

Steering Committee
Farida Zed, Sugeng Mujiyanto

Technical Committee
Suharyati, Rinaldi Adam, Rr. Fifi Indarwati,
Feri Kurniawan, Golfritz Sahat Sihotang, Agung Kurniawan

PREFACE

The updating of the Handbook of Indonesia's Energy Economic Statistics, is a part of the Center for Data and Information on Energy and Mineral Resource's (CDI-EMR) effort to provide accurate and reliable energy economic data and information consolidated in one book. Data and information related to energy economy are dispersed in various sources and locations, and are generally available in different formats unready for energy analysis. In addition, they are generally not provided with sufficient explanation or clarification. The standardization of energy economic data is still quite a critical problem. Currently, some researchers in various institutions, do not have common terminology on energy economy, in some cases may have a number of meanings. This subsequently leads to inaccurate energy analysis.

We hope the process to standardize Energy and Economic data and information in the future will be continued as part of the updating of the Handbook of Indonesia's Energy Economic Statistics. Therefore, in updating the Handbook, CDI-EMR will continue to coordinate with all related parties within the Ministry of Energy and Mineral Resources (MEMR) as well as with statistics units outside MEMR.

We would like to appreciate all parties, for their diligence and patience in preparing this book. May God Almighty always guide us in utilizing our energy resources wisely for the maximum benefit of all the people of Indonesia.

Farida Zed
Head of Center for Energy and Mineral Resources
Data and Information

INTRODUCTION

This Handbook of Indonesia's Energy Economic Statistics, 5th edition, contains data on Indonesia's energy and economy from 2000 through 2007. This edition is an updated version of the 5th Edition, covering estimated energy demand for every sector. The structure of the table is arranged as follows:

A. Tables

Shown in 6 Main Categories, as follows:

- Table 1 General Information and Energy Economic Indicators
- Table 2 Indonesia's Energy Balance Table
- Table 3 Situation of Energy Supply and Demand
- Table 4 Energy Price
- Table 5 Situation of Energy Demand by Sectors
- Table 6 Situation of Energy Supply by Energy Sources

B. Annexes

Annex 1. Methodology and Clarification of Tables which explains the methodology applied to prepare the data for the tables

Annex 2. Glossary, contains important terms which are used in the tables and their respective units.

Annex 3. Conversion Factors, presenting list of multiplication factors used to convert various original units of energy into BOE (barrel oil equivalent).

List of Contents

Preface	ii
Introduction	iii
List of Contents	iv
Concise Energy Profile	vii
 Chapter 1	
1.1 GDP and Energy Indicator	2
1.2 Macro Economy	4
1.3 Finance and Banking	4
1.4 Price Index	5
1.5 Population and Employment	6
1.6 International Trade	6
1.7 Supply of Primary Energy	8
1.8 Comparison of Primary Energy Intensity in Some Countries	9
1.9 Intensity of Final Energy Consumption per Capita	10
 Chapter 2	
2.1 Indonesia Energy Balance Table 2007	11
 Chapter 3	
3.1 Primary Energy Supply by Sources	16
3.2 Final Energy Consumption by Sector	18
3.3 Final Energy Consumption by Type	20
3.4 Share of Distribution of Final Energy Consumption by Sector	21
3.5 Share of Distribution of Final Energy Consumption by Type	22
 Chapter 4	
4.1 Crude Oil Price	24
4.2 International Gas Price	25
4.3 Average Price of LPG, LNG and Coal FOB Export	25
4.4 Energy Price Per Energy Unit	26
4.5 Average Price of Coal Import	28

List of
Contents

Chapter 5	
5.1.1	Energy Consumption in Industrial Sector (in Original Unit) 30
5.1.2	Energy Consumption in Industrial Sector (in Energy Unit) 30
5.1.3	Share of Energy Consumption in Industrial Sector 32
5.2.1	Energy Consumption in Household Sector (in Original Unit) 32
5.2.2	Energy Consumption in Household Sector (in Energy Unit) 33
5.2.3	Share of Energy Consumption in Household Sector 33
5.3.1	Energy Consumption in Commercial Sector (in Original Unit) 34
5.3.2	Energy Consumption in Commercial Sector (in Energy Unit) 34
5.3.3	Share of Energy Consumption in Commercial Sector 35
5.4.1	Energy Consumption in Transportation Sector (in Original Unit) 36
5.4.2	Energy Consumption in Transportation Sector 36
5.4.3	Share of Energy Consumption in Transportation Sector 38
5.5.1	Energy Consumption in Other Sector (in Original Unit)..... 38
5.5.2	Energy Consumption in Other Sector (in Energy Unit)..... 39
5.5.3	Share of Energy Consumption in Other Sector 40
Chapter 6	
6.1.1	Coal Reserves 42
6.1.2	Coal Supply 43
6.1.3	Indonesia Coal Export by Destination..... 44
6.1.4	Coal Sales 44
6.2.1	Oil Reserves 46
6.2.2	Refinery Capacity in 2007..... 47
6.2.3	Domestic Oil Fuels Sales..... 48
6.2.4	Crude Oil Supply and Demand 48
6.2.5	Crude Oil Refinery Production 50
6.2.6	Import of Refined Products 51
6.2.7	Export of Refined Products 51
6.2.8	Indonesia Crude Oil Export by Destination 52
6.2.9	LPG Supply..... 52
6.3.1	Natural Gas Reserves..... 53
6.3.2	Natural Gas Production..... 53
6.3.3	Natural Gas and LNG Supply Demand..... 54

List of
Contents

6.3.4	City Gas Sales and Utilization 54
6.4.1	PLN Power Plant Installed Capacity 56
6.4.2	Power Plant Production 58
6.4.3	Electricity Sales..... 60
6.4.4	Fuel Consumption of PLN Power Plant 61
6.4.5	Share of Fuel Consumption of PLN Power Plant 62
6.4.6	PLN Electricity System Performance 63
6.5.1	Geothermal Resources and Reserves 64
6.5.2	Geothermal Power Plant Capacity 65
6.5.3	Geothermal Steam Production 66
6.5.4	Geothermal Electricity Production 66
ANNEX	
ANNEX 1	Methodology and Table Explanation 67
ANNEX 2	Glossary 76
ANNEX 3	List of Industrial Codes 87

Thousand BOE

Crude Oil	Fuel	LPG	Other Petroleum Product	Electricity	LNG	Total
330,487	146,039	-1,090	-41,971	0	-194,251	1,189,580
348,348		0	0	0	0	2,011,023
115,812	149,890	588	695	0	0	267,268
-135,267	-2,006	-2,470	-42,666	0	-194,251	-1,108,056
1,594	-1,845	791	0	0	0	19,345
-330,027	168,799	12,015	81,845	87,316	194,251	-244,044
-330,027	240,873	7,354	81,845	0	0	-4,440
0	0	4,661	0	0	0	-1,642
0	0	0	0	0	194,251	-39,292
0	0	0	0	0	0	-32
0	-72,074	0	0	87,316	0	-198,639
0	-70,670	0	0	68,191	0	-155,862
0	-1,404	0	0	19,125	0	-42,776
-460	-599	0	0	-12,547	0	-19,563
0	0	0	0	-3,206	0	-3,253
-460	-599	0	0	-9,342	0	-16,310
0	314,240	10,925	39,873	74,769	0	925,972
0	0	0	0	393	0	10,079
0	314,240	10,925	39,873	74,376	0	915,893
0	52,418	1,242	0	28,077	0	300,613
0	179,035	0	0	52,07	0	179,136
0	50,229	8,345	0	29,010	0	318,576
0	7,646	1,337	0	17,237	0	27,896
0	24,912	0	0	0	0	24,912
0	0	0	39,873	0	0	64,759

CDI-EMR

HANDBOOK of ENERGY & ECONOMIC STATISTICS of INDONESIA

2007

ANNEX

3

Conversion Factor

Type of Energy	Original Unit	Multiplier Factor to BOE (Barel Oil Equivalent)
Coal		
Antracite	Metric Ton	4.9893
Coal Import	Metric Ton	4.2766
Kalimantan Coal	Metric Ton	4.2000
Ombilin Coal	Metric Ton	4.8452
Tanjung Enim Coal	Metric Ton	3.7778
Lignit	Metric Ton	3.0649
Riau Peat	Metric Ton	2.5452
Coal Briquette	Ton	3.5638
Biomass		
Charcoal	Ton	4.9713
Firewood	Ton	2.2979
Natural Gas		
Gas Product	MSCF	0.1796
City Gas	Thousand KKal	0.0007
CNG	Thousand KKal	0.0007
LNG	Ton	8.0532
LNG	MMBTU	0.1796
LPG	Ton	8.5246
Crude Oil		
Condensate	Barel	0.9545
Crude Oil	Barel	1.0000
Fuel		
Aviation Gasoil (Avgas)	Kilo Liter	5.5530
Aviation Turbin Gas (Avtur)	Kilo Liter	5.8907
Super TT	Kilo Liter	5.8275
Premix	Kilo Liter	5.8275
Premium	Kilo Liter	5.8275
Minyak Tanah (Kerosene)	Kilo Liter	5.9274
Minyak Solar (ADO)	Kilo Liter	6.4871
Minyak Diesel (IDO)	Kilo Liter	6.6078
Minyak Bakar (FO)	Kilo Liter	6.9612
Petroleum Product		
Other Petroleum Products	Barel	1.0200
Bahan Bakar Kilang		
Refinery Fuel Gas (RFG)	Barel	1.6728
Refinery Fuel Oil (RFO)	Barel	1.1236
Bahan Baku Kilang (Feed Stock)	Barel	1.0423
Geothermal	MWh	1.9558
Hydro Power	MWh	2.5208
Electricity Power	MWh	0.6130

Source : Indonesia Energy Balance 1990-1994, Departemen of Mining and Energy

heating but not including consumption for vehicles/ transportation. Energy consumers included in this group are commercial and general business such as: commerce, hotel, restaurant, financial institution, government agency, school, hospital, etc.

Condensate

Liquid extracted from natural gas; can be in the form liquid petroleum gas or natural gasoline.

Conversion Factor

Factor used to convert physical unit such as: liter, barrel, ton, and cubic meter to energy unit such as: Joule, BTU, ton coal equivalent (TCE), or barrel or ton oil equivalent (BOE or TCE).

Crude Oil

Mixture of hydrocarbons occurring in liquid phase in subsurface reservoir and remains liquid under atmospheric pressure.

Diesel Oil

A refinery product which contains heavy gasoil, and available as automotive diesel oil (ADO) or industrial diesel oil (IDO).

DPPU

Depo Pengisian Bahan Bakar Pesawat Udara (Aircraft Refueling Depot), serving AVGAS and AVTUR for aircraft consumption.

Electricity

Electric power produced in electric power plant such as Hydro Power Plant (PLTA), Geothermal Power Plant (PLTP), Gas Power Plant (PLTG), Gas Steam Power Plant (PLTGU), Coal Steam Power Plant (Coal PLTU), Diesel Power Plant (PLTD), etc.

Energy Balance Table

Energy system input-output table, the rows indicate activities of an energy commodity which consists of four main elements, namely primary energy, transformation, own use & losses, and energy

consumption. The columns indicate the type of energy commodity.

Final Energy

Energy which can be directly consumed by user.

Final Energy Consumption

Energy consumption of four sectors of energy consumers, namely: household sector, commercial sector, industry sector, and transportation sector as well as consumption of energy as raw material and reduction agent. In compiling REP Riau, household sector is combined with commercial sector due to the limited data obtained.

Final Stock

Total stock at the end of the year.

Fuel Oil

Lowest order refinery product; heavy distillate, residue and their mixture which is used as fuel in industrial furnace and electric power plant.

Gasoline

(see mogas)

Gas Process

LNG plant or LPG plant, liquefaction or purification process to produce LNG and LPG.

GDP at Constant Price

Added value of goods and services computed on the basis of prices in a certain year.

GDP, Nominal (based on current price)

Added value of goods and services computed on the basis of the price occurring in each year.

Goods and Services Export

All transfer and sale of goods and services from resident of a country

to resident of another country, including those conducted in the same country or in another country. Value of good export is based on FOB.

Government Consumption

Expenditures for employees expenses, depreciation and purchase of goods and services (including travel expenses, maintenance and other routine expenditures), expended by central government or regional governments but not including receipt from result of production of goods and services.

Household

Group of energy consumers which use energy for cooking, lighting, and household appliances but not including energy consumption for private car.

Hydropower

Potential energy of flowing water, computed as input energy to generate electric power, consists of dam, river stream, micro hydro.

Import

Purchase from other country, not including the one in transit.

Industrial Diesel Oil (IDO)

A type of diesel oil used as fuel in low or medium speed industrial diesel engine (and marine engine).

Industry

Group of energy consumers which use energy for industrial process such as steam boiler, direct heating, lighting, and mechanical equipment, but does not include energy used for electricity generation for such industries: iron and steel, chemical, non-iron metal, non-metal production, food, paper, wood, construction, textile etc.

Initial Stock

Total stock at the beginning of the year.

International Bunker

Energy consumption for international shipping, supplied to international ships for all ships bearing any flag.

Kerosene

A type of oil fuel produced from distillation process which volatility lies between that of mogas and diesel oil, used as fuel for lighting, kitchen stove, and outboard engine.

Losses in Electricity Generation

Losses that occur in transformer, transmission and distribution network.

LPG

Liquefied Petroleum Gas, light hydrocarbons of crude oil, produced from oil refinery process or purification process of natural gas, consisting of propane (C₃H₈) and butane (C₄H₁₀) or their mixture.

LSWR

Low Sulphur Waxy Residue, a by product of oil refining.

Mogas

Motor gasoline, light hydrocarbon oil used in internal combustion engine, except aircraft engine, available in the market as Premium, Premix, Super TT, and BB2L.

Money Supply (M2)

Money supply consisting of currency (kartal) and demand deposits (giral).

Natural Gas

All kinds of hydrocarbon gas produced from wells; mixture of hydrocarbon gas and vapour occurring naturally, which main components are methane, ethane, propane, butane, pentane, and hexane; mined from underground accumulation either directly or as associated gas in oil mining.

GLOSSARY

Automotive Diesel Oil (ADO)

A type of diesel oil used as fuel for high speed diesel engine.

Avgas

Aviation gasoline; special high octane gasoline for aircraft reciprocating engine, has high stability, low freezing point, and rather flat distillation curve.

Avtur

Aviation turbine fuel; special fuel for turbine/jet aircraft, a special kerosene with distillation range of 150°C - 250°C.

Biomass

Collective name for firewood, agriculture waste (rice husks, rice stems, palm fronds, coconut shells), black liquor, wood chips, wood barks.

BOE (Barrel Oil Equivalent)

Calorific equivalent of a barrel of crude oil.

Captive Power Plant

Power plant owned by industry to produce electricity for their own use.

Coal

Sedimentary rock originated from piles of wood since millions of years ago.

Coal Transformation

Processing of coal (coking coal, steam coal, sub-bituminous coal, and lignite) to produce coke, blast furnace gas, and briquette.

Commercial

Group of energy consumers which use energy for lighting, air conditioning, mechanical equipment, cooking appliance, and water

Natural Gas Liquid

(see Condensate)

Non-energy Consumption

Consumption of energy for non-energy consumption which includes lubricating oil, petrochemical industry raw material (naphtha, natural gas, and coke), and gas consumed chemical raw material (methanol and ammonia/urea).

Non-renewable Energy

Energy which reserve cannot be brought back into original condition generally consists of fossil energy.

Oil Refinery

Crude oil or condensate processing unit to produce oil fuels such as naphtha, avgas, avtur, ADO, IDO, gasoline, kerosene, fuel oil, LPG, etc.

Other Oil Products

(OOP) Other refinery products such as naphtha, lubricating oil, bitumen, paraffin, etc. (sulphur, grease).

Own Use and Losses

Category that include energy losses and energy used in primary energy production field and in each transformation.

Own Use in Electricity Generation

Own use is all energy consumed in power plant and the transmission and distribution sub-station.

Own Use and Losses in Gas Processing

Losses that occur due to transport, distribution, and transfer by pipe. Own use is all energy consumed in gas processing.

Own Use and Losses in Oil Refinery

Losses that occur due to transportation, distribution, and transfer by pipe. Own use is all energy consumes in oil refinery processes.

Own Use and Losses in Production Field

Losses that occur due to transport, distribution, and transfer by pipe. Own use is all energy consumed in production field.

PLN Power Plant

Electric power plant owned by PT PLN (Persero) to produce electricity for sale to the public.

Primary Energy

Energy in its original form which is extracted by means of mining, dam, or renewable energy utilization.

Private Sector Power Plant

Power plant owned by private sector to produce electricity for sale to the public. Known as Independent Power Producer (IPP).

Production

Total gross primary energy extracted/produced.

Quasy Money

Time deposit and saving, in Rupiah and foreign exchange, including foreign exchange deposit by residents.

Renewable Energy

Energy which reserve can be brought back into original condition.

SBM

(see BOE)

Secondary Energy

Energy which has undergone transformation process into other form of energy.

SPBU

Stasiun Pengisian BBM Umum (public oil fuel refueling station), which sells gasoline (Premium, Premix, and Super TT) and diesel oil (ADO).

Statistical Difference

Difference between net supply (production + import – export – international bunker – stock change – consumption for transformation + production from transformation – own use – losses) and total final consumption.

Stock Change

Difference between the stock in the beginning and the end of the year. Stock decrease in energy balance is shown by positive sign which means there is increase in supply, while stock increase is shown by negative sign which means there is decrease in supply.

Sub-bituminous coal

A type of coal which has calorific value of 5000–6000 kcal/kg.

Total Energy Balance

Total of all columns in a certain row. In transformation row, the total of columns indicates efficiency of the transformation process.

Total Final Energy Consumption

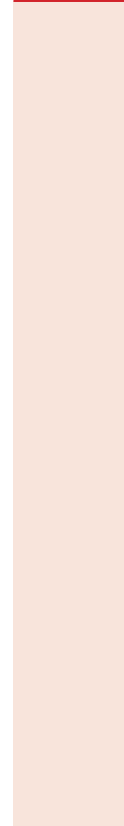
Sum of energy consumption in the following sectors: household, commercial, industry, transportation, and non-energy consumption.

Total Primary Energy Supply

Local production plus import less export less bunker and less or plus stock change.

Transportation

Group of energy consumers which use energy for transport vehicles.



METHODOLOGY AND TABLE EXPLANATION

GENERAL METHODS

Data shown in the tables of Indonesia's energy economic statistics are consolidated from various statistics of regular publication with harmonization of format and definition also covering an estimate of energy demand using macro-economic approach. Data sources used are the statistics of published by: Statistic Indonesia, technical unit within Ministry of Energy and Mineral Resources, energy companies, energy associations and some International Agencies.

Statistics book used as the sources of the energy economic data consolidation, are as follows:

- a. Crude Oil and Oil Products (BBM)
 - Indonesia Oil and Gas Statistics, Direktorat General of Oil and Gas, 2000 – 2006
- b. Natural Gas (Production, utilization and flaring)
 - Indonesia Oil and Gas Statistics, Direktorat General of Oil and Gas , 2000 - 2006
 - PT PGN Annual Report, 2000-2007
- c. Coal
 - Indonesia Coal Statistics, Directorate General of Geology and Mineral Resources, 2000 and 2001.
 - Indonesia Mineral and Coal Statistics, Directorate General of Mineral, Coal and Geothermal 2002 -2007.
- d. Biomass
 - National Survey on Social & Economic (SUSENAS) Statistic Indonesia (BPS), 1999, 2002, 2005
- e. LPG
 - Indonesia Oil and Gas Statistics, Direktorat General of Oil and Gas , 2000 - 2006
 - PT PGN Annual Report, 2000-2007
- f. Electricity
 - PLN Statistics, 2000 - 2007

- Energy and Electricity Statistics, Direktorat General of Electricity and Energy Utilization, 2000-2007

g General

- Indonesia Statistics, Statistic-Indonesia (BPS) 2000-2007
- Finance and Economic Statistic, Central Bank of Indonesia (www.bi.go.id)
- Trade Statistics, Departement of Trade, 2000-2007

TABLE 2.1 up to 2.13

Energy balance is an energy input-output system table, where the rows indicate activities of an energy commodity which consist of four main elements, namely: primary energy activity, transformation, own use & losses, and energy consumption. The columns, on the other hand, indicate the types of energy. Energy balance is presented to fully depict energy activities in a region.

ENERGY BALANCE DEFINITIONS

BY COLUMN

Each column of energy balance represents one type of energy. It begins from the left with renewable energy, then followed by, solid energy, gaseous, liquid, and electricity.

RENEWABLE ENERGY

Hydropower is the potential energy of flowing water. The energy is computed as input power to generate electricity and consists of dam, river stream, minihydro and microhydro. The amount of hydro energy required is equivalent to fossil energy required to generate electricity.

Geothermal is a kind energy that produced from the magma inside earth

in the volcanic areas. The hot and high pressure steam emitted from the production well head can be utilized to pressed the steam turbine in the Geothermal Power Generation or utilized directly for drying agriculture products

Biomass is a kind of renewable organic material based fuel. Among the kinds of biomass are firewood (wood and wood waste), agriculture waste (rice hulks, rice straws, palm fronds, coconut shells, etc.), urban solid waste, and industrial waste.

SOLID Energy

Coal consists of hard coal and lignite. Data information on the volume of coal is only available in aggregate number. In the energy balanced table the conversion factor using average of Indonesia coal calorific factor (4.276 BOE per Ton Coal). Detail category and specification of coal available in Indonesia are as follows:

Hard coal is a type of coal that has a calorific value of more than 5700 kcal/kg (23.26 MJ/kg). Hard coal consists of steam coal, coking coal, bituminous coal, and anthracite.

Steam coal is a type of coal that is used in boiler, steam generator and furnace. Included in this category are anthracite and bituminous coal. It has a gross calorific value of more than 23,865.0 kJ/kg (5700 kcal/kg), lower than coking coal.

Coking coal is a type of coal that is used to produce coke for use as reducing material in blast furnace. Its gross calorific value is higher than 23,865 kJ/kg (5700 kcal/kg), ash free.

Sub-bituminous coal is a type of coal that has a gross calorific value between 17,435.0 kJ/kg (4165 kcal/kg) and 23,865.0 kJ/kg (5700 kcal/kg). Anthracite is a type of coal that has similar characteristics as steam coal.

Lignite is a type of coal that has a gross calorific value of less than 4,165

kcal/kg (17.44 MJ/kg) and volatile matter of more than 31%, dry basis. Lignite is often called low rank coal; also called brown coal.

Coke is the product of high temperature carbonization of steam coal. The product is used as reducing agent in steel plant.

Briquettes are the fuel produced by briquetting sub-bituminous coal, lignite, or peat through the process of carbonization or powdering. Briquette is more convenient to use and has better quality that its raw material.

GASEOUS

Energy in Gaseous form includes natural gas and town gas. Natural gas generally consists of methane which is mined from underground accumulation, and associated gas from oil production, as well as coal bed methane. Town gas covers all kinds of gas, including gas produced from carbonization process, gasification of petroleum oils, and gas produced from chemical conversion of hydrocarbon fossil fuels.

LIQUID

Crude oil is the mineral oil which consists of a mixture of hydrocarbons, blackish green color, and has a range of density and viscosity. It is the raw material for producing oil fuels (BBM) and petrochemical products.

Condensate is a kind of liquid hydrocarbons among which is natural gas liquid (NGL). NGL consists of ethane, propane, butane, pentane, and natural gasoline.

OIL FUELS/Petroleum Products, (BBM), Category BBM in the energy balance table is petroleum products used for energy. It comprise of Avgas, Avtur, Mogas (Motor gasoline), Automotive Diesel Oil (HSD/ADO), Marine Diesel Fuel (MDF/IDO), Fuel Oil and Kerosene. Detail description of each fuels are as follows:

Avgas (aviation gasoline) is aircraft fuel that consists of light hydrocarbons distilling between 100°C and 250°C. The distillation product has at least 20% volume at 143°C.

Avtur is the fuel for jet aircraft which consists of hydrocarbon middle distillate having similar distillation and flash point characteristics as kerosene, with maximum aromatic content of 20% volume. It has a freezing point less than -47°C and octane number of 80–145 RON.

Mogas (motor gasoline) is light hydrocarbons used in motor vehicle internal combustion engine (not including aircraft). Mogas is distilled between 35°C and 215°C and is processed in Reformer, Catalytic Cracking, or Blending with aromatic fraction to achieve high octane number. In Indonesian market, three types of gasoline are available, namely Premium, Premix/Pertamax, and Super TT/Pertamax Plus.

- Premium has an octane number of about 89 RON
- Premix has octane number of about 94 RON
- Super TT has octane number of about 98 RON, and is lead free.

Diesel Oil is a refinery product that contains heavy. This type of BBM is obtained from the lowest fraction of crude oil atmospheric distillation, while the heavy gas oil is obtained from vacuum distillation of atmospheric distillation residue. In the market, diesel oil is distinguished into Automotive Diesel Oil (ADO/Minyak Solar) and Industrial Diesel Oil (IDO/Minyak Diesel).

Fuel Oil (FO) is oil made of distillation residue. This type of BBM includes all kinds of residues including residue from blending. It has a viscosity of about 10 cSt at 80°C. Its flash point is higher than 50°C and density more than 0.9.

Kerosene is the BBM produced from crude oil distillation which has volatility between that of gasoline and gasoil. It has distillation range between 150°C and 300°C, where a minimum of 65% volume is distilled at 250°C. It has a specific gravity of 0.8 and flash point of over 38°C.

LPG is light hydrocarbon fraction of crude oil, produced in oil refinery, and consists of either propane (C₃H₈) and butane (C₄H₁₀) or mixture of both. In addition to oil refinery, LPG is also produced from natural gas purification.

Non BBM is Other Oil Products (OOP), include naphtha, lubricating oil, bitumen, paraffin, etc. (sulphur, grease).

Electricity, electric power produced from various kinds of power plant such as Hydro Power Plant (PLTA), Geothermal Power Plant (PLTP), Gas Power Plant (PLTG), Gas Steam Power Plant (PLTGU), Coal Steam Power Plant (Coal PLTU), and Diesel Power Plant (PLTD), etc.

LNG (liquefied natural gas) is the liquid produced by liquefying natural gas at a temperature of -160°C to facilitate its transportation over very long distances.

Total is the total of all columns at certain row. At transformation row the total of all columns indicates efficiency of transformation process.

BY ROW of Energy Balance Table

Total Primary Energy Supply is domestic production plus import minus export minus bunker and minus or plus stock change. The bunker and stock change data, is not available.

Production, total gross primary energy produced (extracted) from underground.

Import is energy obtained from other countries, not including energy in transit.

Export is energy sold to other country.

ENERGY TRANSFORMATION

Transformation, is the transformation process from primary energy type into final energy type. This includes processes in LPG plant, and carbonizing plant. Input bears a negative sign while production bears positive sign.

Oil Refining is the processing of crude oil and condensate to produce oil fuels such as naphtha, avgas, avtur, ADO, IDO, mogas, kerosene, fuel oil, LPG, etc. Energy consumption such as natural gas, naphtha, is also included.

Gas Processing (LNG plant and LPG plant) the process of liquefaction or purification of natural gas to produce LNG or LPG.

Power Generation is transformation of energy into electric power. This row records the quantity of fuel consumed: (coal, BBM, natural gas, hydropower, geothermal, biomass, wind, photovoltaic (solar energy) etc) and the electricity generated.

OWN USE AND LOSSES

Own Use and Losses include losses and own uses in primary energy production fields and in transformation processes.

- Losses and Own Use in Production Field are losses that occur due to transportation, distribution, and transfer by pipe. Own use includes all energy consumed in the field (off-road transportation, gen-set, boiler, etc., all energy consumed in transportation is computed in Transportation Sector).
- Losses and Own Use in Oil Refining are losses that occur due to transportation, distribution, and transfer by pipe. Own use is all energy consumed in oil refining processes.
- Losses and Own Use in Gas Processing are losses that occur due to transportation, distribution, and transfer by pipe. Own use is all energy consumed in gas processing.
- Losses in Electricity System, is losses incurred in transformer, transmission distribution network.
- Own use in Electricity Generation is all energy consumed in power

plant area.

Statistical Difference the different between net supply (production + import – export stock change – transformation input + transformation production – own use and losses) and total final consumption (household, commercial, industry, transportation, other sector & non-energy use).

FINAL ENERGY CONSUMPTION OTHER SECTOR

Total Final Energy Consumption is the quantity of energy consumed in household, commercial, industry and, transportation sectors and non-energy consumption.

Household, all energy consumption for household, not including consumption for private car.

Commercial, energy consumption of commercial sector such as restaurants, financial institutions, government agencies, schools, hospitals, etc.

Industry, energy consumption of industry in the following sub-sectors (not including transportation): iron and steel, chemical, non-iron metal, non-metal production, machine and equipment, non-energy mining and quarrying, food, paper, wood, construction, textile, etc.

Transportation, energy consumption for transportation covers all transportation activities in all sectors of economy. Transportation sub-sectors are: air transportation, land transportation (motor cycles, cars, buses, and trucks), ferries and railway transportation.

Aside fro these sectors, energy i also consumed by one other sector which consist of the fishery, construction an mining subsectors.

Non-energy, energy consumption for non-energy uses, covering lubricating oils, petrochemical industry, raw materials (naphtha, natural gas, and cokes), and gas used as raw material for petrochemical products (methanol and ammonia/urea).

- 1.1 GDP and Energy Indicator
- 1.2 Macro Economic
- 1.3 Finance and Banking
- 1.4 Price Index
- 1.5 Population and Employment
- 1.6 International Trade
- 1.7 Supply of Primary Energy
- 1.8 Comparison of Primary Energy Intensity in Some Countries
- 1.9 Intensity of Final Energy Consumption per Capita

1.1 GDP and Energy Indicator

	Unit	2000	2001
GDP at Constant Price 2000	Trillion Rupiahs	1,390	1,443
GDP Nominal	Trillion Rupiahs	1,390	1,684
GDP Nominal per Capita	Thousand Rupiahs	6,752	8,072
Population	Thousand	205,843	208,647
Number of Households	Thousand	52,005	54,314
Primary Energy Supply	Thousand BOE	709,344	772,584
Primary Energy Supply per Capita	BOE / capita	3.45	3.70
Final Energy Consumption	Thousand BOE	468,490	484,848
Final Energy Consumption per Capita	BOE / capita	2.28	2.32

Year	Growth (%)	
	2000-2001	2001-2002
GDP at Constant Price 2000	3.83	4.38
GDP Nominal	21.19	10.63
GDP Nominal Per Capita	19.56	8.88
Population	1.36	1.61
Number of Households	4.44	1.34
Primary Energy Supply	8.92	3.53
Final Energy Consumption Per Capita	7.45	1.89
Final Energy Consumption	3.49	-0.76

BPS, Statistics Indonesia; Bank Indonesia;

Note: Final Energy and Primary Energy which are calculated is commercial energy (excluded biomass)

2002	2003	2004	2005	2006	2007
1,506	1,577	1,657	1,751	1,847	1,964
1,863	2,014	2,296	2,774	3,339	3,957
8,789	9,354	10,538	12,676	15,030	17,538
212,003	215,276	217,854	218,869	222,192	225,642
55,041	56,623	58,253	55,119	55,942	56,411
799,845	822,761	849,907	898,919	901,968	957,107
3.77	3.82	3.90	4.11	4.06	4.24
481,185	472,567	517,854	540,206	538,883	576,764
2.27	2.20	2.38	2.47	2.43	2.56

Growth (%)				
2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
4.72	5.03	5.69	5.51	6.32
8.07	14.01	20.84	20.37	18.50
6.43	12.66	20.28	18.57	16.69
1.54	1.20	0.47	1.52	1.55
2.87	2.88	-5.38	1.49	0.84
2.87	3.30	5.77	0.34	6.11
1.30	2.08	5.28	-1.16	4.49
-1.79	9.58	4.32	-0.24	7.03

1.2 Macro Economic

Year	GDP at Constant 2000 Prices				
	GDP		Private Consumption	Government Consumption	Fixed Capital Formation
	Billion Rupiah	Growth (%)			
2000	1,389,770.3	4.90	856,798.3	90,779.7	275,881.2
2001	1,442,984.6	3.83	886,736.0	97,646.0	293,792.7
2002	1,506,124.4	4.38	920,749.6	110,333.6	307,584.6
2003	1,577,171.3	4.72	956,593.4	121,404.1	309,431.1
2004	1,656,516.8	5.03	1,004,109.0	126,248.6	354,865.8
2005	1,750,815.2	5.60	1,043,805.1	134,625.6	393,500.5
2006	1,847,292.9	5.51	1,076,928.1	147,563.7	403,161.9
2007	1,963,974.3	6.32	1,131,186.8	153,309.6	440,078.2

Source : BPS, Statistics Indonesia

1.3 Finance and Banking

Year	Money Supply (M1)			Money Supply (M2)	
	Currency Outside	Demand Deposits	Total M1	Quasi	Total M2
	Billion Rupiah	Billion Rupiah	Billion Rupiah	Billion Rupiah	Billion Rupiah
2000	72,371	89,815.00	162,186	444,651	606,837
2001	76,342	101,389.00	177,731	511,556	689,287
2002	80,686	111,253.00	191,939	551,504	743,443
2003	94,542	129,257.00	223,799	592,716	816,515
2004	109,265	144,553.00	253,818	644,109	897,927
2005	124,316	157,589.00	281,905	732,364	1,014,269
2006	151,009	210,064.00	361,073	837,068	1,198,141
2007	183,419	277,423.00	460,842	966,454	1,427,296

GDP at Constant 2000 Prices			GDP Nominal (Current Prices)	Index GDP Deflator (2000=100)
Stock Change	Export of Goods and Services	Import of Goods and Services		
Billion Rupiah	Billion Rupiah	Billion Rupiah	Billion Rupiah	
33.282,8	569,490.3	423,317.9	1.389.769,9	100,00
41.846,8	573,163.4	441,012.0	1.684.280,5	116,72
13.085,0	566,188.4	422,271.4	1.863.274,7	123,71
45.996,7	599,516.4	428,874.6	2.013.674,6	127,68
25.099,0	680,620.9	543,183.8	2.295.826,2	138,59
33.508,3	793,612.9	639,701.9	2.774.281,1	158,46
29.026,7	868,256.4	694,605.4	3.339.479,6	180,78
911,9	937,849.2	756,348.3	3.957.403,9	201,50

1.4 Price Index

Year	Wholesale Price Index		Consumer Price Index of 45 Cities 2000=100	Fuel Oil Price Index ²⁾	Coal Price Index ²⁾	Electricity Price Index ³⁾	
	Export	Import					
	2000 = 100						
2000	100.00	100.00	100.00	100.00	100.00	100.00	
2001	113.02	112.66	114.16	111.49	201.60	129.79	122.34
2002	108.00	112.00	118.00	124.73	225.35	142.89	189.44
2003	109.00	114.00	122.00	133.14	298.30	150.09	251.99
2004	121.00	127.00	131.00	141.26	299.33	150.04	269.01
2005	145.00	149.00	151.00	155.91	538.76	163.57	271.56
2006	154.00	162.00	172.00	181.97	666.97	218.36	273.78
2007	167.00	186.00	195.00	193.96	725.95	220.27	275.76

1.5 Population and Employment

Year	Population	Labor Force	Household	Unemployment
	Thousand People	Thousand People	Thousand Household	Thousand People
2.117	205,843	95,651	52,005	5,813
2001	208,647	98,812	54,314	8,005
2002	212,003	99,564	55,041	9,132
2003	215,276	100,316	56,623	9,531
2004	217,854	103,973	58,253	10,251
2005	218,869	105,802	55,119	10,854
2006	222,192	106,389	55,942	10,932
2007	225,642	109,941	56,411	10,011

1.6 International Trade

Year	Based on Major Portion		Trade Indexes	
	Export	Import	2000 = 100	
			Export	Import
	Million US \$			
2000	62,124	33,515	100	100
2001	56,321	30,962	91	92
2002	57,159	31,289	92	93
2003	61,058	32,551	98	97
2004	71,585	46,525	115	139
2005	85,660	57,701	138	172
2006	100,799	61,066	162	182
2007	114,101	74,473	184	222

Source : BPS, Statistics Indonesia

Note: *) Derived from World Economic Outlook Database, April 2008, IMF

Unemployment Percentage (towards labor force) (%)	Average Wage		
	Industry	Hotel	Mining
(%)	Thousand Rupiahs Per Month		
6.1	373	396	1,234
8.1	541	575	1,227
9.2	672	651	1,406
9.5	713	581	2,117
9.9	852	801	1,368
10.3	870	788	2,114
10.3	1,292	1,163	3,572
9.1	1,786	1,702	5,617

Balance Payment			Exchange Rate Rupiah to US \$	US\$ Deflator ¹⁾
Current Transaction	Capital Transaction	Total		
Million US \$				
7,991	-7896	95	9,595	1,0000
6,900	-7617	-717	10,400	1,0240
7,822	-1103	6,719	8,940	1,0419
8,107	-950	7,157	8,465	1,0630
3,108	2612	5,720	9,290	1,0910
3,097	6254	9,351	9,830	1,1213
3,495	2180	5,675	9,020	1,1605
3,364	122	3,486	9,419	1,1657

1.7 Supply of Primary Energy

1.7.1 By Type

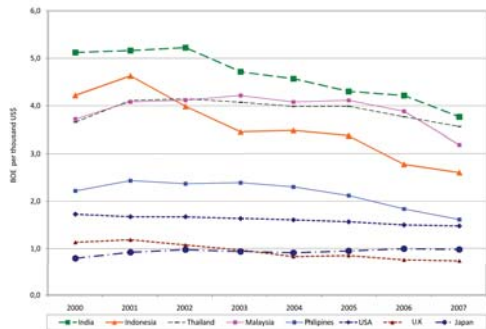
(%)

Type of Energy	2000	2001	2002	2003	2004	2005	2006	2007
Crude Oil and Fuel Export/ Import	42.42	42.44	42.32	41.71	44.41	42.40	39.21	38.60
Coal	9.59	11.44	11.49	11.75	11.44	14.83	17.64	20.96
"Natural Gas and Export/ Import (LPG & LNG)"	16.93	16.52	17.65	18.65	16.72	16.34	16.69	14.91
Hydropower	2.58	2.82	2.34	2.10	2.22	2.32	2.06	2.31
Geothermal	0.98	0.96	0.96	0.95	0.99	0.93	0.95	0.93
Biomass	27.50	25.82	25.25	24.85	24.23	23.17	23.45	22.28

1.7.2 By Type (excluded Biomass)

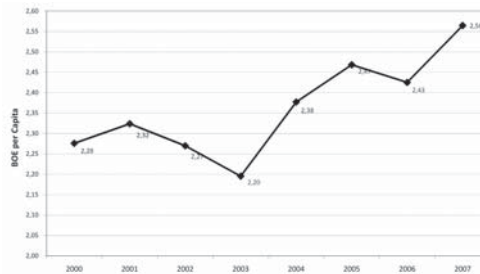
Type of Energy	2000	2001	2002	2003	2004	2005	2006	2007
Crude Oil and Fuel Export/ Import	58.51	57.21	56.61	55.50	58.61	55.19	51.23	49.67
Coal	13.23	15.42	15.37	15.64	15.09	19.31	23.05	26.97
"Natural Gas and Export/ Import (LPG & LNG)"	23.35	22.27	23.61	24.81	22.07	21.27	21.80	19.19
Hydropower	3.56	3.80	3.13	2.79	2.93	3.02	2.69	2.97
Geothermal	1.35	1.29	1.28	1.26	1.30	1.21	1.24	1.19

1.8 Comparison of Primary Energy Intensity in Some Countries



Note: GDP Primary Energy Consumption using US\$ fix rate in year 2000

1.9 Intensity of Final Energy Consumption per Capita



2.1 Indonesia Energy Balance 2007

2. Indonesia Energy Balance Table 2007

	Hydro Power	Geothermal	Biomass	Coal	Briquette	Natural Gas
1 Primary Energy Supply	28,451	11,422	274,443	258,174	0	377,874
a. Production	28,451	11,422	274,443	913,121	0	435,238
b. Import	0	0		284	0	0
c. Export	0	0		-674,034	0	-57,364
d. Stock Change	0	0		18,804	0	0
2 Energy Transformation	-28,451	-11,422	-74	-136,374	178	-282,339
a. Refinery	0	0	0	0	0	-4,485
b. LPG Plant	0	0	0	0	0	-6,303
c. LNG Plant	0	0	0	0	0	-233,542
d. Coal Processing Plant	0	0	0	-210	178	0
e. Power Plant	-28,451	-11,422	-74	-136,164	0	-38,009
- State Own Utility (PLN)	-26,790	-5,686	0	-90,159	0	-30,749
- Independent Power Producers (Non-PLN)	-1,662	-5,497	-74	-46,005	0	-7,260
3 Own Use and Losses	0	0	0	0	-47	-5,909
a. During Transformation	0	0	0	0	-47	0
b. Transmission & Distribution	0	0	0	0	0	-5,909
4 Final Energy Supply	0	0	274,369	121,800	131	89,626
5 Statistic Discrepancy	0	0	0	0	0	9,448
6 Final Energy Consumption	0	0	274,369	121,800	131	89,178
a. Industry	0	0	42,108	121,800	131	54,837
b. Transportation	0	0	0	0	0	49
c. Household	0	0	230,860	0	0	132
d. Commercial	0	0	1,402	0	0	274
e. Other Sector	0	0	0	0	0	0
7 Non Energy Use	0	0	0	0	0	24,886

Thousand BOE

Crude Oil	Fuel	LPG	Other Petroleum Product	Electricity	LNG	Total
330,487	146,039	-1,090	-41,971	0	-194,251	1,189,580
348,348		0	0	0	0	2,011,023
115,812	149,890	588	695	0	0	267,268
-135,267	-2,006	-2,470	-42,666	0	-194,251	-1,108,056
1,594	-1,845	791	0	0	0	19,345
-330,027	168,799	12,015	81,845	87,316	194,251	-244,044
-330,027	240,873	7,354	81,845	0	0	-4,440
0	0	4,661	0	0	0	-1,642
0	0	0	0	0	194,251	-39,292
0	0	0	0	0	0	-32
0	-72,074	0	0	87,316	0	-198,639
0	-70,670	0	0	68,191	0	-155,862
0	-1,404	0	0	19,125	0	-42,776
-460	-599	0	0	-12,547	0	-19,563
0	0	0	0	-3,206	0	-3,253
-460	-599	0	0	-9,342	0	-16,310
0	314,240	10,925	39,873	74,769	0	925,972
0	0	0	0	393	0	10,079
0	314,240	10,925	39,873	74,376	0	915,893
0	52,418	1,242	0	28,077	0	300,613
0	179,035	0	0	52,07	0	179,136
0	50,229	8,345	0	29,010	0	318,576
0	7,646	1,337	0	17,237	0	27,896
0	24,912	0	0	0	0	24,912
0	0	0	39,873	0	0	64,759

CDI-EMR

HANDBOOK of ENERGY & ECONOMIC STATISTICS of INDONESIA

2007

- 3.1 Primary Energy Supply by Sources
- 3.2 Final Energy Consumption by Sector
- 3.3 Final Energy Consumption by Type
- 3.4 Share of Final Energy Consumption by Sector
- 3.5 Share of Final Energy Consumption by Type

CHAPTER

3

3.1 Primary Energy Supply by Sources

Year	Coal	Crude Oil & Export / Import Fuel	Natural Gas & Export / Import (LPG & LNG)
2000	93,831,548	415,011,903	165,655,289
2001	119,125,379	442,033,714	172,083,821
2002	122,918,549	452,817,870	188,822,314
2003	128,658,448	456,647,707	204,142,054
2004	128,276,301	498,117,696	187,554,081
2005	173,554,586	496,143,612	191,189,376
2006	207,861,993	462,066,984	196,599,386
2007	258,174,000	475,436,625	183,623,636

(BOE)

Hydro Power	Geothermal	Biomass	TOTAL
25,248,895	9,596,400	269,073,181	978,417,215
29,380,607	9,960,940	268,970,034	1,041,554,495
25,038,179	10,248,040	270,230,078	1,070,075,031
22,937,538	10,375,200	272,005,374	1,094,766,321
24,882,086	11,077,000	271,806,233	1,121,713,397
27,120,985	10,910,460	271,094,208	1,170,013,227
24,256,796	11,182,742	276,329,431	1,178,297,331
28,451,261	11,421,759	274,443,321	1,231,550,602

3.2 Final Energy Consumption by Sector

3.2.1 Energy Consumption (included Biomass)

Sector	2000	2001	2002
Industry	251,895,942	252,158,714	245,108,900
Household	296,573,110	301,347,223	303,032,794
Commercial	20,670,389	21,449,843	21,752,300
Transportation	139,178,658	148,259,584	151,498,823
Others	29,213,878	30,585,607	29,998,546
Total Final Energy Consumption	737,531,977	753,800,971	751,391,363
Non Energy Consumption	40,393,109	48,524,092	48,534,290

3.2.2 Commercial Energy Consumption (Excluded Biomass)

Sector	2000	2001	2002
Industry	192,914,655	196,972,955	192,803,789
Household	87,963,563	89,023,979	86,568,222
Commercial	19,218,814	20,005,525	20,315,203
Transportation	139,178,658	148,259,584	151,498,823
Others	29,213,878	30,585,607	29,998,546
Total Final Energy Consumption	468,489,567	484,847,650	481,184,583
Non Energy Consumption	40,393,109	48,524,092	48,534,290

(BOE)

2003	2004	2005	2006	2007
228,419,706	240,027,394	262,687,070	280,187,757	300,612,882
309,046,165	314,114,684	314,823,338	312,715,871	318,576,384
22,397,122	25,412,327	26,234,764	26,194,683	27,896,499
156,232,909	178,374,391	178,452,407	170,118,773	179,135,822
28,445,436	31,689,809	29,102,166	25,936,873	24,912,051
744,541,337	789,618,605	811,299,745	815,153,958	851,133,637
48,317,775	62,375,806	54,352,435	64,786,077	64,759,190

(BOE)

2003	2004	2005	2006	2007
178,252,297	193,110,695	218,766,597	233,511,599	258,504,849
88,669,268	90,689,214	89,065,250	84,529,554	87,716,652
20,967,212	23,989,565	24,819,117	24,786,114	26,494,973
156,232,909	178,374,391	178,452,407	170,118,773	179,135,822
28,445,436	31,689,809	29,102,166	25,936,873	24,912,051
472,567,121	517,853,674	540,205,537	538,882,913	576,764,346
48,317,775	62,375,806	54,352,435	64,786,077	64,759,190

3.3 Final Energy Consumption by Type

(Thousand BOE)

Year	Biomass	Coal	Natural Gas	Fuel	Briquette	LPG	Electricity	Total
2000	269,042	36,060	87,214	315,272	85	8,261	48,555	777,925
2001	268,953	37,021	82,235	328,203	78	8,280	51,841	802,325
2002	270,207	38,698	80,885	325,202	83	8,744	53,418	799,926
2003	271,974	32,077	79,575	321,384	77	8,766	55,473	792,859
2004	271,765	32,077	85,459	354,317	80	9,187	61,393	851,994
2005	271,094	65,744	86,634	338,375	94	8,453	65,644	865,652
2006	276,271	89,043	83,221	311,904	94	9,414	69,071	879,940
2007	274,369	121,800	80,178	314,240	131	10,925	74,376	915,893

3.4 Share of Final Energy Consumption by Sector

(%)

Year	Industry	Household	Commercial	Transportation	Others
2000	41.18	18.78	4.10	29.71	6.24
2001	40.63	18.36	4.13	30.58	6.31
2002	40.07	17.99	4.22	31.48	6.23
2003	37.72	18.76	4.44	33.06	6.02
2004	37.29	17.51	4.63	34.44	6.12
2005	40.50	16.49	4.59	33.03	5.39
2006	43.33	15.69	4.60	31.57	4.81
2007	44.82	15.21	4.59	31.06	4.32

Note: Commercial Energy (excluded biomass)

3.5 Share of Final Energy Consumption by Type

(%)

Year	Coal	Natural Gas	Fuel	LPG	Electricity
2000	7.3	17.6	63.6	1.7	9.8
2001	7.3	16.2	64.7	1.6	10.2
2002	7.6	16.0	64.1	1.7	10.5
2003	6.5	16.0	64.6	1.8	11.2
2004	5.9	15.8	65.3	1.7	11.3
2005	11.7	15.3	59.9	1.5	11.6
2006	15.8	14.8	55.4	1.7	12.3
2007	20.3	13.3	52.2	1.8	12.4

CHAPTER 4

CDI-EMR

HANDBOOK of ENERGY & ECONOMIC STATISTICS of INDONESIA

2007

- 4.1 Crude Oil Price
- 4.2 International Gas Price
- 4.3 Average Price of Export LPG, LNG and Coal FOB
- 4.4 Energy Price Per Energy Unit
- 4.5 Average Price of Coal Import

CHAPTER

4

4.1 Crude Oil Price

(US \$ per Barrel)

Crude Oil Type	2000	2001	2002	2003	2004	2005	2006	2007
SLC	28.53	23.99	25.11	29.04	36.30	53.92	64.24	72.94
Arjuna	28.65	24.29	24.35	28.81	36.90	55.07	65.52	72.38
Arun Kondensat	28.92	24.40	24.65	29.16	37.40	54.62	64.85	72.94
Attaka	29.09	24.75	24.89	29.41	37.60	57.51	67.59	75.69
Cinta	27.83	23.15	24.08	28.09	35.00	51.81	61.77	70.33
Duri	27.09	22.02	23.30	27.11	30.40	46.62	54.93	59.89
Handil Mix	n/a	24.42	24.48	28.96	37.10	55.23	65.67	72.53
Lalang	n/a	24.04	25.16	29.09	36.40	53.13	64.29	72.99
Widuri	27.87	23.10	24.08	28.05	35.00	51.19	61.94	70.41
Belida	29.07	24.74	24.74	29.19	37.30	56.54	67.56	75.71
Senipah Kondensat	29.05	24.40	24.65	29.17	39.95	54.62	65.57	73.03
Average	28.39	21.94	22.46	26.34	36.39	53.66	64.27	72.31

Source : Directorate General of Oil and Gas

4.2 International Gas Price

(US \$ /MMBTU)

Year	LNG CIF on Japan	Natural Gas			
		CIF on Uni Eropa	UK (Heren NBP Index)	USA (Henry Hub)	Canada (Alberta)
2000	4.72	3.25	2.71	4.23	3.75
2001	4.64	4.15	3.17	4.07	3.61
2002	4.27	3.46	2.37	3.33	2.57
2003	4.77	4.40	3.33	5.63	4.83
2004	5.18	4.56	4.46	5.85	5.03
2005	6.05	5.95	7.38	8.79	7.25
2006	7.14	8.69	7.87	6.76	5.83
2007	7.73	8.93	6.01	6.95	6.17

Source: BP Statistical Review of World Energy, 2007

4.3 Average Price of Export LPG, LNG and Coal FOB

Year	LPG	LNG	Coal
	US \$/Thousand Tons	US \$/MMBTU	US \$/Ton
2000	294.86	4.82	29.60
2001	252.97	4.31	32.07
2002	246.41	4.45	29.98
2003	278.42	4.84	28.63
2004	332.52	6.00	43.00
2005	443.02	7.19	36.48
2006	479.82	8.49	42.35
2007	624.40	9.04	41.63

4.4 Energy Price Per Energy Unit

Year	Gasoline		Avtur		Avgas		Kerosene	
	Rp/SBM	US\$/SBM	Rp/SBM	US\$/SBM	Rp/SBM	US\$/SBM	Rp/SBM	US\$/SBM
2000	197,340	20.57	179,945	18.75	306,141	31.91	59,048	6.15
2001	248,820	23.93	332,728	31.99	884,207	85.02	65,459	6.29
2002	300,300	33.59	354,797	39.69	766,613	85.75	101,225	11.32
2003	310,596	36.69	601,287	71.03	1,150,909	135.96	118,096	13.95
2004	310,596	33.43	580,746	62.51	1,118,885	120.44	118,096	12.71
2005	534,878	54.41	806,228	82.02	2,067,906	210.37	347,707	35.37
2006	772,201	85.61	974,757	108.07	2,423,480	268.68	337,416	37.41
2007	772,201	81.98	1,048,206	111.29	2,849,871	302.57	337,416	35.82

Year	Coal		Electricity (Average)					
			Household		Industry		Commercial	
	Rp/BOE	US\$/BOE	Rp/BOE	US\$/BOE	Rp/BOE	US\$/BOE	Rp/BOE	US\$/BOE
2000	35,961	3.75	338,238	35.25	493,507	51.43	620,734	64.69
2001	46,673	4.49	413,785	39.79	590,000	56.73	737,210	70.89
2002	51,384	5.75	640,767	71.67	722,577	80.83	966,998	108.17
2003	53,973	6.38	852,333	100.69	865,122	102.20	1,078,972	127.46
2004	53,956	5.81	909,886	97.94	912,15	98.19	1,113,083	119.82
2005	58,820	5.98	918,515	93.44	929,641	94.57	1,133,295	115.29
2006	78,523	8.71	926,020	102.66	1,013,442	112.35	1,092,023	121.07
2007	79,212	8.41	932,724	99.03	1,013,573	107.61	1,260,212	133.79

Note: *) Based on Current Price

ADD		IDO		Fuel Oil		LPG		Average of Refinery Product	
Rp/SBM	US\$/SBM	Rp/SBM	US\$/SBM	Rp/SBM	US\$/SBM	Rp/SBM	US\$/SBM	Rp/SBM	US\$/SBM
92,491	9.64	83,235	8.67	57,461	5.99	246	0.026	121,988	12.71
165,542	15.92	157,978	15.19	112,449	10.81	246	0.024	245,929	23.65
238,936	26.73	228,518	25.56	208,537	23.33	282	0.031	274,901	30.75
254,351	30.05	249,705	29.50	225,823	26.68	334	0.039	363,888	42.99
254,351	27.38	310,239	33.39	227,967	24.54	352	0.038	365,154	39.31
443,496	45.12	640,036	65.11	417,037	42.42	499	0.051	657,223	66.86
662,854	73.49	820,324	90.95	517,488	57.37	499	0.055	813,627	90.20
662,854	70.37	857,359	91.02	556,203	59.05	499	0.053	885,576	94.02

4.5 Average Price of Coal Import

Year	Import Total	Import Value (CIF)	Import Price (CIF)
	Ton	US \$	US \$/Ton
2000	140,116	5,837,447	41.66
2001	30,466	2,004,976	65.81
2002	20,026	1,627,954	81.29
2003	38,228	5,732,026	149.94
2004	97,183	15,474,720	159.23
2005	98,179	13,396,144	136.45
2006	110,683	13,731,442	124.06
2007	67,534	9,275,024	137.34

CDI-EMR

HANDBOOK of ENERGY & ECONOMIC STATISTICS of INDONESIA

2007

- 5.1.1 Energy Consumption in Industrial Sector (in Original Unit)
- 5.1.2 Energy Consumption in Industrial Sector (in Energy Unit)
- 5.1.3 Share of Energy Consumption in Industrial Sector
- 5.2.1 Energy Consumption in Household Sector (in Original Unit)
- 5.2.2 Energy Consumption in Household Sector (in Energy Unit)
- 5.2.3 Share of Energy Consumption in Household Sector
- 5.3.1 Energy Consumption in Commercial Sector (in Original Unit)
- 5.3.2 Energy Consumption in Commercial Sector (in Energy Unit)
- 5.3.3 Share of Energy Consumption in Commercial Sector
- 5.4.1 Energy Consumption in Transportation Sector (in Original Unit)
- 5.4.2 Energy Consumption in Transportation Sector (in Energy Unit)
- 5.4.3 Share of Energy Consumption in Transportation Sector
- 5.5.1 Energy Consumption in Other Sector (in Original Unit)
- 5.5.2 Energy Consumption in Other Sector (in Energy Unit)
- 5.5.3 Share of Energy Consumption in Other Sector

CHAPTER

5

5.1.1 Energy Consumption in Industrial Sector (in Original Unit)

Year	Biomass	Coal	Briquette	Gas	Fuel	
					Kerosene	ADO
					Kilo Liter	
Thousand Ton				MMSCF		
2000	25,667	8,586	24	483,438	711,774	5,729,941
2001	24,016	8,815	22	455,798	701,791	6,082,584
2002	22,762	9,214	23	448,261	667,247	5,985,416
2003	21,832	7,637	22	441,034	671,513	5,764,971
2004	20,417	13,177	23	473,695	676,827	6,626,385
2005	19,113	15,653	26	480,382	649,626	6,155,112
2006	20,313	21,201	27	461,277	572,676	5,399,470
2007	18,325	29,000	37	443,889	565,550	5,208,388

5.1.2 Energy Consumption in Industrial Sector (in Energy Unit)

Year	Biomasa	Coal	Briquette	Gas	Fuel	
					Kerosene	ADO
2000	58,981	36,060	100	86,826	4,219	37,171
2001	55,186	37,021	92	81,861	4,160	39,458
2002	52,305	38,698	98	80,508	3,955	38,828
2003	50,167	32,077	91	79,210	3,980	37,398
2004	46,917	55,344	95	85,076	4,012	42,986
2005	43,920	65,744	111	86,277	3,851	39,929
2006	46,676	89,043	111	82,845	3,394	35,027
2007	42,108	121,800	155	79,723	3,352	33,787

Fuel			LPG	Electricity
IDO	Fuel Oil	Total Fuel		
Kilo Liter			Thousand Ton	GWh
1,211,930	3,674,761	11,328,406	126	34,013
1,170,511	3,832,704	11,787,590	114	35,593
1,106,467	3,676,959	11,36,088	128	36,831
962,232	2,981,697	10,380,414	95	36,497
887,061	3,140,129	11,330,403	129	40,324
732,888	2,243,407	9,781,033	133	42,448
397,599	2,320,623	8,690,367	170	43,615
215,233	1,990,450	7,979,620	146	45,803

Thousand BOE

Fuel			LPG	Electricity	Total
IDO	Fuel Oil	Total Fuel			
8,008	25,581	74,979	1,073	20,850	278,869
7,735	26,680	78,033	972	21,819	274,984
7,311	25,596	75,690	1,093	22,578	270,970
6,358	20,756	68,493	808	22,373	253,218
5,862	21,859	74,718	1,101	24,719	287,969
4,843	15,617	64,239	1,131	26,021	287,442
2,627	16,154	57,203	1,453	26,736	304,068
1,422	13,856	52,418	1,242	28,077	325,522

5.1.3 Share of Energy Consumption in Industrial Sector

(%)

Year	Coal	Briquette	Gas	Fuel				LPG	Electricity
				Kerosene	ADO	IDO	Fuel Oil		
2000	16.40	0.05	39.49	1.92	16.90	3.64	11.63	0.49	9.48
2001	16.84	0.04	37.24	1.89	17.95	3.52	12.14	0.44	9.93
2002	17.70	0.04	36.82	1.81	17.76	3.34	11.71	0.50	10.33
2003	15.80	0.04	39.01	1.96	18.42	3.13	10.22	0.40	11.02
2004	22.96	0.04	35.29	1.66	17.83	2.43	9.07	0.46	10.25
2005	27.00	0.05	35.43	1.58	16.40	1.99	6.41	0.46	10.69
2006	34.59	0.04	32.19	1.32	13.61	1.02	6.28	0.56	10.39
2007	42.98	0.05	28.13	1.18	11.92	0.50	4.89	0.44	9.91

5.2.1 Energy Consumption in Household Sector

(in Original Unit)

Year	Biomass	Gas	Kerosene	LPG	Electricity
	Thousand Ton	MMSCF	Kilo Liter	Thousand Ton	GWh
2000	90,783	449	10,665,049	696	30,563
2001	92,399	487	10,515,453	724	33,340
2002	94,201	535	9,997,862	748	33,994
2003	95,904	553	10,061,787	823	35,753
2004	97,230	691	10,141,412	798	38,588
2005	98,245	693	9,733,831	704	41,184
2006	99,302	711	8,580,829	788	43,753
2007	100,466	737	8,474,054	979	47,325

5.2.2 Energy Consumption in Household Sector

(in Energy Unit)

Thousand BOE

Year	Biomass	Gas	Kerosene	LPG	Electricity	Total
2001	212,323	87	62,329	6,170	20,437	301,347
2002	216,465	96	59,261	6,373	20,838	303,033
2003	220,377	99	59,640	7,013	21,917	309,046
2004	223,425	124	60,112	6,798	23,655	314,115
2005	225,758	124	57,696	5,998	25,246	314,823
2006	228,186	128	50,862	6,719	26,821	312,716
2007	230,860	132	50,229	8,345	29,010	318,576

5.2.3 Share of Energy Consumption in Household Sector

(%)

Year	Gas	Kerosene	LPG	Electricity
2000	0,092	71,866	6,743	21,299
2001	0,098	70,014	6,931	22,957
2002	0,111	68,456	7,362	24,071
2003	0,112	67,261	7,909	24,717
2004	0,137	66,284	7,496	26,083
2005	0,140	64,780	6,735	28,345
2006	0,151	60,171	7,949	31,729
2007	0,151	57,263	9,514	33,073

5.3.1 Energy Consumption in Commercial Sector

(in Original Unit)

Year	Biomass	Gas	Fuel				LPG	Electricity
			Kerosene	ADO	IDO	Total		
2000	632	745	588,919	825,064	6,503	1,420,486	147	14,588
2001	629	821	580,658	875,842	6,281	1,462,781	134	15,587
2002	625	913	552,077	861,851	5,937	1,419,865	150	16,264
2003	622	882	555,607	830,108	5,163	1,390,878	111	18,191
2004	619	972	560,004	954,145	4,760	1,518,909	151	21,185
2005	616	1,057	537,497	886,286	3,933	1,427,715	155	23,400
2006	613	1,145	473,829	777,479	2,134	1,253,442	146	25,241
2007	610	1,526	467,933	749,965	1,155	1,219,053	157	28,119

5.3.2 Energy Consumption in Commercial Sector

(in Energy Unit)

(Thousand BOE)

Year	Biomass	Gas	Fuel				LPG	Electricity	Total
			Kerosene	ADO	IDO	Total Fuel			
2000	1,452	134	3,491	5,352	43	8,886	1,257	8,943	20,670
2001	1,444	147	3,442	5,682	42	9,165	1,138	9,555	21,450
2002	1,437	164	3,272	5,591	39	8,903	1,279	9,970	21,752
2003	1,430	158	3,293	5,385	34	8,712	946	11,151	22,397
2004	1,423	174	3,319	6,190	31	9,540	1,288	12,986	25,412
2005	1,416	190	3,186	5,749	26	8,961	1,324	14,344	26,235
2006	1,409	206	2,809	5,044	14	7,866	1,241	15,473	26,195
2007	1,402	274	2,774	4,865	8	7,646	1,337	17,237	27,896

5.3.3 Share of Energy Consumption in Commercial Sector

(%)

Year	Gas	Fuel			LPG	Electricity
		Kerosene	ADO	IDO		
2000	0,696	18,163	27,849	0,224	6,538	46,530
2001	0,737	17,204	28,401	0,207	5,689	47,762
2002	0,807	16,108	27,521	0,193	6,296	49,075
2003	0,755	15,707	25,683	0,163	4,510	53,182
2004	0,727	13,837	25,801	0,131	5,370	54,133
2005	0,765	12,837	23,165	0,105	5,334	57,794
2006	0,829	11,331	20,348	0,057	5,008	62,426
2007	1,034	10,468	18,362	0,029	5,048	65,058

5.4.1 Energy Consumption in Transportation Sector

(in Original Unit)

Year	Gas	Fuel						
		Avgas	Avtur	Premium	Bio Premium	Pertamax	Bio Permatax	Pertamax Plus
	MMSCF	Kilo Liter						
2000	968	3,550	1,202,717	12,059,026	0	0	0	0
2001	773	3,430	1,473,503	12,705,861	0	0	0	0
2002	654	3,488	1,597,291	13,323,304	0	0	0	0
2003	599	3,556	1,929,351	13,746,726	0	371,238	0	107,441
2004	471	3,416	2,437,923	15,337,655	0	487,562	0	121,866
2005	238	3,070	2,322,634	16,621,765	0	248,875	0	99,326
2006	233	3,390	2,428,078	15,941,837	1,624	505,730	16	128,289
2007	273	2,163	2,520,040	16,962,198	55,970	472,284	9,956	158,070

5.4.2 Energy Consumption in Transportation Sector

Year	Gas	Fuel						
		Avgas	Avtur	Premium	Bio Premium	Pertamax	Bio Permatax	Pertamax Plus
2000	174	20	7,085	70,274	0	0	0	0
2001	139	19	8,680	74,043	0	0	0	0
2002	118	19	9,409	77,642	0	0	0	0
2003	108	20	11,365	80,109	0	2,163	0	626
2004	85	19	14,361	89,380	0	2,841	0	710
2005	43	17	13,682	96,863	0	1,450	0	579
2006	42	19	14,303	92,901	9	2,947	0	748
2007	49	12	14,845	98,847	326	2,752	58	921

Dex	Fuel						Electricity
	Bio Solar	Kerosene	ADO	IDO	Fuel Oil	Total Fuel	
	Kilo Liter						GWh
0	0	4,708	9,365,388	48,356	71,474	22,755,220	44
0	0	4,642	9,941,771	46,704	74,546	24,250,457	49
0	0	4,414	9,782,952	44,148	71,517	24,827,114	53
0	0	4,442	9,422,642	38,393	57,994	25,681,783	53
0	0	4,477	10,830,594	35,394	61,075	29,319,962	55
0	0	4,297	10,060,316	29,242	43,634	29,433,160	55
1,344	217,048	3,788	8,825,244	15,864	45,136	28,117,389	67
1,288	877,457	3,741	8,512,927	8,588	38,714	29,623,396	85

Thousand SBM

Dex	Fuel						Electricity	Total
	Bio Solar	Kerosene	ADO	IDO	Fuel Oil	Total Fuel		
0	0	28	60,754	320	498	138,978	27	139,179
0	0	28	64,493	309	519	148,091	30	148,260
0	0	26	63,463	292	498	151,349	33	151,499
0	0	26	61,126	254	404	156,093	33	156,233
0	0	27	70,259	234	425	178,256	34	178,374
0	0	25	65,262	193	304	178,376	34	178,452
9	1,408	22	57,250	105	314	170,036	41	170,119
8	5,692	22	55,224	57	269	179,035	52	179,136

5.4.3 Share of Energy Consumption in Transportation Sector

Year	Gas	Fuel						
		Avgas	Avtur	Premium	Bio Premium	Pertamax	Bio Permatax	Pertamax Plus
2000	0,125	0,014	5.09	50.49	0,000	0,000	0,000	0,000
2001	0,094	0,013	5.85	49.94	0,000	0,000	0,000	0,000
2002	0,078	0,013	6.21	51.25	0,000	0,000	0,000	0,000
2003	0,069	0,013	7.27	51.28	0,000	1,385	0,000	0,401
2004	0,047	0,011	8.05	50.11	0,000	1,593	0,000	0,398
2005	0,024	0,010	7.67	54.28	0,000	0,813	0,000	0,324
2006	0,025	0,011	8.41	54.61	0,006	1,732	0,000	0,439
2007	0,027	0,007	8.29	55.18	0,182	1,536	0,032	0,514

5.5.1 Energy Consumption in Other Sector
(in Original Unit)

Year	Mogas	Kerosene	ADO	IDO	Fuel Oil	Total Fuel
	Kilo Liter					
2000	370,265	487,325	2,906,942	181,019	590,966	4,536,516
2001	390,125	480,490	3,085,847	174,832	616,365	4,747,660
2002	409,084	456,839	3,036,551	165,266	591,319	4,659,059
2003	422,084	459,760	2,924,714	143,723	479,509	4,429,790
2004	470,933	463,398	3,361,731	132,495	504,987	4,933,544
2005	510,361	444,774	3,122,642	109,467	360,779	4,548,023
2006	489,484	392,089	2,739,286	59,387	373,197	4,053,443
2007	520,813	387,211	2,642,345	32,148	320,099	3,902,616

(%)

Dex	Fuel						Electricity
	Bio Solar	Kerosene	ADO	IDO	Fuel Oil	Total Fuel	
0,000	0,000	0,020	43,65	0,23	0,36	99,86	0,02
0,000	0,000	0,019	43,50	0,21	0,35	99,89	0,02
0,000	0,000	0,017	41,89	0,19	0,33	99,90	0,02
0,000	0,000	0,017	39,12	0,16	0,26	99,91	0,02
0,000	0,000	0,015	39,39	0,13	0,24	99,93	0,02
0,000	0,000	0,014	36,57	0,11	0,17	99,96	0,02
0,005	0,828	0,013	33,65	0,06	0,18	99,95	0,02
0,005	3,178	0,012	30,83	0,03	0,15	99,94	0,03

5.5.2 Energy Consumption in Other Sector

(in Energy Unit)

Year	Fuel					
	Mogas	Kerosene	ADO	IDO	Fuel Oil	Total Fuel
2000	2,158	2,889	18,858	1,196	4,114	29,214
2001	2,273	2,848	20,018	1,155	4,291	30,586
2002	2,384	2,708	19,698	1,092	4,116	29,999
2003	2,460	2,725	18,973	950	3,338	28,445
2004	2,744	2,747	21,808	875	3,515	31,690
2005	2,974	2,636	20,257	723	2,511	29,102
2006	2,852	2,324	17,770	392	2,598	25,937
2007	3,035	2,295	17,141	212	2,228	24,912

5.5.3 Share of Energy Consumption in Other Sector

Year	Mogas	Kerosene	ADO	IDO	Fuel Oil
2000	7.39	9.89	64.55	4.09	14.08
2001	7.43	9.31	65.45	3.78	14.03
2002	7.95	9.03	65.66	3.64	13.72
2003	8.65	9.58	66.70	3.34	11.73
2004	8.66	8.67	68.82	2.76	11.09
2005	10.22	9.06	69.61	2.49	8.63
2006	11.00	8.96	68.51	1.51	10.02
2007	12.18	9.21	68.81	0.85	8.94

CDI-EMR

HANDBOOK OF ENERGY & ECONOMIC STATISTICS of INDONESIA

2007

- 6.1.1 Coal Reserves
- 6.1.2 Coal Supply
- 6.1.3 Indonesia Coal Export by Destination
- 6.1.4 Coal Sales
- 6.2.1 Oil Reserves
- 6.2.2 Refinery Capacity in 2006
- 6.2.3 Domestic Oil Fuels sales
- 6.2.4 Crude Oil Supply and Demand
- 6.2.5 Crude Oil Refinery Production
- 6.2.6 Import of Refined Products
- 6.2.7 Export of Refined Products
- 6.2.8 Indonesia Crude Oil Export by Destination
- 6.2.9 LPG Supply
- 6.3.1 Natural Gas Reserves
- 6.3.2 Natural Gas Production
- 6.3.3 Natural Gas and LNG Supply Demand
- 6.3.4 City Gas Sales and Utilization per Customer (in Original Unit)
- 6.3.5 City Gas Sales and Utilization per Customer (in Energy Unit)
- 6.4.1 Power Plant Installed Capacity
- 6.4.2 Power Plant Production
- 6.4.3 Electricity Sales
- 6.4.4 Fuel Consumption of Power Plant
- 6.4.5 Share of Fuel Consumption of Power Plant
- 6.4.6 PLN Electricity System Performance
- 6.5.1 Geothermal Resources
- 6.5.2 Geothermal Power Plant Capacity
- 6.5.3 Geothermal Steam Production
- 6.5.4 Geothermal Electricity Production

CHAPTER

6

6.1.1 Coal Reserves*per 1 January 2007*

(Million Ton)

Province	Resources					Reserves
	Hypothetic	Inferred	Indicated	Measured	Total	
Banten	5.47	5.75	0.00	2.09	13.31	0.00
Jawa Barat	0.00	0.00	0.00	0.00	0.00	0.00
Jawa Tengah	0.00	0.82	0.00	0.00	0.82	0.00
Jawa Timur	0.00	0.08	0.00	0.00	0.08	0.00
Nanggroe Aceh Darussalam	0.00	346.35	13.40	90.40	450.15	0.00
Sumatra Utara	0.00	7.00	0.00	19.97	26.97	0.00
Riau	12.79	467.89	6.04	1,280.82	1,767.54	1,926.24
Sumatra Barat	19.70	475.94	42.72	188.55	726.91	36.07
Bengkulu	15.15	113.09	8.11	62.30	198.65	21.12
Jambi	190.84	1,462.03	343.00	173.20	2,169.07	9.00
Sumatra Selatan	19,909.99	10,970.04	10,321.10	5,883.94	47,085.07	11,910.19
Lampung	0.00	106.95	0.00	0.00	106.95	0.00
Kalimantan Barat	42.12	482.60	1.32	1.48	527.52	0.00
Kalimantan Tengah	122.72	974.40	17.33	471.89	1,586.34	48.59
Kalimantan Selatan	0.00	5,517.81	334.48	6,243.54	12,095.83	1,684.56
Kalimantan Timur	3,224.44	14,054.12	2,540.69	6,439.13	26,258.38	3,075.48
Sulawesi Selatan	0.00	144.93	33.09	53.10	231.12	0.00
Sulawesi Tengah	0.00	1.98	0.00	0.00	1.98	0.00
Maluku Utara	0.00	2.13	0.00	0.00	2.13	0.00
Irian Jaya Barat	89.40	61.86	0.00	0.00	151.26	0.00
Papua	0.00	2.16	0.00	0.00	2.16	0.00
TOTAL	23,632.62	35,197.93	13,661.28	20,910.41	93,402.24	18,711.25

Source : Agency Geology

6.1.2 Coal Supply

(Ton)

Year	Production			Export	Import *)
	Steam Coal	Anthracite	Total		
2000	77,014,956	25,229	77,040,185	58,460,492	140,116
2001	92,499,653	40,807	92,540,460	65,281,086	30,466
2002	103,286,403	42,690	103,329,093	74,177,926	20,026
2003	114,274,243	3,952	114,278,000	85,680,621	38,228
2004	132,352,025	0	132,352,025	93,758,806	97,183
2005	152,722,438	0	152,722,438	110,789,700	98,179
2006	193,761,311	0	193,761,311	143,632,865	110,683
2007	217,409,663	0	217,409,663	160,484,237	67,534

Sources : Directorate General of Mineral, Coal and Geothermal
Dept of Trade

6.1.3 Indonesia Coal Export by Destination

Year	Coal		
	Japan	Taiwan	Other Asian
2000	13,177.44	13,519.59	19,819.47
2001	15,216.26	11,506.81	20,440.57
2002	16,529.76	13,099.99	30,605.89
2003	17,992.18	14,144.14	34,021.52
2004	19,013.41	16,677.88	34,686.66
2005	24,237.43	14,524.21	41,393.85
2006	23,128.07	17,070.46	49,589.54
2007	22,609.17	16,748.40	48,264.85

6.1.4 Coal Sales

Year	Total	Iron & Steel	Power Plant
2000	22,340,845	30,893	13,718,285
2001	27,387,916	220,666	19,517,366
2002	29,257,003	236,802	20,018,456
2003	30,657,940	201,907	22,995,614
2004	36,081,734	119,181	22,882,190
2005	41,350,736	221,309	25,669,226
2006	48,995,069	299,990	27,758,317
2007	61,470,000	376,372	32,420,000

(Thousand Ton)

Coal			Total
Europe	Pacific	Others	
8,861.56	1,876.11	1,206.32	58,460.49
10,226.65	2,160.83	5,729.97	65,281.09
9,294.60	2,555.17	1,450.95	73,536.35
12,786.77	3,118.10	3,617.91	85,680.62
11,987.43	3,583.98	7,809.44	93,758.81
14,824.32	3,927.70	11,882.19	110,789.70
21,004.55	5,263.14	27,577.11	143,632.86
21,554.67	2,367.15	48,939.99	160,484.23

(Ton)

Ceramic & Cement	Pulp & Paper	Briquette	Others
2,228,583	780,676	36,799	5,545,609
5,142,737	822,818	31,265	2,628,333
4,684,970	499,585	24,708	3,792,481
4,773,621	1,704,498	24,976	957,323
5,549,309	1,160,909	22,436	6,347,709
5,152,162	1,188,323	28,216	9,091,501
5,300,552	1,216,384	36,018	14,383,808
6,500,000	2,000,000	50,000	20,123,628

6.2.1. Oil Reserves*per 1 January 2007*

(Billion Barrel)

Year	Reserves		
	Proven	Potential	Total
2000	5.12	4.49	9.61
2001	5.10	4.65	9.75
2002	4.72	5.03	9.75
2003	4.73	4.40	9.13
2004	4.30	4.31	8.61
2005	4.19	4.44	8.63
2006	4.37	4.56	8.93
2007	3.99	4.41	8.40

Source : Directorate General of Oil and Gas

6.2.2 Refinery Capacity in 2007

(MBSD)

Refinery	Refinery Capacity
Pangkalan Brandan	0.00
Dumai	120.00
Sungai Pakning	50.00
Musi	135.20
Cilacap	348.00
Balikpapan	260.00
Balongan	125.00
Cepu	3.80
Kasim	10.00
Tuban (TPPI)	100.00
Total	1,152.00

Source : Directorate General of Oil and Gas

6.2.3 Domestic Oil Fuels Sales

	2000	2001	2002
Avgas	3,550	3,430	3,488
Avtur	1,202,717	1,473,503	1,597,291
Premium	11,877,659	12,538,350	13,263,285
Kerosene	12,457,776	12,283,033	11,678,439
ADO	22,072,256	23,359,617	24,212,847
IDO	1,472,168	1,426,877	1,360,379
Fuel Oil	6,076,212	6,162,485	6,260,273
Premix (94)	389,334	396,631	364,006
Super TT	55,418	86,217	102,882
BB2L	106,880	74,788	2,215
Pertamax Plus	0	0	0
Pertamax	0	0	0
Pertadex	0	0	0
Bio Premium	0	0	0
Bio Pertamax Plus	0	0	0
Bio Pertamax	0	0	0
Bio Solar	0	0	0
Total Fuel	55,713,970	57,804,931	58,845,105

Source : Directorate General of Oil and Gas

2003	2004	2005	2006	2007
3,556	3,416	3,070	3,390	2,163
1,929,351	2,437,923	2,322,634	2,428,078	2,520,040
14,150,246	15,808,588	17,132,126	16,431,321	17,483,011
11,753,109	11,846,119	11,370,026	10,023,211	9,898,488
24,064,458	26,487,751	27,056,409	25,163,603	24,779,597
1,183,478	1,093,414	891,785	497,819	269,466
6,215,566	5,754,507	4,802,535	4,820,184	5,136,408
14,972	0	0	0	0
3,592	0	0	0	0
0	0	0	0	0
107,441	121,866	99,326	128,289	158,070
371,238	487,562	248,875	505,730	472,284
0	0	0	1,344	1,288
0	0	0	1,624	55,970
0	0	0	0	0
0	0	0	16	9,956
0	0	0	217,048	877,457
59,797,007	64,041,146	63,926,786	60,221,657	61,664,198

6.2.4 Crude Oil Supply and Demand

Year	Production		Export	
	Thousand bbl	Growth (%)	Thousand bbl	Growth (%)
2000	517,489	-5.1	223,500	-21.7
2001	489,306	-5.4	241,612	8.1
2002	456,026	-6.8	218,115	-9.7
2003	419,255	-8.1	189,095	-13.3
2004	400,554	-4.5	178,869	-5.4
2005	386,483	-3.5	159,703	-10.7
2006	367,049	-5.0	134,960	-15.5
2007	348,348	-5.1	135,267	0.2

Source : Directorate General of Oil and Gas

Import		Oil Refinery Input	
Thousand bbl	Growth (%)	Thousand bbl	Thousand bbd
78,615	-7.2	360,232	986.9
117,168	49.0	361,396	990.1
124,148	6.0	357,971	980.7
137,127	10.5	358,519	982.2
148,490	8.3	366,033	1,002.8
164,007	10.4	357,656	979.9
116,232	-29.1	333,136	912.7
115,812	-0.4	330,027	904.2

6.2.5 Crude Oil Refinery Production

(Thousand KL)

Year	Premium	Avtur + PS	Avgas	Kerosene	ADO	IDO	Fuel Oil	Pertamax Plus	Pertamax	Pertadex	Total Fuel
2000	11,742	1,342	0,00	9,206	15,249	1,294	5,165	0	0	0	43,999
2001	12,180	1,371	8,24	9,221	15,253	1,448	5,579	0	0	0	45,059
2002	11,653	1,482	5,22	8,952	14,944	1,340	5,931	0	0	0	44,307
2003	11,559	1,701	5,10	9,310	15,035	1,239	5,386	0	0	0	44,236
2004	11,438	1,783	5,13	9,034	15,685	1,622	4,923	48	483	0	45,021
2005	11,291	1,699	5,38	8,542	15,047	1,361	4,413	69	270	0	42,696
2006	11,162	1,694	3,34	8,853	14,639	552	3,841	105	344	0	40,994
2007	11,343	1,302	4,70	8,257	13,057	360	3,942	151	438	3	38,859

(Thousand barel)

Year	Secondary Fuel				Non Fuel	Lubricant	LPG	HDMC	Total Production
	Naphtha	LCMC	LSHR	Total					
2000	16,647	1,666	38,618	56,931	8,172	2,676	8,378	0	352,880
2001	20,180	143	34,211	54,534	7,922	2,712	8,160	0	356,717
2002	16,230	0	28,363	44,593	7,796	2,252	8,199	0	341,498
2003	18,306	0	32,050	50,357	11,402	2,867	8,702	0	351,539
2004	18,737	0	29,189	47,926	9,284	2,823	9,380	0	352,566
2005	21,216	0	28,965	50,181	9,634	2,404	8,457	0	339,205
2006	25,405	0	31,070	56,475	11,460	2,734	8,971	0	337,461
2007	25,155	0	29,472	54,627	12,202	2,814	8,905	10,597	333,540

Source: Directorate General of Oil and Gas

6.2.6 Import of Refined Products

(Thousand KL)

Year	Avtur	Premium	Pertamax Plus	Pertamax	DPK	HOMC	ADO	Fuel Oil	IDO	Total Fuel
2000	0	0	0	0	2,966	1,984	7,194	2,326	0	14,470
2001	0	0	0	0	2,718	2,410	7,879	1,166	0	14,174
2002	0	0	0	0	2,916	3,154	9,637	1,232	0	16,940
2003	0	0	0	0	2,516	3,076	9,955	1,512	0	17,058
2004	679	772	0	0	2,907	5,804	12,339	1,896	0	24,398
2005	654	6,202	0	3	2,604	1,076	14,470	1,493	0	26,502
2006	796	5,841	0	69	861	1,056	10,846	1,682	0	21,152
2007	1,176	7,069	27	35	1,080	108	12,367	2,163	8	24,032

Source : Directorate General of Oil and Gas

Note: DPK = Dual Purpose Kerosene (Avtur and Kerosene)

6.2.7 Export of Refined Products

(Thousand Barrel)

Year	Gasoline (Premium)	Kerosene	ADO	Fuel Oil	Naphtha	Lubricant	Other Product	Total
2000	0.0	0.0	0.0	0	11,390	0.0	55,694	67,085
2001	0.0	0.0	0.0	0	13,448	147.5	41,522	55,118
2002	0.0	0.0	0.0	3,253	10,993	417.3	40,826	55,490
2003	0.0	0.0	0.0	2,813	18,715	674.0	41,510	63,712
2004	0.0	0.0	0.0	4,940	11,763	513.0	47,285	64,501
2005	51.2	0.5	114.9	3,234	6,531	64.2	33,358	43,353
2006	37.0	0.8	78.4	204	947	87.3	36,159	37,513
2007	47.4	0.7	988.1	851	6,163	8.0	35,658	41,829

Source : Directorate General of Oil and Gas

6.2.8 Indonesia Crude Oil Export by Destination

(Thousand bbl)

Year	Japan	USA	Korea	Taiwan	Singapore	Others	Total
2000	74,807	14,153	37,408	9,157	15,656	72,320	223,500
2001	77,866	15,349	51,965	8,167	20,517	67,748	241,612
2002	61,752	15,864	43,977	7,023	14,648	74,852	218,115
2003	61,285	12,051	40,822	5,528	11,410	57,999	189,095
2004	52,040	11,930	42,111	6,029	8,761	57,998	178,869
2005	43,628	6,256	40,108	2,639	7,612	59,209	159,453
2006	42,203	8,950	23,723	7,249	5,480	47,355	134,960
2007	45,892	4,464	18,051	3,779	7,796	47,154	127,135

Source : Directorate General of Oil and Gas

6.2.9 LPG Supply

(Ton)

Year	Production			Export	Import	Total Supply
	Gas Refinery	Oil Refinery	Total			
2000	1,321,037	766,632	2,087,669	1,253,197	0	834,472
2001	1,415,534	772,143	2,187,677	1,423,928	0	763,749
2002	1,296,505	814,177	2,110,682	1,217,410	0	893,272
2003	1,148,379	778,939	1,927,318	1,033,672	111,178	1,004,824
2004	1,130,540	896,395	2,026,935	981,780	32,994	1,078,150
2005	995,097	832,717	1,827,814	1,015,366	22,166	834,614
2006	573,093	855,397	1,428,490	289,698	68,997	1,207,790
2007	546,734	862,696	1,409,430	268,511	137,760	1,278,679

Source : Directorate General of Oil and Gas

6.3.1. Natural Gas Reserves per 1 January 2007

(TSCF)

Year	Proven	Potential	Total
2000	94.75	75.56	170.31
2001	92.10	76.05	168.15
2002	90.30	86.29	176.59
2003	91.17	86.96	178.13
2004	97.81	90.53	188.34
2005	97.26	88.54	185.80
2006	94.00	93.10	187.10
2007	106.00	59.00	165.00

Source : Directorate General of Oil and Gas

6.3,2 Natural Gas Production

(MMSCF)

Year	Assosiated	Non Assosiated	Total
2000	705,979	2,195,323	2,901,302
2001	716,930	2,089,154	2,806,084
2002	720,125	2,316,230	3,036,355
2003	789,202	2,366,041	3,155,243
2004	772,812	2,231,133	3,003,945
2005	795,224	2,190,117	2,985,341
2006	708,715	2,245,281	2,953,997
2007	433,630	2,371,910	2,805,540

Source : Directorate General of Oil and Gas

6.3.3 Natural Gas and LNG Supply and Demand

Year	Natural Gas Production	Gas Lift & Reinjection	Own Use	Flare	Utilization	
					LNG Plant	LPG Plant
(MMSCF)						
2000	2,901,302	237,280	157,238	172,883	1,584,365	31,832
2001	2,806,084	219,191	152,677	186,380	1,489,935	12,807
2002	3,036,355	202,875	170,089	176,585	1,656,472	26,901
2003	3,155,243	228,019	168,120	148,709	1,719,127	24,429
2004	3,003,945	206,659	151,041	134,997	1,607,970	28,661
2005	2,985,341	199,890	139,245	107,236	1,511,335	24,578
2006	2,953,997	185,307	142,384	112,537	1,436,093	32,879
2007	2,805,540	147,303	136,952	97,912	1,300,348	35,096

Source : Directorate General of Oil and Gas

6.3.4 City Gas Sales and Utilization

Year	Sales (million M ³)				Number of Customer	
	Household	Industry and Commercial	Transportation	Total	Household	Industry
2000	12.74	1,907.88	27.44	1,948	42,991	594
2001	13.51	2,116.60	21.91	2,152	48,401	626
2002	15.00	2,442.24	19.72	2,477	51,943	646
2003	15.66	2,690.19	17.14	2,723	64,889	675
2004	19.00	2,918.00	13.26	2,950	75,244	677
2005	19.32	3,125.43	6.68	3,151	77,833	723
2006	19.82	3,277.98	6.55	3,304	79,736	723
2007	20.39	4,267.06	7.36	4,295	81,294	873

Source : PT.PGN

Utilization					Export LNG
Refinery	City Gas	Industry	Electricity	Export Gas	
(MMSCF)					(ton)
32,277	69,370	483,438	223,564	0	27,321,020
29,437	76,671	455,798	254,238	31,967	24,343,678
30,879	86,768	448,261	196,300	82,619	26,184,740
22,776	95,545	441,034	187,187	118,112	26,077,500
20,795	105,094	473,695	169,457	129,342	25,237,867
16,155	108,193	480,382	175,222	181,247	23,676,765
15,159	116,304	461,277	169,269	161,555	22,400,121
24,972	321,281	443,889	183,329	226,184	20,851,609

Number of Customer		Specific Consumption (Thousand M ³)		
Commercial	Total	Household	Industry and Commercial	Average Uses
1,053	44,638	0,2964	1,158	43.03
1,160	50,187	0,2791	1,185	42.44
1,330	53,919	0,2889	1,236	45.57
1,305	66,869	0,2413	1,359	40.46
1,158	77,079	0,2525	1,590	38.10
1,412	79,968	0,2482	1,464	39.33
1,463	81,922	0,2485	1,500	40.26
1,468	83,635	0,2508	1,823	51.26

6.4.1 PLN Power Plant Installed Capacity

Tahun	Hydro PP	Steam PP	Gas PP	Combined Gas Steam PP
2000	3,015.24	6,770.00	1,203.37	6,863.22
2001	3,105.76	6,900.00	1,224.72	6,863.22
2002	3,155.17	6,900.00	1,224.72	6,863.22
2003	3,167.73	6,900.00	1,224.72	6,863.22
2004	3,199.44	6,900.00	1,481.57	6,560.97
2005	3,220.96	6,900.00	2,723.63	6,280.97
2006	3,529.11	8,220.00	2,727.22	7,020.97
2007	3,501.54	8,534.00	2,783.62	7,020.97

Source : PLN Statistics

(MW)

Geothermal PP	Diesel PP	Combined Oil-Gas PP	Wind PP	Total
360.00	2,549.85	0.00	0.00	20,761.68
380.00	2,585.12	0.00	0.00	21,058.82
380.00	2,589.12	0.00	0.00	21,112.23
380.00	2,670.62	0.00	0.00	21,206.30
395.00	2,933.43	0.00	0.00	21,470.41
395.00	2,994.54	12.00	0.00	22,527.10
0.00	2,941.49	12.00	0.00	24,450.79
415.00	2,956.25	12.00	0.10	25,223.48

6.4.2 Power Plant Production

Year	PLN						Gas PP
	Hydro PP	Geothermal PP	Steam PP			Total	
			Coal	Oil	Gas		
2000	9,110	2,649	28,776	6,055	3,598	38,429	1,252
2001	10,651	2,982	29,330	6,557	3,489	39,376	1,459
2002	8,834	3,187	29,313	8,884	835	39,032	2,229
2003	8,472	2,959	31,737	9,108	1,334	42,178	2,486
2004	8,943	3,147	30,806	9,636	1,204	41,646	3,179
2005	9,831	3,006	33,253	8,180	835	42,268	6,039
2006	8,759	3,141	38,362	8,575	828	47,764	5,031
2007	10,627	3,188	41,880	9,179	1,151	52,209	5,148

Year	PLN Electricity Purchase from Captive Power & IPP					
	Hydro PP	Geothermal PP	Steam PP			Total
			Coal	Gas	Biomass	
2000	906	2,220	5,226	0	6	5,232
2001	1,004	3,049	8,383	0	8	8,391
2002	1,099	3,051	13,616	0	11	13,627
2003	627	3,335	14,722	1,492	15	20,192
2004	731	3,509	17,405	12	20	17,437
2005	928	3,598	18,521	165	22	18,728
2006	864	3,517	20,268	27	32	20,327
2007	659	3,833	21,937	86	36	22,060

(GWh)

PLN				
Combined Gas-Steam PP	Diesel PP	Combined Oil-Gas PP	Wind PP	Sub-Total
26,397	6,355	0	0	84,190
27,366	6,520	0	0	88,355
28,803	7,209	0	0	89,293
28,409	7,977	0	0	92,481
30,700	8,577	0	0	96,192
31,272	8,866	0	0	101,282
30,918	8,855	0	0	104,469
31,374	8,573	121	0.02	111,241

(GWh)

PLN Electricity Purchase from Captive Power & IPP				Grand Total
Combined Gas-Steam PP	Diesel PP	Sub-Total	Total	
682	94	9,135	9,135	93,325
773	88	13,304	13,304	101,659
925	221	18,923	18,923	108,217
1,511	283	21,986	21,986	114,467
1,947	347	23,970	23,970	120,162
2,681	151	26,087	26,087	127,369
3,578	354	28,640	28,640	133,108
4,175	472	31,200	31,200	142,441

6.4.3 Electricity Sales

(GWh)

Year	Electricity Sales Per Tariff Segment						
	Household	Commercial	Industry	Street Lighting	Social	Government	Total
2000	30,563.42	10,575.97	34,013.22	1,070.85	1,643.52	1,297.83	79,164.81
2001	33,339.78	11,395.35	35,593.25	1,128.82	1,781.55	1,281.63	84,520.38
2002	33,993.56	11,845.04	36,831.30	1,294.47	1,842.89	1,281.49	87,088.75
2003	35,753.05	13,223.84	36,497.25	1,512.02	2,021.60	1,433.19	90,440.95
2004	38,588.28	15,257.73	40,324.26	2,044.59	2,237.86	1,644.74	100,097.46
2005	41,184.29	17,022.84	42,448.36	2,221.24	2,429.84	1,725.66	107,032.23
2006	43,753.17	18,415.52	43,615.45	2,414.13	2,603.64	1,807.92	112,609.83
2007	47,324.91	20,608.47	45,802.51	2,585.86	2,908.71	2,016.37	121,246.83

Source : PLN Statistic

6.4.4 Fuel Consumption of PLN Power Plant

Year	Coal	HSD	IDO	FO	Natural Gas
	(Ton)	(KL)	(KL)	(KL)	(MMSCF)
2000	13,135,584	3,141,917	23,146	1,858,568	228,838
2001	14,027,713	3,575,348	30,457	1,793,283	222,421
2002	14,054,377	4,625,521	40,682	2,300,603	192,927
2003	15,260,305	5,024,362	31,573	2,557,546	184,304
2004	15,412,738	6,299,706	36,935	2,502,598	176,436
2005	16,900,972	7,626,201	27,581	2,258,776	143,050
2006	19,084,438	7,586,916	23,977	2,387,622	157,894
2007	21,466,348	7,874,290	13,558	2,801,128	171,209

Source : PLN Statistics

6.4.5 Share of Fuel Consumption of PLN Power Plant

(%)

Year	Type of Fuel			Type of Fuel	
	Coal	HSD	IDO	FO	Natural Gas
2000	44.09	13.62	0.12	10.10	32.08
2001	45.42	14.95	0.15	9.40	30.08
2002	44.10	18.74	0.20	11.69	25.28
2003	45.37	19.29	0.14	12.31	22.89
2004	44.00	23.23	0.16	11.57	21.04
2005	46.40	27.04	0.12	10.04	16.40
2006	48.46	24.88	0.09	9.82	16.75
2007	49.53	23.46	0.05	10.46	16.50

Source : PLN Statistics

6,4,6 PLN Electricity System Performance

Year	Average Thermal Efficiency	Capacity Factor	Load Factor	Peak Load	Transmission & Distribution Losses
	(%)			(MW)	(%)
2000	34.66	46.29	69.54	15,320	11.65
2001	34.49	47.90	71.13	16,314	13.52
2002	34.56	48.28	72.10	17,160	16.45
2003	34.35	49.78	71.88	17,949	16.88
2004	34.23	51.14	72.64	18,896	11.29
2005	34.62	52.15	75.48	19,263	11.54
2006	33.51	48.00	64.15	20,354	11.45
2007	32.00	64.47	59.60	21,306	11.08

Source : PLN Statistics

6.5.1 Geothermal Resources and Reserves Status Year 2006

No	Location	Resources		Reserves			Total
		Speculative	Hipotethic	Probable	Possible	Proven	
		(MW)					
1	Sumatera	5,000	2,194	5,745	15	380	13,334
2	Jawa	1,960	1,771	3,225	885	1,815	9,656
3	Bali-Nusa Tenggara	410	359	973	-	15	1,757
4	Sulawesi	900	32	865	150	78	2,025
5	Maluku	370	37	327	-	-	734
6	Kalimantan	45	-	-	-	-	45
7	Papua	50	-	-	-	-	50
Total		8,735	4,393	11,135	1,050	2,288	27,601

Source : Agency Geology

6.5.2 Geothermal Power Plant Capacity

(MW)

No	Working Area	Location	Turbine Capacity	Operator	Total Capacity
1	PLTP Kamojang, (Pertamina)	West Java	1 x 30 MWe	PLN	200
			2 x 55 MWe	PLN	
			1 x 40 MWe	PLN	
2	PLTP Lahendong, (Pertamina)	North Sulawesi	2 x 20 MWe	PLN	40
3	PLTP Sibayak, (Pertamina)	North Sumatera	1 x 2 MWe	Pertamina	2.5
4	PLTP Salak, (Chevron GS)	West Java	3 x 60 MWe	PLN	375
			3 x 65 MWe	CGS	
5	PLTP Darajat (Chevron GI)	West Java	1 x 55 MWe	PLN	255
			1 x 90 MWe	CGI	
			1 x 110 MWe	CGI	
6	PLTP Wayang Windu (Star Energi)	West Java	1 x 110 MWe	SE	110
7	PLTP Dieng, (Geo Dipa Energi)	Central Java	1 x 60 MWe	GDE	60
Total					1,042.5

Source : Statistics Geothermal Business Indonesia 2006. Direktorat Geothermal, Directorate General of Mineral, Coal and Geothermal

6.5.3 Geothermal Steam Production

Year	Pertamina Field				KOB Field	
	Kamojang	Sibayak	Lahendong	Sub Total	Salak	Darajat
2000	8,238	66	-	8,304	19,494	4,876
2001	8,623	242	457	9,322	22,044	7,242
2002	9,292	212	954	10,458	21,742	7,453
2003	9,274	42	1,132	10,448	21,325	7,435
2004	9,277	126	1,173	10,576	22,595	8,011
2005	7,462	74	1,012	8,548	24,167	7,551
2006	8,096	165	1,240	9,501	24,527	7,633
2007	8,121	84	1,311	9,517	24,346	10,322

Source : Statistics Geothermal Business Indonesia 2006. Direktorat Geothermal, Directorate General of Mineral, Coal and Geothermal

6.5.4 Geothermal Electricity Production

Year	Pertamina Field				KOB Field	
	Kamojang	Sibayak	Lahendong	Sub Total	Salak	Darajat
2000	1,072	3	-	1,075	2,398	741
2001	1,116	11	61	1,188	2,726	1,107
2002	1,202	10	93	1,305	2,668	1,169
2003	1,201	1	155	1,357	2,637	1,170
2004	1,200	4	159	1,363	2,737	1,251
2005	963	2	134	1,099	2,930	1,218
2006	1,043	6	166	1,215	2,920	1,176
2007	1,049	3	177	1,229	2,963	1,605

Source : Statistics Geothermal Business Indonesia 2006. Direktorat Geothermal, Directorate General of Mineral, Coal and Geothermal

(Thousand Ton)

KOB Field			Total
Wayang Windu	Geodipa (60MW)	Sub Total	
3,717	-	28,087	36,391
6,669	-	35,955	45,277
6,929	-	36,124	46,582
6,431	1,521	36,712	47,160
6,863	2,305	39,774	50,350
6,809	2,518	41,045	49,593
6,625	2,544	41,330	50,831
6,524	1,209	42,400	51,917

(MWh)

KOB Field			Total
Wayang Windu	Geodipa (60MW)	Sub Total	
507	-	3,646	4,721
888	-	4,721	5,909
910	-	4,747	6,052
858	186	4,851	6,208
921	288	5,197	6,560
936	323	5,407	6,506
924	319	5,339	6,554
938	163	5,670	6,899