

ISSN 2528-3464



Ministry of Energy and Mineral Resources  
Republic of Indonesia



# 2016

## HANDBOOK OF ENERGY & ECONOMIC STATISTICS OF INDONESIA



Ministry of Energy and Mineral Resources  
Republic of Indonesia

ISSN 2528-3464

# **2016**

## **HANDBOOK OF ENERGY & ECONOMIC STATISTICS OF INDONESIA**

## Team Handbook

### Steering Committee

|                     |                                                      |
|---------------------|------------------------------------------------------|
| Susetyo Edi Prabowo | (Head of Center for Data and Information Technology) |
| MP Dwinugroho       | (Head of Data Management Division)                   |

### Coordinators

|                   |                                                                                            |
|-------------------|--------------------------------------------------------------------------------------------|
| Eko Satra Baruna  | (Head of Oil and Gas Data Management Subdivision)                                          |
| Nunung Ajiwihanto | (Head of Mineral, Coal, Electricity, New and Renewable Energy Data Management Subdivision) |

### Technical Committee

|                     |                                  |
|---------------------|----------------------------------|
| Fifi Indarwati      | (Energy Data Statistician)       |
| Linda Ambarsari     | (PIC for Gas Data)               |
| Muhammad Yusuf      | (PIC for Oil Data)               |
| Vony Mela Suzanty   | (PIC for New and Renewable Data) |
| Agung Kurniawan     | (PIC for Coal Data)              |
| Zulhelmi Thaib      | (PIC for Electricity Data)       |
| Herlina Yuanningrat | (Data Team)                      |
| Imam Gagas Anutomo  | (Data Team)                      |

## Preface

The updating of the Handbook of Indonesia's Energy Economy Statistics, is a part of the Center for Data and Information Energy Mineral Resources (CDI-EMR) effort to provide accurate and reliable energy economic data and information consolidated in book. Data and information related to energy economy are dispersed in various sources and locations, and are generally 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.

Currently, the problem related to energy data in Indonesia is the unavailability of demand-side data. To date, energy data are actually derived from supply-side data. In other word, consumption data are assumed to be identical with the sales data. Such assumption maybe quite accurate provided there is no disparity between domestic energy price and its international price. Disparity in energy price would promote misuse of energy. Thus, sales data on an energy commodity cannot be regarded as the same as that of its consumption. For that reason, in this statistics handbook, energy consumption data concept is presented after a computation based on a number energy parameters.

We hope the process to standardize Energy and Economy data and information in the future will be continued as part of the updating of the Handbook, (CDI-EMR) will continued 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 guides us in utilizing our energy resources wisely for the maximum benefit of all the people of Indonesia.

Jakarta, July 2016

Head of Center for Data and Information  
Technology on Energy and Mineral Resources

## Introduction

This Handbook of Indonesia's Energy Economy Statistics, 14<sup>th</sup> edition, contains data on Indonesia's energy and economy from 2000 through 2015. This edition is an update version of the 13<sup>th</sup> edition, covering estimated energy demand for every sector. The structure of the table is arranged as follows:

### A. Tables

Show in 6 Main Categories, as follows:

- Table 1 General Information and Energy Economic Indicators
- Table 2 Indonesia's Energy Balanced 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                               | iii |
| Introduction                          | iv  |
| List of Contents                      | v   |
| Concise Energy Profile Indonesia 2015 | vii |

### Chapter 1

|                                                             |    |
|-------------------------------------------------------------|----|
| 1.1. GDP and Energy Indicator                               | 2  |
| 1.2. Macro Economic                                         | 4  |
| 1.3. Finance and Banking                                    | 6  |
| 1.4. Price Index                                            | 7  |
| 1.5. Population and Employment                              | 8  |
| 1.6. International Trade                                    | 9  |
| 1.7. Supply of Primary Energy                               | 10 |
| 1.8. Comparison of Primary Energy Intensity in Some Country | 12 |
| 1.9. Intensity of Final Energy Consumption per Capita       | 13 |

### Chapter 2

|                                     |    |
|-------------------------------------|----|
| Indonesia Energy Balance Table 2015 | 16 |
|-------------------------------------|----|

### Chapter 3

|                                                  |    |
|--------------------------------------------------|----|
| 3.1. Primary Energy Supply by Sources            | 20 |
| 3.2. Final Energy Consumption by Sector          | 22 |
| 3.3. Final Energy Consumption by Type            | 24 |
| 3.4. Share of Final Energy Consumption by Sector | 26 |
| 3.5. Share of Final Energy Consumption by Type   | 27 |

### Chapter 4

|                                                    |    |
|----------------------------------------------------|----|
| 4.1. Crude Oil Price                               | 30 |
| 4.2. International Gas Price                       | 32 |
| 4.3. Average Price of LPG, LNG and Coal FOB Export | 33 |
| 4.4. Energy Price per Energy Unit                  | 34 |
| 4.5. Average Price of Coal Import                  | 38 |

### Chapter 5

|                                                                   |    |
|-------------------------------------------------------------------|----|
| 5.1.1. Energy Consumption in Industrial Sector (in Original Unit) | 40 |
| 5.1.2. Energy Consumption in Industrial Sector (in Energy Unit)   | 42 |
| 5.1.3. Share of Energy Consumption in Industrial Sector           | 44 |
| 5.2.1. Energy Consumption in Household Sector (in Original Unit)  | 46 |
| 5.2.2. Energy Consumption in Household Sector (in Energy Unit)    | 47 |

|        |                                                                |    |
|--------|----------------------------------------------------------------|----|
| 5.2.3. | Share of Energy Consumption in Household Sector                | 48 |
| 5.3.1. | Energy Consumption in Commercial Sector (in Original Unit)     | 49 |
| 5.3.2. | Energy Consumption in Commercial Sector (in Energy Unit)       | 50 |
| 5.3.3. | Share of Energy Consumption in Commercial Sector               | 51 |
| 5.4.1. | Energy Consumption in Transportation Sector (in Original Unit) | 52 |
| 5.4.2. | Energy Consumption in Transportation Sector (in Energy Unit)   | 54 |
| 5.4.3. | Share of Energy Consumption in Transportation Sector           | 56 |
| 5.5.1. | Energy Consumption in Others Sector (in Original Unit)         | 58 |
| 5.5.2. | Energy Consumption in Others Sector (in Energy Unit)           | 59 |
| 5.5.3. | Share of Energy Consumption in Others Sector                   | 60 |

## Chapter 6

|        |                                              |     |
|--------|----------------------------------------------|-----|
| 6.1.1. | Coal Reserves                                | 62  |
| 6.1.2. | Coal Supply                                  | 63  |
| 6.1.3. | Indonesia Coal Export by Destination         | 64  |
| 6.1.4. | Coal Sales                                   | 66  |
| 6.2.1. | Oil Reserves                                 | 67  |
| 6.2.2. | Refinery Capacity in 2015                    | 68  |
| 6.2.3. | Crude Oil Supply and Demand                  | 69  |
| 6.2.4. | Domestic Oil Fuels Sales                     | 70  |
| 6.2.5. | Crude Oil Refinery Production                | 72  |
| 6.2.6. | Import of Refined Products                   | 76  |
| 6.2.7. | Export of Refined Products                   | 78  |
| 6.2.8. | Indonesia Crude Oil Export by Destination    | 80  |
| 6.2.9. | LPG Supply                                   | 81  |
| 6.3.1. | Natural Gas Reserves                         | 82  |
| 6.3.2. | Natural Gas Production                       | 83  |
| 6.3.3. | Natural Gas and LNG Supply and Demand        | 84  |
| 6.3.4. | City Gas Sales and Utilization               | 86  |
| 6.4.1. | Power Plant Installed Capacity               | 88  |
| 6.4.2. | Power Plant Production                       | 90  |
| 6.4.3. | Import of Electricity                        | 94  |
| 6.4.4. | Electricity Sales                            | 95  |
| 6.4.5. | Fuel Consumption of PLN Power Plant          | 96  |
| 6.4.6. | Share of Fuel Consumption of PLN Power Plant | 97  |
| 6.4.7. | PLN Electricity System Performance           | 98  |
| 6.5.1. | Geothermal Resources and Reserves            | 99  |
| 6.5.2. | Geothermal Power Plant Capacity 2015         | 100 |
| 6.5.3. | Geothermal Steam Production                  | 102 |

|                                           |  |     |
|-------------------------------------------|--|-----|
| Annex                                     |  |     |
| Annex 1 Methodology and Table Explanation |  | 106 |
| Annex 2 Glossary                          |  | 116 |
| Annex 3 Conversion Factor                 |  | 126 |

## Concise Energy Profile Indonesia 2015

### A. SOCIO ECONOMY

|                      |              |                    |
|----------------------|--------------|--------------------|
| Teritorial Area *) : | 7,788,810.32 | km <sup>2</sup>    |
| Land Area *) :       | 1,910,931.32 | km <sup>2</sup>    |
| Population :         | 255,461.69   | Thousand People    |
| Household :          | 65,582.46    | Thousand Household |

### GDP Regional

|               |           |                          |
|---------------|-----------|--------------------------|
| Total Value : | 9,728.97  | Trillion Rupiah          |
| Per Capita :  | 38,083.89 | Thousand Rupiah per Year |

### B. ENERGY PRODUCTION

#### Primary Energy Production

|               |               |                  |
|---------------|---------------|------------------|
| Crude Oil :   | 286,814.22    | Thousand Barel   |
| Natural Gas : | 2,674.70      | BSCF             |
| Coal :        | 461,566.08    | Thousand Tonnes  |
| Hydro Power : | 48,051,312.52 | Million Kcal     |
| Geothermal :  | 74,263.08     | Thousand Tonnes  |
|               |               | Geothermal Steam |

**C. FINAL ENERGY CONSUMPTION 1,033.24 Million BOE****Energy Consumption by****Type (excluded non energy use)**

|               |        |             |
|---------------|--------|-------------|
| Coal :        | 70.22  | Million BOE |
| Fuel :        | 380.08 | Million BOE |
| Gas :         | 94.73  | Million BOE |
| Electricity : | 124.34 | Million BOE |
| Briquette :   | 0.05   | Million BOE |
| LPG :         | 54.36  | Million BOE |
| Biomass :     | 309.45 | Million BOE |

**Energy Consumption by Sector 1,033.24**

|                  |        |             |
|------------------|--------|-------------|
| Industry :       | 274.90 | Million BOE |
| Household :      | 373.79 | Million BOE |
| Commercial :     | 38.19  | Million BOE |
| Transportation : | 329.41 | Million BOE |
| Other Sector :   | 16.95  | Million BOE |
| Non Energy :     | 106.63 | Million BOE |

**D. RATIO ELECTRIFICATION 88.30 %**

Note : \*) Temporary Data

**ENERGY ECONOMIC  
INDICATORS**

## 1.1. GDP and Energy Indicator

|                                       | Unit             | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    |  | 2006    | 2007    | 2008    | 2009      | 2010      | 2011      | 2012      | 2013      | 2014      | 2015      |
|---------------------------------------|------------------|---------|---------|---------|---------|---------|---------|--|---------|---------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| GDP at Constant Price 2000            | Trillion Rupiahs | 1,390   | 1,443   | 1,506   | 1,577   | 1,657   | 1,751   |  | 1,847   | 1,964   | 2,082   | 2,179     | 2,314     | 2,465     | 2,618     | 2,770     | 2,909     | 3,042     |
| GDP Nominal                           | Trillion Rupiahs | 1,390   | 1,684   | 1,863   | 2,014   | 2,296   | 2,774   |  | 3,339   | 3,951   | 4,951   | 6,209     | 6,447     | 7,423     | 8,242     | 8,078     | 8,971     | 9,729     |
| GDP Nominal per Capita                | Thousand Rupiahs | 6,752   | 8,072   | 8,789   | 9,354   | 10,538  | 12,676  |  | 15,030  | 17,510  | 21,667  | 26,485    | 27,128    | 33,461    | 33,582    | 32,464    | 35,576    | 38,084    |
| Population                            | Thousand         | 205,843 | 208,647 | 212,003 | 215,276 | 217,854 | 218,869 |  | 222,192 | 225,642 | 228,523 | 234,432   | 237,641   | 238,519   | 245,425   | 248,818   | 252,165   | 255,462   |
| Number of Households                  | Thousand         | 52,005  | 54,314  | 55,041  | 56,623  | 58,253  | 55,119  |  | 55,942  | 56,411  | 57,131  | 58,422    | 61,165    | 62,080    | 63,097    | 63,938    | 64,767    | 65,582    |
| Primary Energy Supply *)              | Thousand BOE     | 726,687 | 772,282 | 799,806 | 859,053 | 872,677 | 896,445 |  | 899,168 | 955,703 | 984,022 | 1,015,318 | 1,145,068 | 1,235,550 | 1,278,788 | 1,348,400 | 1,280,941 | 1,332,242 |
| Primary Energy Supply per Capita *)   | BOE / capita     | 3.53    | 3.70    | 3.77    | 3.99    | 4.01    | 4.10    |  | 4.05    | 4.24    | 4.31    | 4.33      | 4.82      | 5.18      | 5.21      | 5.42      | 5.08      | 5.22      |
| Final Energy Consumption*)            | Thousand BOE     | 508,883 | 533,372 | 529,719 | 567,774 | 603,496 | 594,558 |  | 603,882 | 641,594 | 664,019 | 699,210   | 793,929   | 835,870   | 904,124   | 898,216   | 809,133   | 830,420   |
| Final Energy Consumption per Capita*) | BOE / capita     | 2.47    | 2.56    | 2.50    | 2.64    | 2.77    | 2.72    |  | 2.72    | 2.84    | 2.91    | 2.98      | 3.34      | 3.50      | 3.68      | 3.61      | 3.21      | 3.25      |

|                                     | Unit             | Growth (%) |           |           |           |           |           |  |           |           |           |           |           |           |              |           |           |
|-------------------------------------|------------------|------------|-----------|-----------|-----------|-----------|-----------|--|-----------|-----------|-----------|-----------|-----------|-----------|--------------|-----------|-----------|
|                                     |                  | 2000-2001  | 2001-2002 | 2002-2003 | 2003-2004 | 2004-2005 | 2005-2006 |  | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | 2012-2013 *) | 2013-2014 | 2014-2015 |
| GDP at Constant Price 2000          | Trillion Rupiahs | 3.83       | 4.38      | 4.72      | 5.03      | 5.69      | 5.50      |  | 6.35      | 6.01      | 4.64      | 6.22      | 6.49      | 6.23      | 5.81         | 5.01      | 4.57      |
| GDP Nominal                         | Trillion Rupiahs | 21.19      | 10.63     | 8.07      | 14.01     | 20.84     | 20.37     |  | 18.31     | 25.32     | 25.40     | 3.83      | 15.14     | 11.03     | -1.99        | 11.06     | 8.45      |
| GDP Nominal per Capita              | Thousand Rupiahs | 19.56      | 8.88      | 6.43      | 12.66     | 20.28     | 18.57     |  | 16.50     | 23.74     | 22.24     | 2.43      | 23.34     | 0.36      | -3.33        | 9.59      | 7.05      |
| Population                          | Thousand         | 1.36       | 1.61      | 1.54      | 1.20      | 0.47      | 1.52      |  | 1.55      | 1.28      | 2.59      | 1.37      | 0.37      | 2.90      | 1.38         | 1.35      | 1.31      |
| Number of Households                | Thousand         | 4.44       | 1.34      | 2.87      | 2.88      | -5.38     | 1.49      |  | 0.84      | 1.28      | 2.26      | 4.69      | 1.50      | 1.64      | 1.33         | 1.30      | 1.26      |
| Primary Energy Supply               | Thousand BOE     | 6.27       | 3.56      | 7.41      | 1.59      | 2.72      | 0.30      |  | 6.29      | 2.96      | 3.18      | 12.78     | 7.90      | 3.50      | 8.23         | -5.00     | 4.00      |
| Final Energy Consumption            | BOE / capita     | 4.81       | -0.68     | 7.18      | 6.29      | -1.48     | 1.57      |  | 6.24      | 3.50      | 5.30      | 13.55     | 5.28      | 8.17      | 3.10         | -9.92     | 2.63      |
| Final Energy Consumption per Capita | Thousand BOE     | 3.40       | -2.26     | 5.55      | 5.03      | -1.94     | 0.05      |  | 4.62      | 2.19      | 2.65      | 12.01     | 4.90      | 5.12      | 1.69         | -11.11    | 1.31      |

Sources : BPS, Statistics Indonesia; Bank Indonesia

Note : Primary Energy Supply and Final Energy Consumption which are Calculated is Commercial Energy (Excluded Biomass)

\*) Revised Data for 2013 and 2014  
Temporary Data for Year 2015

## 1.2. Macro Economic

| Year    | GDP Constant 2000 Prices |                        |                           |                            |  | GDP Constant 2000 Prices |                                    |                                    | GDP Nominal<br>(Current Prices) | Index GDP<br>Deflator |
|---------|--------------------------|------------------------|---------------------------|----------------------------|--|--------------------------|------------------------------------|------------------------------------|---------------------------------|-----------------------|
|         | GDP                      | Private<br>Consumption | Government<br>Consumption | Fixed Capital<br>Formation |  | Stock<br>Change          | Export of<br>Goods and<br>Services | Import of<br>Goods and<br>Services |                                 |                       |
|         | Billion Rupiahs          | Billion Rupiahs        | Billion Rupiahs           | Billion Rupiahs            |  | Billion Rupiahs          | Billion Rupiahs                    | Billion Rupiahs                    | Billion Rupiahs                 | (2000=100)            |
| 2000    | 1,389,770.3              | 856,798.3              | 90,779.7                  | 275,881.2                  |  | 33,282.8                 | 569,490.3                          | 423,317.9                          | 1,389,769.9                     | 100.00                |
| 2001    | 1,442,984.6              | 886,736.0              | 97,646.0                  | 293,792.7                  |  | 41,846.8                 | 573,163.4                          | 441,012.0                          | 1,684,280.5                     | 116.72                |
| 2002    | 1,506,124.4              | 920,749.6              | 110,333.6                 | 307,584.6                  |  | 13,085.0                 | 566,188.4                          | 422,271.4                          | 1,863,274.7                     | 123.71                |
| 2003    | 1,577,171.3              | 956,593.4              | 121,404.1                 | 309,431.1                  |  | 45,996.7                 | 599,516.4                          | 428,874.6                          | 2,013,674.6                     | 127.68                |
| 2004    | 1,656,516.8              | 1,004,109.0            | 126,248.6                 | 354,865.8                  |  | 25,099.0                 | 680,620.9                          | 543,183.8                          | 2,295,826.2                     | 138.59                |
| 2005    | 1,750,815.2              | 1,043,805.1            | 134,625.6                 | 393,500.5                  |  | 33,508.3                 | 793,612.9                          | 639,701.9                          | 2,774,281.1                     | 158.46                |
| 2006    | 1,847,126.7              | 1,076,928.1            | 147,563.7                 | 403,161.9                  |  | 29,026.7                 | 868,256.4                          | 694,605.4                          | 3,339,479.6                     | 180.79                |
| 2007    | 1,964,327.3              | 1,130,847.1            | 153,309.6                 | 441,361.5                  |  | -243.1                   | 942,431.4                          | 757,566.2                          | 3,950,893.2                     | 201.13                |
| 2008    | 2,082,315.9              | 1,191,190.8            | 169,297.2                 | 493,716.5                  |  | 2,170.4                  | 1,032,277.8                        | 833,342.2                          | 4,951,356.7                     | 237.78                |
| 2009    | 2,178,850.3              | 1,249,070.1            | 195,834.4                 | 510,085.9                  |  | -2,065.2                 | 932,248.6                          | 708,528.8                          | 5,606,203.4                     | 257.30                |
| 2010    | 2,314,458.8              | 1,308,272.8            | 196,468.8                 | 553,347.7                  |  | -604.4                   | 1,074,568.7                        | 831,418.3                          | 6,446,851.9                     | 278.55                |
| 2011    | 2,464,676.5              | 1,369,881.1            | 202,755.8                 | 601,890.6                  |  | 9,033.5                  | 1,221,229.0                        | 942,297.3                          | 7,422,781.2                     | 301.17                |
| 2012    | 2,618,139.2              | 1,442,193.2            | 205,289.7                 | 660,942.3                  |  | 53,228.4                 | 1,245,781.0                        | 1,004,957.5                        | 8,241,864.3                     | 314.80                |
| 2013    | 2,770,345.1              | 1,518,393.4            | 215,393.1                 | 688,559.8                  |  | 53,767.6                 | 1,311,759.6                        | 1,017,190.8                        | 8,077,565.2                     | 291.57                |
| 2014    | 2,909,181.5              | 1,601,234.6            | 219,876.4                 | 719,046.9                  |  | 63,354.1                 | 1,295,554.1                        | 986,938.0                          | 8,971,090.8                     | 308.37                |
| 2015 *) | 3,042,265.4              | 1,676,923.0            | 231,109.9                 | 753,775.9                  |  | 38,723.7                 | 1,269,492.9                        | 925,696.3                          | 9,728,973.7                     | 319.79                |

Sources : BPS, Statistics Indonesia

Note : \*) Data Estimation from Growth Rate of GDP  
Temporary Data for Year 2015

### 1.3. Finance and Banking

| Year | Money Supply (M1) |                 |                 |
|------|-------------------|-----------------|-----------------|
|      | Currency Outside  | Demand Deposits | Total           |
|      | Billion Rupiahs   | Billion Rupiahs | Billion Rupiahs |
| 2000 | 72,371            | 89,815          | 162,186         |
| 2001 | 76,342            | 101,389         | 177,731         |
| 2002 | 80,686            | 111,253         | 191,939         |
| 2003 | 94,542            | 129,257         | 223,799         |
| 2004 | 109,265           | 144,553         | 253,818         |
| 2005 | 124,316           | 157,589         | 281,905         |
| 2006 | 151,009           | 210,064         | 361,073         |
| 2007 | 183,419           | 277,423         | 460,842         |
| 2008 | 209,378           | 257,001         | 466,379         |
| 2009 | 226,006           | 289,818         | 515,824         |
| 2010 | 260,227           | 345,184         | 605,411         |
| 2011 | 307,760           | 415,231         | 722,991         |
| 2012 | 361,967           | 479,755         | 841,721         |
| 2013 | 399,609           | 487,475         | 887,084         |
| 2014 | 419,262           | 522,960         | 942,221         |
| 2015 | 469,534           | 585,906         | 1,055,440       |

Source: Bank Indonesia

Note : Temporary Data for Year 2015

### 1.4. Price Index

| Year | Wholesale Price Index *) |        |         | Consumer Price Index of 66 Cities *) | Coal Price Index **) | Electricity Price Index **) |
|------|--------------------------|--------|---------|--------------------------------------|----------------------|-----------------------------|
|      | Export                   | Import | General |                                      |                      |                             |
|      | 2000 = 100               |        |         | 2007=100                             |                      |                             |
| 2000 | 100.00                   | 100.00 | 100.00  | 53.47                                | 100.00               | 100.00                      |
| 2001 | 113.02                   | 112.66 | 114.16  | 59.62                                | 129.79               | 122.34                      |
| 2002 | 108.00                   | 112.00 | 118.00  | 66.66                                | 142.89               | 189.44                      |
| 2003 | 109.00                   | 114.00 | 122.00  | 71.17                                | 150.09               | 251.99                      |
| 2004 | 121.00                   | 127.00 | 131.00  | 75.49                                | 150.04               | 269.01                      |
| 2005 | 145.00                   | 149.00 | 151.00  | 83.38                                | 163.57               | 271.56                      |
| 2006 | 154.00                   | 162.00 | 172.00  | 94.31                                | 218.36               | 273.78                      |
| 2007 | 167.00                   | 186.00 | 195.00  | 100.00                               | 220.27               | 275.76                      |
| 2008 | 209.00                   | 235.00 | 246.00  | 109.78                               | 318.12               | 283.60                      |
| 2009 | 134.10                   | 156.61 | 162.71  | 115.06                               | 476.18               | 284.23                      |
| 2010 | 137.80                   | 160.90 | 170.59  | 125.17                               | 427.02               | 297.06                      |
| 2011 | 154.11                   | 177.37 | 183.31  | 129.91                               | 454.27               | 298.04                      |
| 2012 | 163.15                   | 189.17 | 192.69  | 135.49                               | 496.43               | 318.86                      |
| 2013 | 145.16                   | 134.43 | 128.76  | 146.84                               | 932.99               | 335.11                      |
| 2014 | 138.73                   | 137.37 | 132.44  | 111.53                               | 996.55               | 342.55                      |
| 2015 | 128.73                   | 133.52 | 143.34  | 122.99                               | 1,253.42             | 375.30                      |

Note : \*) 2009-2012 based on 2005=100; Processed from BPS, Statistics Indonesia; Bank Indonesia

\*\*) Revised data for 2013 and 2014  
Temporary Data for Year 2015

## 1.5. Population and Employment

| Year | Popula-<br>tion         | Labor<br>Force          | House-<br>hold *)               | Unem-<br>ploy-<br>ment  | Unemploy-<br>ment<br>Percent-<br>age<br>(toward<br>labor<br>force) | Average Wage                  |       |        |
|------|-------------------------|-------------------------|---------------------------------|-------------------------|--------------------------------------------------------------------|-------------------------------|-------|--------|
|      |                         |                         |                                 |                         |                                                                    | Indus-<br>try                 | Hotel | Mining |
|      | Thou-<br>sand<br>People | Thou-<br>sand<br>People | Thou-<br>sand<br>House-<br>hold | Thou-<br>sand<br>People | (%)                                                                | Thousand Rupiahs Per<br>Month |       |        |
| 2000 | 205,843                 | 95,651                  | 52,005                          | 5,813                   | 6.1                                                                | 373                           | 396   | 1,234  |
| 2001 | 208,647                 | 98,812                  | 54,314                          | 8,005                   | 8.1                                                                | 541                           | 575   | 1,227  |
| 2002 | 212,003                 | 99,564                  | 55,041                          | 9,132                   | 9.2                                                                | 672                           | 651   | 1,406  |
| 2003 | 215,276                 | 100,316                 | 56,623                          | 9,531                   | 9.5                                                                | 713                           | 581   | 2,117  |
| 2004 | 217,854                 | 103,973                 | 58,253                          | 10,251                  | 9.9                                                                | 852                           | 801   | 1,368  |
| 2005 | 218,869                 | 105,802                 | 55,119                          | 10,854                  | 10.3                                                               | 870                           | 788   | 2,114  |
| 2006 | 222,192                 | 106,389                 | 55,942                          | 10,932                  | 10.3                                                               | 972                           | 918   | 2,733  |
| 2007 | 225,642                 | 109,941                 | 56,411                          | 10,011                  | 9.1                                                                | 1 050                         | 1 042 | 3,890  |
| 2008 | 228,523                 | 111,947                 | 57,131                          | 9,395                   | 8.4                                                                | 1,105                         | 1,069 | 4,064  |
| 2009 | 234,757                 | 113,833                 | 60,249                          | 8,963                   | 7.9                                                                | 1,173                         | 1,110 | 3,322  |
| 2010 | 237,641                 | 116,528                 | 61,165                          | 8,320                   | 7.1                                                                | 1,388                         | 1,194 | 3,942  |
| 2011 | 238,519                 | 117,370                 | 62,630                          | 7,700                   | 6.6                                                                | 1,346                         | 1,256 | 3,881  |
| 2012 | 245,425                 | 118,053                 | 63,097                          | 7,245                   | 6.1                                                                | 1,620                         | 1,337 | 4,521  |
| 2013 | 248,818                 | 118,193                 | 63,938                          | 7,389                   | 6.3                                                                | 1,816                         | 1,500 | 4,740  |
| 2014 | 252,165                 | 121,873                 | 64,767                          | 7,245                   | 5.9                                                                | 2,175                         | 1,840 | 5,653  |
| 2015 | 255,462                 | 120,847                 | 65,582                          | 7,561                   | 6.3                                                                | n.a.                          | n.a.  | n.a.   |

Sources : BPS, Statistics Indonesia  
 Note : \*) Revised Data for 2014  
 Temporary Data for Year 2015

## 1.6. International Trade

| Year | Based on<br>Major Portion |         | Trade Index<br>2000=100 |        | Balance Payment **)              |                             |        | Ex-<br>change<br>Rate<br>Rupiah<br>to US \$ | US \$<br>Defla-<br>tor*) |
|------|---------------------------|---------|-------------------------|--------|----------------------------------|-----------------------------|--------|---------------------------------------------|--------------------------|
|      | Export                    | Import  | Export                  | Import | Cur-<br>rent<br>Trans-<br>action | Capital<br>Trans-<br>action | Total  |                                             |                          |
|      | Million US\$              |         |                         |        | Million US\$                     |                             |        |                                             |                          |
| 2000 | 62,124                    | 33,515  | 100                     | 100    | 7,992                            | -7,896                      | 96     | 9,595                                       | 1.0000                   |
| 2001 | 56,321                    | 30,962  | 91                      | 92     | 6,901                            | -7,617                      | -716   | 10,400                                      | 1.0240                   |
| 2002 | 57,159                    | 31,289  | 92                      | 93     | 7,824                            | -1,103                      | 6,720  | 8,940                                       | 1.0419                   |
| 2003 | 61,058                    | 32,551  | 98                      | 97     | 10,882                           | -949                        | 9,933  | 8,465                                       | 1.0640                   |
| 2004 | 71,585                    | 46,525  | 115                     | 139    | 1,564                            | 1,852                       | 3,415  | 9,290                                       | 1.0946                   |
| 2005 | 85,660                    | 57,701  | 138                     | 172    | 278                              | 345                         | 623    | 9,830                                       | 1.1303                   |
| 2006 | 100,799                   | 61,066  | 162                     | 182    | 10,860                           | 3,025                       | 13,884 | 9,020                                       | 1.1668                   |
| 2007 | 114,101                   | 74,473  | 184                     | 222    | 10,493                           | 3,591                       | 14,083 | 9,419                                       | 1.1982                   |
| 2008 | 137,020                   | 129,197 | 221                     | 385    | -637                             | -5,915                      | -6,552 | 10,950                                      | 1.2242                   |
| 2009 | 119,646                   | 88,714  | 193                     | 265    | 10,628                           | 4,852                       | 15,481 | 9,400                                       | 1.0962                   |
| 2010 | 158,074                   | 127,447 | 254                     | 380    | 5,144                            | 26,620                      | 31,765 | 8,991                                       | 1.1066                   |
| 2011 | 200,788                   | 190,948 | 323                     | 570    | 1,685                            | 13,636                      | 15,321 | 9,068                                       | 1.0331                   |
| 2012 | 207,073                   | 207,621 | 333                     | 619    | -24,418                          | -24,368                     | 491    | 9,670                                       | 1.0517                   |
| 2013 | 197,060                   | 200,548 | 317                     | 598    | -29,115                          | 22,010                      | -7,105 | 12,189                                      | 1.0673                   |
| 2014 | 191,438                   | 192,403 | 308                     | 574    | -4,159                           | 5,087                       | 928    | 12,440                                      | 1.0869                   |
| 2015 | 163,633                   | 142,585 | 263                     | 425    | -17,761                          | 17,136                      | -624   | 13,795                                      | 1.0975                   |

Sources : BPS, Statistics Indonesia

Note : \*) Derived from World Economic Outlook Database, October 2015, IMF

\*\*) Revised Data 2013 - 2014 for Balance Payment  
 Temporary Data for Year 2015

## 1.7. Supply of Primary Energy

### 1.7.1 By Type

%

| Type of Energy | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013 *) | 2014 *) | 2015  |
|----------------|-------|-------|-------|-------|-------|-------|-------|--|-------|-------|-------|-------|-------|-------|---------|---------|-------|
| Oil            | 41.74 | 42.42 | 42.32 | 40.37 | 43.52 | 42.32 | 39.24 |  | 38.50 | 38.08 | 37.28 | 37.57 | 38.91 | 37.32 | 36.79   | 39.41   | 38.35 |
| Coal           | 9.42  | 11.44 | 11.48 | 14.58 | 13.24 | 14.89 | 17.51 |  | 20.97 | 17.80 | 18.18 | 19.84 | 22.00 | 23.92 | 24.56   | 20.21   | 22.21 |
| Gas            | 16.54 | 16.53 | 17.65 | 18.05 | 16.39 | 16.39 | 16.72 |  | 14.92 | 18.70 | 19.30 | 19.03 | 17.23 | 16.43 | 16.33   | 17.06   | 17.03 |
| Hydropower     | 2.54  | 2.82  | 2.34  | 2.03  | 2.13  | 2.32  | 2.06  |  | 2.31  | 2.30  | 2.20  | 3.10  | 2.06  | 2.04  | 2.58    | 2.40    | 2.15  |
| Geothermal     | 0.96  | 0.96  | 0.96  | 0.92  | 0.97  | 0.94  | 0.95  |  | 0.93  | 1.06  | 1.26  | 1.08  | 1.00  | 0.96  | 0.92    | 1.02    | 1.00  |
| Biomass        | 28.80 | 25.83 | 25.25 | 24.05 | 23.75 | 23.15 | 23.51 |  | 22.37 | 22.03 | 21.71 | 19.29 | 18.64 | 19.04 | 18.51   | 19.49   | 18.86 |
| Biofuel        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.01  |  | 0.02  | 0.03  | 0.06  | 0.10  | 0.15  | 0.29  | 0.32    | 0.42    | 0.41  |

Note : Temporary Data for Year 2015

### 1.7.2. By Type (Excluded Biomass)

| Type of Energy | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013 *) | 2014 *) | 2015  |
|----------------|-------|-------|-------|-------|-------|-------|-------|--|-------|-------|-------|-------|-------|-------|---------|---------|-------|
| Oil            | 59.64 | 57.20 | 56.62 | 53.16 | 57.08 | 55.07 | 51.29 |  | 49.56 | 48.80 | 47.62 | 46.55 | 47.83 | 46.10 | 45.14   | 48.95   | 47.26 |
| Coal           | 12.91 | 15.43 | 15.36 | 19.20 | 17.37 | 19.37 | 22.89 |  | 27.01 | 22.82 | 23.22 | 24.58 | 27.04 | 29.55 | 30.14   | 25.11   | 27.37 |
| Gas            | 22.66 | 22.28 | 23.61 | 23.76 | 21.49 | 21.33 | 21.86 |  | 19.21 | 23.99 | 24.66 | 23.58 | 21.18 | 20.29 | 20.03   | 21.19   | 20.99 |
| Hydropower     | 3.47  | 3.80  | 3.13  | 2.67  | 2.79  | 3.02  | 2.70  |  | 2.98  | 2.95  | 2.82  | 3.84  | 2.53  | 2.52  | 3.16    | 2.98    | 2.64  |
| Geothermal     | 1.32  | 1.29  | 1.28  | 1.21  | 1.27  | 1.22  | 1.24  |  | 1.20  | 1.36  | 1.61  | 1.33  | 1.22  | 1.18  | 1.13    | 1.26    | 1.23  |
| Biofuel        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.01  |  | 0.02  | 0.03  | 0.08  | 0.12  | 0.19  | 0.35  | 0.40    | 0.52    | 0.51  |

Note : Oil Including Crude Oil, Petroleum Product and LPG

Coal Including Coal and Briquette.

Gas Including Natural Gas and LNG

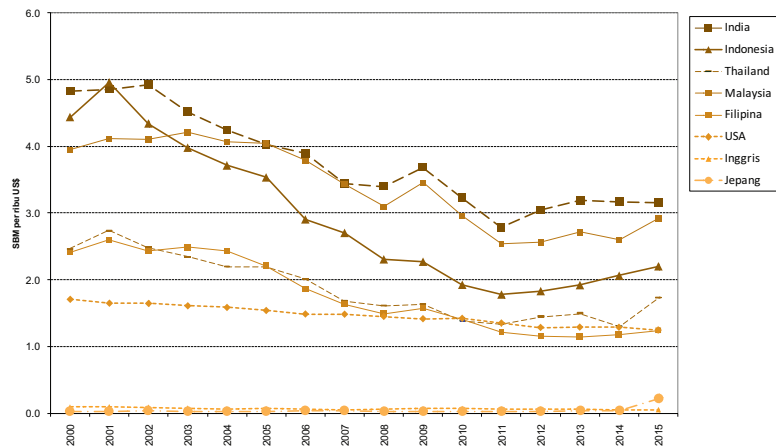
Biomass Including Firewood and Charcoal

Biofuel : Pure Bio Energy (not Blending Product)

\*) Revised Data

Temporary Data for Year 2015

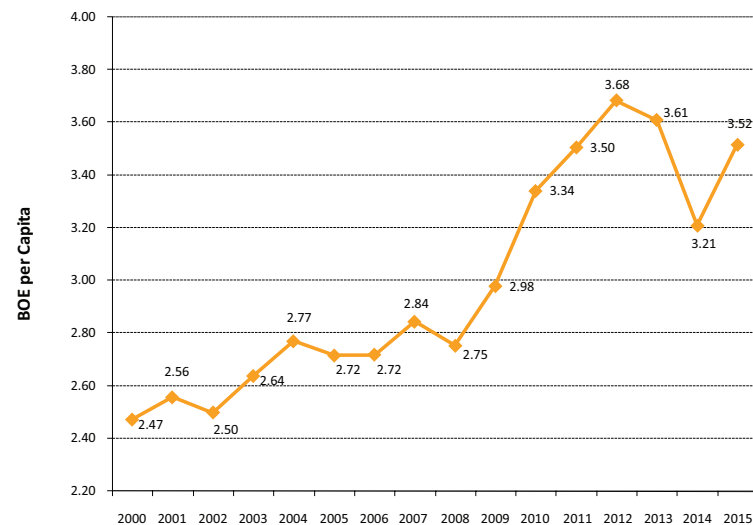
### 1.8. Comparison of Primary Energy Intensity in Some Country



Sources : BP Statistical Review of World Energy 2015 and World Economic Outlook Database October 2015, IMF

Note : GDP Primary Energy Consumption Using US\$ Fix Rate in Year 2000  
Temporary Data for Year 2015

### 1.9. Intensity of Final Energy Consumption per Capita



Note : \*) Revised Data for 2013 - 2014  
Temporary Data for Year 2015

## ENERGY BALANCED TABLE



## Indonesia Energy Balance Table 2015

(Thousand BOE)

|          |                                        | Hydro Power    | Geothermal     | Biomass        | Coal            | Briquette | Natural Gas     |  | Crude Oil       | Fuel           | Biofuel       | LPG           | Other Petroleum Product | Electricity    | LNG *)          | Total            |
|----------|----------------------------------------|----------------|----------------|----------------|-----------------|-----------|-----------------|--|-----------------|----------------|---------------|---------------|-------------------------|----------------|-----------------|------------------|
| <b>1</b> | <b>Primary Energy Supply</b>           | <b>35,222</b>  | <b>16,338</b>  | <b>309,717</b> | <b>364,619</b>  | <b>0</b>  | <b>425,296</b>  |  | <b>311,392</b>  | <b>200,275</b> | <b>90,698</b> | <b>34,065</b> | <b>-26,543</b>          | <b>8</b>       | <b>-145,663</b> | <b>1,615,423</b> |
|          | a. Production                          | 35,222         | 16,338         | 309,717        | 1,938,578       | 0         | 480,375         |  | 286,814         | 0              | 90,698        | 0             | 0                       | 0              | 0               | 3,157,742        |
|          | b. Import                              | 0              | 0              | 0              | 12,633          | 0         | 0               |  | 136,666         | 161,838        | 0             | 30,723        | 6,399                   | 8              | 0               | 348,267          |
|          | c. Export                              | 0              | 0              | 0              | -1,536,568      | 0         | -55,080         |  | -115,017        | -2,094         | 0             | 0             | -32,943                 | 0              | -145,663        | -1,887,366       |
|          | d. Stock Change                        | 0              | 0              | 0              | -50,023         | 0         | 0               |  | 2,929           | 40,531         | 0             | 3,343         | 0                       | 0              | 0               | -3,220           |
| <b>2</b> | <b>Energy Transformation</b>           | <b>-35,222</b> | <b>-16,338</b> | <b>-268</b>    | <b>-294,395</b> | <b>50</b> | <b>-285,075</b> |  | <b>-305,286</b> | <b>89,814</b>  | <b>0</b>      | <b>20,296</b> | <b>104,027</b>          | <b>143,431</b> | <b>180,273</b>  | <b>-398,692</b>  |
|          | a. Refinery                            | 0              | 0              | 0              | 0               | 0         | -4,255          |  | -305,286        | 156,477        | 0             | 4,667         | 104,027                 | 0              | 0               | -44,370          |
|          | b. Gas Processing                      | 0              | 0              | 0              | 0               | 0         | -188,686        |  | 0               | 0              | 0             | 15,629        | 0                       | 0              | 180,273         | 7,216            |
|          | c. Coal Processing Plant               | 0              | 0              | 0              | -59             | 50        | 0               |  | 0               | 0              | 0             | 0             | 0                       | 0              | 0               | -9               |
|          | e. Power Plant                         | -35,222        | -16,338        | -268           | -294,336        | 0         | -92,134         |  | 0               | -66,663        | 0             | 0             | 0                       | 143,431        | 0               | -361,529         |
|          | - State Own Utility (PLN)              | -25,191        | -6,975         | 0              | -205,780        | 0         | -81,986         |  | 0               | -68,979        | 0             | 0             | 0                       | 108,177        | 0               | -280,733         |
|          | - Independent Power Producer (Non-PLN) | -10,031        | -9,363         | -268           | -88,556         | 0         | -10,148         |  | 0               | 2,316          | 0             | 0             | 0                       | 35,253         | 0               | -80,796          |
| <b>3</b> | <b>Own Use and Losses</b>              | <b>0</b>       | <b>0</b>       | <b>0</b>       | <b>0</b>        | <b>0</b>  | <b>-42,744</b>  |  | <b>-6,106</b>   | <b>-528</b>    | <b>-181</b>   | <b>0</b>      | <b>0</b>                | <b>-18,910</b> | <b>-34,545</b>  | <b>-103,014</b>  |
|          | a. During Transformation               | 0              | 0              | 0              | 0               | 0         | -4,255          |  | -6,106          | 0              | 0             | 0             | 0                       | -5,388         | 0               | -15,749          |
|          | b. Energy Use/ Own Use                 | 0              | 0              | 0              | 0               | 0         | -38,489         |  | 0               | 0              | 0             | 0             | 0                       | 0              | 0               | -38,489          |
|          | c. Transmission & Distribution         | 0              | 0              | 0              | 0               | 0         | 0               |  | 0               | -528           | -181          | 0             | 0                       | -13,522        | -34,545         | -48,776          |
| <b>4</b> | <b>Final Energy Supply</b>             | <b>0</b>       | <b>0</b>       | <b>309,450</b> | <b>70,224</b>   | <b>50</b> | <b>97,476</b>   |  | <b>0</b>        | <b>289,561</b> | <b>90,517</b> | <b>54,361</b> | <b>77,484</b>           | <b>124,529</b> | <b>65</b>       | <b>1,113,718</b> |
| <b>5</b> | <b>Statistic Discrepancy</b>           | <b>0</b>       | <b>0</b>       | <b>0</b>       | <b>0</b>        | <b>0</b>  | <b>-26,401</b>  |  | <b>0</b>        | <b>0</b>       | <b>0</b>      | <b>0</b>      | <b>0</b>                | <b>185</b>     | <b>65</b>       | <b>-26,152</b>   |
| <b>6</b> | <b>Final Energy Consumption</b>        | <b>0</b>       | <b>0</b>       | <b>309,450</b> | <b>70,224</b>   | <b>50</b> | <b>123,877</b>  |  | <b>0</b>        | <b>289,561</b> | <b>90,517</b> | <b>54,361</b> | <b>77,484</b>           | <b>124,344</b> | <b>0</b>        | <b>1,139,869</b> |
|          | a. Industry                            | 0              | 0              | 44,828         | 70,224          | 50        | 92,932          |  | 0               | 26,799         | 0             | 788           | 0                       | 39,281         | 0               | 274,901          |
|          | b. Transportation                      | 0              | 0              | 0              | 0               | 0         | 246             |  | 0               | 238,522        | 90,517        | 0             | 0                       | 126            | 0               | 329,411          |
|          | c. Household                           | 0              | 0              | 263,275        | 0               | 0         | 116             |  | 0               | 3,903          | 0             | 52,130        | 0                       | 54,362         | 0               | 373,787          |
|          | d. Commercial                          | 0              | 0              | 1,346          | 0               | 0         | 1,435           |  | 0               | 3,387          | 0             | 1,444         | 0                       | 30,576         | 0               | 38,188           |
|          | e. Other Sector                        | 0              | 0              | 0              | 0               | 0         | 0               |  | 0               | 16,950         | 0             | 0             | 0                       | 0              | 0               | 16,950           |
| <b>7</b> | <b>Non Energy Use</b>                  | <b>0</b>       | <b>0</b>       | <b>0</b>       | <b>0</b>        | <b>0</b>  | <b>29,148</b>   |  | <b>0</b>        | <b>0</b>       | <b>0</b>      | <b>0</b>      | <b>77,484</b>           | <b>0</b>       | <b>0</b>        | <b>106,632</b>   |

Note : Temporary Data for Year 2015

**ENERGY SUPPLY  
AND DEMAND**



### 3.1. Primary Energy Supply by Sources

(BOE)

| Year     | Coal        | Crude Oil & Product | Natural Gas & Product | Hydro Power |  | Geothermal | Biomass     | Biofuel    | Total         |
|----------|-------------|---------------------|-----------------------|-------------|--|------------|-------------|------------|---------------|
| 2000     | 93,831,548  | 433,360,999         | 164,649,922           | 25,248,631  |  | 9,596,400  | 269,054,110 | 0          | 995,741,609   |
| 2001     | 119,125,379 | 441,731,352         | 172,083,907           | 29,380,607  |  | 9,960,940  | 268,970,034 | 0          | 1,041,252,219 |
| 2002     | 122,879,411 | 452,817,870         | 188,822,314           | 25,038,179  |  | 10,248,040 | 270,230,078 | 0          | 1,070,035,892 |
| 2003     | 164,950,173 | 456,647,707         | 204,142,054           | 22,937,538  |  | 10,375,200 | 272,005,374 | 0          | 1,131,058,046 |
| 2004     | 151,543,284 | 498,117,696         | 187,553,776           | 24,385,647  |  | 11,077,000 | 271,806,233 | 0          | 1,144,483,636 |
| 2005     | 173,673,093 | 493,636,985         | 191,189,376           | 27,034,841  |  | 10,910,460 | 270,042,895 | 0          | 1,166,487,651 |
| 2006     | 205,779,290 | 459,929,016         | 196,599,386           | 24,256,796  |  | 11,182,742 | 276,335,944 | 1,420,404  | 1,175,503,577 |
| 2007     | 258,174,000 | 470,036,057         | 183,623,636           | 28,450,964  |  | 11,421,759 | 275,199,938 | 3,996,452  | 1,230,902,805 |
| 2008     | 224,587,657 | 474,496,098         | 236,049,566           | 29,060,413  |  | 13,423,610 | 277,981,421 | 6,404,542  | 1,262,003,306 |
| 2009     | 236,439,000 | 467,883,065         | 251,035,250           | 28,662,883  |  | 14,973,198 | 279,313,257 | 16,324,713 | 1,294,631,364 |
| 2010     | 281,400,000 | 518,405,561         | 269,942,185           | 43,952,237  |  | 15,266,074 | 273,670,429 | 28,560,422 | 1,431,196,907 |
| 2011     | 334,142,760 | 546,635,311         | 261,708,332           | 31,268,976  |  | 15,119,152 | 283,140,897 | 46,675,773 | 1,518,691,200 |
| 2012     | 377,892,961 | 533,830,676         | 259,456,414           | 32,226,297  |  | 15,129,340 | 300,838,657 | 60,252,319 | 1,579,626,663 |
| 2013 *)  | 406,368,974 | 542,950,370         | 270,134,751           | 42,627,451  |  | 15,245,038 | 306,227,006 | 71,073,722 | 1,654,627,313 |
| 2014 **) | 321,597,105 | 544,795,076         | 271,375,371           | 38,139,213  |  | 16,191,566 | 310,162,037 | 88,842,904 | 1,591,103,271 |
| 2015     | 364,619,216 | 545,732,171         | 279,632,345           | 35,221,612  |  | 16,337,878 | 309,717,323 | 90,698,447 | 1,641,958,992 |

Note : \*) Revised Data for Coal; Natural Gas & Product; Hydropower; Geothermal; Biomass and Total

\*\*) Revised Data for Coal, Hydropower and Total

Temporary Data for Year 2015

## 3.2. Final Energy Consumption by Sector

### 3.2.1. Energy Consumption (Included Biomass)

(BOE)

| Sector                   | 2000        | 2001        | 2002        | 2003        | 2004        | 2005        | 2006        |  | 2007        | 2008        | 2009        | 2010          | 2011          | 2012          | 2013 *)       | 2014 **)      | 2015          |
|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|-------------|-------------|-------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Industrial               | 251,895,942 | 252,158,714 | 245,108,900 | 275,308,517 | 263,294,377 | 262,686,505 | 280,187,757 |  | 300,675,120 | 309,872,959 | 297,271,113 | 355,412,885   | 359,809,663   | 376,159,363   | 365,887,894   | 257,377,423   | 274,901,401   |
| Households               | 296,573,110 | 301,347,223 | 303,032,794 | 309,046,165 | 314,114,684 | 313,772,025 | 312,715,871 |  | 319,333,000 | 316,802,419 | 317,055,653 | 310,548,074   | 323,355,711   | 349,084,289   | 360,016,142   | 369,893,470   | 373,786,746   |
| Commercial               | 20,670,389  | 21,449,843  | 21,752,300  | 22,397,122  | 25,412,327  | 26,234,764  | 26,194,683  |  | 27,896,499  | 29,273,897  | 30,848,294  | 33,122,376    | 35,225,915    | 35,200,167    | 37,308,106    | 38,112,729    | 38,187,888    |
| Transportation           | 139,178,658 | 148,259,584 | 151,498,823 | 156,232,909 | 178,374,391 | 178,452,407 | 170,127,492 |  | 179,144,177 | 196,941,689 | 224,883,086 | 255,568,629   | 277,404,656   | 308,235,640   | 323,304,451   | 334,202,726   | 329,411,317   |
| Other                    | 29,213,878  | 30,585,607  | 29,998,546  | 28,445,436  | 31,689,809  | 29,102,166  | 25,936,873  |  | 24,912,051  | 25,855,949  | 27,186,782  | 28,743,347    | 24,816,386    | 25,055,850    | 23,255,126    | 20,157,451    | 16,950,371    |
| Non Energy Utilization   | 40,393,109  | 48,524,092  | 48,534,290  | 48,317,775  | 62,375,806  | 54,352,999  | 64,990,106  |  | 64,759,190  | 73,847,398  | 84,096,759  | 84,146,777    | 98,284,711    | 111,081,769   | 94,531,056    | 99,424,786    | 106,631,582   |
| Final Energy Consumption | 777,925,086 | 802,325,064 | 799,925,653 | 839,747,924 | 875,261,394 | 864,600,867 | 880,152,782 |  | 916,720,038 | 952,594,312 | 981,341,686 | 1,067,542,087 | 1,118,897,043 | 1,204,817,077 | 1,204,302,774 | 1,119,168,585 | 1,139,869,306 |

Note : \*) Revised Data for Industrial and Final Energy Consumption

\*\*) Revised Data for Industrial and Final Energy Consumption

Temporary Data for Year 2015

### 3.2.2. Commercial Energy Consumption (Excluded Biomass)

(BOE)

| Sector                   | 2000        | 2001        | 2002        | 2003        | 2004        | 2005        | 2006        |  | 2007        | 2008        | 2009        | 2010        | 2011        | 2012        | 2013 *)     | 2014 **)    | 2015        |
|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Industrial               | 192,914,655 | 196,972,955 | 192,803,789 | 225,141,109 | 216,377,677 | 218,766,032 | 233,511,599 |  | 258,567,087 | 255,304,315 | 252,750,040 | 312,095,602 | 316,085,936 | 333,427,610 | 321,489,102 | 212,189,786 | 230,072,962 |
| Households               | 87,963,563  | 89,023,979  | 86,568,222  | 88,669,268  | 90,689,214  | 89,065,250  | 84,529,554  |  | 87,716,652  | 84,558,014  | 80,832,849  | 81,632,635  | 85,426,266  | 92,489,973  | 99,687,947  | 106,398,267 | 110,511,916 |
| Commercial               | 19,218,814  | 20,005,525  | 20,315,203  | 20,967,212  | 23,989,565  | 24,819,117  | 24,786,114  |  | 26,494,973  | 27,879,379  | 29,460,747  | 31,741,767  | 33,852,210  | 33,833,330  | 35,948,103  | 36,759,526  | 36,841,452  |
| Transportation           | 139,178,658 | 148,259,584 | 151,498,823 | 156,232,909 | 178,374,391 | 178,452,407 | 170,127,492 |  | 179,144,177 | 196,941,689 | 224,883,086 | 255,568,629 | 277,404,656 | 308,235,640 | 323,304,451 | 334,202,726 | 329,411,317 |
| Other                    | 29,213,878  | 30,585,607  | 29,998,546  | 28,445,436  | 31,689,809  | 29,102,166  | 25,936,873  |  | 24,912,051  | 25,855,949  | 27,186,782  | 28,743,347  | 24,816,386  | 25,055,850  | 23,255,126  | 20,157,451  | 16,950,371  |
| Non Energy Utilization   | 40,393,109  | 48,524,092  | 48,534,290  | 48,317,775  | 62,375,806  | 54,352,999  | 64,990,106  |  | 64,759,190  | 73,479,806  | 84,096,759  | 84,146,777  | 98,284,711  | 111,081,769 | 94,531,056  | 99,424,786  | 106,631,582 |
| Final Energy Consumption | 508,882,677 | 533,371,742 | 529,718,873 | 567,773,708 | 603,496,463 | 594,557,972 | 603,881,738 |  | 641,594,130 | 664,019,151 | 699,210,263 | 793,928,757 | 835,870,166 | 904,124,172 | 898,215,786 | 809,132,543 | 830,419,601 |

Note : \*) Revised Data for Industrial and Final Energy Consumption

\*\*) Revised Data for Industrial and Final Energy Consumption

Temporary Data for Year 2015

### 3.3. Final Energy Consumption by Type

| Year     | Biomass | Coal    | Natural Gas | Fuel    |  | Other Petroleum Product | Briquette | LPG    | Electricity | Total     |
|----------|---------|---------|-------------|---------|--|-------------------------|-----------|--------|-------------|-----------|
| 2000     | 269,042 | 36,060  | 87,214      | 315,272 |  | 13,435                  | 85        | 8,261  | 48,555      | 777,925   |
| 2001     | 268,953 | 37,021  | 82,235      | 328,203 |  | 25,712                  | 78        | 8,280  | 51,841      | 802,325   |
| 2002     | 270,207 | 38,698  | 80,885      | 325,202 |  | 22,688                  | 83        | 8,744  | 53,418      | 799,926   |
| 2003     | 271,974 | 68,264  | 90,277      | 321,384 |  | 23,533                  | 77        | 8,766  | 55,473      | 839,748   |
| 2004     | 271,765 | 55,344  | 85,459      | 354,317 |  | 37,716                  | 80        | 9,187  | 61,393      | 875,261   |
| 2005     | 270,043 | 65,744  | 86,634      | 338,375 |  | 29,614                  | 94        | 8,453  | 65,644      | 864,601   |
| 2006     | 276,271 | 89,043  | 83,221      | 311,913 |  | 41,126                  | 94        | 9,414  | 69,071      | 880,153   |
| 2007     | 275,126 | 121,904 | 80,178      | 314,248 |  | 39,873                  | 89        | 10,925 | 74,376      | 916,720   |
| 2008     | 277,874 | 94,035  | 102,281     | 320,987 |  | 16,658                  | 155       | 15,718 | 79,138      | 906,846   |
| 2009     | 279,169 | 82,587  | 118,587     | 335,271 |  | 55,663                  | 220       | 24,384 | 82,499      | 978,380   |
| 2010     | 273,613 | 136,733 | 115,404     | 363,130 |  | 55,765                  | 123       | 32,067 | 90,707      | 1,067,542 |
| 2011     | 283,027 | 144,502 | 121,234     | 363,827 |  | 69,978                  | 121       | 37,060 | 99,147      | 1,118,897 |
| 2012     | 300,693 | 155,915 | 125,074     | 391,531 |  | 81,934                  | 130       | 42,883 | 106,656     | 1,204,817 |
| 2013 *)  | 306,087 | 146,482 | 125,529     | 397,223 |  | 66,161                  | 56        | 47,801 | 114,962     | 1,204,303 |
| 2014 **) | 310,036 | 44,431  | 124,467     | 396,214 |  | 70,277                  | 58        | 51,942 | 121,743     | 1,119,169 |
| 2015     | 309,450 | 70,224  | 123,877     | 380,079 |  | 77,484                  | 50        | 54,361 | 124,344     | 1,139,869 |

Note : \*) Revised Data for Coal and Total

\*\*) Revised Data for Coal, Other Petroleum Product and Total  
Temporary Data for Year 2015

### 3.4. Share of Final Energy Consumption by Sector

(%)

| Year    | Industry | Household | Commercial | Transportation | Other |
|---------|----------|-----------|------------|----------------|-------|
| 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    | 43.34    | 17.07     | 4.04       | 30.08          | 5.48  |
| 2004    | 39.99    | 16.76     | 4.43       | 32.96          | 5.86  |
| 2005    | 40.50    | 16.49     | 4.59       | 33.03          | 5.39  |
| 2006    | 43.33    | 15.69     | 4.60       | 31.57          | 4.81  |
| 2007    | 44.83    | 15.21     | 4.59       | 31.06          | 4.32  |
| 2008    | 43.23    | 14.32     | 4.72       | 33.35          | 4.38  |
| 2009    | 44.22    | 14.06     | 4.64       | 32.78          | 4.30  |
| 2010    | 41.09    | 13.14     | 4.79       | 36.56          | 4.42  |
| 2011    | 43.97    | 11.50     | 4.47       | 36.01          | 4.05  |
| 2012    | 42.04    | 11.66     | 4.27       | 38.87          | 3.16  |
| 2013 *) | 40.00    | 12.40     | 4.47       | 40.23          | 2.89  |
| 2014 *) | 29.90    | 14.99     | 5.18       | 47.09          | 2.84  |
| 2015    | 31.79    | 15.27     | 5.09       | 45.51          | 2.34  |

Note : Commercial Energy (Excluded Biomass)  
 \*) Revised Data  
 Temporary Data for Year 2015

### 3.5. Share of Final Energy Consumption by Type

(%)

| Year    | Coal | Natural Gas | Fuel | Biofuel | LPG | Electricity |
|---------|------|-------------|------|---------|-----|-------------|
| 2000    | 7.3  | 17.6        | 63.6 | 0.00    | 1.7 | 9.8         |
| 2001    | 7.3  | 16.2        | 64.7 | 0.00    | 1.6 | 10.2        |
| 2002    | 7.6  | 16.0        | 64.2 | 0.00    | 1.7 | 10.5        |
| 2003    | 12.6 | 16.6        | 59.1 | 0.00    | 1.6 | 10.2        |
| 2004    | 9.8  | 15.1        | 62.6 | 0.00    | 1.6 | 10.9        |
| 2005    | 11.7 | 15.3        | 59.9 | 0.00    | 1.5 | 11.6        |
| 2006    | 15.8 | 14.8        | 55.1 | 0.24    | 1.7 | 12.3        |
| 2007    | 20.3 | 13.3        | 51.6 | 0.62    | 1.8 | 12.4        |
| 2008    | 15.4 | 16.7        | 51.4 | 1.03    | 2.6 | 12.9        |
| 2009    | 12.9 | 18.4        | 49.6 | 2.53    | 3.8 | 12.8        |
| 2010    | 18.5 | 15.6        | 45.4 | 3.86    | 4.3 | 12.3        |
| 2011    | 18.9 | 15.8        | 41.4 | 6.08    | 4.9 | 12.7        |
| 2012    | 19.0 | 15.2        | 40.0 | 7.62    | 5.2 | 13.0        |
| 2013 *) | 17.6 | 15.1        | 39.2 | 8.52    | 5.7 | 13.8        |
| 2014 *) | 6.0  | 16.8        | 41.6 | 12.00   | 7.0 | 16.5        |
| 2015    | 9.3  | 16.5        | 38.5 | 12.02   | 7.2 | 16.5        |

Note : \*) Revised Data  
 Temporary Data for Year 2015

ENERGY PRICES



## 4.1. Crude Oil Price

(US\$ per Barrel)

| Crude Oil Type     | 2000  | 2001  | 2002  | 2003  |  | 2004  | 2005  | 2006  | 2007  | 2008   | 2009  |
|--------------------|-------|-------|-------|-------|--|-------|-------|-------|-------|--------|-------|
| SLC                | 28.53 | 23.99 | 25.11 | 29.04 |  | 36.30 | 53.92 | 64.24 | 72.94 | 99.90  | 64.14 |
| Arjuna             | 28.65 | 24.29 | 24.35 | 28.81 |  | 36.90 | 55.07 | 65.52 | 72.38 | 97.61  | 61.18 |
| Arun Condensate    | 28.92 | 24.40 | 24.65 | 29.16 |  | 37.40 | 54.62 | 64.85 | 72.94 | 94.27  | 60.33 |
| Attaka             | 29.09 | 24.75 | 24.89 | 29.41 |  | 37.60 | 57.51 | 67.59 | 75.69 | 101.03 | 62.74 |
| Cinta              | 27.83 | 23.15 | 24.08 | 28.09 |  | 35.00 | 51.81 | 61.77 | 70.33 | 94.58  | 59.74 |
| Duri               | 27.09 | 22.02 | 23.30 | 27.11 |  | 30.40 | 46.62 | 54.93 | 59.89 | 84.57  | 55.12 |
| Handil Mix         | n/a   | 24.42 | 24.48 | 28.96 |  | 37.10 | 55.23 | 65.67 | 72.53 | 97.77  | 61.33 |
| Lalang             | n/a   | 24.04 | 25.16 | 29.09 |  | 36.40 | 53.13 | 64.29 | 72.99 | 99.95  | 64.19 |
| Widuri             | 27.87 | 23.10 | 24.08 | 28.05 |  | 35.00 | 51.19 | 61.94 | 70.41 | 94.98  | 59.72 |
| Belida             | 29.07 | 24.74 | 24.74 | 29.19 |  | 37.30 | 56.54 | 67.56 | 75.71 | 101.05 | 62.30 |
| Senipah Condensate | 29.05 | 24.40 | 24.65 | 29.17 |  | 39.95 | 54.62 | 65.57 | 73.03 | 94.27  | 60.33 |
| Average            | 28.39 | 21.94 | 22.46 | 26.34 |  | 36.39 | 53.66 | 64.27 | 72.31 | 96.13  | 61.58 |

## 4.1. Crude Oil Price (continued)

(US\$ per Barrel)

| Crude Oil Type     | 2010  | 2011   | 2012   | 2013   |  | 2014  | 2015  |
|--------------------|-------|--------|--------|--------|--|-------|-------|
| SLC                | 81.44 | 113.63 | 115.59 | 108.15 |  | 98.63 | 49.39 |
| Arjuna             | 78.91 | 112.47 | 111.75 | 104.23 |  | 94.82 | 48.54 |
| Attaka             | 80.75 | 114.38 | 114.47 | 107.57 |  | 97.96 | 51.20 |
| Cinta              | 77.02 | 110.50 | 114.07 | 106.51 |  | 96.83 | 48.22 |
| Duri               | 75.07 | 107.57 | 112.31 | 104.44 |  | 94.67 | 47.60 |
| Widuri             | 77.12 | 110.55 | 114.16 | 106.05 |  | 97.03 | 48.44 |
| Belida             | 80.28 | 114.14 | 115.19 | 109.69 |  | 99.63 | 52.62 |
| Senipah Condensate | 78.76 | 109.02 | 108.97 | 106.48 |  | 98.25 | 52.92 |
| Anoa               | 81.15 | 114.78 | 114.87 | 107.97 |  | 98.36 | 51.60 |
| Arun Condensate    | 78.76 | 109.02 | 108.97 | 106.48 |  | 98.25 | 52.92 |
| Badak              | 80.75 | 114.38 | 114.47 | 107.57 |  | 97.96 | 51.20 |
| Average            | 79.40 | 111.55 | 112.73 | 105.85 |  | 96.51 | 49.21 |

Source : Oil and Gas Statistics, Directorate General of Oil and Gas

Note : Temporary Data for Year 2015

## 4.2. International Gas Price

(US\$/MMBTU)

| Year | LNG          | Natural Gas      |                      |                 |                  |
|------|--------------|------------------|----------------------|-----------------|------------------|
|      | CIF on Japan | CIF on Uni Eropa | UK (Heren NBP Index) | USA (Henry Hub) | Canada (Alberta) |
| 2000 | 4.72         | 4.32             | 2.71                 | 4.23            | 3.75             |
| 2001 | 4.64         | 3.66             | 3.17                 | 4.07            | 3.61             |
| 2002 | 4.27         | 3.23             | 2.37                 | 3.33            | 2.57             |
| 2003 | 4.77         | 4.06             | 3.33                 | 5.63            | 4.83             |
| 2004 | 5.18         | 4.32             | 4.46                 | 5.85            | 5.03             |
| 2005 | 6.05         | 5.88             | 7.38                 | 8.79            | 7.25             |
| 2006 | 7.14         | 7.85             | 7.87                 | 6.76            | 5.83             |
| 2007 | 7.73         | 8.03             | 6.01                 | 6.95            | 6.17             |
| 2008 | 12.55        | 11.56            | 10.79                | 8.85            | 7.99             |
| 2009 | 9.06         | 8.52             | 4.85                 | 3.89            | 3.38             |
| 2010 | 10.91        | 8.01             | 6.56                 | 4.39            | 3.69             |
| 2011 | 14.73        | 10.61            | 9.03                 | 4.01            | 3.47             |
| 2012 | 16.75        | 11.03            | 9.46                 | 2.76            | 2.27             |
| 2013 | 16.17        | 10.72            | 10.63                | 3.71            | 2.93             |
| 2014 | 16.33        | 9.11             | 8.22                 | 4.35            | 3.87             |
| 2015 | 10.31        | 6.61             | 6.53                 | 2.60            | 2.01             |

Source : BP Statistical Review of World Energy, 2016

Note : Temporary Data for Year 2015

## 4.3. Average Price of LPG, LNG and Coal FOB Export

| 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       | 40.99    |
| 2008 | 785.94             | 11.97      | 54.76    |
| 2009 | 545.49             | 6.95       | 63.85    |
| 2010 | 0.00               | 7.79       | 72.35    |
| 2011 | 0.00               | 11.80      | 95.91    |
| 2012 | 0.00               | 9.86       | 88.36    |
| 2013 | 0.00               | 10.07      | 75.42    |
| 2014 | 0.00               | 7.41       | 66.30    |
| 2015 | 0.00               | 5.09       | 60.13    |

Source : Directorate General of Oil and Gas, Bank Indonesia and Ministry of Trade

Note : \*) Revised Data for 2013 and 2014

Temporary Data for Year 2015

#### 4.4. Energy Price per Energy Unit \*)

| Year | Gasoline (Premium) |          | Avtur     |          | Avgas     |          | Kerosene |          |  | ADO       |          | IDO       |          | Fuel Oil |          | LPG (3 Kg) |          |
|------|--------------------|----------|-----------|----------|-----------|----------|----------|----------|--|-----------|----------|-----------|----------|----------|----------|------------|----------|
|      | Rp/BOE             | US\$/BOE | Rp/BOE    | US\$/BOE | Rp/BOE    | US\$/BOE | Rp/BOE   | US\$/BOE |  | Rp/BOE    | US\$/BOE | Rp/BOE    | US\$/BOE | Rp/BOE   | US\$/BOE | Rp/BOE     | US\$/BOE |
| 2000 | 178,035            | 18.55    | 179,945   | 18.75    | 306,141   | 31.91    | 50,191   | 5.23     |  | 86,711    | 9.04     | 77,560    | 8.08     | 52,074   | 5.43     | 0.0        | 0.000    |
| 2001 | 225,368            | 21.67    | 332,728   | 31.99    | 884,207   | 85.02    | 63,640   | 6.12     |  | 117,669   | 11.31    | 139,292   | 13.39    | 98,702   | 9.49     | 0.0        | 0.000    |
| 2002 | 248,820            | 27.83    | 354,797   | 39.69    | 766,613   | 85.75    | 67,483   | 7.55     |  | 138,737   | 15.52    | 194,215   | 21.72    | 150,357  | 16.82    | 0.0        | 0.000    |
| 2003 | 313,707            | 37.06    | 601,287   | 71.03    | 1,150,909 | 135.96   | 309,087  | 36.51    |  | 260,228   | 30.74    | 289,935   | 34.25    | 222,902  | 26.33    | 0.0        | 0.000    |
| 2004 | 310,596            | 33.43    | 580,746   | 62.51    | 1,118,885 | 120.44   | 303,674  | 32.69    |  | 254,351   | 27.38    | 310,239   | 33.39    | 227,810  | 24.52    | 0.0        | 0.000    |
| 2005 | 492,028            | 50.05    | 806,228   | 82.02    | 2,067,906 | 210.37   | 398,713  | 40.56    |  | 406,962   | 41.40    | 585,398   | 59.55    | 394,879  | 40.17    | 0.0        | 0.000    |
| 2006 | 772,201            | 85.61    | 974,757   | 108.07   | 2,423,480 | 268.68   | 337,416  | 37.41    |  | 662,854   | 73.49    | 829,863   | 92.00    | 513,974  | 56.98    | 0.0        | 0.000    |
| 2007 | 772,201            | 81.98    | 1,048,206 | 111.29   | 2,849,871 | 302.57   | 337,416  | 35.82    |  | 662,854   | 70.37    | 887,504   | 94.22    | 577,206  | 61.28    | 498.6      | 0.053    |
| 2008 | 911,626            | 83.25    | 1,561,727 | 142.62   | 4,246,083 | 387.77   | 386,623  | 35.31    |  | 766,264   | 69.98    | 1,311,550 | 119.78   | 853,622  | 77.96    | 498.6      | 0.046    |
| 2009 | 858,001            | 82.85    | 949,203   | 91.66    | 3,277,120 | 316.44   | 421,770  | 40.73    |  | 739,930   | 71.45    | n.a.      | n.a.     | n.a.     | n.a.     | 498.6      | 0.048    |
| 2010 | 772,201            | 85.06    | 1,123,989 | 123.81   | 4,092,892 | 450.86   | 421,770  | 46.46    |  | 693,684   | 76.41    | n.a.      | n.a.     | n.a.     | n.a.     | 498.6      | 0.055    |
| 2011 | 772,201            | 85.16    | 1,455,486 | 160.51   | 3,540,632 | 390.45   | 421,770  | 46.51    |  | 693,684   | 76.50    | n.a.      | n.a.     | n.a.     | n.a.     | 498.6      | 0.055    |
| 2012 | 772,201            | 63.35    | 1,591,196 | 130.54   | 4,003,697 | 328.47   | 421,770  | 34.60    |  | 693,684   | 56.91    | n.a.      | n.a.     | n.a.     | n.a.     | 498.6      | 0.041    |
| 2013 | 943,801            | 77.43    | 1,693,547 | 138.94   | 4,339,184 | 355.99   | 421,770  | 34.60    |  | 770,760   | 63.23    | n.a.      | n.a.     | n.a.     | n.a.     | 498.6      | 0.041    |
| 2014 | n.a.               | n.a.     | n.a.      | n.a.     | n.a.      | n.a.     | n.a.     | n.a.     |  | n.a.      | n.a.     | n.a.      | n.a.     | n.a.     | n.a.     | n.a.       | n.a.     |
| 2015 | 1,248,391          | 90.50    | 1,561,784 | 113.21   | n.a.      | n.a.     | n.a.     | n.a.     |  | 1,338,503 | 97.03    | n.a.      | n.a.     | n.a.     | n.a.     | n.a.       | n.a.     |

Note : \*) Based on Current Price

\*\*) Average of refinery product for 2009 extremely decrease of IDO and fuel oil's non subsidized price data not longer available

Temporary Data for Year 2015

#### 4.4. Energy Price per Energy Unit (continued)

| Year | LPG<br>(12 Kg) |          | LPG<br>(50 Kg) |          | Average of<br>Refinery Product **) |           | Coal |         |           | Electricity (Average) |          |           |          |            |           |
|------|----------------|----------|----------------|----------|------------------------------------|-----------|------|---------|-----------|-----------------------|----------|-----------|----------|------------|-----------|
|      | Rp/BOE         | US\$/BOE | Rp/BOE         | US\$/BOE | Rp/BOE                             | US \$/BOE |      |         |           | Household             |          | Industry  |          | Commercial |           |
|      |                |          |                |          |                                    |           |      | Rp/BOE  | US \$/BOE | Rp/BOE                | US\$/BOE | Rp/BOE    | US\$/BOE | Rp/BOE     | US \$/BOE |
| 2000 | 246.3          | 0.026    | 246.3          | 0.026    | 116,363                            | 12.13     |      | 35,961  | 3.75      | 338,238               | 35.25    | 493,507   | 51.43    | 620,734    | 64.69     |
| 2001 | 246.3          | 0.024    | 246.3          | 0.024    | 232,732                            | 22.38     |      | 46,673  | 4.49      | 413,785               | 39.79    | 590,000   | 56.73    | 737,210    | 70.89     |
| 2002 | 281.5          | 0.031    | 281.5          | 0.031    | 240,163                            | 26.86     |      | 51,384  | 5.75      | 640,767               | 71.67    | 722,577   | 80.83    | 966,998    | 108.17    |
| 2003 | 334.3          | 0.039    | 334.3          | 0.039    | 393,549                            | 46.49     |      | 53,973  | 6.38      | 852,333               | 100.69   | 865,122   | 102.20   | 1,078,972  | 127.46    |
| 2004 | 351.9          | 0.038    | 351.9          | 0.038    | 388,332                            | 41.80     |      | 53,956  | 5.81      | 909,886               | 97.94    | 912,153   | 98.19    | 1,113,083  | 119.82    |
| 2005 | 498.6          | 0.051    | 498.6          | 0.051    | 644,077                            | 65.52     |      | 58,820  | 5.98      | 918,515               | 93.44    | 929,641   | 94.57    | 1,133,295  | 115.29    |
| 2006 | 498.6          | 0.055    | 498.6          | 0.055    | 814,380                            | 90.29     |      | 78,523  | 8.71      | 926,020               | 102.66   | 1,013,442 | 112.35   | 1,092,023  | 121.07    |
| 2007 | 498.6          | 0.053    | 845.1          | 0.090    | 891,970                            | 94.70     |      | 79,212  | 8.41      | 932,724               | 99.03    | 1,013,573 | 107.61   | 1,260,212  | 133.79    |
| 2008 | 662.9          | 0.061    | 859.7          | 0.079    | 1,254,770                          | 114.59    |      | 53,956  | 5.81      | 909,886               | 97.94    | 912,153   | 98.19    | 1,113,083  | 119.82    |
| 2009 | 686.2          | 0.066    | 859.7          | 0.083    | 780,815                            | 75.40     |      | 114,397 | 10.45     | 959,231               | 87.60    | 1,014,741 | 92.67    | 1,387,403  | 126.70    |
| 2010 | 686.2          | 0.076    | 1,315.8        | 0.145    | 888,129                            | 97.83     |      | 153,559 | 17.08     | 1,004,763             | 111.75   | 1,078,287 | 119.93   | 1,524,176  | 169.52    |
| 2011 | 686.2          | 0.076    | 862.8          | 0.095    | 860,534                            | 94.90     |      | 163,359 | 18.01     | 1,008,075             | 111.17   | 1,134,519 | 125.11   | 1,551,468  | 171.09    |
| 2012 | 686.2          | 0.056    | 1,315.8        | 0.108    | 935,381                            | 76.74     |      | 174,489 | 18.04     | 1,030,440             | 106.56   | 1,158,091 | 119.76   | 1,574,551  | 162.83    |
| 2013 | 747.2          | 0.061    | 1,568.8        | 0.129    | 1,021,195                          | 83.78     |      | 219,464 | 18.01     | 1,128,972             | 92.62    | 1,299,103 | 106.58   | 1,821,501  | 162.83    |
| 2014 | n.a            | n.a      | n.a            | n.a      | n.a                                | n.a       |      | 234,883 | 18.88     | 1,236,803             | 99.42    | 1,595,057 | 128.22   | 2,065,041  | 149.44    |
| 2015 | n.a            | n.a      | n.a            | n.a      | n.a                                | n.a       |      | n.a     | n.a       | n.a                   | n.a      | n.a       | n.a      | n.a        | n.a       |

Note : \*) Based on Current Price

\*\*) Average of refinery product for 2009 extremely decrease IDO and fuel oil's non-subsidized price data not longer available  
Temporary Data for Year 2015

#### 4.5. Average Price of Coal Import

| Year | Import Value (CIF) *) | Import Volume *) | Import Price (CIF) *) |
|------|-----------------------|------------------|-----------------------|
|      | US \$                 | Ton              | US \$/Ton             |
| 2000 | 5,837,447             | 140,116          | 41.66                 |
| 2001 | 2,004,976             | 30,466           | 65.81                 |
| 2002 | 1,627,954             | 20,026           | 81.29                 |
| 2003 | 5,732,026             | 38,228           | 149.94                |
| 2004 | 15,204,824            | 97,183           | 156.46                |
| 2005 | 12,891,514            | 98,179           | 131.31                |
| 2006 | 13,455,025            | 110,683          | 121.56                |
| 2007 | 8,880,440             | 67,534           | 131.50                |
| 2008 | 23,549,197            | 106,931          | 220.23                |
| 2009 | 16,057,630            | 68,804           | 325.71                |
| 2010 | 21,672,318            | 55,230           | 351.05                |
| 2011 | 25,644,956            | 42,449           | 410.70                |
| 2012 | 38,807,116            | 98,973           | 392.10                |
| 2013 | 82,501,170            | 609,875          | 135.28                |
| 2014 | 358,888,547           | 2,442,319        | 146.95                |
| 2015 | 325,116,779           | 3,007,934        | 108.09                |

Source : Ministry of Trade

Note : \*) Revised Data for 2013 and 2014  
Temporary Data for Year 2015

ENERGY DEMAND  
BY SECTORS

5

### 5.1.1. Energy Consumption in Industrial Sector (in Original Unit)

| Year     | Biomass      | Coal   | Briquette | Gas     | Fuel       |           |        | Fuel      |           |            | Other Petro-<br>leum Product | LPG             | Electricity |
|----------|--------------|--------|-----------|---------|------------|-----------|--------|-----------|-----------|------------|------------------------------|-----------------|-------------|
|          |              |        |           |         | Kerosene   | ADO       |        | IDO       | Fuel Oil  | Total Fuel |                              |                 |             |
|          | Thousand Ton |        |           | MMSCF   | Kilo Liter |           |        |           |           |            |                              | Thousand<br>Ton | GWh         |
| 2000     | 25,667       | 8,586  | 24        | 483,438 | 711,774    | 5,729,941 |        | 1,211,930 | 3,674,761 | 11,328,406 | 2,094,316                    | 126             | 34,013      |
| 2001     | 24,016       | 8,815  | 22        | 455,798 | 701,791    | 6,082,584 |        | 1,170,511 | 3,832,704 | 11,787,590 | 4,008,106                    | 114             | 35,593      |
| 2002     | 22,762       | 9,214  | 23        | 448,261 | 667,247    | 5,985,416 |        | 1,106,467 | 3,676,959 | 11,436,088 | 3,536,732                    | 128             | 36,831      |
| 2003     | 21,832       | 16,253 | 22        | 500,622 | 671,513    | 5,764,971 |        | 962,232   | 2,981,697 | 10,380,414 | 3,668,380                    | 95              | 36,497      |
| 2004     | 20,417       | 13,177 | 23        | 473,695 | 676,827    | 6,626,385 |        | 887,061   | 3,140,129 | 11,330,403 | 5,879,216                    | 129             | 40,324      |
| 2005     | 19,113       | 15,653 | 26        | 480,382 | 649,626    | 6,155,112 |        | 732,888   | 2,243,407 | 9,781,033  | 4,616,280                    | 133             | 42,448      |
| 2006     | 20,313       | 21,201 | 27        | 461,277 | 572,676    | 5,399,470 |        | 397,599   | 2,320,623 | 8,690,367  | 6,410,874                    | 170             | 43,615      |
| 2007     | 18,325       | 29,025 | 25        | 443,889 | 565,550    | 5,208,388 |        | 215,233   | 1,990,450 | 7,979,620  | 6,215,568                    | 146             | 45,803      |
| 2008     | 19,250       | 22,389 | 43        | 623,616 | 451,457    | 5,735,356 |        | 128,424   | 1,430,903 | 7,746,140  | 8,117,302                    | 132             | 47,969      |
| 2009     | 19,375       | 19,664 | 62        | 654,428 | 273,095    | 6,349,977 |        | 111,242   | 1,204,418 | 7,938,732  | 8,676,804                    | 69              | 46,204      |
| 2010     | 18,851       | 32,555 | 35        | 635,361 | 162,577    | 6,663,702 |        | 134,607   | 1,798,635 | 8,759,521  | 8,692,820                    | 77              | 50,985      |
| 2011     | 19,028       | 34,405 | 34        | 666,195 | 113,409    | 5,627,864 |        | 99,193    | 1,165,728 | 7,006,194  | 10,908,408                   | 73              | 54,725      |
| 2012     | 18,596       | 37,123 | 36        | 685,751 | 78,987     | 5,561,064 |        | 72,907    | 1,269,216 | 6,982,175  | 12,772,090                   | 73              | 60,176      |
| 2013 *)  | 19,321       | 34,877 | 16        | 689,312 | 72,018     | 5,153,722 |        | 62,987    | 730,651   | 6,019,378  | 10,313,407                   | 81              | 64,381      |
| 2014 **) | 19,665       | 10,579 | 16        | 683,177 | 55,503     | 4,237,700 |        | 48,449    | 697,388   | 5,039,039  | 10,954,972                   | 88              | 65,909      |
| 2015     | 19,508       | 16,720 | 14        | 679,728 | 43,950     | 3,393,515 | 42,239 | 609,809   | 4,089,513 | 12,078,384 | 92                           | 64,079          |             |

Notes : \*) Revised Data for Coal

\*\*) Revised Data for Coal and Other Petroleum Product  
Temporary Data for Year 2015

## 5.1.2. Energy Consumption in Industrial Sector

(in Energy Unit)

(Thousand BOE)

| Year     | Biomass | Coal    | Briquette | Gas     | Fuel     |        |  | Fuel  |          |            | Other Petroleum Product | LPG   | Electricity | Total   |
|----------|---------|---------|-----------|---------|----------|--------|--|-------|----------|------------|-------------------------|-------|-------------|---------|
|          |         |         |           |         | Kerosene | ADO    |  | IDO   | Fuel Oil | Total Fuel |                         |       |             |         |
| 2000     | 58,981  | 36,060  | 85        | 86,826  | 4,219    | 37,171 |  | 8,008 | 25,581   | 74,979     | 13,435                  | 1,073 | 20,850      | 292,289 |
| 2001     | 55,186  | 37,021  | 78        | 81,861  | 4,160    | 39,458 |  | 7,735 | 26,680   | 78,033     | 25,712                  | 972   | 21,819      | 300,683 |
| 2002     | 52,305  | 38,698  | 83        | 80,508  | 3,955    | 38,828 |  | 7,311 | 25,596   | 75,690     | 22,688                  | 1,093 | 22,578      | 293,643 |
| 2003     | 50,167  | 68,264  | 77        | 89,912  | 3,980    | 37,398 |  | 6,358 | 20,756   | 68,493     | 23,533                  | 808   | 22,373      | 323,626 |
| 2004     | 46,917  | 55,344  | 80        | 85,076  | 4,012    | 42,986 |  | 5,862 | 21,859   | 74,718     | 37,716                  | 1,101 | 24,719      | 325,670 |
| 2005     | 43,920  | 65,744  | 94        | 86,277  | 3,851    | 39,929 |  | 4,843 | 15,617   | 64,239     | 29,614                  | 1,131 | 26,021      | 317,040 |
| 2006     | 46,676  | 89,043  | 94        | 82,845  | 3,394    | 35,027 |  | 2,627 | 16,154   | 57,203     | 41,126                  | 1,453 | 26,736      | 345,178 |
| 2007     | 42,108  | 121,904 | 89        | 79,723  | 3,352    | 33,787 |  | 1,422 | 13,856   | 52,418     | 39,873                  | 1,242 | 28,077      | 365,434 |
| 2008     | 44,235  | 94,035  | 155       | 101,668 | 2,676    | 37,206 |  | 849   | 9,961    | 50,691     | 16,658                  | 1,124 | 29,405      | 337,972 |
| 2009     | 44,521  | 82,587  | 220       | 117,535 | 1,619    | 41,193 |  | 735   | 8,384    | 51,931     | 55,663                  | 588   | 28,323      | 381,368 |
| 2010     | 43,317  | 136,733 | 123       | 114,111 | 964      | 43,228 |  | 889   | 12,521   | 57,602     | 55,765                  | 655   | 31,254      | 439,560 |
| 2011     | 43,724  | 144,502 | 121       | 119,649 | 672      | 36,509 |  | 655   | 8,115    | 45,951     | 69,978                  | 623   | 33,547      | 458,094 |
| 2012     | 42,732  | 155,915 | 130       | 123,161 | 468      | 36,075 |  | 482   | 8,835    | 45,860     | 81,934                  | 621   | 36,888      | 487,241 |
| 2013 *)  | 44,399  | 146,482 | 56        | 123,800 | 427      | 33,433 |  | 416   | 5,086    | 39,362     | 66,161                  | 693   | 39,466      | 460,419 |
| 2014 **) | 45,188  | 44,431  | 58        | 122,699 | 329      | 27,490 |  | 320   | 4,855    | 32,994     | 70,277                  | 753   | 40,402      | 356,802 |
| 2015     | 44,828  | 70,224  | 50        | 122,079 | 261      | 22,014 |  | 279   | 4,245    | 26,799     | 77,484                  | 788   | 39,281      | 381,533 |

Notes : \*) Revised Data for Coal and Total

\*\*) Revised Data for Coal, Other Petroleum Product and Total  
Temporary Data for Year 2015

## 5.1.3. Share of Energy Consumption in Industrial Sector

(%)

| Year    | Coal  | Briquette | Gas   | Fuel     |       |  | Fuel |       | Other Petroleum Product | LPG  | Electricity |
|---------|-------|-----------|-------|----------|-------|--|------|-------|-------------------------|------|-------------|
|         |       |           |       | Kerosene | ADO   |  |      | IDO   |                         |      |             |
| 2000    | 15.46 | 0.04      | 37.22 | 1.81     | 15.93 |  | 3.43 | 10.96 | 5.76                    | 0.46 | 8.94        |
| 2001    | 15.08 | 0.03      | 33.35 | 1.69     | 16.07 |  | 3.15 | 10.87 | 10.47                   | 0.40 | 8.89        |
| 2002    | 16.03 | 0.03      | 33.36 | 1.64     | 16.09 |  | 3.03 | 10.61 | 9.40                    | 0.45 | 9.36        |
| 2003    | 24.96 | 0.03      | 32.88 | 1.46     | 13.68 |  | 2.33 | 7.59  | 8.61                    | 0.30 | 8.18        |
| 2004    | 19.85 | 0.03      | 30.52 | 1.44     | 15.42 |  | 2.10 | 7.84  | 13.53                   | 0.39 | 8.87        |
| 2005    | 24.07 | 0.03      | 31.59 | 1.41     | 14.62 |  | 1.77 | 5.72  | 10.84                   | 0.41 | 9.53        |
| 2006    | 29.83 | 0.03      | 27.75 | 1.14     | 11.73 |  | 0.88 | 5.41  | 13.78                   | 0.49 | 8.96        |
| 2007    | 37.70 | 0.03      | 24.66 | 1.04     | 10.45 |  | 0.44 | 4.29  | 12.33                   | 0.38 | 8.68        |
| 2008    | 32.01 | 0.05      | 34.61 | 0.91     | 12.67 |  | 0.29 | 3.39  | 5.67                    | 0.38 | 10.01       |
| 2009    | 24.52 | 0.07      | 34.89 | 0.48     | 12.23 |  | 0.22 | 2.49  | 16.52                   | 0.17 | 8.41        |
| 2010    | 34.51 | 0.03      | 28.80 | 0.24     | 10.91 |  | 0.22 | 3.16  | 14.07                   | 0.17 | 7.89        |
| 2011    | 34.87 | 0.03      | 28.87 | 0.16     | 8.81  |  | 0.16 | 1.96  | 16.89                   | 0.15 | 8.10        |
| 2012    | 29.89 | 0.03      | 27.71 | 0.11     | 8.12  |  | 0.11 | 1.99  | 18.43                   | 0.14 | 8.30        |
| 2013 *) | 35.21 | 0.01      | 29.76 | 0.10     | 8.04  |  | 0.10 | 1.22  | 15.90                   | 0.17 | 9.49        |
| 2014 *) | 14.26 | 0.02      | 39.38 | 0.11     | 8.82  |  | 0.10 | 1.56  | 22.55                   | 0.24 | 12.97       |
| 2015    | 20.86 | 0.01      | 36.26 | 0.08     | 6.54  |  | 0.08 | 1.26  | 23.01                   | 0.23 | 11.67       |

Note : \*) Revised Data  
Temporary Data for Year 2015

### 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 | 97,788       | 693   | 9,733,831  | 704          | 41,184      |
| 2006 | 99,302       | 711   | 8,580,829  | 788          | 43,753      |
| 2007 | 100,795      | 737   | 8,474,054  | 979          | 47,325      |
| 2008 | 101,068      | 729   | 6,764,523  | 1,592        | 50,184      |
| 2009 | 101,510      | 722   | 4,091,982  | 2,671        | 54,945      |
| 2010 | 99,619       | 751   | 2,436,009  | 3,564        | 59,825      |
| 2011 | 103,542      | 635   | 1,699,298  | 4,144        | 65,112      |
| 2012 | 111,665      | 748   | 1,183,526  | 4,824        | 72,133      |
| 2013 | 113,290      | 681   | 1,079,100  | 5,377        | 77,211      |
| 2014 | 114,668      | 636   | 831,641    | 5,843        | 84,086      |
| 2015 | 114,572      | 648   | 658,537    | 6,115        | 88,682      |

Note : Temporary Data for Year 2015

### 5.2.2. Energy Consumption in Household Sector (in Energy Unit)

(Thousand BOE)

| Year | Biomass | Gas | Kerosene | LPG    | Electricity | Total   |
|------|---------|-----|----------|--------|-------------|---------|
| 2000 | 208,610 | 81  | 63,216   | 5,932  | 18,735      | 296,573 |
| 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 | 224,707 | 124 | 57,696   | 5,998  | 25,246      | 313,772 |
| 2006 | 228,186 | 128 | 50,862   | 6,719  | 26,821      | 312,716 |
| 2007 | 231,616 | 132 | 50,229   | 8,345  | 29,010      | 319,333 |
| 2008 | 232,244 | 131 | 40,096   | 13,568 | 30,763      | 316,802 |
| 2009 | 233,261 | 130 | 24,255   | 22,767 | 33,682      | 314,094 |
| 2010 | 228,915 | 135 | 14,439   | 30,386 | 36,673      | 310,548 |
| 2011 | 237,929 | 114 | 10,072   | 35,326 | 39,914      | 323,356 |
| 2012 | 256,594 | 134 | 7,015    | 41,123 | 44,217      | 349,084 |
| 2013 | 260,328 | 122 | 6,396    | 45,839 | 47,330      | 360,016 |
| 2014 | 263,495 | 114 | 4,929    | 49,810 | 51,545      | 369,893 |
| 2015 | 263,275 | 116 | 3,903    | 52,130 | 54,362      | 373,787 |

Note : Temporary Data for Year 2015

## 5.2.3. Share of Energy Consumption in Household Sector

(%)

| Year | Gas  | Kerosene | LPG   | Electricity |
|------|------|----------|-------|-------------|
| 2000 | 0.09 | 71.87    | 6.74  | 21.30       |
| 2001 | 0.10 | 70.01    | 6.93  | 22.96       |
| 2002 | 0.11 | 68.46    | 7.36  | 24.07       |
| 2003 | 0.11 | 67.26    | 7.91  | 24.72       |
| 2004 | 0.14 | 66.28    | 7.50  | 26.08       |
| 2005 | 0.14 | 64.78    | 6.73  | 28.35       |
| 2006 | 0.15 | 60.17    | 7.95  | 31.73       |
| 2007 | 0.15 | 57.26    | 9.51  | 33.07       |
| 2008 | 0.15 | 47.42    | 16.05 | 36.38       |
| 2009 | 0.16 | 30.01    | 28.17 | 41.67       |
| 2010 | 0.17 | 17.69    | 37.22 | 44.92       |
| 2011 | 0.13 | 11.79    | 41.35 | 46.72       |
| 2012 | 0.15 | 7.58     | 44.46 | 47.81       |
| 2013 | 0.12 | 6.42     | 45.98 | 47.48       |
| 2014 | 0.11 | 4.63     | 46.81 | 48.45       |
| 2015 | 0.11 | 3.53     | 47.17 | 49.19       |

Note : Temporary Data for Year 2015

## 5.3.1. Energy Consumption in Commercial Sector

(in Original Unit)

| Year | Biomass              | Gas   | Fuel       |         |       |           | LPG                  | Elec-<br>tricity |
|------|----------------------|-------|------------|---------|-------|-----------|----------------------|------------------|
|      |                      |       | Kerosene   | ADO     | IDO   | Total     |                      |                  |
|      | Thou-<br>sand<br>Ton | MMSCF | Kilo Liter |         |       |           | Thou-<br>sand<br>Ton | GWh              |
| 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           |
| 2008 | 607                  | 1,989 | 373,533    | 825,844 | 689   | 1,200,067 | 120                  | 30,866           |
| 2009 | 604                  | 4,067 | 225,957    | 914,345 | 597   | 1,140,899 | 121                  | 33,322           |
| 2010 | 601                  | 5,364 | 134,515    | 959,518 | 722   | 1,094,756 | 120                  | 37,073           |
| 2011 | 598                  | 7,185 | 93,834     | 810,366 | 532   | 904,733   | 130                  | 41,816           |
| 2012 | 595                  | 9,050 | 65,354     | 800,748 | 391   | 866,492   | 134                  | 41,574           |
| 2013 | 592                  | 7,915 | 59,587     | 742,094 | 338   | 802,019   | 149                  | 45,820           |
| 2014 | 589                  | 8,057 | 45,923     | 610,194 | 260   | 656,377   | 162                  | 48,452           |
| 2015 | 586                  | 7,990 | 36,364     | 488,638 | 227   | 525,229   | 169                  | 49,879           |

Note : Temporary Data for Year 2015

**5.3.2. Energy Consumption in Commercial Sector***(in Energy Unit)***(Thousand BOE)**

| Year | Bio-mass | Gas   | Fuel      |       |     |            | LPG   | Electricity | Total  |
|------|----------|-------|-----------|-------|-----|------------|-------|-------------|--------|
|      |          |       | Kero-sene | 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 |
| 2008 | 1,395    | 357   | 2,214     | 5,357 | 5   | 7,576      | 1,025 | 18,921      | 29,274 |
| 2009 | 1,388    | 730   | 1,339     | 5,931 | 4   | 7,275      | 1,029 | 20,426      | 30,848 |
| 2010 | 1,381    | 963   | 797       | 6,224 | 5   | 7,027      | 1,026 | 22,726      | 33,122 |
| 2011 | 1,374    | 1,290 | 556       | 5,257 | 4   | 5,817      | 1,112 | 25,633      | 35,226 |
| 2012 | 1,367    | 1,625 | 387       | 5,195 | 3   | 5,584      | 1,139 | 25,485      | 35,200 |
| 2013 | 1,360    | 1,422 | 353       | 4,814 | 2   | 5,169      | 1,269 | 28,088      | 37,308 |
| 2014 | 1,353    | 1,447 | 272       | 3,958 | 2   | 4,232      | 1,379 | 29,701      | 38,113 |
| 2015 | 1,346    | 1,435 | 216       | 3,170 | 1   | 3,387      | 1,444 | 30,576      | 38,188 |

Note : Temporary Data for Year 2015

**5.3.3. Share of Energy Consumption in Commercial Sector****(%)**

| Year | Gas  | Fuel     |       |      | LPG  | Electricity |
|------|------|----------|-------|------|------|-------------|
|      |      | Kerosene | ADO   | IDO  |      |             |
| 2000 | 0.70 | 18.16    | 27.85 | 0.22 | 6.54 | 46.53       |
| 2001 | 0.74 | 17.20    | 28.40 | 0.21 | 5.69 | 47.76       |
| 2002 | 0.81 | 16.11    | 27.52 | 0.19 | 6.30 | 49.08       |
| 2003 | 0.76 | 15.71    | 25.68 | 0.16 | 4.51 | 53.18       |
| 2004 | 0.73 | 13.84    | 25.80 | 0.13 | 5.37 | 54.13       |
| 2005 | 0.77 | 12.84    | 23.17 | 0.10 | 5.33 | 57.79       |
| 2006 | 0.83 | 11.33    | 20.35 | 0.06 | 5.01 | 62.43       |
| 2007 | 1.03 | 10.47    | 18.36 | 0.03 | 5.05 | 65.06       |
| 2008 | 1.28 | 7.94     | 19.22 | 0.02 | 3.68 | 67.87       |
| 2009 | 2.48 | 4.55     | 20.13 | 0.01 | 3.49 | 69.33       |
| 2010 | 3.04 | 2.51     | 19.61 | 0.02 | 3.23 | 71.60       |
| 2011 | 3.81 | 1.64     | 15.53 | 0.01 | 3.28 | 75.72       |
| 2012 | 4.80 | 1.14     | 15.35 | 0.01 | 3.37 | 75.32       |
| 2013 | 3.95 | 0.98     | 13.39 | 0.01 | 3.53 | 78.13       |
| 2014 | 3.94 | 0.74     | 10.77 | 0.00 | 3.75 | 80.80       |
| 2015 | 3.90 | 0.59     | 8.60  | 0.00 | 3.92 | 82.99       |

Note : Temporary Data for Year 2015

### 5.4.1. Energy Consumption in Transportation Sector

(in Original Unit)

| Year | Gas   | Fuel       |           |            |           |         |        |               |  | Fuel       |        |             |            | Biofuel             |                      |              |                  | Elec-<br>tricity |
|------|-------|------------|-----------|------------|-----------|---------|--------|---------------|--|------------|--------|-------------|------------|---------------------|----------------------|--------------|------------------|------------------|
|      |       | Avgas      | Avtur     | RON 88     | RON 92    | RON 95  | DEX    | Kero-<br>sene |  | ADO        | IDO    | Fuel<br>Oil | Total Fuel | Bio<br>Premi-<br>um | Bio<br>Perta-<br>max | Bio<br>Solar | Total<br>Biofuel |                  |
|      | MMSCF | Kilo Liter |           |            |           |         |        |               |  | Kilo Liter |        |             |            | Kilo Liter          |                      |              |                  | GWh              |
| 2000 | 968   | 3,550      | 1,202,717 | 12,059,026 | 0         | 0       | 0      | 4,708         |  | 9,365,388  | 48,356 | 71,474      | 22,755,220 | 0                   | 0                    | 0            | 0                | 44               |
| 2001 | 773   | 3,430      | 1,473,503 | 12,705,861 | 0         | 0       | 0      | 4,642         |  | 9,941,771  | 46,704 | 74,546      | 24,250,457 | 0                   | 0                    | 0            | 0                | 49               |
| 2002 | 654   | 3,488      | 1,597,291 | 13,323,304 | 0         | 0       | 0      | 4,414         |  | 9,782,952  | 44,148 | 71,517      | 24,827,114 | 0                   | 0                    | 0            | 0                | 53               |
| 2003 | 599   | 3,556      | 1,929,351 | 13,746,726 | 371,238   | 107,441 | 0      | 4,442         |  | 9,422,642  | 38,393 | 57,994      | 25,681,783 | 0                   | 0                    | 0            | 0                | 53               |
| 2004 | 471   | 3,416      | 2,437,923 | 15,337,655 | 487,562   | 121,866 | 0      | 4,477         |  | 10,830,594 | 35,394 | 61,075      | 29,319,962 | 0                   | 0                    | 0            | 0                | 55               |
| 2005 | 238   | 3,070      | 2,322,634 | 16,621,765 | 248,875   | 99,326  | 0      | 4,297         |  | 10,060,316 | 29,242 | 43,634      | 29,433,160 | 0                   | 0                    | 0            | 0                | 55               |
| 2006 | 233   | 3,390      | 2,428,078 | 15,941,837 | 505,730   | 128,289 | 1,344  | 3,788         |  | 8,826,588  | 15,864 | 45,136      | 28,117,389 | 1,624               | 16                   | 217,048      | 218,688          | 67               |
| 2007 | 273   | 2,163      | 2,520,040 | 16,962,198 | 472,284   | 158,070 | 1,288  | 3,741         |  | 8,514,215  | 8,588  | 38,714      | 29,623,396 | 55,970              | 9,956                | 877,457      | 621,535          | 85               |
| 2008 | 691   | 2,003      | 2,635,670 | 19,112,241 | 297,982   | 114,789 | 1,289  | 2,986         |  | 9,374,239  | 5,124  | 27,831      | 32,564,294 | 44,016              | 16,234               | 931,179      | 991,429          | 81               |
| 2009 | 1,066 | 1,687      | 2,760,678 | 20,802,405 | 460,148   | 104,388 | 1,955  | 1,807         |  | 10,378,815 | 4,439  | 23,426      | 37,064,029 | 105,816             | 20,232               | 2,398,234    | 2,524,282        | 111              |
| 2010 | 1,088 | 2,231      | 3,527,382 | 22,391,362 | 670,364   | 113,812 | 4,434  | 1,075         |  | 10,891,587 | 5,371  | 34,983      | 42,036,462 | 0                   | 0                    | 4,393,861    | 4,393,861        | 89               |
| 2011 | 1,006 | 2,316      | 3,562,126 | 24,766,975 | 625,162   | 294,639 | 6,392  | 750           |  | 9,198,546  | 3,958  | 22,673      | 45,664,345 | 0                   | 0                    | 7,180,806    | 7,180,806        | 88               |
| 2012 | 856   | 2,606      | 3,898,832 | 27,612,171 | 666,461   | 149,424 | 12,297 | 522           |  | 9,089,365  | 2,909  | 24,686      | 41,459,273 | 0                   | 0                    | 9,269,482    | 9,269,482        | 108              |
| 2013 | 1,031 | 2,868      | 4,159,010 | 28,622,924 | 850,408   | 158,714 | 23,053 | 476           |  | 8,423,579  | 2,513  | 14,211      | 42,257,757 | 0                   | 0                    | 10,934,294   | 10,934,294       | 129              |
| 2014 | 1,152 | 1,499      | 4,229,094 | 28,822,039 | 1,062,920 | 154,888 | 33,305 | 367           |  | 6,926,372  | 1,933  | 13,564      | 41,245,982 | 0                   | 0                    | 13,667,983   | 13,667,983       | 155              |
| 2015 | 1,372 | 3,070      | 4,336,318 | 27,269,723 | 2,761,956 | 278,758 | 38,552 | 291           |  | 5,546,582  | 1,685  | 11,861      | 40,248,795 | 0                   | 0                    | 13,953,448   | 13,953,448       | 205              |

Note : Temporary Data for Year 2015

## 5.4.2. Energy Consumption in Transportation Sector

(in Energy Unit)

(Thousand BOE)

| Year | Gas | Fuel  |        |         |        |        |          |               |        | Fuel |     |          | Bio Fuel   |            |            |           | Elec-<br>tricity | Total   |               |
|------|-----|-------|--------|---------|--------|--------|----------|---------------|--------|------|-----|----------|------------|------------|------------|-----------|------------------|---------|---------------|
|      |     | Avgas | Avtur  | RON 88  | RON 92 | RON 95 | Solar 51 | Kero-<br>sene | ADO    |      | IDO | Fuel Oil | Total Fuel | Bio RON 88 | Bio RON 92 | Bio Solar |                  |         | Total Biofuel |
| 2000 | 174 | 20    | 7,085  | 70,274  | 0      | 0      | 0        | 28            | 60,754 |      | 320 | 498      | 138,978    | 0          | 0          | 0         | 0                | 27      | 139,179       |
| 2001 | 139 | 19    | 8,680  | 74,043  | 0      | 0      | 0        | 28            | 64,493 |      | 309 | 519      | 148,091    | 0          | 0          | 0         | 0                | 30      | 148,260       |
| 2002 | 118 | 19    | 9,409  | 77,642  | 0      | 0      | 0        | 26            | 63,463 |      | 292 | 498      | 151,349    | 0          | 0          | 0         | 0                | 33      | 151,499       |
| 2003 | 108 | 20    | 11,365 | 80,109  | 2,163  | 626    | 0        | 26            | 61,126 |      | 254 | 404      | 156,093    | 0          | 0          | 0         | 0                | 33      | 156,233       |
| 2004 | 85  | 19    | 14,361 | 89,380  | 2,841  | 710    | 0        | 27            | 70,259 |      | 234 | 425      | 178,256    | 0          | 0          | 0         | 0                | 34      | 178,374       |
| 2005 | 43  | 17    | 13,682 | 96,863  | 1,450  | 579    | 0        | 25            | 65,262 |      | 193 | 304      | 178,376    | 0          | 0          | 0         | 0                | 34      | 178,452       |
| 2006 | 42  | 19    | 14,303 | 92,901  | 2,947  | 748    | 9        | 22            | 57,268 |      | 105 | 314      | 168,636    | 9          | 0          | 1,408     | 1,418            | 41      | 170,127       |
| 2007 | 49  | 12    | 14,845 | 98,847  | 2,752  | 921    | 8        | 22            | 55,241 |      | 57  | 269      | 172,975    | 326        | 58         | 5,692     | 6,076            | 52      | 179,144       |
| 2008 | 124 | 11    | 15,526 | 111,377 | 1,736  | 669    | 8        | 18            | 60,812 |      | 34  | 194      | 190,384    | 257        | 95         | 6,041     | 6,392            | 50      | 196,942       |
| 2009 | 191 | 9     | 16,262 | 121,226 | 2,682  | 608    | 13       | 11            | 67,328 |      | 29  | 163      | 208,332    | 617        | 118        | 15,558    | 16,292           | 68      | 224,883       |
| 2010 | 195 | 12    | 20,779 | 130,486 | 3,907  | 663    | 29       | 6             | 70,655 |      | 35  | 244      | 226,816    | 0          | 0          | 28,503    | 28,503           | 54      | 255,569       |
| 2011 | 181 | 13    | 20,983 | 144,330 | 3,643  | 1,717  | 41       | 4             | 59,672 |      | 26  | 158      | 230,588    | 0          | 0          | 46,583    | 337,072          | 54      | 277,405       |
| 2012 | 154 | 14    | 22,967 | 160,910 | 3,884  | 871    | 80       | 3             | 58,964 |      | 19  | 172      | 247,883    | 0          | 0          | 60,132    | 60,132           | 66      | 308,236       |
| 2013 | 185 | 16    | 24,499 | 166,800 | 4,956  | 925    | 150      | 3             | 54,645 |      | 17  | 99       | 252,109    | 0          | 0          | 70,932    | 70,932           | 79      | 323,304       |
| 2014 | 207 | 8     | 24,912 | 167,960 | 6,194  | 903    | 216      | 2             | 44,932 |      | 13  | 94       | 245,235    | 0          | 0          | 88,666    | 88,666           | 95      | 334,203       |
| 2015 | 246 | 17    | 25,544 | 158,914 | 16,095 | 1,624  | 250      | 2             | 35,981 | 11   | 83  | 238,522  | 0          | 0          | 90,517     | 90,517    | 126              | 329,411 |               |

Note : Temporary Data for Year 2015

## 5.4.3. Share of Energy Consumption in Transportation Sector

(%)

| Year | Gas   | Fuel  |       |        |        |        |       |               | Fuel  |       |      |             | Bio Fuel      |                  |                  |                  |              | Elec-<br>tricity |                       |
|------|-------|-------|-------|--------|--------|--------|-------|---------------|-------|-------|------|-------------|---------------|------------------|------------------|------------------|--------------|------------------|-----------------------|
|      |       | Avgas | Avtur | RON 88 | RON 92 | RON 95 | DEX   | Kero-<br>sene |       | ADO   | IDO  | Fuel<br>Oil | Total<br>Fuel | Bio<br>RON<br>88 | Bio<br>RON<br>92 | Bio<br>RON<br>95 | Bio<br>Solar |                  | Total<br>Bio-<br>fuel |
| 2000 | 0.125 | 0.014 | 5.09  | 50.49  | 0.000  | 0.000  | 0.000 | 0.020         |       | 43.65 | 0.23 | 0.36        | 99.86         | 0.000            | 0.000            | 0.000            | 0.000        | 0.00             | 0.02                  |
| 2001 | 0.094 | 0.013 | 5.85  | 49.94  | 0.000  | 0.000  | 0.000 | 0.019         |       | 43.50 | 0.21 | 0.35        | 99.89         | 0.000            | 0.000            | 0.000            | 0.000        | 0.00             | 0.02                  |
| 2002 | 0.078 | 0.013 | 6.21  | 51.25  | 0.000  | 0.000  | 0.000 | 0.017         |       | 41.89 | 0.19 | 0.33        | 99.90         | 0.000            | 0.000            | 0.000            | 0.000        | 0.00             | 0.02                  |
| 2003 | 0.069 | 0.013 | 7.27  | 51.28  | 1.385  | 0.401  | 0.000 | 0.017         |       | 39.12 | 0.16 | 0.26        | 99.91         | 0.000            | 0.000            | 0.000            | 0.000        | 0.00             | 0.02                  |
| 2004 | 0.047 | 0.011 | 8.05  | 50.11  | 1.593  | 0.398  | 0.000 | 0.015         |       | 39.39 | 0.13 | 0.24        | 99.93         | 0.000            | 0.000            | 0.000            | 0.000        | 0.00             | 0.02                  |
| 2005 | 0.024 | 0.010 | 7.67  | 54.28  | 0.813  | 0.324  | 0.000 | 0.014         |       | 36.57 | 0.11 | 0.17        | 99.96         | 0.000            | 0.000            | 0.000            | 0.000        | 0.00             | 0.02                  |
| 2006 | 0.025 | 0.011 | 8.41  | 54.61  | 1.732  | 0.439  | 0.005 | 0.013         |       | 33.66 | 0.06 | 0.18        | 99.11         | 0.006            | 0.000            | 0.000            | 0.828        | 0.83             | 0.02                  |
| 2007 | 0.027 | 0.007 | 8.29  | 55.18  | 1.536  | 0.514  | 0.005 | 0.012         |       | 30.84 | 0.03 | 0.15        | 96.56         | 0.182            | 0.032            | 0.000            | 3.177        | 3.39             | 0.03                  |
| 2008 | 0.063 | 0.006 | 7.88  | 56.55  | 0.882  | 0.340  | 0.004 | 0.009         |       | 30.88 | 0.02 | 0.10        | 96.67         | 0.130            | 0.048            | 0.000            | 3.067        | 3.25             | 0.03                  |
| 2009 | 0.085 | 0.004 | 7.23  | 53.91  | 1.192  | 0.271  | 0.006 | 0.005         |       | 29.94 | 0.01 | 0.07        | 92.64         | 0.274            | 0.052            | 0.000            | 6.918        | 7.24             | 0.03                  |
| 2010 | 0.076 | 0.005 | 8.13  | 51.06  | 1.529  | 0.260  | 0.011 | 0.002         |       | 27.65 | 0.01 | 0.10        | 88.75         | 0.000            | 0.000            | 0.000            | 11.153       | 11.15            | 0.02                  |
| 2011 | 0.065 | 0.005 | 7.56  | 52.03  | 1.313  | 0.619  | 0.015 | 0.002         |       | 21.51 | 0.01 | 0.06        | 83.12         | 0.000            | 0.000            | 0.000            | 16.792       | 16.79            | 0.02                  |
| 2012 | 0.050 | 0.005 | 7.45  | 52.20  | 1.260  | 0.283  | 0.026 | 0.001         |       | 19.13 | 0.01 | 0.06        | 80.42         | 0.000            | 0.000            | 0.000            | 19.508       | 19.51            | 0.02                  |
| 2013 | 0.057 | 0.005 | 7.58  | 51.59  | 1.533  | 0.286  | 0.046 | 0.001         |       | 16.90 | 0.01 | 0.03        | 77.98         | 0.000            | 0.000            | 0.000            | 21.940       | 21.94            | 0.02                  |
| 2014 | 0.062 | 0.002 | 7.45  | 50.26  | 1.853  | 0.270  | 0.065 | 0.001         |       | 13.44 | 0.00 | 0.03        | 73.38         | 0.000            | 0.000            | 0.000            | 26.530       | 26.53            | 0.03                  |
| 2015 | 0.075 | 0.005 | 7.75  | 48.24  | 4.886  | 0.493  | 0.076 | 0.001         | 10.92 | 0.00  | 0.03 | 72.41       | 0.000         | 0.000            | 0.000            | 27.479           | 27.48        | 0.04             |                       |

Note : Temporary Data for Year 2015

### 5.5.1. Energy Consumption in Others 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  |
| 2008 | 586,829    | 309,096  | 2,909,690 | 19,182  | 230,114  | 4,054,911  |
| 2009 | 638,725    | 186,978  | 3,221,502 | 16,616  | 193,691  | 4,257,511  |
| 2010 | 687,512    | 111,310  | 3,380,662 | 20,105  | 289,252  | 4,488,842  |
| 2011 | 760,454    | 77,647   | 2,855,156 | 14,816  | 187,469  | 3,895,542  |
| 2012 | 847,814    | 54,080   | 2,821,267 | 10,890  | 204,112  | 3,938,162  |
| 2013 | 878,849    | 49,308   | 2,614,612 | 9,408   | 117,501  | 3,669,678  |
| 2014 | 884,962    | 38,001   | 2,149,891 | 7,236   | 112,152  | 3,192,242  |
| 2015 | 837,299    | 30,091   | 1,721,615 | 6,309   | 98,068   | 2,693,382  |

Note : Temporary Data for Year 2015

### 5.5.2. Energy Consumption in Others Sector (in Energy Unit)

(Thousand BOE)

| Year | 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     |
| 2008 | 3,420 | 1,832    | 18,875 | 127   | 1,602    | 25,856     |
| 2009 | 3,722 | 1,108    | 20,898 | 110   | 1,348    | 27,187     |
| 2010 | 4,006 | 660      | 21,931 | 133   | 2,014    | 28,743     |
| 2011 | 4,432 | 460      | 18,522 | 98    | 1,305    | 24,816     |
| 2012 | 4,941 | 321      | 18,302 | 72    | 1,421    | 25,056     |
| 2013 | 5,121 | 292      | 16,961 | 62    | 818      | 23,255     |
| 2014 | 5,157 | 225      | 13,947 | 48    | 781      | 20,157     |
| 2015 | 4,879 | 178      | 11,168 | 42    | 683      | 16,950     |

Note : Temporary Data for Year 2015

**5.5.3. Share of Energy Consumption in Others 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     |
| 2008 | 13.23 | 7.09     | 73.00 | 0.49 | 6.20     |
| 2009 | 13.69 | 4.08     | 76.87 | 0.40 | 4.96     |
| 2010 | 13.94 | 2.30     | 76.30 | 0.46 | 7.01     |
| 2011 | 17.86 | 1.85     | 74.63 | 0.39 | 5.26     |
| 2012 | 19.72 | 1.28     | 73.04 | 0.29 | 5.67     |
| 2013 | 22.02 | 1.26     | 72.94 | 0.27 | 3.52     |
| 2014 | 25.58 | 1.12     | 69.19 | 0.24 | 3.87     |
| 2015 | 28.79 | 1.05     | 65.89 | 0.25 | 4.03     |

Note : Temporary Data for Year 2015

**ENERGY SUPPLY BY  
ENERGY RESOURCES**


**6.1.1. Coal Reserves***per 1 January 2015***(Million Ton)**

| Province                 | Resources        |                  |                  |                  |                   | Reserves         |
|--------------------------|------------------|------------------|------------------|------------------|-------------------|------------------|
|                          | Hypo-<br>thetic  | Inferred         | Indicated        | Mea-<br>sured    | Total             |                  |
| Banten                   | 5.47             | 5.75             | 4.86             | 2.72             | 18.80             | -                |
| West Java                | 0.00             | 0.82             | 0.00             | 0.00             | 0.82              | -                |
| Central Java             | 0.00             | 0.08             | 0.00             | 0.00             | 0.08              | -                |
| East Java                | 0.00             | 0.08             | 0.00             | 0.00             | 0.08              | -                |
| Nanggroe Aceh Darussalam | 0.00             | 346.35           | 13.89            | 90.40            | 450.64            | 0.00             |
| North Sumatera           | 0.25             | 7.00             | 0.00             | 19.97            | 27.22             | 0.00             |
| Riau                     | 12.79            | 243.12           | 643.82           | 900.34           | 1,800.07          | 687.83           |
| West Sumatera            | 20.41            | 294.50           | 231.16           | 249.45           | 795.52            | 158.43           |
| Bengkulu                 | 0.00             | 2.12             | 118.81           | 71.14            | 192.07            | 18.95            |
| Jambi                    | 603.71           | 1,110.30         | 670.88           | 361.82           | 2,746.70          | 240.75           |
| South Sumatera           | 12,633.17        | 13,161.57        | 15,001.02        | 11,106.17        | 51,901.93         | 12,274.72        |
| Lampung                  | 0.00             | 106.95           | 0.00             | 0.94             | 107.89            | 0.00             |
| West Kalimantan          | 2.26             | 477.69           | 6.85             | 4.70             | 491.50            | 0.00             |
| Central Kalimantan       | 222.24           | 1,952.19         | 883.86           | 1,047.20         | 4,105.48          | 771.26           |
| South Kalimantan         | 0.00             | 6,050.60         | 3,461.10         | 4,945.92         | 14,457.62         | 3,655.13         |
| East Kalimantan          | 6,088.84         | 11,623.63        | 8,807.33         | 20,543.66        | 47,063.46         | 13,762.39        |
| North Kalimantan         | 65.62            | 660.81           | 480.27           | 850.09           | 2,056.79          | 694.17           |
| South Sulawesi           | 0.00             | 48.81            | 129.68           | 53.09            | 231.58            | 0.12             |
| Central Sulawesi         | 0.00             | 17.11            | 0.00             | 0.00             | 17.11             | -                |
| North Maluku             | 8.22             | 0.00             | 0.00             | 0.00             | 8.22              | -                |
| West Papua               | 93.66            | 32.82            | 0.00             | 0.00             | 126.48            | 0.00             |
| Papua                    | 7.20             | 2.16             | 0.00             | 0.00             | 9.36              | 0.00             |
| <b>TOTAL</b>             | <b>19,763.84</b> | <b>36,144.39</b> | <b>30,453.51</b> | <b>40,247.60</b> | <b>126,609.34</b> | <b>32,263.68</b> |

Source : Agency Geology

Note : Temporary Data for Year 2015

**6.1.2. Coal Supply****(Ton)**

| Year     | Production  |           |             | Export      | Import    |
|----------|-------------|-----------|-------------|-------------|-----------|
|          | Steam Coal  | Antracite | 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     | 114,274,048 | 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     | 216,946,699 | 0         | 216,946,699 | 163,000,000 | 67,534    |
| 2008     | 240,249,968 | 0         | 240,249,968 | 191,430,218 | 106,931   |
| 2009     | 256,181,000 | 0         | 256,181,000 | 198,366,000 | 68,804    |
| 2010     | 275,164,196 | 0         | 275,164,196 | 208,000,000 | 55,230    |
| 2011     | 353,270,937 | 0         | 353,270,937 | 272,671,351 | 42,449    |
| 2012     | 385,899,100 | 0         | 385,899,100 | 304,051,216 | 77,786    |
| 2013 *)  | 474,600,921 | 0         | 474,600,921 | 356,357,973 | 609,875   |
| 2014 **) | 458,096,707 | 0         | 458,096,707 | 382,586,349 | 2,442,319 |
| 2015     | 461,566,080 | 0         | 461,566,080 | 365,849,610 | 3,007,934 |

Sources : 1. Directorate General of Mineral and Coal

2. Ministry of Trade

Note : \*) Revised data for coal production, export and import

\*\*) Revised data for coal export and import  
Temporary Data for Year 2015

## 6.1.3. Indonesia Coal Export by Destination

(Thousand Ton)

| Year | China  | India  | Japan  | Korea  | Taiwan | Hongkong |  | Malaysia | Philip-<br>pines | Thailand | Spain | Others *) | Total *)   |
|------|--------|--------|--------|--------|--------|----------|--|----------|------------------|----------|-------|-----------|------------|
| 2000 | n.a.   | n.a.   | 13,177 | n.a.   | 13,520 | n.a.     |  | n.a.     | n.a.             | n.a.     | n.a.  | 31,763    | 58,460.49  |
| 2001 | n.a.   | n.a.   | 15,216 | n.a.   | 11,507 | n.a.     |  | n.a.     | n.a.             | n.a.     | n.a.  | 38,558    | 65,281.09  |
| 2002 | n.a.   | n.a.   | 16,530 | n.a.   | 13,100 | n.a.     |  | n.a.     | n.a.             | n.a.     | n.a.  | 44,548    | 74,177.93  |
| 2003 | n.a.   | n.a.   | 17,992 | n.a.   | 14,144 | n.a.     |  | n.a.     | n.a.             | n.a.     | n.a.  | 53,544    | 85,680.62  |
| 2004 | n.a.   | n.a.   | 19,013 | n.a.   | 16,678 | n.a.     |  | n.a.     | n.a.             | n.a.     | n.a.  | 58,068    | 93,758.81  |
| 2005 | n.a.   | n.a.   | 24,237 | n.a.   | 14,524 | n.a.     |  | n.a.     | n.a.             | n.a.     | n.a.  | 72,028    | 110,789.70 |
| 2006 | 4,089  | 10,846 | 23,128 | 10,925 | 17,070 | 9,373    |  | 5,293    | 3,089            | 4,313    | 4,232 | 51,274    | 143,632.86 |
| 2007 | 8,570  | 13,795 | 24,323 | 13,688 | 18,112 | 11,061   |  | 6,000    | 3,172            | 5,725    | 3,322 | 55,231    | 163,000.00 |
| 2008 | 8,394  | 14,683 | 26,948 | 15,035 | 14,887 | 10,936   |  | 7,107    | 4,385            | 8,429    | 3,882 | 76,742    | 191,430.22 |
| 2009 | 27,266 | 20,784 | 25,262 | 18,362 | 17,238 | 9,664    |  | 8,499    | 4,439            | 7,468    | 4,500 | 54,886    | 198,366.00 |
| 2010 | 44,056 | 18,640 | 25,776 | 20,643 | 14,590 | 9,415    |  | 11,307   | 7,248            | 7,175    | 2,128 | 47,021    | 208,000.00 |
| 2011 | 50,347 | 30,976 | 26,073 | 18,900 | 16,517 | 10,660   |  | 12,407   | 6,828            | 7,391    | 4,077 | 88,495    | 272,671.35 |
| 2012 | 68,821 | 31,648 | 25,738 | 16,542 | 16,391 | 10,669   |  | 13,459   | 7,130            | 5,721    | 6,208 | 101,725   | 304,051.22 |
| 2013 | 49,859 | 41,834 | 21,709 | 13,635 | 14,399 | 4,990    |  | 9,066    | 7,609            | 5,253    | 796   | 187,207   | 356,357.97 |
| 2014 | 67,807 | 60,284 | 31,232 | 20,170 | 15,689 | 13,697   |  | 10,772   | 10,274           | 8,497    | 5,675 | 138,490   | 382,586.35 |
| 2015 | 41,898 | 79,111 | 23,252 | 14,111 | 10,643 | 7,263    |  | 7,719    | 11,816           | 9,380    | 3,846 | 156,810   | 365,849.61 |

Source : Directorate General of Mineral and Coal

Note : \*) Revised data for 2013 and 2014

Temporary Data for Year 2015

**6.1.4. Coal Sales****(Ton)**

| Year | Total      | Iron & Steel | Power Plant | Ceramic & Cement | Pulp & Paper*) | Briquette**) | Others*)   |
|------|------------|--------------|-------------|------------------|----------------|--------------|------------|
| 2000 | 22,340,845 | 30,893       | 13,718,285  | 2,228,583        | 780,676        | 36,799       | 5,545,609  |
| 2001 | 27,387,916 | 220,666      | 19,517,366  | 5,142,737        | 822,818        | 31,265       | 2,628,333  |
| 2002 | 29,257,003 | 236,802      | 20,018,456  | 4,684,970        | 499,585        | 24,708       | 3,792,481  |
| 2003 | 39,273,851 | 201,907      | 22,995,614  | 4,773,621        | 1,704,498      | 24,976       | 9,573,234  |
| 2004 | 36,081,734 | 119,181      | 22,882,190  | 5,549,309        | 1,160,909      | 22,436       | 6,347,709  |
| 2005 | 41,350,736 | 221,309      | 25,669,226  | 5,152,162        | 1,188,323      | 28,216       | 9,091,501  |
| 2006 | 48,995,069 | 299,990      | 27,758,317  | 5,300,552        | 1,216,384      | 36,018       | 14,383,808 |
| 2007 | 61,470,000 | 282,730      | 32,420,000  | 6,443,864        | 1,526,095      | 25,120       | 20,772,192 |
| 2008 | 53,473,252 | 245,949      | 31,041,000  | 6,842,403        | 1,251,000      | 43,000       | 14,049,899 |
| 2009 | 56,295,000 | 256,605      | 36,570,000  | 6,900,000        | 1,170,000      | 61,463       | 11,336,932 |
| 2010 | 67,180,051 | 335,000      | 34,410,000  | 6,308,000        | 1,742,000      | 34,543       | 24,170,457 |
| 2011 | 79,557,800 | 166,034      | 45,118,519  | 5,873,144        | n.a.           | 33,939       | 28,366,165 |
| 2012 | 82,142,862 | 289,371      | 52,815,519  | 6,642,130        | 1,570,701      | 36,383       | 28,620,411 |
| 2013 | 96,754,518 | 298,346      | 61,862,156  | 7,187,400        | 2,722,170      | 15,595       | 24,668,850 |
| 2014 | 76,570,739 | 399,000      | 65,975,432  | 7,187,400        | 1,458,170      | 16,384       | 1,534,352  |
| 2015 | 86,814,099 | 399,000      | 70,080,000  | 7,180,000        | 4,310,000      | 14,164       | 4,830,935  |

Source : Directorate General of Mineral and Coal

Note : 2000-2009 exclude Mining Concession (Kuasa Pertambangan)

\*) Revised data for 2012 and 2013

\*\*) Revised data for 2013

Temporary Data for Year 2015

**6.2.1. Oil Reserves***per January***(Billion Barel)**

| Year | 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  |
| 2008 | 3.75   | 4.47      | 8.22  |
| 2009 | 4.30   | 3.70      | 8.00  |
| 2010 | 4.23   | 3.53      | 7.76  |
| 2011 | 4.04   | 3.69      | 7.73  |
| 2012 | 3.74   | 3.67      | 7.41  |
| 2013 | 3.69   | 3.86      | 7.55  |
| 2014 | 3.62   | 3.75      | 7.37  |
| 2015 | 3.60   | 3.70      | 7.31  |

Source : Directorate General of Oil and Gas

Note : Temporary Data for Year 2015

## 6.2.2. Refinery Capacity in 2015

(MBSD)

| Refinery                   | Refinery Capacity |
|----------------------------|-------------------|
| Tri Wahana Universal (TWU) | 18.00             |
| Dumai                      | 127.00            |
| Sungai Pakning             | 50.00             |
| Musi                       | 127.30            |
| Cilacap                    | 348.00            |
| Balikpapan                 | 260.00            |
| Balongan                   | 125.00            |
| Cepu                       | 3.80              |
| Kasim                      | 10.00             |
| Tuban (TPPI)               | 100.00            |
| <b>Total</b>               | <b>1,169.10</b>   |

Source : Directorate General of Oil and Gas  
 Note : Temporary Data for Year 2015

## 6.2.3. Crude Oil Supply and Demand

| Year | Production   | Export       | Import       | Oil Refinery Input |              |
|------|--------------|--------------|--------------|--------------------|--------------|
|      | Thousand bbl | Thousand bbl | Thousand bbl | Thousand bbl       | Thousand bpd |
| 2000 | 517,489      | 223,500      | 78,615       | 360,232            | 986.9        |
| 2001 | 489,306      | 241,612      | 117,168      | 361,396            | 990.1        |
| 2002 | 456,026      | 218,115      | 124,148      | 357,971            | 980.7        |
| 2003 | 419,255      | 189,095      | 137,127      | 358,519            | 982.2        |
| 2004 | 400,554      | 178,869      | 148,490      | 366,033            | 1,002.8      |
| 2005 | 386,483      | 159,703      | 164,007      | 357,656            | 979.9        |
| 2006 | 367,049      | 134,960      | 116,232      | 333,136            | 912.7        |
| 2007 | 348,348      | 135,267      | 115,812      | 330,027            | 904.2        |
| 2008 | 357,501      | 134,872      | 95,100       | 331,949            | 909.5        |
| 2009 | 346,313      | 132,223      | 120,119      | 328,589            | 900.2        |
| 2010 | 344,888      | 134,473      | 101,093      | 340,475            | 853.4        |
| 2011 | 329,265      | 135,572      | 96,862       | 365,820            | 879.5        |
| 2012 | 314,666      | 115,339      | 95,968       | 347,853            | 819.9        |
| 2013 | 300,830      | 117,380      | 118,334      | 352,438            | 822.3        |
| 2014 | 287,902      | 109,933      | 121,993      | 369,792            | 847.8        |
| 2015 | 286,814      | 115,017      | 136,666      | 350,110            | 836.4        |

Source : Directorate General of Oil and Gas  
 Note : Oil Refinery Input Consist of Crude Oil, Condensate and Others  
 Temporary Data for Year 2015

## 6.2.4. Domestic Oil Fuels Sales

(Kilo Liter)

|                   | 2000              | 2001              | 2002              | 2003              | 2004              | 2005              | 2006              |  | 2007              | 2008              | 2009              | 2010              | 2011              | 2012              | 2013              | 2014              | 2015              |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Avgas             | 3,550             | 3,430             | 3,488             | 3,556             | 3,416             | 3,070             | 3,390             |  | 2,163             | 2,003             | 1,687             | 2,231             | 2,316             | 2,606             | 2,868             | 1,499             | 3,070             |
| Avtur             | 1,202,717         | 1,473,503         | 1,597,291         | 1,929,351         | 2,437,923         | 2,322,634         | 2,428,078         |  | 2,520,040         | 2,635,670         | 2,760,678         | 3,527,382         | 3,562,126         | 3,898,832         | 4,159,010         | 4,229,094         | 4,336,318         |
| RON 88            | 11,877,659        | 12,538,350        | 13,263,285        | 14,150,246        | 15,808,588        | 17,132,126        | 16,431,321        |  | 17,483,011        | 19,699,070        | 21,441,130        | 23,078,874        | 25,527,429        | 28,459,985        | 29,501,773        | 29,707,002        | 28,107,022        |
| Kerosene          | 12,457,776        | 12,283,033        | 11,678,439        | 11,753,109        | 11,846,119        | 11,370,026        | 10,023,211        |  | 9,898,488         | 7,901,596         | 4,779,818         | 2,845,486         | 1,984,939         | 1,382,469         | 1,260,490         | 971,434           | 769,233           |
| ADO               | 22,072,256        | 23,359,617        | 24,212,847        | 24,064,458        | 26,487,751        | 27,056,409        | 25,164,947        |  | 24,780,885        | 26,999,434        | 26,691,227        | 27,653,973        | 26,391,275        | 24,940,275        | 23,113,427        | 19,005,247        | 15,219,246        |
| IDO               | 1,472,168         | 1,426,877         | 1,360,379         | 1,183,478         | 1,093,414         | 891,785           | 497,819           |  | 269,466           | 180,997           | 145,192           | 167,733           | 133,589           | 91,600            | 79,137            | 60,870            | 53,069            |
| Fuel Oil          | 6,076,212         | 6,162,485         | 6,260,273         | 6,215,566         | 5,754,507         | 4,802,535         | 4,820,184         |  | 5,136,408         | 4,969,526         | 4,480,563         | 4,316,705         | 3,904,580         | 3,428,875         | 1,973,903         | 1,884,040         | 1,647,441         |
| Premix (94)       | 389,334           | 396,631           | 364,006           | 14,972            | 0                 | 0                 | 0                 |  | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 |
| Super TT          | 55,418            | 86,217            | 102,882           | 3,592             | 0                 | 0                 | 0                 |  | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 |
| BB2L              | 106,880           | 74,788            | 2,215             | 0                 | 0                 | 0                 | 0                 |  | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 |
| RON 95            | 0                 | 0                 | 0                 | 107,441           | 121,866           | 99,326            | 128,289           |  | 158,070           | 114,789           | 104,388           | 113,812           | 294,639           | 149,424           | 158,714           | 154,888           | 278,758           |
| RON 92            | 0                 | 0                 | 0                 | 371,238           | 487,562           | 248,875           | 505,730           |  | 472,284           | 297,982           | 460,148           | 670,364           | 625,162           | 666,461           | 850,408           | 1,062,920         | 2,761,956         |
| Solar 51          | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 1,344             |  | 1,288             | 0                 | 1,955             | 4,434             | 6,392             | 12,297            | 23,053            | 33,305            | 38,552            |
| Bio Premium       | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 1,624             |  | 55,970            | 44,016            | 105,816           | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 |
| Bio Pertamina     | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 16                |  | 9,956             | 16,234            | 20,232            | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 |
| Bio Solar         | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 217,048           |  | 877,457           | 931,179           | 2,398,234         | 4,393,861         | 7,180,806         | 9,269,482         | 10,934,294        | 13,667,983        | 13,953,448        |
| <b>Total Fuel</b> | <b>55,713,970</b> | <b>57,804,931</b> | <b>58,845,105</b> | <b>59,797,007</b> | <b>64,041,146</b> | <b>63,926,786</b> | <b>60,221,657</b> |  | <b>61,664,198</b> | <b>63,792,494</b> | <b>63,391,066</b> | <b>66,774,855</b> | <b>69,613,254</b> | <b>72,302,305</b> | <b>72,057,077</b> | <b>70,778,283</b> | <b>67,168,112</b> |

Sources : Directorate General of Oil and Gas

Note : Temporary Data for Year 2015

## 6.2.5. Crude Oil Refinery Production

(Thousand Barrel)

| Year | RON 88 | Avtur<br>+ JP5 | Avgas | Kerosene | ADO     |  | IDO    | Fuel<br>Oil | RON 95 | RON 92 | RON 51 | Total<br>Fuel |
|------|--------|----------------|-------|----------|---------|--|--------|-------------|--------|--------|--------|---------------|
| 2000 | 73,852 | 8,442          | 0.00  | 57,899   | 95,907  |  | 8,141  | 32,483      | 0      | 0      | 0.00   | 276,723       |
| 2001 | 76,601 | 8,620          | 51.82 | 57,992   | 95,929  |  | 9,109  | 35,087      | 0      | 0      | 0.00   | 283,389       |
| 2002 | 73,287 | 9,319          | 32.81 | 56,301   | 93,985  |  | 8,431  | 37,302      | 0      | 0      | 0.00   | 278,658       |
| 2003 | 72,695 | 10,701         | 32.08 | 58,553   | 94,560  |  | 7,792  | 33,874      | 0      | 0      | 0.00   | 278,208       |
| 2004 | 71,937 | 11,215         | 32.25 | 56,820   | 98,645  |  | 10,202 | 30,962      | 303    | 3,037  | 0.00   | 283,153       |
| 2005 | 71,013 | 10,686         | 33.81 | 53,721   | 94,633  |  | 8,559  | 27,752      | 432    | 1,700  | 0.00   | 268,529       |
| 2006 | 70,200 | 10,653         | 21.00 | 55,679   | 90,813  |  | 3,473  | 24,157      | 663    | 2,162  | 0.00   | 257,821       |
| 2007 | 71,337 | 8,190          | 29.58 | 51,934   | 82,120  |  | 2,267  | 24,795      | 951    | 2,754  | 18.11  | 244,396       |
| 2008 | 72,404 | 11,229         | 23.95 | 48,031   | 92,812  |  | 2,036  | 23,084      | 387    | 1,523  | 2.67   | 251,533       |
| 2009 | 74,751 | 16,672         | 0.21  | 29,476   | 110,698 |  | 1,213  | 18,843      | 774    | 2,832  | 30.65  | 255,289       |
| 2010 | 66,820 | 15,710         | 6.67  | 18,985   | 107,351 |  | 1,377  | 21,515      | 668    | 3,301  | 15.13  | 235,748       |
| 2011 | 64,460 | 17,061         | 6.56  | 14,378   | 116,391 |  | 1,352  | 20,276      | 736    | 2,446  | 28.16  | 237,135       |
| 2012 | 67,684 | 19,050         | 0.00  | 10,808   | 123,483 |  | 1,135  | 15,047      | 514    | 2,487  | 122.34 | 240,330       |
| 2013 | 68,174 | 18,623         | 0.00  | 9,827    | 123,726 |  | 927    | 13,879      | 566    | 2,651  | 516.91 | 238,892       |
| 2014 | 70,829 | 19,938         | 0.00  | 7,332    | 129,502 |  | 1,107  | 12,243      | 545    | 3,629  | 381.64 | 245,507       |
| 2015 | 68,389 | 20,240         | 0.00  | 4,977    | 129,260 |  | 972    | 11,170      | 627    | 8,725  | 242.47 | 244,603       |

Source : Directorate General of Oil and Gas

Note : 2000-2003 RON 88 Included Premix (94), Super TT and BB 2L (Unleaded Gasoline)  
Temporary Data for Year 2015

(Thousand Barrel)

| Year | Secondary Fuel |       |        |        | Non Fuel |  | Lubricant | LPG   | HOMC   | Total Production |
|------|----------------|-------|--------|--------|----------|--|-----------|-------|--------|------------------|
|      | Naphtha        | LOMC  | LSWR   | 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 | 11,405   |  | 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          |
| 2008 | 28,270         | 0     | 30,033 | 58,303 | 14,130   |  | 3,067     | 8,054 | 10,871 | 345,959          |
| 2009 | 23,820         | 63    | 31,691 | 55,510 | 15,642   |  | 2,772     | 8,119 | 7,498  | 346,668          |
| 2010 | 22,321         | 187   | 29,522 | 52,030 | 19,189   |  | 2,027     | 7,602 | 4,982  | 321,578          |
| 2011 | 28,613         | 0     | 24,021 | 52,634 | 27,499   |  | 3,065     | 9,143 | 11,908 | 341,384          |
| 2012 | 23,293         | 59    | 26,451 | 49,803 | 41,448   |  | 2,988     | 7,288 | 10,405 | 352,263          |
| 2013 | 23,793         | 0     | 24,487 | 48,281 | 21,726   |  | 2,697     | 6,635 | 6,564  | 324,795          |
| 2014 | 21,985         | 243   | 26,946 | 49,174 | 30,460   |  | 2,529     | 6,362 | 8,544  | 342,577          |
| 2015 | 18,382         | 0     | 26,892 | 45,274 | 47,149   |  | 2,579     | 7,900 | 6,985  | 354,491          |

Source : Directorate General of Oil and Gas

Note : 2000-2003 RON 88 Included Premix (94), Super TT and BB 2L (Unleaded Gasoline)  
Temporary Data for Year 2015

## 6.2.6. Import of Refined Products

(Thousand KL)

| Year | Avtur | Avgas | RON 88 | RON 95 | RON 92 |  | DPK   | HOMC  | ADO    | Fuel Oil | IDO  | Total Fuel |
|------|-------|-------|--------|--------|--------|--|-------|-------|--------|----------|------|------------|
| 2000 | 0     | 0.0   | 0      | 0      | 0      |  | 2,966 | 1,984 | 7,194  | 2,326    | 0.0  | 14,470     |
| 2001 | 0     | 0.0   | 0      | 0      | 0      |  | 2,718 | 2,410 | 7,879  | 1,166    | 0.0  | 14,174     |
| 2002 | 0     | 0.0   | 0      | 0      | 0      |  | 2,916 | 3,154 | 9,637  | 1,232    | 0.0  | 16,940     |
| 2003 | 0     | 0.0   | 0      | 0      | 0      |  | 2,516 | 3,076 | 9,955  | 1,512    | 0.0  | 17,058     |
| 2004 | 679   | 0.0   | 772    | 0      | 0      |  | 2,907 | 5,804 | 12,339 | 1,896    | 0.0  | 24,398     |
| 2005 | 654   | 0.0   | 6,202  | 0      | 3      |  | 2,604 | 1,076 | 14,470 | 1,493    | 0.0  | 26,502     |
| 2006 | 796   | 0.0   | 5,841  | 0      | 69     |  | 861   | 1,088 | 10,846 | 1,682    | 0.0  | 21,184     |
| 2007 | 1,176 | 0.0   | 7,069  | 27     | 35     |  | 1,080 | 108   | 12,367 | 2,163    | 7.6  | 24,032     |
| 2008 | 769   | 0.0   | 8,572  | 17     | 40     |  | 333   | 57    | 12,284 | 2,573    | 28.0 | 24,673     |
| 2009 | 172   | 0.9   | 10,263 | 32     | 120    |  | 0     | 1,301 | 8,505  | 1,909    | 8.4  | 22,311     |
| 2010 | 577   | 0.0   | 12,283 | 48     | 381    |  | 0     | 1,535 | 10,637 | 549      | 6.8  | 26,017     |
| 2011 | 816   | 1.9   | 15,248 | 36     | 319    |  | 0     | 157   | 13,573 | 998      | 0.0  | 31,149     |
| 2012 | 710   | 2.5   | 17,621 | 36     | 213    |  | 0     | 525   | 12,455 | 420      | 0.0  | 31,982     |
| 2013 | 950   | 2.2   | 18,340 | 60     | 268    |  | 0     | 1,015 | 11,947 | 107      | 6.3  | 32,695     |
| 2014 | 981   | 0.0   | 18,829 | 64     | 619    |  | 0     | 1,093 | 11,475 | 174      | 6.7  | 33,242     |
| 2015 | 1,202 | 0.3   | 16,274 | 171    | 1,781  |  | 0     | 998   | 7,318  | 148      | 6.4  | 27,898     |

Source : Directorate General of Oil and Gas

Note : Temporary Data for Year 2015

## 6.2.7. Export of Refined Products

(Thousand Barrel)

| Year | RON 88 | Avtur | Kero-sene | ADO     | Fuel Oil | RON 92 |  | RON 95 | Total Fuel | Naphtha  | Lubricant | Other Pro-duct | Total  |
|------|--------|-------|-----------|---------|----------|--------|--|--------|------------|----------|-----------|----------------|--------|
| 2000 | 0.0    | 0.0   | 0.0       | 0.0     | 0.0      | 0.0    |  | 0.0    | 0.0        | 11,390.1 | 0.0       | 55,694.4       | 67,085 |
| 2001 | 0.0    | 0.0   | 0.0       | 0.0     | 0.0      | 0.0    |  | 0.0    | 0.0        | 13,448.4 | 147.5     | 41,522.3       | 55,118 |
| 2002 | 0.0    | 0.0   | 0.0       | 0.0     | 3,253.2  | 0.0    |  | 0.0    | 3,253.2    | 10,993.3 | 417.3     | 40,825.9       | 55,490 |
| 2003 | 0.0    | 0.0   | 0.0       | 0.0     | 2,813.2  | 0.0    |  | 0.0    | 2,813.2    | 18,715.0 | 674.0     | 41,509.8       | 63,712 |
| 2004 | 0.0    | 0.0   | 0.0       | 0.0     | 4,940.0  | 0.0    |  | 0.0    | 4,940.0    | 11,763.0 | 513.0     | 47,285.0       | 64,501 |
| 2005 | 51.2   | 0.0   | 0.5       | 114.9   | 3,233.5  | 0.0    |  | 0.0    | 3,400.1    | 6,531.1  | 64.2      | 33,357.8       | 43,353 |
| 2006 | 37.0   | 0.0   | 0.8       | 78.4    | 203.6    | 0.0    |  | 0.0    | 319.8      | 946.6    | 87.3      | 36,159.2       | 37,513 |
| 2007 | 47.4   | 0.0   | 0.7       | 988.1   | 851.3    | 0.0    |  | 0.0    | 1,887.6    | 6,163.3  | 8.0       | 35,657.9       | 43,717 |
| 2008 | 38.4   | 3.4   | 0.0       | 1,860.7 | 64.1     | 0.0    |  | 0.0    | 1,966.6    | 5,371.7  | 0.0       | 30,308.3       | 37,647 |
| 2009 | 130.3  | 423.7 | 427.0     | 759.5   | 303.5    | 0.0    |  | 0.0    | 2,044.0    | 3,182.5  | 0.0       | 31,848.9       | 37,075 |
| 2010 | 23.9   | 2.6   | 1,436.0   | 1,518.7 | 600.2    | 0.0    |  | 0.3    | 3,581.8    | 3,955.0  | 0.0       | 29,257.4       | 36,794 |
| 2011 | 79.6   | 9.2   | 2,700.9   | 112.7   | 0.0      | 0.0    |  | 6.8    | 2,909.2    | 1,316.4  | 65.4      | 26,108.0       | 30,399 |
| 2012 | 68.6   | 13.3  | 1,917.4   | 92.3    | 0.0      | 60.2   |  | 0.0    | 2,151.7    | 0.0      | 301.5     | 25,862.3       | 28,315 |
| 2013 | 0.0    | 8.6   | 1,631.8   | 0.0     | 4,319.5  | 84.0   |  | 13.4   | 6,057.3    | 1,092.0  | 0.0       | 19,693.3       | 26,843 |
| 2014 | 0.0    | 12.9  | 400.7     | 147.9   | 3,215.2  | 159.0  |  | 0.0    | 3,935.6    | 5,338.7  | 0.0       | 23,342.0       | 32,616 |
| 2015 | 0.0    | 15.4  | 589.3     | 0.0     | 1,377.3  | 14.7   |  | 0.0    | 1,996.7    | 2,550.5  | 0.0       | 29,746.2       | 34,293 |

Source : Directorate General of Oil and Gas  
Note : Temporary Data for Year 2015

**6.2.8. Indonesia Crude Oil Export by Destination**

(Thousand Barrel)

| 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     | 59,459 | 159,703 |
| 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     | 55,286 | 135,267 |
| 2008 | 37,724 | 4,740  | 12,289 | 1,981  | 15,083    | 63,053 | 134,872 |
| 2009 | 25,783 | 5,264  | 19,394 | 2,160  | 11,649    | 67,974 | 132,223 |
| 2010 | 23,407 | 4,779  | 17,607 | 1,961  | 10,576    | 76,143 | 134,473 |
| 2011 | 29,511 | 31,784 | 3,484  | 0      | 24,543    | 46,250 | 135,572 |
| 2012 | 30,446 | 28,579 | 3,652  | 0      | 15,457    | 37,205 | 115,339 |
| 2013 | 33,229 | 26,467 | 2,868  | 0      | 15,388    | 39,428 | 117,380 |
| 2014 | 32,625 | 6,811  | 7,586  | 653    | 13,680    | 48,578 | 109,933 |
| 2015 | 26,634 | 13,648 | 8,481  | 5,244  | 15,567    | 45,444 | 115,017 |

Source : Directorate General of Oil and Gas

Note : Temporary Data for Year 2015

**6.2.9. LPG Supply**

(Ton)

| Year | Production   |              | Total     | Export    | Import    | Total Supply | Sales     |
|------|--------------|--------------|-----------|-----------|-----------|--------------|-----------|
|      | Gas Refinery | Oil Refinery |           |           |           |              |           |
| 2000 | 1,321,037    | 766,632      | 2,087,669 | 1,253,197 | 0         | 834,472      | 969,132   |
| 2001 | 1,415,534    | 772,143      | 2,187,677 | 1,423,928 | 0         | 763,749      | 971,360   |
| 2002 | 1,296,505    | 814,177      | 2,110,682 | 1,217,410 | 0         | 893,272      | 1,025,790 |
| 2003 | 1,148,379    | 778,939      | 1,927,318 | 1,033,672 | 111,178   | 1,004,824    | 1,028,360 |
| 2004 | 1,130,540    | 896,395      | 2,026,935 | 981,780   | 32,994    | 1,078,150    | 1,076,780 |
| 2005 | 995,097      | 832,717      | 1,827,814 | 1,015,366 | 22,166    | 834,614      | 996,000   |
| 2006 | 573,093      | 855,397      | 1,428,490 | 289,698   | 68,997    | 1,207,790    | 1,104,306 |
| 2007 | 546,734      | 862,696      | 1,409,430 | 268,511   | 137,760   | 1,278,679    | 1,281,000 |
| 2008 | 910,663      | 780,103      | 1,690,766 | 100,500   | 418,139   | 2,008,406    | 1,843,817 |
| 2009 | 1,430,671    | 694,547      | 2,125,218 | 88,463    | 917,171   | 2,953,926    | 2,922,080 |
| 2010 | 1,828,743    | 649,628      | 2,478,371 | 0         | 1,621,959 | 4,100,330    | 3,761,086 |
| 2011 | 1,580,598    | 704,842      | 2,285,439 | 0         | 1,991,774 | 4,277,213    | 4,347,465 |
| 2012 | 1,824,297    | 377,242      | 2,201,539 | 0         | 2,573,670 | 4,775,209    | 5,030,547 |
| 2013 | 1,447,055    | 563,935      | 2,010,990 | 0         | 3,299,808 | 5,310,799    | 5,607,430 |
| 2014 | 1,833,417    | 547,445      | 2,380,862 | 0         | 3,604,009 | 5,984,871    | 6,093,138 |
| 2015 | 1,631,599    | 644,311      | 2,275,910 | 0         | 4,025,600 | 6,301,510    | 6,376,990 |

Source : Directorate General of Oil and Gas

Note : Temporary Data for Year 2015

**6.3.1. Natural Gas Reserves***per January***(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 |
| 2008 | 112.50 | 57.60     | 170.10 |
| 2009 | 107.34 | 52.29     | 159.63 |
| 2010 | 108.40 | 48.74     | 157.14 |
| 2011 | 104.71 | 48.18     | 152.89 |
| 2012 | 103.35 | 47.35     | 150.70 |
| 2013 | 101.54 | 48.85     | 150.39 |
| 2014 | 100.26 | 49.04     | 149.30 |
| 2015 | 97.99  | 53.34     | 151.33 |

Source : Directorate General of Oil and Gas  
 Note : Temporary Data for Year 2015

**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 |
| 2008 | 472,897    | 2,412,431      | 2,885,328 |
| 2009 | 467,570    | 2,593,326      | 3,060,897 |
| 2010 | 471,507    | 2,936,086      | 3,407,592 |
| 2011 | 472,552    | 2,783,827      | 3,256,379 |
| 2012 | 405,465    | 2,769,175      | 3,174,639 |
| 2013 | 352,561    | 2,768,277      | 3,120,838 |
| 2014 | 304,693    | 2,871,098      | 3,175,791 |
| 2015 | 376,669    | 2,739,473      | 3,116,142 |

Source : Directorate General of Oil and Gas  
 Note : Temporary Data for Year 2015

## 6.3.3. Natural Gas and LNG Supply and Demand

| Year | Natural Gas Production | Gas Lift & Reinjection | Own Use | Flare   | Utilization |           | Utilization |          |            |          |             |                 | Export LNG |
|------|------------------------|------------------------|---------|---------|-------------|-----------|-------------|----------|------------|----------|-------------|-----------------|------------|
|      |                        |                        |         |         | LNG Plant   | LPG Plant |             | Refinery | City Gas*) | Industry | Electricity | Export Gas Pipa |            |
|      | (MMSCF)                | (MMSCF)                | (MMSCF) | (MMSCF) | (MMSCF)     | (MMSCF)   |             | (MMSCF)  | (MMSCF)    | (MMSCF)  | (ton)       |                 |            |
| 2000 | 2,901,302              | 237,280                | 157,238 | 172,883 | 1,584,365   | 31,832    |             | 32,277   | 1,194      | 483,438  | 223,564     | 0               | 27,321,020 |
| 2001 | 2,806,084              | 219,191                | 152,677 | 186,380 | 1,489,935   | 12,807    |             | 29,437   | 1,307      | 455,798  | 254,238     | 31,967          | 24,343,678 |
| 2002 | 3,036,355              | 202,875                | 170,089 | 176,585 | 1,656,472   | 26,901    |             | 30,879   | 1,447      | 448,261  | 196,300     | 82,619          | 26,184,740 |
| 2003 | 3,155,243              | 228,019                | 168,120 | 148,709 | 1,719,127   | 24,429    |             | 22,776   | 1,435      | 500,622  | 187,187     | 126,450         | 26,077,500 |
| 2004 | 3,003,945              | 206,659                | 151,041 | 134,997 | 1,607,970   | 28,661    |             | 20,795   | 1,662      | 473,695  | 169,457     | 163,045         | 25,237,867 |
| 2005 | 2,985,341              | 199,890                | 139,245 | 107,236 | 1,511,335   | 24,578    |             | 16,155   | 1,751      | 480,382  | 175,222     | 251,303         | 23,676,765 |
| 2006 | 2,953,997              | 185,307                | 142,384 | 112,537 | 1,436,093   | 32,879    |             | 15,159   | 1,856      | 461,277  | 169,269     | 257,224         | 22,400,121 |
| 2007 | 2,805,540              | 147,303                | 136,952 | 97,912  | 1,300,348   | 35,096    |             | 24,972   | 2,263      | 443,889  | 183,329     | 319,397         | 20,851,609 |
| 2008 | 2,885,328              | 154,890                | 143,252 | 113,701 | 1,270,854   | 13,196    |             | 29,727   | 2,718      | 623,616  | 221,236     | 234,964         | 20,579,632 |
| 2009 | 3,060,897              | 154,800                | 175,024 | 172,922 | 1,221,502   | 17,806    |             | 35,566   | 4,790      | 654,428  | 231,521     | 294,109         | 19,932,902 |
| 2010 | 3,407,592              | 174,844                | 205,378 | 184,893 | 1,427,917   | 20,866    |             | 34,038   | 6,115      | 635,361  | 269,003     | 333,993         | 24,184,380 |
| 2011 | 3,256,379              | 185,997                | 198,463 | 179,460 | 1,293,151   | 14,289    |             | 37,476   | 7,896      | 666,195  | 248,871     | 335,510         | 21,971,547 |
| 2012 | 3,174,639              | 191,886                | 189,384 | 230,353 | 1,019,569   | 28,141    |             | 39,782   | 9,896      | 685,751  | 289,424     | 358,325         | 18,212,204 |
| 2013 | 3,120,838              | 156,154                | 217,416 | 237,295 | 1,040,992   | 26,647    |             | 38,866   | 8,669      | 689,312  | 302,958     | 335,164         | 19,250,004 |
| 2014 | 3,175,791              | 176,267                | 219,652 | 311,614 | 978,978     | 29,757    |             | 41,992   | 8,974      | 683,177  | 319,491     | 342,669         | 18,186,393 |
| 2015 | 3,116,142              | 168,045                | 214,306 | 273,402 | 1,025,789   | 24,801    | 47,384      | 8,847    | 679,728    | 305,484  | 306,679     | 19,071,196      |            |

Source : Directorate General of Oil and Gas

Note : \*) City Gas Sales not Including Industry, Only Household and Commercial Sector  
Temporary Data for Year 2015

## 6.3.4. City Gas Sales and Utilization

| Year | Sales (Million M <sup>3</sup> ) |                       |                |       | Number of Customer |  |          |            |         | Specific Consumption (Thousand M <sup>3</sup> ) |                       |              |
|------|---------------------------------|-----------------------|----------------|-------|--------------------|--|----------|------------|---------|-------------------------------------------------|-----------------------|--------------|
|      | Household                       | Industry & Commercial | Transportation | Total | Household          |  | Industry | Commercial | Total   | Household                                       | Industry & Commercial | Average Uses |
| 2000 | 12.74                           | 1,907.88              | 27.44          | 1,948 | 42,991             |  | 594      | 1,053      | 44,638  | 0.2964                                          | 1,158                 | 43.03        |
| 2001 | 13.79                           | 2,117.35              | 21.91          | 2,153 | 48,401             |  | 626      | 1,160      | 50,187  | 0.2849                                          | 1,186                 | 42.46        |
| 2002 | 15.13                           | 2,418.03              | 19.72          | 2,453 | 51,943             |  | 646      | 1,330      | 53,919  | 0.2912                                          | 1,224                 | 45.13        |
| 2003 | 15.94                           | 2,668.29              | 17.14          | 2,701 | 64,889             |  | 675      | 1,305      | 66,869  | 0.2456                                          | 1,348                 | 40.14        |
| 2004 | 19.37                           | 2,917.09              | 13.26          | 2,950 | 75,244             |  | 677      | 1,158      | 77,079  | 0.2574                                          | 1,590                 | 38.10        |
| 2005 | 19.32                           | 3,108.91              | 6.68           | 3,135 | 77,833             |  | 723      | 1,412      | 79,968  | 0.2482                                          | 1,456                 | 39.12        |
| 2006 | 19.82                           | 3,277.98              | 6.55           | 3,304 | 79,736             |  | 769      | 1,463      | 81,968  | 0.2485                                          | 1,469                 | 40.23        |
| 2007 | 20.39                           | 4,267.06              | 7.36           | 4,295 | 81,294             |  | 873      | 1,468      | 83,635  | 0.2508                                          | 1,823                 | 51.26        |
| 2008 | 19.61                           | 5,693.28              | 12.49          | 5,725 | 82,123             |  | 1,099    | 1,498      | 84,720  | 0.2387                                          | 2,192                 | 67.43        |
| 2009 | 19.43                           | 8,034.44              | 11.08          | 8,065 | 83,519             |  | 1,180    | 1,593      | 86,292  | 0.2326                                          | 2,897                 | 93.33        |
| 2010 | 20.39                           | 8,430.72              | 29.47          | 8,481 | 85,326             |  | 1,216    | 1,592      | 88,134  | 0.2389                                          | 3,002                 | 95.89        |
| 2011 | 18.01                           | 4,997.35              | 27.24          | 5,043 | 86,167             |  | 1,246    | 1,641      | 89,054  | 0.2090                                          | 1,731                 | 56.32        |
| 2012 | 21.19                           | 5,212.12              | 23.19          | 5,256 | 87,437             |  | 1,253    | 1,674      | 90,364  | 0.2424                                          | 1,781                 | 57.91        |
| 2013 | 19.30                           | 5,158.65              | 27.93          | 5,206 | 88,613             |  | 1,260    | 1,717      | 91,590  | 0.2178                                          | 1,733                 | 56.53        |
| 2014 | 18.03                           | 5,302.25              | 31.20          | 5,351 | 92,858             |  | 1,439    | 1,752      | 96,049  | 0.1941                                          | 1,662                 | 55.39        |
| 2015 | 18.37                           | 4,764.52              | 37.07          | 4,820 | 107,690            |  | 1,529    | 1,857      | 111,076 | 0.1706                                          | 1,407                 | 43.06        |

Note : Temporary Data for Year 2015

## 6.4.1. Power Plant Installed Capacity

(MW)

| Year    | Hydro PP | Steam PP  | Gas PP   | Combined Cycle PP | Geothermal PP | Diesel PP | Gas Engine PP |  | Wind PP | Mycro Hydro PP | Mini Hydro PP | Solar PP | Coal Gasification PP | Waste PP | Bio Mass PP | Total     |
|---------|----------|-----------|----------|-------------------|---------------|-----------|---------------|--|---------|----------------|---------------|----------|----------------------|----------|-------------|-----------|
| 2000    | 4,199.28 | 10,671.56 | 3,804.80 | 6,863.22          | 525.00        | 11,223.33 | 0.00          |  | 0.00    | 0.00           | 0.00          | 0.00     | 0.00                 | 0.00     | 0.00        | 37,287.19 |
| 2001    | 3,112.61 | 7,798.73  | 1,966.77 | 6,998.22          | 785.00        | 3,016.05  | 0.00          |  | 0.00    | 0.00           | 0.00          | 0.00     | 0.00                 | 0.00     | 0.00        | 23,677.39 |
| 2002    | 3,155.17 | 6,900.00  | 1,224.72 | 6,863.22          | 785.00        | 2,589.12  | 0.00          |  | 0.00    | 0.00           | 0.00          | 0.00     | 0.00                 | 0.00     | 0.00        | 21,517.23 |
| 2003    | 3,167.92 | 9,750.00  | 1,687.72 | 6,998.22          | 805.00        | 2,730.60  | 0.00          |  | 0.00    | 0.00           | 0.00          | 0.00     | 0.00                 | 0.00     | 0.00        | 25,139.46 |
| 2004    | 3,199.71 | 9,750.00  | 2,802.57 | 6,846.27          | 820.00        | 2,993.60  | 12.00         |  | 0.00    | 0.00           | 0.00          | 0.00     | 0.00                 | 0.00     | 0.00        | 26,424.15 |
| 2005    | 3,407.46 | 9,750.00  | 3,099.35 | 6,919.97          | 850.00        | 3,208.08  | 3.00          |  | 0.00    | 0.45           | 3.03          | 0.00     | 0.00                 | 0.00     | 0.00        | 27,241.33 |
| 2006    | 3,715.61 | 11,170.00 | 3,102.95 | 7,659.97          | 850.00        | 3,165.05  | 21.00         |  | 0.00    | 0.55           | 3.03          | 0.00     | 0.00                 | 0.00     | 0.00        | 29,688.16 |
| 2007    | 3,688.04 | 12,014.00 | 3,220.18 | 7,699.97          | 980.00        | 3,211.91  | 33.00         |  | 0.10    | 0.55           | 6.03          | 0.00     | 0.00                 | 0.00     | 0.00        | 30,853.78 |
| 2008    | 3,690.80 | 12,294.00 | 3,068.97 | 8,009.97          | 1,052.00      | 3,272.98  | 66.84         |  | 0.26    | 0.69           | 6.03          | 0.00     | 0.00                 | 0.00     | 0.00        | 31,462.54 |
| 2009    | 3,694.95 | 12,594.00 | 3,135.88 | 8,009.97          | 1,189.00      | 3,256.36  | 71.00         |  | 1.06    | 0.69           | 6.03          | 0.00     | 0.00                 | 0.00     | 0.00        | 31,958.94 |
| 2010 *) | 3,719.69 | 12,981.50 | 3,821.57 | 7,590.32          | 1,189.00      | 4,569.89  | 92.84         |  | 0.34    | 0.69           | 13.53         | 0.19     | 0.00                 | 0.00     | 0.00        | 33,979.56 |
| 2011 *) | 3,880.83 | 16,318.00 | 4,236.02 | 8,480.97          | 1,226.00      | 5,471.93  | 169.54        |  | 0.93    | 5.93           | 57.66         | 1.16     | 41.00                | 26.00    | 0.00        | 39,915.97 |
| 2012 *) | 4,078.24 | 19,714.00 | 4,343.82 | 9,461.11          | 1,336.00      | 5,973.58  | 198.74        |  | 0.93    | 6.71           | 61.46         | 4.09     | 41.00                | 26.00    | 0.00        | 45,245.67 |
| 2013 *) | 5,058.87 | 23,812.53 | 4,389.08 | 9,852.21          | 1,343.50      | 5,935.00  | 448.12        |  | 0.63    | 29.69          | 77.05         | 9.02     | 6.00                 | 26.00    | 0.00        | 50,987.69 |
| 2014 *) | 5,059.06 | 25,104.23 | 4,310.50 | 10,146.11         | 1,403.50      | 6,206.99  | 610.74        |  | 1.12    | 30.46          | 139.87        | 9.02     | 6.00                 | 36.00    | 0.00        | 53,063.60 |
| 2015    | 5,079.06 | 27,224.73 | 4,310.50 | 10,146.11         | 1,438.50      | 6,274.99  | 818.74        |  | 0.60    | 30.46          | 152.17        | 14.02    | 6.00                 | 36.00    | 0.52        | 55,532.40 |

Source : PLN Statistics and Electricity Statistics, Directorate General of Electricity, Directorate General of New and Renewable Energy and Energy Conservation

Note : \* Revised data for Geothermal PP (DG NRE)  
Temporary Data for Year 2015

## 6.4.2. Power Plant Production

(GWh)

| Year | PLN      |                |          |           |          |        |       |        | PLN |                       |        |               |         |            |
|------|----------|----------------|----------|-----------|----------|--------|-------|--------|-----|-----------------------|--------|---------------|---------|------------|
|      | Hydro PP | Geo-thermal PP | Solar PP | Diesel PP | Steam PP |        |       | Total  |     | Combined Gas-Steam PP | Gas PP | Gas Engine PP | Wind PP | Sub-To-tal |
|      |          |                |          |           | Coal     | Oil    | Gas   |        |     |                       |        |               |         |            |
| 2000 | 9,110    | 2,649          | 0        | 6,355     | 28,776   | 6,055  | 3,598 | 38,429 |     | 26,397                | 1,252  | 0.0           | 0.00    | 84,190     |
| 2001 | 10,651   | 2,982          | 0        | 6,520     | 29,330   | 6,557  | 3,489 | 39,376 |     | 27,366                | 1,459  | 0.0           | 0.00    | 88,355     |
| 2002 | 8,834    | 3,187          | 0        | 7,209     | 29,313   | 8,884  | 835   | 39,032 |     | 28,803                | 2,229  | 0.0           | 0.00    | 89,293     |
| 2003 | 8,472    | 2,959          | 0        | 7,977     | 31,737   | 9,108  | 1,334 | 42,178 |     | 28,409                | 2,486  | 0.0           | 0.00    | 92,481     |
| 2004 | 8,943    | 3,147          | 0        | 8,577     | 30,806   | 9,636  | 1,204 | 41,646 |     | 30,700                | 3,179  | 0.0           | 0.00    | 96,192     |
| 2005 | 9,831    | 3,006          | 0        | 8,866     | 33,253   | 8,180  | 835   | 42,268 |     | 31,272                | 6,039  | 0.0           | 0.00    | 101,282    |
| 2006 | 8,759    | 3,141          | 0        | 8,855     | 38,362   | 8,575  | 828   | 47,764 |     | 30,918                | 5,031  | 0.0           | 0.00    | 104,469    |
| 2007 | 10,627   | 3,188          | 0        | 8,694     | 41,880   | 9,179  | 1,151 | 52,209 |     | 31,374                | 5,148  | 121.3         | 0.02    | 111,241    |
| 2008 | 10,740   | 3,391          | 0.10     | 10,212    | 41,311   | 10,186 | 856   | 52,353 |     | 35,731                | 5,621  | 0.0           | 0.00    | 118,047    |
| 2009 | 10,307   | 3,504          | 0.1      | 10,432    | 43,138   | 9,031  | 795   | 52,964 |     | 34,747                | 8,674  | 0.0           | 0.00    | 120,628    |
| 2010 | 15,827   | 3,398          | 0.50     | 11,926    | 46,685   | 6,712  | 1,009 | 54,407 |     | 36,812                | 9,266  | 73.6          | 0.03    | 131,710    |
| 2011 | 10,316   | 3,487          | 0.72     | 16,125    | 54,950   | 6,383  | 1,003 | 62,335 |     | 40,410                | 10,018 | 48.0          | 0.00    | 142,739    |
| 2012 | 10,525   | 3,558          | 2.85     | 18,913    | 66,633   | 2,391  | 4,799 | 73,823 |     | 34,569                | 8,310  | 55.1          | 0.00    | 149,755    |
| 2013 | 13,014   | 4,345          | 5.48     | 18,919    | 74,398   | 1,257  | 6,195 | 81,850 |     | 36,493                | 6,195  | 381.8         | 0.00    | 163,966    |
| 2014 | 11,164   | 4,285          | 6.81     | 21,862    | 84,076   | 747    | 5,189 | 90,012 |     | 38,800                | 5,189  | 1,087.3       | 0.00    | 175,298    |
| 2015 | 10,005   | 4,392          | 5.28     | 20,091    | 91,042   | 406    | 5,308 | 96,756 |     | 39,316                | 5,308  | 1,135.7       | 0.00    | 176,472    |

Note : Temporary Data for Year 2015

## 6.4.2. Power Plant Production (continued)

(GWh)

| Year | PLN Purchase from IPP & PPU |                |          |           |          |       |          |        | PLN Purchase from IPP & PPU |                       |        |         |          |           |             |
|------|-----------------------------|----------------|----------|-----------|----------|-------|----------|--------|-----------------------------|-----------------------|--------|---------|----------|-----------|-------------|
|      | Hydro PP                    | Geo-thermal PP | Solar PP | Diesel PP | Steam PP |       |          | Total  |                             | Combined Gas-Steam PP | Gas PP | Wind PP | Waste PP | Sub-Total | Grand Total |
|      |                             |                |          |           | Coal     | Gas   | Bio-mass |        |                             |                       |        |         |          |           |             |
| 2000 | 906                         | 0              | 0.00     | 94        | 5,226    | 0.0   | 6        | 5,232  |                             | 682                   | 0      | 0.0     | 0.0      | 6,915     | 91,105      |
| 2001 | 1,004                       | 0              | 0.00     | 88        | 8,383    | 0.0   | 8        | 8,391  |                             | 773                   | 0      | 0.0     | 0.0      | 10,256    | 98,610      |
| 2002 | 1,099                       | 0              | 0.00     | 221       | 13,616   | 0.0   | 11       | 13,627 |                             | 925                   | 0      | 0.0     | 0.0      | 15,873    | 105,166     |
| 2003 | 627                         | 0              | 0.00     | 283       | 14,722   | 0.0   | 15       | 14,737 |                             | 1,511                 | 0      | 0.0     | 0.0      | 17,158    | 109,639     |
| 2004 | 731                         | 0              | 0.00     | 347       | 17,405   | 0.0   | 20       | 17,425 |                             | 1,947                 | 0      | 0.0     | 0.0      | 20,449    | 116,642     |
| 2005 | 894                         | 3,598          | 0.00     | 251       | 18,572   | 2.8   | 22       | 18,596 |                             | 2,566                 | 373    | 0.0     | 0.0      | 26,278    | 127,560     |
| 2006 | 864                         | 3,517          | 0.00     | 318       | 20,305   | 2.2   | 32       | 20,339 |                             | 2,816                 | 787    | 0.0     | 0.0      | 28,640    | 133,108     |
| 2007 | 659                         | 3,833          | 0.00     | 388       | 22,022   | 1.7   | 36       | 22,060 |                             | 2,746                 | 1,514  | 0.0     | 0.0      | 31,200    | 142,442     |
| 2008 | 788                         | 4,918          | 0.00     | 428       | 20,182   | 89.7  | 55       | 20,327 |                             | 3,591                 | 1,336  | 0.3     | 0.0      | 31,390    | 149,437     |
| 2009 | 1,077                       | 5,791          | 0.00     | 393       | 22,776   | 2.3   | 63       | 22,841 |                             | 4,395                 | 1,669  | 3.7     | 0.0      | 36,169    | 156,797     |
| 2010 | 1,629                       | 5,959          | 0.02     | 369       | 21,792   | 98.9  | 95       | 21,985 |                             | 6,512                 | 1,618  | 3.6     | 0.0      | 38,076    | 169,786     |
| 2011 | 2,103                       | 5,884          | 0.05     | 331       | 26,140   | 153.8 | 186      | 26,480 |                             | 4,179                 | 1,666  | 4.7     | 30.9     | 40,679    | 183,419     |
| 2012 | 2,274                       | 5,859          | 0.16     | 279       | 35,533   | 133.6 | 238      | 31,745 |                             | 4,519                 | 1,691  | 4.6     | 30.9     | 50,563    | 200,318     |
| 2013 | 3,916                       | 5,069          | 0.11     | 18        | 36,054   | 140.8 | 228      | 36,424 |                             | 4,945                 | 1,807  | 1.4     | 39.4     | 52,220    | 216,186     |
| 2014 | 3,984                       | 5,753          | 3.95     | 48        | 36,190   | 0.0   | 206      | 36,395 |                             | 5,118                 | 1,857  | 0.0     | 32.1     | 53,191    | 228,489     |
| 2015 | 3,736                       | 5,656          | 13.50    | 1,176     | 39,466   | 115.4 | 437      | 40,018 |                             | 5,330                 | 1,546  | 3.7     | 31.9     | 57,510    | 233,982     |

Source : PLN Statistics and Electricity Statistics, Directorate General of Electricity

Note : Temporary Data for Year 2015

**6.4.3. Import of Electricity**

(GWh)

| Year | Country of Origin | Micro Hydro PP*) |
|------|-------------------|------------------|
| 2000 | -                 | -                |
| 2001 | -                 | -                |
| 2002 | -                 | -                |
| 2003 | -                 | -                |
| 2004 | -                 | -                |
| 2005 | -                 | -                |
| 2006 | -                 | -                |
| 2007 | -                 | -                |
| 2008 | -                 | -                |
| 2009 | Malaysia          | 1.26             |
| 2010 | Malaysia          | 2.22             |
| 2011 | Malaysia          | 2.54             |
| 2012 | Malaysia          | 2.44             |
| 2013 | Malaysia          | 2.99             |
| 2014 | Malaysia          | 8.99             |
| 2015 | Malaysia          | 12.75            |

Source : PLN Statistics

Note : Temporary Data for Year 2015

**6.4.4. Electricity Sales**

(GWh)

| Year | Electricity Sales / Tariff Segment |            |          |                 |        |            |                |         |
|------|------------------------------------|------------|----------|-----------------|--------|------------|----------------|---------|
|      | Household                          | Commercial | Industry | Street Lighting | Social | Government | Transportation | Total   |
| 2000 | 30,563                             | 10,532     | 34,013   | 1,071           | 1,644  | 1,298      | 44             | 79,165  |
| 2001 | 33,340                             | 11,346     | 35,593   | 1,129           | 1,782  | 1,282      | 49             | 84,520  |
| 2002 | 33,994                             | 11,792     | 36,831   | 1,294           | 1,843  | 1,281      | 53             | 87,089  |
| 2003 | 35,753                             | 13,171     | 36,497   | 1,512           | 2,022  | 1,433      | 53             | 90,441  |
| 2004 | 38,588                             | 15,203     | 40,324   | 2,045           | 2,238  | 1,645      | 55             | 100,097 |
| 2005 | 41,184                             | 16,968     | 42,448   | 2,221           | 2,430  | 1,726      | 55             | 107,032 |
| 2006 | 43,753                             | 18,348     | 43,615   | 2,414           | 2,604  | 1,808      | 67             | 112,610 |
| 2007 | 47,325                             | 20,524     | 45,803   | 2,586           | 2,909  | 2,016      | 85             | 121,247 |
| 2008 | 50,184                             | 22,845     | 47,969   | 2,761           | 3,082  | 2,096      | 81             | 129,019 |
| 2009 | 54,945                             | 24,715     | 46,204   | 2,888           | 3,384  | 2,335      | 111            | 134,582 |
| 2010 | 59,825                             | 27,069     | 50,985   | 3,000           | 3,700  | 2,630      | 89             | 147,297 |
| 2011 | 65,112                             | 30,093     | 54,725   | 3,068           | 3,994  | 2,787      | 88             | 159,867 |
| 2012 | 72,133                             | 30,880     | 60,176   | 3,141           | 4,496  | 3,057      | 108            | 173,991 |
| 2013 | 77,211                             | 34,369     | 64,381   | 3,251           | 4,939  | 3,261      | 129            | 187,541 |
| 2014 | 84,086                             | 36,128     | 65,909   | 3,394           | 5,446  | 3,484      | 155            | 198,602 |
| 2015 | 88,682                             | 36,773     | 64,079   | 3,448           | 5,941  | 3,717      | 205            | 202,846 |

Source : PLN Statistic

Note : Temporary Data for Year 2015

## 6.4.5. 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     |
| 2008 | 20,999,521 | 8,127,546 | 28,989 | 3,163,954 | 181,661     |
| 2009 | 21,604,464 | 6,365,116 | 11,132 | 3,032,657 | 266,539     |
| 2010 | 23,958,699 | 6,887,455 | 6,895  | 2,430,584 | 283,274     |
| 2011 | 27,434,163 | 8,943,880 | 13,923 | 2,509,047 | 285,722     |
| 2012 | 35,514,791 | 6,625,335 | 4,065  | 1,585,395 | 365,927     |
| 2013 | 39,601,034 | 6,291,667 | 3,221  | 1,179,604 | 409,890     |
| 2014 | 44,604,981 | 6,330,517 | 3,849  | 1,096,638 | 450,190     |
| 2015 | 48,995,169 | 9,660,646 | 2,244  | 904,266   | 456,494     |

Source : PLN Statistic  
Note : Temporary Data for Year 2015

## 6.4.6. Share of Fuel Consumption of PLN Power Plant

| Year | 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       |
| 2008 | 47.46        | 23.72 | 0.10 | 11.58 | 17.15       |
| 2009 | 47.09        | 17.91 | 0.04 | 10.70 | 24.26       |
| 2010 | 49.27        | 18.29 | 0.02 | 8.09  | 24.33       |
| 2011 | 49.88        | 21.00 | 0.04 | 7.39  | 21.70       |
| 2012 | 57.35        | 13.82 | 0.01 | 4.14  | 24.68       |
| 2013 | 59.32        | 12.17 | 0.01 | 2.86  | 25.64       |
| 2014 | 60.80        | 11.14 | 0.01 | 2.42  | 25.63       |
| 2015 | 59.75        | 15.21 | 0.00 | 1.79  | 23.25       |

Source : PLN Statistic  
Note : Temporary Data for Year 2015

## 6.4.7. 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 | 32.04                      | 64.47           | 59.60       | 21,306    | 11.08                              |
| 2008 | 31.96                      | 52.62           | 80.77       | 21,120    | 10.46                              |
| 2009 | 29.95                      | 53.71           | 76.37       | 23,438    | 9.93                               |
| 2010 | 29.46                      | 55.90           | 77.78       | 24,917    | 9.70                               |
| 2011 | 29.23                      | 55.67           | 78.53       | 26,665    | 9.41                               |
| 2012 | 26.87                      | 51.96           | 79.18       | 28,882    | 9.21                               |
| 2013 | 27.18                      | 54.72           | 80.04       | 30,834    | 9.91                               |
| 2014 | 26.60                      | 50.97           | 78.30       | 33,321    | 9.97                               |
| 2015 | 23.66                      | 50.53           | 80.02       | 33,381    | 9.77                               |

Source : PLN Statistic  
Note : Temporary Data for Year 2015

## 6.5.1. Geothermal Resources and Reserves

Status Year 2015

(MW)

| No    | Location           | Resources   |            | Reserves |          |        | Total  |
|-------|--------------------|-------------|------------|----------|----------|--------|--------|
|       |                    | Speculative | Hypothetic | Probable | Possible | Proven |        |
| 1     | Sumatera           | 3,191       | 2,334      | 6,992    | 15       | 380    | 12,912 |
| 2     | Jawa               | 1,560       | 1,739      | 4,023    | 658      | 1,815  | 9,795  |
| 3     | Bali-Nusa Tenggara | 295         | 431        | 1,179    | 0        | 15     | 1,920  |
| 4     | Sulawesi           | 1,221       | 318        | 1,441    | 150      | 78     | 3,208  |
| 5     | Maluku             | 560         | 91         | 800      | 0        | 0      | 1,451  |
| 6     | Kalimantan         | 153         | 30         | 0        | 0        | 0      | 183    |
| 7     | Papua              | 75          | 0          | 0        | 0        | 0      | 75     |
| Total |                    | 7,055       | 4,943      | 14,435   | 823      | 2,288  | 29,544 |

Source : Geological Agency  
Note : Temporary Data for Year 2015

## 6.5.2. Geothermal Power Plant Capacity 2015

(MW)

| No | Working Area      | Location       | IPB Owner                             |  | Turbine Capacity | Operator Steam Area | Operator PLTP           | Total Capacity |
|----|-------------------|----------------|---------------------------------------|--|------------------|---------------------|-------------------------|----------------|
| 1  | PLTP Kamojang     | West Java      | PT. Pertamina Geothermal Energy (PGE) |  | 1 x 30 MWe       | PGE                 | PLN                     | 235            |
|    |                   |                |                                       |  | 2 x 55 MWe       |                     |                         |                |
|    |                   |                |                                       |  | 1 x 60 MWe       |                     | PGE                     |                |
|    |                   |                |                                       |  | 1 x 35 MWe       |                     | PGE                     |                |
| 2  | PLTP Lahendong    | North Sulawesi | PT. Pertamina Geothermal Energy (PGE) |  | 4 x 20 MWe       | PGE                 | PLN                     | 80             |
| 3  | PLTP Sibayak      | North Sumatera | PT. Pertamina Geothermal Energy (PGE) |  | 1 x 12 MWe       | PGE                 | PT. Dizamatra Powerindo | 12             |
| 4  | PLTP Salak        | West Java      | PT. Pertamina Geothermal Energy (PGE) |  | 3 x 60 MWe       | CGS                 | PLN                     | 377            |
|    |                   |                |                                       |  | 3 x 65.6 MWe     |                     | CGS                     |                |
| 5  | PLTP Darajat      | West Java      | PT. Pertamina Geothermal Energy (PGE) |  | 1 x 55 MWe       | CGI                 | PLN                     | 270            |
|    |                   |                |                                       |  | 1 x 94 MWe       |                     | CGI                     |                |
|    |                   |                |                                       |  | 1 x 121 MWe      |                     | CGI                     |                |
| 6  | PLTP Wayang Windu | West Java      | PT. Pertamina Geothermal Energy (PGE) |  | 1 x 110 MWe      | SE                  | SE                      | 227            |
|    |                   |                |                                       |  | 1 x 117 MWe      |                     |                         |                |
| 7  | PLTP Dieng        | Central Java   | PT. Geo Dipa Energy (GDE)             |  | 1 x 60 MWe       | GDE                 | GDE                     | 60             |
| 8  | PLTP Ulubelu      | Lampung        | PT. Pertamina Geothermal Energy (PGE) |  | 2 x 55 MWe       | PGE                 | PGE                     | 110            |
| 9  | PLTP Ulumbu       | NTT            | PT. PLN (Persero)                     |  | 4 x 2.5 MWe      | PLN                 | PLN                     | 10             |
| 10 | PLTP Mataloko     | NTT            | PT. PLN (Persero)                     |  | 1 x 2.5 MWe      | PLN                 | PLN                     | 2.5            |
| 11 | PLTP Patuha       | West Java      | PT. Geo Dipa Energy (GDE)             |  | 1 x 5.5 MWe      | GDE                 | GDE                     | 55             |
|    |                   |                |                                       |  |                  |                     |                         | Total          |

Source : Directorate General of New and Renewable Energy and Energy Conservation

Note : Temporary Data for Year 2015

## 6.5.3. Geothermal Steam Production

(Thousand Tonnes Geothermal Steam)

| Year | Pertamina Field |         |            |         |           | KOB Field |        |         |              |       |        |           |        |           |        | Total |
|------|-----------------|---------|------------|---------|-----------|-----------|--------|---------|--------------|-------|--------|-----------|--------|-----------|--------|-------|
|      | Kamo-jang       | Sibayak | Lahen-dong | Ulubelu | Sub Total | Salak     |        | Darajat | Wayang Windu | Dieng | Ulumbu | Ma-taloko | Patuha | Sub Total |        |       |
| 2000 | 8,238           | 66.00   | -          | -       | 8,304     | 19,494    |        | 4,876   | 3,717        | -     | -      | -         | -      | 28,087    | 36,391 |       |
| 2001 | 8,623           | 242.00  | 457        | -       | 9,322     | 22,044    |        | 7,242   | 6,669        | -     | -      | -         | -      | 35,955    | 45,277 |       |
| 2002 | 9,292           | 212.00  | 954        | -       | 10,458    | 21,742    |        | 7,453   | 6,929        | -     | -      | -         | -      | 36,124    | 46,582 |       |
| 2003 | 9,274           | 42.00   | 1,132      | -       | 10,448    | 21,325    |        | 7,435   | 6,431        | 1,521 | -      | -         | -      | 36,712    | 47,160 |       |
| 2004 | 9,277           | 126.00  | 1,173      | -       | 10,576    | 22,595    |        | 8,011   | 6,863        | 2,305 | -      | -         | -      | 39,774    | 50,350 |       |
| 2005 | 7,462           | 74.00   | 1,012      | -       | 8,548     | 24,167    |        | 7,551   | 6,809        | 2,518 | -      | -         | -      | 41,045    | 49,593 |       |
| 2006 | 8,096           | 164.69  | 1,240      | -       | 9,501     | 24,527    |        | 7,633   | 6,625        | 2,544 | -      | -         | -      | 41,330    | 50,831 |       |
| 2007 | 8,121           | 84.31   | 1,311      | -       | 9,517     | 24,346    |        | 10,322  | 6,524        | 1,209 | -      | -         | -      | 42,400    | 51,917 |       |
| 2008 | 12,100          | 288.76  | 2,349      | -       | 14,738    | 24,482    |        | 13,487  | 6,665        | 1,644 | -      | -         | -      | 46,279    | 61,016 |       |
| 2009 | 12,612          | 497.92  | 2,665      | -       | 15,775    | 24,538    |        | 13,977  | 12,989       | 780   | -      | -         | -      | 52,285    | 68,060 |       |
| 2010 | 12,446          | 548.41  | 2,964      | -       | 15,959    | 24,272    |        | 14,264  | 13,675       | 1,221 | -      | -         | -      | 53,433    | 69,391 |       |
| 2011 | 12,470          | 310.00  | 2,510      | -       | 15,290    | 24,673    |        | 14,131  | 13,523       | 1,106 | -      | -         | -      | 53,433    | 68,723 |       |
| 2012 | 10,878          | 160.36  | 3,262      | 1,393   | 15,694    | 24,513    |        | 14,283  | 13,233       | 1,047 | -      | -         | -      | 53,076    | 68,770 |       |
| 2013 | 11,256          | 238.67  | 3,841      | 5,575   | 20,910    | 23,728    |        | 10,678  | 13,378       | 348   | 253    | -         | -      | 48,386    | 69,296 |       |
| 2014 | 10,489          | 183.98  | 4,138      | 6,174   | 20,985    | 24,307    |        | 13,856  | 13,143       | 205   | 261    | -         | 840    | 52,613    | 73,598 |       |
| 2015 | 11,974          | 0.37    | 4,693      | 6,044   | 22,711    | 24,755    | 13,916 | 7,850   | 1,770        | 382   | 41     | 2,837     | 51,552 | 74,263    |        |       |

Source : Directorate General of New and Renewable Energy and Energy Conservation

Note : Temporary Data for Year 2015

ANNEX



## METHODOLOGY AND TABLE EXPLANATION

### GENERAL METHODS

Data shown in the tables of Indonesia's energy economic statistics are a 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 statistic 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 source of energy economic data consolidation, are as follows:

- a. Crude Oil and Oil Products (BBM)
  - Indonesia Oil and Gas Statistics, Directorate General Oil and Gas 2000-2006
- b. Natural Gas (Production, utilization and flaring)
  - Indonesia Oil and Gas Statistics, Directorate General Oil and Gas 2000-2006
  - PT PGN Annual Report, 2000-2013
- c. Coal
  - Indonesia Coal Statistics, Directorate General of Geology and Mineral Resources 2000 and 2001
  - Indonesia Mineral and Coal Statistics Directorate of Mineral Coal and Geothermal 2002-2010 and 2012-2013
- d. Biomass
  - National Survey on Social & Economic (SUSENAS) Statistic Indonesia (BPS), 1999, 2002, 2005
- e. LPG
  - Indonesia Oil and Gas Statistics, Directorate General Oil and Gas 2000-2006 and 2013

- f. Electricity
  - PLN Statistics, 2000-2012
  - Statistics of Electricity, Directorate General of Electricity and Energy Utilization, 2000-2012
- g. General
  - Indonesia Statistics, Statistics Indonesia
  - Finance and Economic Statistics, Bank Indonesia ([www.bi.go.id](http://www.bi.go.id))
  - Trade Statistics, Ministry of Trade, 2000-2012

### TABLE 2: ENERGY BALANCE TABLE

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, mini hydro and micro hydro. 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 5,700 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 (5,700 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 (5,700 kcal/kg), ash free. Sub-bituminous coal is a type of coal that has a gross calorific value between 17,435.0 kJ/kg (4,165 kcal/kg) and 23,865.0 kJ/kg (5,700 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 is 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 than 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 is comprised of Avgas, Avtur, Mo-gas (Motor gasoline), Automotive Diesel Oil (HSD/ADO), Marine Diesel Fuel (MDF/IDO), Fuel Oil and Kerosene. Detail description of each fuel is 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 gasoil. 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 SOT. Its flash point is higher than SOT 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 ( $C_3H_8$ ) and butane ( $C_4H_{10}$ ) 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 -160T 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, are 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, genset, 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 and 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 - transformation input + transformation production- own use and losses) and total final consumption (household, commercial, industry, and transportation).

## FINAL ENERGY CONSUMPTION

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: commerce, hotels, 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, petrochemical, 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. A side for these sector energy is also consumed by one other sector which consist of the fishery, construction and 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).

ANNEX



## 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 briquet.

### Commercial

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

**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 ( $C_3H_8$ ) and butane ( $C_4H_{10}$ ) 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.

**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, mogas, 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 5,000-6,000 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.

ANNEX



**CONVERSION FACTOR**

| Energy            | Original Unit | Multiplier Factor to BOE (Barrel Oil Equivalent) |
|-------------------|---------------|--------------------------------------------------|
| Coal              |               |                                                  |
| Anthracite        | Ton           | 4.9893                                           |
| Imported Coal     | Ton           | 4.2766                                           |
| Kalimantan Coal   | Ton           | 4.2766                                           |
| Ombilin Coal      | Ton           | 4.8452                                           |
| Tanjung Enim Coal | Ton           | 3.7778                                           |
| Lignite           | Ton           | 3.0649                                           |
| Riau Peat         | Ton           | 2.5452                                           |
| Briquette         | Ton           | 3.5638                                           |
| Biomass           |               |                                                  |
| Charcoal          | Ton           | 4.9713                                           |
| Firewood          | Ton           | 2.2979                                           |
| Natural Gas       | MSCF          | 0.1796                                           |
| Gas Products      |               |                                                  |
| City Gas          | Thousand KKal | 0.0007                                           |
| CNG               | Thousand KKal | 0.0007                                           |
| LNG               | Ton           | 8.0532                                           |
| LNG               | MMBTU         | 0.1796                                           |
| LPG               | Ton           | 8.5246                                           |

**CONVERSION FACTOR (continued)**

| Energy                      | Original Unit | Multiplier Factor to BOE (Barrel Oil Equivalent) |
|-----------------------------|---------------|--------------------------------------------------|
| Oil                         |               |                                                  |
| Condensate                  | Barrel        | 0.9545                                           |
| Crude Oil                   | Barrel        | 1.0000                                           |
| Oil 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                                           |
| Kerosene                    | Kilo Liter    | 5.9274                                           |
| ADO                         | Kilo Liter    | 6.4871                                           |
| IDO                         | Kilo Liter    | 6.6078                                           |
| FO                          | Kilo Liter    | 6.9612                                           |
| Oil Products                |               |                                                  |
| Other Oil Products          | Barrel        | 1.0200                                           |
| Refinery Fuel               |               |                                                  |
| Refinery Fuel Gas (RFG)     | Barrel        | 1.6728                                           |
| Refinery Fuel Oil (RFO)     | Barrel        | 1.1236                                           |
| Feed Stock                  | Barrel        | 1.0423                                           |
| Electric Power              | MWh           | 0.6130                                           |

Sources : Neraca Energi 1990-1994, Departemen Pertambangan dan Energi





**HANDBOOK OF ENERGY & ECONOMIC STATISTICS  
OF INDONESIA 2016**

Ministry of Energy and Mineral Resources of Indonesia

Jl. Medan Merdeka Selatan No.18  
Jakarta Pusat, DKI Jakarta

Phone : (62) 21-380-4242  
Facsimile : (62) 21-351-9881  
Email : [pusdatin@esdm.go.id](mailto:pusdatin@esdm.go.id)  
Website : [www.esdm.go.id](http://www.esdm.go.id)

ISSN 2528-3464



9 772528 346007