309	-
Blast Furnace Gas	365	-	-	-	453	-	-	3,431	-
Crude Oil & NGL	-	-	-	-	-	-	-	7,761	-
LPG	-	-	298	-	-	-	-	-	-
Refinery Gas	-	-	-	-	-	-	-	-	-
Naphtha	-	-	-	-	-	-	-	-	-
Gas/Diesel Oil	154	-	1,476	183	-	24	2,676	11,912	4,156
Fuel Oil	-	-	-	-	-	-	-	533	-
Natural Gas	4,987	1,030	6,810	882	-	1,224	4,793	50,517	13,862
Others	542	8	1,017	2,825	-	6	7,602	7,917	24
Auto Producers	2,863	863	1,882	170	94,423	-	-	23,726	5,145
Coal	-	-	5	6	61,982	-	-	8,757	1,491
Coke	-	-	-	-	-	-	-	-	-
Coke Oven Gas	-	-	12	-	3,260	-	-	546	222
Blast Furnace Gas	22	-	13	-	6,463	-	-	2,293	1,988
Crude Oil & NGL	-	-	-	-	165	-	-	-	-
LPG	-	-	-	13	1,796	-	-	953	-
Refinery Gas	-	-	-	-	-	-	-	-	-
Naphtha	-	-	-	-	-	-	-	-	-
Gas/Diesel Oil	-	-	-	96	6,971	-	-	7,581	513
Fuel Oil	-	-	-	-	62	-	-	101	-
Natural Gas	2,841	863	1,853	37	9,357	-	-	3,315	528
Others	-	-	-	19	4,368	-	-	180	404

Fuel Consumption Table for Power Generation in 2008 (Continued)

ktoe

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
20,673	37,609	2,676	83	2,716	8,495	258,668	7,689	34,710	27,269	659,213	9,030	2,068,838
6,894	5,023	965	-	251	4,558	60,705	-	22,871	6,924	492,094	3,348	1,461,150
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	1,684
-	-	-	-	-	-	-	-	-	-	410	-	3,973
-	-	-	-	-	-	-	-	-	-	-	-	9,438
-	-	-	-	-	-	-	-	-	-	-	-	213
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	102	-	102
180	10,415	-	42	370	927	3,423	1,462	2,419	340	5,513	121	46,055
-	-	-	-	-	-	-	-	-	-	-	-	643
13,300	21,167	1,679	-	1,969	2,854	193,868	6,167	9,294	19,966	155,341	5,454	517,047
298	1,005	32	41	126	155	673	60	127	39	5,752	107	28,534
1,067	3,139	273	610	265	-	50,273	-	7,981	2,947	17,077	982	211,644
-	-	6	-	-	-	18,055	-	6,301	598	2,776	380	104,712
-	-	-	-	-	-	8	-	-	-	-	-	8
-	25	42	-	-	-	1,396	-	95	-	194	-	6,230
-	107	93	-	-	-	3,291	-	310	-	630	-	9,108
-	-	-	-	-	-	732	-	-	-	-	-	830
-	-	-	-	30	-	854	-	31	-	-	-	4,343
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	274	34	-	5,442	-	581	8	139	343	20,779
-	-	-	-	-	-	26	-	-	-	-	-	182
1,004	3,007	131	120	72	-	18,283	-	140	2,327	12,951	239	57,828
63	-	-	216	130	-	2,186	-	524	15	387	21	7,624

Fuel Consumption Table for Power Generation in 2007 (Continued)

ktoe

Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
18,211	40,844	2,593	104	2,040	7,737	250,247	7,694	34,341	26,080	676,254	8,309	2,052,743
6,400	6,795	584	-	242	3,972	51,489	-	23,223	6,850	418,909	3,208	1,360,695
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	25	-	1,824
-	-	-	-	-	-	-	-	-	-	456	-	4,705
-	-	-	-	-	-	-	-	-	-	-	-	7,761
-	-	-	-	-	-	-	-	-	-	-	-	298
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	148	-	148
199	12,999	-	53	189	900	3,668	1,688	2,583	888	9,095	206	53,048
-	-	-	-	-	-	-	-	-	-	-	-	533
11,298	20,018	1,977	-	1,564	2,720	195,089	5,960	8,414	18,224	159,405	4,713	513,488
314	1,032	32	51	45	145	-	46	121	118	88,215	182	110,244
1,116	2,907	281	577	193	-	54,226	-	8,877	2,204	18,139	1,020	218,612
-	-	6	-	-	-	19,244	-	6,924	-	2,582	383	101,380
-	-	-	-	-	-	3	-	-	-	-	-	3
-	29	45	-	-	-	1,674	-	86	-	130	-	6,004
-	75	103	-	-	-	3,319	-	368	-	722	-	15,364
-	-	-	-	-	-	702	-	-	-	-	-	867
-	-	-	-	-	-	937	-	35	-	-	-	3,734
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	263	9	-	6,613	-	682	-	253	409	23,389
-	-	-	-	-	-	84	-	-	-	-	-	247
1,032	2,803	128	108	60	-	18,974	-	160	2,204	13,756	203	58,223
83	-	-	206	124	-	2,675	-	622	-	695	25	9,400

## 3.22.6 Stock Table by Energy Resources

## Stock Table by Energy Resource in 2008

	Australia	Brunei	Canada	Chile	China	Hong Kong	Indonesia	Japan	Korea
<b>Opening Stocks</b>									
Hard Coal	-	-	-	-	-	-	-	-1,103	-
Coking Coal	-	-	-	-	-	-	-	-	-
Other bituminous coal	-	-	-	-	-	-	-	-1,103	-
Subbituminous Coal	-	-	-	-	-	-	-	-	-
Anthracite	-	-	-	-	-	-	-	-	-
Lignite	-	-	-	-	-	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coke	-	-	-	-	-	-	-	-	-
BKB/PB	-	-	-	-	-	-	-	-	-
Crude Oil & NGL	2,127	-	7,068	22	-	-	-	13,121	12,160
Gasoline	795	5	1,954	270	-	4	-	1,611	557
Naphtha	264	-	412	1	11	-	-	656	436
Jet Fuel	-	-	2	-	-	-	-	-	-
Kerosene	-	0	-	-	-	32	-	1,440	605
Gas/Diesel Oil	166	-	520	289	83	-	-	2,858	1,470
Fuel Oil	199	-	119	-	97	46	-	2,528	941
LPG	-	-	-	0	-	-	-	-	-
Other Petroleum Products	835	-	3,727	-	-	-	-	315	291
Natural Gas	-	-	5,145	-	-	-	-	-10	-1,723
Others	-	-	-	-	-	-	-	-	-
<b>Total Opening Stocks</b>	<b>4,386</b>	<b>6</b>	<b>18,948</b>	<b>581</b>	<b>191</b>	<b>81</b>	<b>-</b>	<b>21,416</b>	<b>14,737</b>
<b>Closing Stocks</b>									
Hard Coal	-	-	-	-	17,089	296	-	-	-
Coking Coal	-	-	-	-	4,310	-	-	-	-
Other bituminous coal	-	-	-	-	6,609	296	-	-	-
Subbituminous Coal	-	-	-	-	6,170	-	-	-	-
Anthracite	-	-	-	247	7,057	-	-	-	-
Lignite	-	-	-	-	621	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coke	-	-	-	106	7,470	-	-	-	-
BKB/PB	-	-	-	-	1	-	-	-	-
Crude Oil & NGL	2,093	81	7,385	-	14,712	-	-976	14,984	11,343
Gasoline	761	-	1,780	-	1,957	-	-	1,542	378
Naphtha	232	1	400	-	50	266	-	711	294
Jet Fuel	-	-	3	-	50	-	-	-	-
Kerosene	79	-	161	71	4,182	-	-	1,769	-
Gas/Diesel Oil	159	-	452	-	-	256	-	2,841	1,482
Fuel Oil	218	0	153	237	-	-	-	2,933	1,088
LPG	-	-	-	-	-	-	-	-	-
Other Petroleum Products	679	2	4,005	-	-	-	-	367	293
Natural Gas	-	-	-	-	-	171	-	-	-
Others	-	-	-	1	-	-	-	-	-
<b>Total Closing Stocks</b>	<b>4,221</b>	<b>83</b>	<b>14,339</b>	<b>661</b>	<b>53,190</b>	<b>989</b>	<b>-976</b>	<b>25,147</b>	<b>14,879</b>
<b>Stock Change</b>									
Hard Coal	-1,085	-	26	-	-17,089	-296	-	-1,103	-742
Coking Coal	912	-	-	-	-4,310	-	-	-	-167
Other bituminous coal	-1,269	-	-57	-	-6,609	-296	-	-1,103	-575
Subbituminous Coal	-727	-	83	-	-6,170	-	-	-	-
Anthracite	-	-	-	-247	-7,057	-	-	-	1,010
Lignite	-	-	-	-	-621	-	-	-	-
Peat	-	-	-	-	-	-	-	-	-
Coke	-	-	190	-106	-7,470	-	-	-	-
BKB/PB	-	-	-	-	-1	-	-	-	-
Crude Oil & NGL	34	-81	-317	22	-14,712	-	976	-1,863	817
Gasoline	34	5	173	270	-1,957	4	-	69	179
Naphtha	32	-1	13	1	-39	-266	-	-56	141
Jet Fuel	-	-	-1	-	-50	-	-	-	-
Kerosene	-79	0	-161	-71	-4,182	32	-	-329	605
Gas/Diesel Oil	7	-	68	289	83	-256	-	18	-12
Fuel Oil	-18	-0	-34	-237	97	46	-	-405	-147
LPG	-	-	-	0	-	-	-	-	-
Other Petroleum Products	156	-2	-278	-	-	-	-	-52	-3
Natural Gas	-	-	5,145	-	-	-171	-	-10	-1,723
Others	-	-	-	-1	-	-	-	-	-
<b>Total Stock Change</b>	<b>-919</b>	<b>-78</b>	<b>4,825</b>	<b>-80</b>	<b>-52,999</b>	<b>-908</b>	<b>976</b>	<b>-3,731</b>	<b>126</b>

Stock Table by Energy Resource in 2008 (Continued)

												ktoe
Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam	Total
1,049	-	-	-	157	-	-	-	3,798	-	-	-	3,901
-	-	-	-	-	-	-	-	264	-	-	-	264
-	-	-	-	157	-	-	-	3,132	-	-	-	2,186
1,049	-	-	-	-	-	-	-	402	-	-	-	1,451
-	-	-	-	18	-	113	-	3	-	-	129	263
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	29	-	-	-	-	-	29
-	-	-	-	-	-	-	-	20	-	-	-	20
-	-	-	-	-	-	-	-	-	-	-	-	-
746	2,766	456	-	-	-	36,647	-	4,030	-	126,228	-	205,371
96	1,146	223	-	-	194	2,696	-	1,057	-	22,961	-	33,569
42	190	66	-	-	-	-	-	-	-	4,019	-	6,096
-	-	-	-	-	-	-	-	-	-	-	-	2
147	261	-	-	-	214	3,757	-	1,012	-	-	-	7,469
23	595	96	-	17	78	6,349	-	506	-	9,985	-	23,034
15	101	6	-	-	24	177	-	247	-	6,203	-	10,702
-	-	-	-	-	-	-	-	-	-	-	-	0
582	291	65	-	-	-	-	-	-	-	7,516	-	13,622
-	-358	-	-	-	-	31,103	-	-	-	904	-	35,061
-	-	-	-	-	-	-	-	-	-	-	-	-
2,700	4,992	911	-	193	509	80,872	-	10,672	-	177,817	129	339,141
1,745	-	-	-	-	-	4,032	-	4,534	-	-	-	27,695
-	-	-	-	-	-	21	-	358	-	-	-	4,689
-	-	-	-	-	-	4,011	-	3,686	-	-	-	14,602
1,745	-	-	-	-	-	-	-	489	-	-	-	8,405
-	-	-	-	-	-	-	-	13	-	-	-	7,317
-	-	-	-	-	-	527	-	-	-	-	-	1,148
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	40	-	-	-	-	-	7,616
-	-	-	-	-	-	1	-	-	-	-	-	2
601	3,404	407	71	135	347	40,152	-	4,669	-	129,651	1,173	230,232
54	1,180	225	4	392	-	2,492	-	964	38	22,292	-	34,059
61	133	67	-1	66	-	-	-	-	12	3,969	-	6,262
-	-	-	-	-	-	-	-	-	-	-	-	53
246	-	21	6	545	-	3,995	-	905	-137	1,405	-	13,248
17	630	96	8	-	-	5,846	-	484	-282	8,702	-	20,690
25	95	9	1	63	-	267	-	230	-280	6,457	-	11,495
-	-	-	-	-	-	-	-	-	-	-	-	-
600	267	61	-	39	18	-	-	-	-	7,225	-	13,556
-	-	-	-	-	-	48,184	-	-	-	-	-	48,355
-	-	-	-	-	-	-	-	-	-	-	-	1
3,348	5,709	886	88	1,239	365	105,535	-	11,798	-649	179,702	1,173	421,730
-695	-1,045	285	-	157	-	-4,032	-	-736	-	-7,327	-	-33,682
-	-513	135	-	-	-	-21	-	-94	-	-245	-	-4,302
-	-	-	-	157	-	-4,011	-	-554	-	-3,555	-	-17,873
-695	-532	150	-	-	-	-	-	-88	-	-3,527	-	-11,508
-	-	-	-	18	-	113	-	-9	-	326	129	-5,717
-	-	-	-	-	-	-527	-	-	-	686	-	-462
-	-	-	-	-	-	29	-	-	-	-	-	29
-	725	-	-	-	-	-40	-	20	-	-178	-	-6,858
-	-	-	-	-	-	-1	-	-	-	-	-	-2
144	-638	49	-71	-135	-347	-3,504	-	-639	-	-3,423	-1,173	-24,860
42	-34	-2	-4	-392	194	204	-	93	-38	669	-	-491
-19	56	-1	1	-66	-	-	-	-	-12	50	-	-165
-	-	-	-	-	-	-	-	-	-	-	-	-51
-98	261	-21	-6	-545	214	-238	-	107	137	-1,405	-	-5,779
6	-35	-	-8	17	78	502	-	22	282	1,283	-	2,344
-10	6	-3	-1	-63	24	-89	-	16	280	-254	-	-792
-	-	-	-	-	-	-	-	-	-	-	-	0
-18	25	4	-	-39	-18	-	-	-	-	291	-	66
-	-358	-	-	-	-	-17,081	-	-	-	904	-	-13,294
-	-	-	-	-	-	-	-	-	-	84	-	83
-648	-1,036	310	-88	-1,046	144	-24,664	-	-1,126	649	-8,294	-1,044	-89,633

## 3.22.7 Power Generation Capacity Table

**Power Generation Capacity - Total**

MW

	1980	1990	1995	2000	2005	2006	2007	2008
Australia	24,141	38,451	42,192	46,208	50,546	51,216	53,190	55,511
Brunei Darussalam	148	334	650	763	759	759	759	814
Canada	81,999	104,141	115,505	111,324	122,838	123,947	126,376	127,644
Chile	2,940	4,079	5,577	10,372	12,363	13,442	12,207	14,296
China	65,869	137,891	217,225	319,321	508,410	622,000	713,290	792,530
Hong Kong, China	3,342	8,342	10,096	11,568	11,804	12,320	12,644	12,624
Indonesia	2,554	9,275	14,970	20,762	27,664	30,958	31,416	30,298
Japan	143,698	194,730	226,995	258,838	274,558	274,467	275,529	275,588
Republic of Korea	9,391	21,021	32,186	53,693	66,537	70,081	73,373	79,859
Malaysia	2,334	5,582	10,600	13,762	23,626	21,088	22,973	23,029
Mexico	14,625	28,267	35,859	40,519	51,071	53,795	56,234	57,231
New Zealand	6,112	7,176	7,920	8,456	8,787	8,810	9,391	9,376
Papua New Guinea	313	490	490	543	N.A.	N.A.	N.A.	N.A.
Peru	3,140	4,143	4,520	6,070	6,201	6,658	6,658	7,158
Philippines	4,478	6,869	9,696	13,185	15,619	15,803	15,803	13,048
Russia	168,200	213,400	215,000	214,011	N.A.	221,414	223,981	88,429
Singapore	2,010	3,667	4,678	6,610	10,106	10,106	10,606	10,606
Chinese Taipei	9,056	16,883	21,898	27,385	43,146	45,009	45,881	46,382
Thailand	3,448	8,725	14,757	20,802	26,269	26,815	28,285	30,508
United States of America	578,600	733,589	776,333	812,630	978,539	986,954	995,879	1,011,597
Viet Nam	1,185	2,537	4,499	6,192	11,340	11,823	N.A.	N.A.

**Power Generation Capacity - Thermal Power**

MW

	1980	1990	1995	2000	2005	2006	2007	2008
Australia	18,038	30,130	33,613	36,945	40,460	41,042	42,539	44,214
Brunei Darussalam	148	334	650	763	759	759	759	814
Canada	28,363	31,201	34,269	33,183	36,794	36,264	37,757	37,263
Chile	1,470	1,789	2,246	6,244	6,933	7,953	7,089	7,988
China	45,551	101,845	162,941	237,540	384,130	484,050	554,420	601,320
Hong Kong, China	3,342	8,342	10,096	11,568	11,804	12,320	12,644	12,624
Indonesia	2,176	7,040	12,482	17,386	23,643	26,626	26,844	25,845
Japan	98,071	124,984	141,665	166,648	177,223	175,767	176,339	176,412
Republic of Korea	7,647	11,065	20,475	36,817	45,365	46,666	49,888	55,977
Malaysia	1,721	4,185	8,840	11,708	21,242	18,758	20,611	20,745
Mexico	8,483	19,012	24,457	28,648	38,156	40,634	42,285	43,407
New Zealand	1,852	2,296	2,386	2,809	2,817	2,840	3,253	3,075
Papua New Guinea	213	335	335	319	N.A.	N.A.	N.A.	N.A.
Peru	1,273	1,744	2,053	3,210	2,938	3,395	3,395	2,244
Philippines	3,089	3,661	6,275	8,953	10,393	10,542	10,542	8,676
Russia	122,400	149,700	149,700	148,900	N.A.	151,513	153,335	16,763
Singapore	2,010	3,667	4,678	6,610	10,106	10,106	10,606	10,606
Chinese Taipei	6,398	9,177	12,571	17,819	32,756	34,564	35,277	35,650
Thailand	2,178	6,451	12,019	17,865	20,575	21,023	22,412	24,547
United States of America	444,181	536,667	571,659	610,124	767,316	772,160	775,198	781,765
Viet Nam	890	1,362	1,633	2,900	4,382	7,137	N.A.	N.A.

## Power Generation Capacity - Hydro Power

MW

	1980	1990	1995	2000	2005	2006	2007	2008
Australia	6,103	8,321	8,564	9,201	9,285	9,285	9,317	9,304
Brunei Darussalam	-	-	-	-	-	-	-	-
Canada	47,770	59,381	64,750	67,407	71,978	72,838	73,458	74,614
Chile	1,470	2,290	3,331	4,128	4,812	4,862	4,907	5,026
China	20,318	36,046	52,184	79,352	116,520	128,570	145,260	171,520
Hong Kong, China	-	-	-	-	-	-	-	-
Indonesia	378	2,095	2,180	3,015	3,221	3,532	3,529	3,510
Japan	29,776	37,831	43,455	46,325	47,348	47,357	47,374	47,637
Republic of Korea	1,157	2,340	3,093	3,149	3,883	5,485	5,492	5,505
Malaysia	613	1,397	1,760	2,054	2,091	2,120	2,120	2,120
Mexico	5,992	7,880	9,329	9,634	10,571	10,734	11,519	11,389
New Zealand	4,022	4,619	5,259	5,193	5,345	5,344	5,346	5,373
Papua New Guinea	100	155	155	224	N.A.	N.A.	N.A.	N.A.
Peru	1,868	2,400	2,467	2,860	3,207	3,216	3,216	3,242
Philippines	943	2,153	2,258	2,301	3,222	3,257	3,257	2,950
Russia	37,500	43,400	44,000	43,900	N.A.	46,062	46,804	48,282
Singapore	-	-	-	-	-	-	-	-
Chinese Taipei	1,386	1,562	4,183	4,422	4,512	4,512	4,523	4,540
Thailand	1,270	2,274	2,738	2,936	3,476	3,476	3,475	3,481
United States of America	81,700	92,360	100,060	98,881	98,887	99,282	99,771	99,788
Viet Nam	250	1,176	2,866	3,292	4,155	4,401	N.A.	N.A.

## Power Generation Capacity - Nuclear Power

MW

	1980	1990	1995	2000	2005	2006	2007	2008
Australia	-	-	-	-	-	-	-	-
Brunei Darussalam	-	-	-	-	-	-	-	-
Canada	5,866	13,538	16,393	10,615	13,345	13,345	13,345	13,345
Chile	-	-	-	-	-	-	-	-
China	-	-	2,100	2,100	6,840	6,850	8,850	8,850
Hong Kong, China	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-
Japan	15,689	31,645	41,356	45,248	48,222	49,580	49,467	49,467
Republic of Korea	587	7,616	8,616	13,716	17,176	17,716	17,716	17,716
Malaysia	-	-	-	-	-	-	-	-
Mexico	-	675	1,309	1,365	1,365	1,365	1,365	1,365
New Zealand	-	-	-	-	-	-	-	-
Papua New Guinea	-	-	-	-	N.A.	N.A.	N.A.	N.A.
Peru	-	-	-	-	-	-	-	-
Philippines	-	-	-	-	-	-	-	-
Russia	8,300	20,300	21,300	21,200	N.A.	23,742	23,742	23,304
Singapore	-	-	-	-	-	-	-	-
Chinese Taipei	1,272	5,144	5,144	5,144	5,144	5,144	5,144	5,144
Thailand	-	-	-	-	-	-	-	-
United States of America	51,810	99,643	99,515	97,860	99,988	100,334	100,266	100,755
Viet Nam	-	-	-	-	-	-	N.A.	N.A.

## Power Generation Capacity - Others

MW

	1980	1990	1995	2000	2005	2006	2007	2008
Australia	-	-	15	62	801	889	1,334	1,993
Brunei Darussalam	-	-	-	-	-	-	-	-
Canada	-	21	93	119	721	1,500	1,816	2,422
Chile	-	-	-	-	619	627	211	1,283
People's Republic of China	-	-	-	329	920	2,530	4,760	10,840
Hong Kong, China	-	-	-	-	-	-	-	-
Indonesia	-	140	308	360	800	800	1,043	942
Japan	162	270	519	617	1,765	1,763	2,349	2,072
Republic of Korea	-	-	2	11	113	214	277	661
Malaysia	-	-	-	-	293	210	242	164
Mexico	150	700	764	872	979	1,062	1,065	1,070
New Zealand	238	261	275	454	625	626	792	928
Papua New Guinea	-	-	-	-	N.A.	N.A.	N.A.	N.A.
Peru	-	-	-	1	55	47	47	1,672
Philippines	446	1,055	1,163	1,931	2,004	2,004	2,004	1,422
Russia	-	-	-	11	N.A.	97	100	80
Singapore	-	-	-	-	-	-	-	-
Chinese Taipei	-	1,000	-	-	735	789	936	1,048
Thailand	-	-	-	1	2,218	2,316	2,398	2,480
United States of America	909	4,919	5,099	5,765	12,348	15,178	20,644	29,289
Viet Nam	45	-	-	-	2,803	285	N.A.	N.A.

# Appendix

## A. Definition of Products

1. Coal
2. Oil
3. Natural Gas
4. Electricity and Heat
5. New and Renewable Energy

## B. Definition of Flows

## C. Energy Prices

## D. Definition of Columns and Rows of the Energy Balance Table

## E. Conversion Factors

## A. Definition of Products

### COAL

Primary coal is a fossil fuel, usually with the physical appearance of a black or brown rock, consisting of carbonised vegetal matter. The higher the carbon content of a coal, the higher its rank or quality is. Coal types are distinguished by their physical and chemical characteristics. These characteristics determine the suitability for various uses. There are three main categories of coal: hard coal, sub-bituminous coal and brown coal (also called lignite). Peat, which is another primary fuel closely related to coal, is often included under coal.

#### 1. Anthracite

High rank coal used for industrial and residential applications. It has generally less than 10% volatile matter and a high carbon content (about 90% fixed carbon). Its gross calorific value is greater than 23 865 kJ/kg (5 700 kcal/kg) on an ash-free but moist basis.

#### 2. Coking Coal

Bituminous coal with a quality that allows the production of a coke suitable to support a blast furnace charge. Its gross calorific value is greater than 23 865 kJ/kg (5 700 kcal/kg) on an ash-free but moist basis.

#### 3. Bituminous Coal

Coal used for steam raising purposes and includes all bituminous coal that is not included under coking coal nor anthracite. It is characterized by higher volatile matter than anthracite (more than 10%) and lower carbon content (less than 90% fixed carbon). Its gross calorific value is greater than 23 865 kJ/kg (5 700 kcal/kg) on an ash-free but moist basis. If bituminous coal is used in coke ovens it should be reported as coking coal.

#### 4. Sub-bituminous Coal

Non-agglomerating coals with a gross calorific value between 17.4 MJ/kg (4,165 kcal/kg) and 23.9 MJ/kg (5,700 kcal/kg) containing more than 31% volatile matter on a dry mineral matter free basis.

#### 5. Lignite

Non-agglomerating coals with a gross calorific value less than 17.4 MJ/kg (4,165 kcal/kg) and greater than 31% volatile matter on a dry mineral matter free basis. Oil shale and tar sands produced and combusted directly should be reported in this category. Oil shale and tar sands used as inputs for other transformation processes should also be reported in this category. This includes the portion of the oil shale or tar sands consumed in the transformation process.

#### 6. Peat

Combustible soft, porous or compressed, fossil sedimentary deposit of plant origin with high water content (up to 90 per cent in the raw state), easily cut, of light to dark brown color. Only peat used for energy purposes should be reported here.

#### 7. Patent Fuel

A composition fuel manufactured from hard coal fines by shaping with the addition of a binding agent. Note that the amount of patent fuel produced can be slightly higher than the amount of coal consumed in the transformation process because of 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 carbonization of coal, principally coking coal,

at high temperature, it is low in moisture and volatile matter. Coke oven coke is used mainly in the iron and steel industry acting as energy source and chemical agent. Coke breeze and foundry coke are included in this category. Semi-coke, the solid product obtained from carbonization of coal at low temperature, should be included in this category. Semi-coke is used as a domestic fuel or by the transformation plant itself. This heading also includes coke, coke breeze and semi-coke made from lignite/brown coal.

- **Gas Coke:** A by-product of hard coal used for production of town gas in gas works. Gas Coke is used for heating purposes.

### 9. Coal Tar

Coal tar is a by-product of the coke oven process.

### 10. BKB/PB (Braunkohlenbriketts/Peat Briquettes)

A composition fuel manufactured from lignite/brown coal or peat. The lignite/brown coal or peat is crushed, dried and molded under high pressure into an even-shaped briquette without the addition of binders. German production of lignite dust is included in this category.

### 11. Gas Works Gas

Covers all types of gases including substitute natural gas produced in public utility or private plants, whose main purpose is manufacture, transport and distribution of gas. It includes gas produced by carbonization (including gas produced by coke ovens and transferred to gas works gas) reported under the "production" row, by total gasification with or without enrichment with oil products (LPG, residual fuel oil, etc.), by cracking of natural gas, and by reforming and simple mixing of gases and/or air,

reported under the "from other sources" row. Substitute natural gas is a high calorific value gas, manufactured by chemical conversion of a hydrocarbon fossil fuel. It is chemically and physically interchangeable with natural gas and is usually distributed through the natural gas grid. The main raw materials for manufacture of substitute natural gas are: coal, oil and oil shales. Substitute natural gas is distinguished from other manufactured gases by its high heat value (above 8,000 kcal/m<sup>3</sup>) and by its high methane content (above 85%). Substitute natural gas produced by synthesis from fuels other than coal based should also come under "from other sources". The quantity of fuel should be reported on a gross calorific value.

### 12. Coke Oven Gas

Obtained as a by-product of solid fuel carbonization and gasification operations carried out by coke producers and iron and steel plants which are not connected with gas works and municipal gas plants. The quantity of fuel should be reported on a gross calorific value.

### 13. Blast Furnace Gas

Obtained as a by-product in operating blast furnaces; it is recovered on leaving the furnaces and used partly within the plant and partly in other steel industry processes or in power stations equipped to burn it. The quantity of fuel should be reported on a gross calorific value.

### 14. Oxygen Steel Furnace Gas

Obtained as a by-product of the production of steel in an oxygen furnace; it is recovered on leaving the furnace. The gas is also known as converter gas, LD or BOS gas. The quantity of fuel should be reported on a gross calorific value.

## OIL

### 1. Crude Oil

Crude oil is a mineral oil of natural origin comprising a mixture of hydrocarbons and associated impurities, such as sulphur. It exists in the liquid phase under normal surface temperature and pressure and its physical characteristics (density, viscosity, etc.) are highly variable. This category includes field or lease condensate recovered from associated and non-associated gas where it is commingled with the commercial crude oil stream.

### 2. Natural Gas Liquids (NGL)

NGL are liquid or liquefied hydrocarbons recovered from natural gas in separation facilities or gas processing plants. Natural gas liquids include ethane, propane, butane (normal and iso-), (iso) pentane and pentanes plus (sometimes referred to as natural gasoline or plant condensate).

### 3. Refinery Feedstocks

A refinery feedstock is a processed oil destined for further processing (e.g. straight run fuel oil or vacuum gas oil) excluding blending. With further processing, it will be transformed into one or more components and/or finished products. This definition also covers returns from the petrochemical industry to the refining industry (e.g. pyrolysis gasoline, C<sub>4</sub> fractions, gasoil and fuel oil fractions).

### 4. Additives/Oxygenates

Additives are non-hydrocarbon compounds added to or blended with a product to modify fuel properties (octane, cetane, cold properties, etc.):

- **Oxygenates:** such as alcohols (methanol, ethanol), ethers (such as MTBE (methyl tertiary butyl ether), ETBE (ethyl tertiary butyl ether), TAME (tertiary amyl methyl ether));
- **Esters** (e.g. rapeseed or dimethylester, etc.);

- **Chemical Compounds** (such as TML, TEL and detergents).

Note: Quantities of ethanol relate only to the quantities destined for fuel use.

### 5. Biofuels

Biofuels such as bio-gasoline and bio-diesel that are blended into gasoline and diesel by the consumer or at a refinery plant.

- **Bio-gasoline:** a gasoline quality liquid fuel produced from biomass or used cooking oils consists of bioethanol, biomethanol, BioETBE and bioMTBE
- **Bio-diesel:** a diesel quality liquid fuel produced from biomass or used cooking oils, consists of biodiesel, bio-dimethylether, fischer tropsh and cold pressed biooil.
- **Bio-ethanol:** ethanol produced from biomass and/or biodegradable fraction of waste;
- **Bio-methanol:** methanol produced from biomass and/or the biodegradable fraction of waste;
- **Bio-dimethylether:** 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

This category includes synthetic crude oil from tar sands, shale oil, etc., liquids from coal liquefaction, output of liquids from natural gas conversion into gasoline, hydrogen and emulsified oils (e.g. Orimulsion).

Note on the reporting of emulsified oils:

All imports of emulsified oils (e.g. Orimulsion) should be reported as imports of 'Other Hydrocarbons' (cell F8 in Table 1). As these oils do not need further processing

in a refinery, report these quantities as Direct Use (cell F10 in Table 1) and Primary Product Receipts in the 'Bitumen' category in Table 2. Any production of emulsified oils should appear as indigenous production of 'Other Hydrocarbons' (cell F1 in Table 1). Report all quantities in physical weight of the emulsion (i.e. including the water content).

### 7. Refinery Gas (not liquefied)

Refinery gas includes 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. This also includes gases which are returned from the petrochemical industry.

### 8. Ethane

A naturally gaseous straight-chain hydrocarbon, (C<sub>2</sub>H<sub>6</sub>) extracted from natural gas and refinery gas streams.

### 9. Liquefied Petroleum Gases (LPG)

LPG are light paraffinic hydrocarbons derived from the refinery processes, crude oil stabilisation and natural gas processing plants. They consist mainly of propane (C<sub>3</sub>H<sub>8</sub>) and butane (C<sub>4</sub>H<sub>10</sub>) or a combination of the two. They could also include propylene, butylene, isobutene and isobutylene. LPG are normally liquefied under pressure for transportation and storage.

### 10. Naphtha

Naphtha is a feedstock destined for either the petrochemical industry (e.g. ethylene manufacture or aromatics production). Naphtha comprises material in the 30°C and 210°C distillation range or part of this range. Naphtha imported for blending is reported as an import of naphtha, then shown on the interproduct transfer row, as a negative entry for Naphtha, and a positive entry for the corresponding finished product.

### 11. Motor Gasoline

Motor gasoline consists of a mixture of light hydrocarbons distilling between 35°C and 215°C. It is

used as a fuel for land based spark ignition engines. Motor gasoline may include additives, oxygenates and octane enhancers, including lead compounds such as TEL (Tetraethyl lead) and TML (tetramethyl lead).

### 12. Aviation Gasoline

This is motor spirit prepared especially for aviation piston engines, with an octane number suited to the engine, a freezing point of -60°C and a distillation range usually within the limits of 30°C and 180°C.

### 13. Gasoline Type Jet Fuel (Naphtha type Jet Fuel or JP4)

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 kerosenes and gasoline or naphtha in such a way that the aromatic content does not exceed 25% in volume, and the vapour pressure is between 13.7kPa and 20.6kPa.

### 14. Kerosene Type Jet Fuel

This is a distillate used for aviation turbine power units. It has the same distillation characteristics between 150°C and 300°C (generally not above 250°C) and flash point as kerosene. In addition, it has particular specifications (such as freezing point) which are established by the International Air Transport Association (IATA). This category includes kerosene blending components.

### 15. Other Kerosene

Kerosene comprises refined petroleum distillate and is used in sectors other than aircraft transport. It distils between 150°C and 300°C.

### 16. Gas/Diesel Oil (Distillate Fuel Oil)

Gas/diesel oil is primarily a medium distillate distilling between 180°C and 380°C, and mainly used for diesel compression ignition (cars, trucks, etc.), usually of low sulphur content.

### 17. Fuel Oil

This covers all residual (heavy) fuel oils (including those

obtained by blending). Kinematic viscosity is above 10 cSt at 80°C. The flash point is always above 50°C and density is always more than 0.90 kg/l.

### 18. White Spirit and SBP

White Spirit and SBP are defined as refined distillate intermediates with a distillation in the naphtha/kerosene range. They are sub-divided as:

- Industrial Spirit (SBP): Light oils distilling between 30° and 200°C. There are 7 or 8 grades of industrial spirit, depending on the position of the cut in the distillation range. The grades are defined according to the temperature difference between the 5% volume and 90% volume distillation points (which is not more than 60°C).
- White Spirit: Industrial spirit with a flash point above 30°C. The distillation range of white spirit is 135° to 200°C.

### 19. Lubricants

Lubricants are hydrocarbons produced from distillate by product; they are mainly used to reduce friction between bearing surfaces. This category includes all finished grades of lubricating oil, from spindle oil to cylinder oil, and those used in greases, including motor oils and all grades of lubricating oil base stocks.

### 20. Bitumen

Bitumen is a solid, semi-solid or viscous hydrocarbon with a colloidal structure, being brown to black in colour, obtained as a residue in the distillation of crude oil, by vacuum distillation of oil residues from atmospheric distillation. Bitumen is often referred to as asphalt and is

primarily used for construction of roads and for roofing material. This category includes fluidized and cut back bitumen.

### 21. Paraffin Waxes

These are saturated aliphatic hydrocarbons. These waxes are residues extracted when dewaxing lubricant oils. They have a crystalline structure which is more-or-less fine according to the grade. Their main characteristics are as follows: they are colourless, odourless and translucent, with a melting point above 45°C.

### 22. Petroleum Coke

Petroleum coke is a black solid by-product, obtained mainly by cracking and carbonising petroleum derived feedstock, vacuum bottoms, tar and pitches in processes such as delayed coking or fluid coking. It consists mainly of carbon (90 to 95%) and has a low ash content. It is used as a feedstock in coke ovens for the steel industry, for heating purposes, for electrode manufacture and for production of chemicals. The two most important qualities are "green coke" and "calcinated coke". This category also includes "catalyst coke" deposited on the catalyst during refining processes; this coke is not recoverable and is usually burned as refinery fuel.

### 23. Other Products

All products not specifically mentioned above, for example: tar and sulphur. This category also includes aromatics (e.g. BTX or benzene, toluene and xylene) and olefins (e.g. propylene) produced within refineries.

## GAS

### 1. Natural Gas

Natural gas comprises gases, occurring in underground deposits, whether liquefied or gaseous, consisting mainly of methane. It includes both "non-associated" gas originating from fields producing hydrocarbons only in gaseous form, and "associated" gas produced in association with crude oil as well as methane recovered from coal mines (colliery gas). Manufactured gas (produced from municipal or industrial waste, or sewage) should be reported in the Annual Questionnaire on Renewable and Wastes.

- **Associated Gas:** natural gas produced in association with crude oil.
- **Non-Associated Gas:** natural gas originating from fields producing hydrocarbons only in gaseous form.
- **Colliery Gas:** methane produced at coal mines, piped to the surface and consumed at collieries or transmitted by pipeline to consumers.

### 2. LNG

Liquid Natural Gas is produced by liquefaction of natural gas.

## NEW AND RENEWABLE ENERGY

### 1. Fuelwood

Covers purpose-grown energy crops (poplar, willow, etc), a multitude of woody materials generated by an industrial process (wood/paper industry in particular) or provided directly by forestry such as firewood, wood chips, bark, sawdust, shavings, chips, black liquor, etc. The quantity of fuel used should be reported on a net calorific value basis.

### 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

Covers crushed sugar cane or beet refuse from sugar

making.

### 4. Charcoal

Covers the solid residue of the destructive distillation and pyrolysis of wood and other vegetal material.

### 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

A gas composed principally of methane and carbon dioxide produced by anaerobic digestion of biomass, comprising:

- **Landfill gas:** formed by the digestion of landfilled wastes.
- **Sewage sludge gas:** produced from the anaerobic fermentation of sewage sludge.

- **Other biogas:** such as biogas produced from the anaerobic fermentation of animal slurries and of wastes in abattoirs, breweries and other agro-food industries.

### 7. Industrial Waste

Wastes of industrial non-renewable origin (solids or liquids) combusted directly for the production of electricity and/or heat. The quantity of fuel used should be reported on a net calorific value basis. Renewable industrial waste should be reported in the Solid biomass, Biogas and/or Liquid biofuels categories.

### 8. Municipal solid waste (renewables)

Waste produced by households, industry, hospitals and the tertiary sector that contains non-biodegradable materials that are incinerated at specific installations. The quantity of fuel used should be reported on a net calorific value basis.

### 9. Liquid Biofuels

Biofuels cover bio-ethanol, bio-diesel, bio-methanol, bio-dimethylether, bio-oil. Liquid bio-fuels are mainly bio-diesel and bio-ethanol/ETBE used as transport fuels. They can be made from new and used vegetable oils and may be blended with or replace petroleum-based fuels. The natural plant feedstock includes soya, sunflower and oil seed rape oils. Under some circumstances, used vegetable oils may also be used as feedstock for the process.

### 10. Hydro

Potential and kinetic energy of water converted into electricity in hydroelectric plants. Pumped storage also

included. Detailed plant sizes should be reported net of pumped storage.

### 11. Geothermal

Energy available as heat emitted from within the Earth's crust, usually in the form of hot water or steam. It is exploited at suitable sites:

- **Electricity:** For Electricity generation using dry steam or high enthalpy brine after flashing.
- **Thermal:** Directly as Heat for district heating, agriculture, etc.

### 12. Solar

- **Pothovoltaic:** Solar energy used for electricity generation.
- **Thermal:** 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.)

### 13. Tide/wave/ocean

Mechanical energy derived from tidal movement or wave motion and exploited for electricity generation.

### 14. Wind Energy

Kinetic energy of wind exploited for electricity generation in wind turbines.

## ELECTRICITY AND HEAT

### 1. Thermal

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

### 2. Hydro

Power 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.
- **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:** Mechanical energy derived from tidal movement or wave motion and exploited for electricity generation.

- **Wind:** Kinetic energy of wind exploited for electricity generation in wind turbines.

- **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  $\pm$  stock changes.

#### 1. Production

Production refers to the quantities of fuels and energies extracted or produced, calculated after any operation for removal of inert matter or impurities. Indigenous production refers to production within national boundaries including off shore production. 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

Quantity of energy that have crossed the national territorial boundaries, whether customs clearance has taken place or not. 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 country of ultimate origin; refinery feedstocks and finished products should be reported as coming from the country 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 country to the final destination.

### 3. International Marine Bunkers

Bunkers cover the quantities of fuels delivered to sea-going ships of all flags. 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. Stock Changes

Stock changes should reflect the difference between opening stock level and closing stock level for stocks held on national territory. A stock build is shown as a negative number, and a stock draw as a positive number.

### 5. Transfers

This refers to products transferred and inter-product transfers. Products transferred are imported petroleum products which are reclassified as feedstocks for further

processing in the refinery, without delivery to final consumers. Inter-product transfers result from reclassification of products either because their specification has changed, or because they are blended into another product. For example, quantities of kerosene may be reclassified as gas oil after blending with the latter in order to meet its winter diesel specification.

### 6. 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

The transformation sector comprises the conversion of primary forms of energy to secondary and further transformation (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 which are designed to produce electricity only. If one or more units of the plant is a CHP unit (and the inputs and outputs can not be distinguished on a unit basis) then the whole plant is designated as a CHP plant. Both main activity producer

(formerly known as public) and autoproducer plants are included here. Heat from chemical processes for electricity generation is also included here.

### 2. Combined Heat and Power Plants (CHP)

Combined heat and power plants refers to plants which are designed to produce both heat and electricity (sometimes referred to as co-generation power stations). If possible, fuel inputs and electricity/heat outputs are on a unit basis rather than on a plant basis. However, if data are not available on a unit basis, the convention for defining a CHP plant noted above should be adopted. 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 and who sell heat to a third party (e.g. residential, commercial or industrial consumers) under the provisions of a contract. Both main activity producer (formerly known as public) and autoproducer plants are included here. Heat pumps that are operated within the residential sector where the heat is not sold are not considered a transformation process and are not included here • the electricity consumption would appear as residential use.

### 4. Blast Furnaces

Blast furnaces are for the production of pig-iron from iron ore. The transformation component pertains to the fuels used for supporting the blast furnace charge and providing heat and carbon for the reduction of the iron ore. Accounting for the calorific content of the fuels entering the process is a complex matter as transformation (into blast furnace gas) and consumption (heat of combustion) occur simultaneously. Some carbon is also retained in the pig-iron; almost all of this reappears later in the oxygen steel furnace gas (or converter gas) when the pig-iron is converted to steel.

### 5. Gas Works

Gas works plants are for the production of town gas/gas work gas by carbonization (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 carbonization 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 convert (transform) crude oil and other hydrocarbons into finished petroleum products.

### 10. Petrochemical Industry

Petrochemical industries are industrial plants the produce raw materials for the manufacturing of plastics, synthetic fibers and rubbers, fertilizers, pesticides, detergents and solvents. 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 where the calorific value of natural gas for distribution is adjusted through blending with gases from oil and/or coal.

### 13. Charcoal Production Plants

Charcoal plants are facilities where charcoal, a solid residue, is produced from the destructive distillation and pyrolysis of wood and other vegetable material.

### 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 and NACE Divisions 10, 11, 12, 23 and 40. 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 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 includes consumption for both energy and 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 271 and Class 2731. 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. (NACE Divisions 27.1, 27.2, 27.3, 27.51, and 27.52).

### 1.2 Chemical including Petrochemical

Refers to ISIC Division 24 (NACE Division 24).

- Includes manufacture of basic chemicals (ISIC 241)
- Other chemical products (ISIC 242), Man-made fibers (ISIC 243)

### 1.3 Non-ferrous Metals

Refers to ISIC Group 272 and Class 2732. (NACE Division 27.4, 27.53 and 27.54).

- Manufacture of precious and non-ferrous metals (ISIC 272)
- Casting of non-ferrous metals (2732)

### 1.4 Non-metallic Minerals Products

Covers ISIC Division 26, i.e.: Glass, ceramic, cement and other building materials industries. (NACE Division 26).

- Manufacture of glass and glass products (ISIC 261)
- Non-metallic mineral products (ISIC 262) such as ceramics, tiles, baked clay products and cement

### 1.5 Transport Equipment

Covers ISIC Division 34 and 35. (NACE Division 34 and 35), i.e.:

- Manufacture of motor vehicles (ISIC 341) bodies for motor vehicles and semi trailers (ISIC 342)
- Parts and accessories for motor vehicles (ISIC 343)
- Shipbuilding and repair (ISIC 345)
- Railway and tramway locomotives (ISIC 352)
- Aircraft and spacecrafts (ISIC 353)
- Transport equipment not elsewhere classified (ISIC 359)

### 1.6 Machinery

Refers to Fabrication of metal products, machinery and equipment other than transport equipment. ISIC Division 28, 29, 30, 31 and 32. (NACE Division 28, 29, 30, 31 and 32)

- Structural metal products (ISIC 281)
- Other fabricated metal products (ISIC 289)
- General purpose machinery (ISIC 291)
- Special purpose machinery (ISIC 292)
- Domestic appliances (ISIC 293)
- Office, accounting and computing machinery (ISIC 300)
- Electric motors, generators and transformers (ISIC 311)
- Electricity distribution and control apparatus (ISIC 312)
- Insulated wire & cable (ISIC 313),
- Accumulators, primary cells and batteries (ISIC 314)
- Electric lamps and lighting equipment (ISIC 315),
- Other electrical equipment (ISIC 319),
- Electric valve, tubes and other conductors (ISIC 321),
- Television and radio transmitters (ISIC 322),
- Television and radio receivers, sound or video recording reproducing apparatus and associated goods (ISIC 323)

### 1.7 Mining (excluding energy producing industries) and Quarrying

Refers to ISIC Divisions 13 and 14. (NACE 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 Processing, Beverages and Tobacco

Refers to ISIC Division 15 and 16. (NACE Divisions 15, 16), i.e:

- Production, processing and preservation of meat, fish, fruit, vegetables (ISIC 151)
- Manufacture of dairy products (ISIC 152)

- Manufacture of grain mill products, starches and starch products and animal feeds (ISIC 153)
- Manufacture of other food products (ISIC 154)
- Manufacture of beverages (ISIC 155)
- Manufacture of tobacco products (ISIC 160)

### 1.9 Pulp, Paper and Printing

Refers to ISIC Division 21 and 22. (NACE 21, 22)

Includes production of recorded media.

- Paper and paper products (ISIC 210)
- Publishing (ISIC 221)
- Printing and printing related activities (ISIC 222)
- Reproduction of recorded media (ISIC 223)

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

Refers to ISIC Division 20. (NACE Division 20), i.e.:

- Sawmill and planing of wood (ISIC 201)
- Wood products, cork, straw and plaiting materials (ISIC 202)

### 1.11 Construction

Refers to ISIC Division 45. (NACE Division 45), i.e.:

- Site preparation (ISIC 451)
- Building of complete construction (ISIC 452)
- Building installation (ISIC 453)
- Building completion (ISIC 454)
- Renting of construction or demolition equipment (ISIC 455)

### 1.12 Textile and Leather

Refers to ISIC Divisions 17, 18 and 19. (NACE Divisions 17, 18, 19), i.e.:

- Spinning, weaving and finishing of textiles (ISIC 171)
- Manufacture of other textiles (ISIC 172)
- Manufacture of knitted and crocheted fabrics and articles (ISIC 173)
- Manufacture of wearing apparel except fur apparel

(ISIC 181)

- Dressing and dyeing of fur; manufacture of articles of fur (ISIC 182)

### 1.13 Not elsewhere specified

If your country's industrial classification does not correspond to the above ISIC or NACE codes, 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 25, 33, 36 and 37. (NACE Divisions 25, 33, 36 and 37), i.e.:

- Rubber products (ISIC 251)
- Plastic products (ISIC 252)
- Medical appliances and instruments (ISIC 331)
- Optical instruments and photographic equipment (ISIC 332)
- Watches and clocks (ISIC 333), Furniture (ISIC 361)
- Others manufacturing not elsewhere classified (ISIC 369)
- Recycling of metal waste and scrap (ISIC 371)
- Recycling of non-metal waste and scrap (ISIC 372)

## 2. Transport Sector

All transport activities irrespective of the economic sector in which the activity occurs. Refers to ISIC and NACE categories: Divisions 60, 61 and 62.

### 2.1 International Civil Aviation

All aviation activities for international passenger and freight services.

### 2.2 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.

### 2.3 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.

#### 2.4 Rail

Refers to rail traffic, including industrial railways.

#### 2.5 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.

#### 2.6 Pipeline Transport

Refers to transport of goods through pipelines.

#### 2.7 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 41, 50, 51, 52, 55, 63, 64, 65, 66, 67, 70, 71, 72, 73, 74, 75, 80, 85, 90, 91, 92, 93 and 99. (NACE Divisions 50, 51, 52, 41, 55, 63, 64, 65, 66, 67, 70, 71, 72, 74, 75, 80, 85, 90, 91, 92, 93, 99).

#### 3.2 Residential

Refers to all households including "households with employed persons." ISIC Division 95 (NACE Division 95).

#### 3.3 Agriculture

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

#### 3.4 Fishing

Refers to aquaculture and fisheries. Includes ocean, coastal and inland fishing. ISIC Division 05 and NACE 05. This class includes: fishing on a commercial basis in ocean, coastal or inland waters; taking of marine and freshwater crustaceans and mollusks; whale catching; hunting of aquatic animals: turtles, sea squirts, tunicates, sea urchins etc. This class also includes: activities of vessels engaged both in fishing, and in processing and preserving of fish; gathering of marine materials: natural pearls, sponges, coral and algae; and service activities incidental to fishing.

#### 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 fertilizer 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

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 of 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

### 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<sup>7</sup> kcal (41.863 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 1 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 comprises crude oil, refinery feedstocks and natural gas liquids. Natural LPG is included in LPG.

**Columns 4 and 4.1 to 4.10:** Petroleum products (Column 4) comprises motor gasoline, naphtha, jet fuel, kerosene, gas/diesel oil, residual fuel oil, LPG, refinery

gas, ethane and other petroleum products such as: aviation gasoline, white spirit, lubricants, bitumen, paraffin waxes and petroleum coke (Columns 4.1 to 4.10). The definitions of these products are in Appendix A.

**Column 5:** Gas includes natural gas and LNG (excluding natural gas liquids).

**Column 6:** Hydro shows the energy content of the electricity produced in hydro power plants. Hydro output includes output from pumped storage plants.

**Column 8:** Nuclear shows the primary heat equivalent of the electricity produced by a nuclear power plant with an average thermal efficiency of 33 percent.

**Column 9:** 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 10:** Others includes wood, wood waste, black liquor, industrial and municipal waste and biomass (power generation from other fuel sources such as defined in "Others" energy. is included here).

**Column 11:** 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 12:** Heat includes heat production from public Combined Heat Power plants (CHP), from autoproducer's heat that is sold to a third party (e.g. to a network).

**Column 13:** TOTAL = the total of columns (1) to (12).

## 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's 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:** International marine bunkers cover those quantities delivered to sea-going ships of all flags. Consumption by ships and planes engaged in transport in inland and coastal waters is not included.

**Row 5:** 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 6:** Total primary energy supply (TPES) are made up of indigenous production (Row1) + imports (Row2) – exports (Row3) – international marine bunkers (Row4)

and ± stock changes (Row5).

**Row 7:** Transfers refer to Interproduct Transfers, Product Transferred, liquid products from Gas Separation and Recycled Products as defined in Appendix 2.

**Row 8:** Main Activity Producer electricity, column 1 to 10 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 13, as a negative number.

**Row 9:** Auto-producers of electricity, columns 1 to 10 show primary and secondary fuel input to electricity generation of auto-producers as negative entries. An auto-producer 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 12, "Electricity". Transformation losses appear in the "Total", column 13 as a negative number.

**Row 10:** 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 "Natural 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 11:** The row Petroleum refineries shows the transformation of crude oil, NGL and condensate to petroleum products.

**Row 12:** 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 13:** Other Transformation: contains the energy feedstocks and outputs of petrochemical industry, bio-fuel processing, charcoal processing and other transformation processes that are not classified elsewhere.

**Row 14:** Own use & loss: 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 15:** Discrepancy is a category which includes the sum of the unexplained statistical differences for individual fuels.

**Row 16:** Total Final Consumption (TFC) is the sum of consumption by the different end-use sectors. In final consumption, petrochemical feedstocks as well as natural

gas for producing fertilizer are shown under industry sector.

**Row 17:** Consumption of the Industry sector (energy used for transport by industry is not included here but reported under transport).

**Row 18:** The Transport sector includes all fuels for transport, except international marine bunkers. It includes transport in the industry sector and covers road, railway, internal and international air, internal navigation (including small craft, fishing vessels and coastal shipping not included under marine bunkers) and non-specified transport.

**Row 19:** Other sectors cover agriculture, residential, commercial and public services and non-specified consumption.

**Row 20:** Consumption of the Residential and Commercial sectors. Public services also is included here.

**Row 21:** Consumption of the Agriculture sector.

**Row 22:** Other shows non-specified use which may include military use.

**Row 23:** 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. Feedstocks for the petrochemical industry are accounted for in industry (row 15). 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.  $10^{10}$  kilocalories = 1 MTOE

### 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 2008

	Australia	Brunei	Canada	Chile	China	Hong Kong	Indonesia	Japan	Korea
<b>Coal</b>									
Coking Coal	6,807		6,030		5,775			6,581	6,750
Anthracite			6,616		6,565	7,282		6,105	5,548
Other Bituminous Coal	6,138		6,094		5,073	6,298		5,832	5,950
Sub-bituminous Coal	4,413		4,251		4,675		5,880	5,106	5,000
Lignite	2,224		3,455		3,363				
Peat									
<b>Coal Products</b>									
Patent Fuels								5,344	4,600
Coke Oven Coke	6,126		6,542	7,000				6,678	7,000
Coal Tar				10,400	8,000				
Coal Briquettes	5,015				4,170		4,740		
<b>Crude Oil and NGL</b>									
Crude Oil	10,348	11,146	10,220	10,861	10,000			10,140	10,199
Natural Gas Liquids	10,846		10,801					11,205	
Refinery Feedstocks	10,338		10,151					10,346	10,700
Additives/Oxygenates	6,401		6,401						2,558
Other Hydrocarbons			10,000						
<b>Petroleum Products</b>									
Refinery Gas	11,488	11,971	11,488	7,889	11,000			10,515	11,488
Ethane	11,799		11,799						
LPG	11,393	11,518	11,297	12,100	12,000	10,878	11,934	11,528	11,393
Naphtha	10,318		10,748	11,500	9,176	10,540		10,347	10,318
Motor Gasoline	10,653	9,898	10,700	11,200	10,300	10,217	11,064	10,654	10,653
Bio-ethanol	6,401		6,401						
Aviation Gasoline	10,653		10,700	11,400			9,801		10,653
Gasoline Type Jet Fuel	10,653		10,700		10,300				10,653
Kerosene Type Jet Fuel	10,629	10,144	10,653	11,100	10,300	10,263	10,398	10,632	10,629
Other Kerosene	10,247	10,144	10,461	11,100	10,300	10,262	10,212	10,232	10,247
Gas/Diesel Oil	10,175	9,764	10,175	10,900	10,200	10,150	9,166	10,149	10,175
Bio-diesel	8,790								9,126
Fuel Oil	10,175	9,374	9,602	10,500	10,000	9,912	10,319	10,553	10,175
White Spirit SBP	10,270		10,270		9,176				10,270
Lubricants	10,247	9,486	10,032		9,176			10,242	10,247
Bitumen	9,267	9,072	9,554		9,176				9,267
Paraffin Wax	9,554				9,176				9,554
Petroleum Coke	8,073		7,643		9,176			6,787	8,073
Other Products	9,554	8,712	9,554	10,861	9,176		9,996	9,284	9,554
<b>Natural Gas</b>									
Natural Gas	8,728	9,290	8,237	9,341	9,310	8,924	8,880	8,420	8,960
<b>New and Renewables</b>									
Fuel wood and Wood waste	3,701		3,701	3,500			3,056	3,702	3,701
Bagasse	1,958		1,958						1,958
Charcoal	6,897		6,897			7,023		6,898	6,897
Other Biomass	3,701		3,701				3,702		3,701
Biogas									
Industrial Waste	3,343		3,343		7,000			3,344	3,343
Municipal Solid Waste	3,343		3,343					3,344	3,343
Liquid Biofuels	6,386		6,386						6,386

Note: The Net Calorific Values are used to convert the unit of each product to tons of oil equivalent (toe). 1 toe = 10<sup>7</sup> kcal

## Average Net Calorific Values of Energy Products in 2008 (continued)

kcal/kg (kcal/m <sup>3</sup> for Natural Gas)											
Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russia	Singapore	Chinese Taipei	Thailand	United States	Viet Nam
	5,609	7,006				5,450		7,011		6,756	5,600
				7,001		5,450		6,745		6,880	5,600
	5,609	6,743		7,288		5,450		6,128		6,399	
5,985	4,635	4,923			5,278			5,605		4,543	
	3,368	3,183				3,800		3,957		3,328	5,600
						2,380					
								3,610		5,485	
	6,334			6,404		6,930		6,650		6,889	
						4,200					
10,304	10,411	10,154	10,120	10,192	9,905	10,050	10,709	10,442	10,089	10,304	10,180
10,581	10,189	10,731	10,120	10,192	7,694	10,010			9,173	11,074	
10,349		10,454								10,484	
	5,364									3,437	
										12,182	
10,149	11,488	11,488	10,515	15,011		11,500	11,500	14,996		11,488	
	11,799									11,799	
10,877	11,297	11,393	11,393	11,058	10,760	11,300	11,923	11,893	11,778	11,297	10,880
	10,748		10,500		11,031	10,750	11,923	10,924		10,748	9,910
10,500	10,700	10,653	10,654	10,347	10,545	10,700	11,174	10,494	10,320	10,700	10,500
					5,637					6,388	
	10,700	10,653		10,347	10,894	10,700		10,669	10,320	10,700	
				10,347				10,485	11,675	10,700	
10,316	10,653	10,629	10,632	10,385	9,957	10,650	12,425	10,038	11,675	10,653	10,320
10,150	10,461	10,247	10,233	10,385	9,855	10,450	11,140	10,600	10,416	10,461	10,320
10,150	10,175	10,175	10,284	10,273	10,038	10,350	10,957	10,546	10,051	10,175	10,150
					8,609					9,777	
9,912	9,602	10,175	10,520	9,730	9,617	9,553	9,839	9,609	10,105	9,602	9,910
	10,270	10,270		8,670		9,600		11,538		10,270	
	10,032	10,247	10,240	8,670		9,600		9,600		10,032	9,910
	9,554	9,267		8,670	9,248	9,600		10,000		9,554	9,910
	9,554			8,670		9,600		10,664		9,554	
	7,643	8,073	8,078	8,670		7,400		8,200		7,643	9,910
10,150	9,554	9,554	9,602	8,670	9,864	9,600	10,320	12,496	9,940	9,554	9,910
8,385	8,346	8,147	8,113	8,258	8,222	8,076	8,385	9,900		8,219	9,000
	3,701	3,701		3,426	3,455	3,701		3,039	3,820	3,701	
	1,958	1,958		1,429	4,042	1,958			1,800	1,958	
	6,897	6,897		6,172	6,313	6,897			6,927	6,897	
	3,701	3,701		3,428	3,163	3,701			3,215	3,701	3,302
								3,690			
	3,343	3,343				3,343				3,343	
	3,343	3,343				3,343	3,344	2,092	1,091	3,343	
	6,386	6,386			9,056	6,386			9,707	6,386	