THE REAL SITUATION OF VIET NAM’S ENERGY STATISTICS

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Vietnam overview

Population:
~ 95.0 million inhabitants

Life expectancy:
Male: 70.6 years
Female: 76 years

GDP per capita:
2,200 USD/capita/year

VN is a country located in the Southeast Asia. It is bordered with Laos and Cambodia in the west, China in the North.
Introduction about GSO Vietnam

- The General Statistics Office (GSO) is an institution directly under Ministry of Planning & Investment (MPI), performing the advisory function to help the MPI Minister in doing the task of state management in the field of statistics; conducting statistical operations and providing socio-economic statistical information to all agencies, organizations and individuals in accordance with the law.

- GSO is vertically organised from central to local administrative level, ensuring the principle of centralization and unity. It is responsible for collection, compilation and dissemination all national socio-economic statistical indicator.
Up to now Vietnam has not had a specialized survey on energy statistics so all energy data has been collected from 3 major corporations and get data from the General Customs of VN & General Statistics Office.
**Indigenous production**

- **Export**
  - Customs of VN

- **Import**
  - Customs of VN

- **Initial production**
  - Getting from corporations

- **Stock change**
  - Getting from corporations

- **International Marine bunker**
  - Planning to get data from Vietnam Maritime Administration

- **International Aviation bunker**
  - Planning to get data from Civil Aviation Authority of VN

- **Getting from corporations**

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Total transformation sector

Petroleum Refinery Plant
Up to now, Dung Quat refinery plant is the biggest in the Petro Vietnam Corporation. Processing capacity: 6.5 million tons of crude oil per year (equivalent to 148,000 barrels per day), In the future expansion and upgrades: 8.5 million tons of crude oil per year.

Gas processing Plant
GPP Ca Mau with capacity of 6.2 million m³ of natural gas per day to produce 600 tons of LPG per day, 34 tons of condensate per day and 5.7 million m³ of dry gas per day.

Electricity Plant
There are many electricity plants: hydro, wind, thermal electric in Electricity Vietnam Corporation
Total domestic energy consumption

- The total energy consumption data 2015 is the 3 sampling surveys, so the data of the section is the wide.
- The sampling frame is selected for calculating the GO of the enterprise and the house hold, not for the energy statistics survey.
MINING OF COAL 2015

Mining of coal or Initial production
41,664 (ths tons)
- Coal Corporation
- Some enterprises out of Corp

Stock change
-659 (ths tons)

TOTAL COAL
46,184 (ths tons)

Import
6,927 (ths tons)
Russia, China, Indonesia

Export
-1,748 (ths tons)
Japan, Thailand, Malaysia
COAL

Indigenous production

46.184 (ths.tons)

Transformation sector – Power plant

22.599 (ths.tons)

Domestic Energy consumption

23.584 (ths.tons)
Total domestic energy consumption for Coal 2015

- Industry: 86.7%
- Trade & services: 9.74%
- Household: 9.74%
- Agriculture: 0.14%
- Total domestic energy consumption for Coal 2015: 3.25%
Crude oil

- Initial: 16,880 (ths. tons)
- Import: 182 (ths. ton)
- Export: -9,486 (ths. ton)
- Stock change: -659 (ths. ton)

Refinery Dung Quat Factory

Import: Singapore, Malaysia, Korea
Export: Mainly exp to China, Australia, Japan

7,118 (ths. ton)
Product of refinery:

- Gas: 2.781 ths. tons
- Jet fuel: 196 ths. tons
- FO: 139 ths. tons
- DO: 3066 ths. tons
- Condensate: -59.8 ths. tons
- LPG: 448 ths. tons

Get 6.571 ths. tons oil from Dung Quat Refinery flat.
Total petroleum product

Total petroleum consumption: 17.746 ths. tons

- Total petroleum supply: 10.985 ths. tons
  - Petroleum refinery: 6.571 ths. tons
  - Gas processing Plant: 348 ths. tons
  - Power Plants: -157 ths. tons

Industries trade household agriculture

- Industry: 11.46%
- Trade: 4.26%
- Household: 3.57%
- Agriculture: 2.67%

Transport 78.05%
### Associated Gas

<table>
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<th>Total gas</th>
<th>Associated gas</th>
<th>Non-Associated gas</th>
<th>Note</th>
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</thead>
<tbody>
<tr>
<td>Gas mining</td>
<td>10.670</td>
<td>1.641</td>
<td>9.029</td>
<td>From 398 billion m³ through Gas processing plant 288 ths.tons LPG and 59.8 ths.ton Condensate</td>
</tr>
<tr>
<td>Gas processing Plant</td>
<td></td>
<td>-398</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Plants</td>
<td>-8.769</td>
<td>-1.243</td>
<td>-7.526</td>
<td></td>
</tr>
<tr>
<td>Energy consumption for industry</td>
<td>1.503</td>
<td>1.503</td>
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</tbody>
</table>

Unit: billion m³

- Gas in mined by Petro VN Copr about 90% of Gas used to produce electric by power plants
- Gas only used for consumption of Industry
Electricity

- Hydro: 51.173 Gwh
- Wind: 69.7 Gwh
- Thermal: 100.773 Gwh

- 73 Hydro electricity plants
- 3 Wind electricity plants
- 50 Thermal electricity plants

Electricity: 158.016 Gwh

- Import: China: 1.709 Gwh
- Export: Campc-804 Gwh

- Distribution losses: - 12.618 Gwh
- Own Use: - 2.624 Gwh

143.682 Gwh
Electricity consumption

1. Industry: 53.7%
2. Agriculture: 1.6%
3. Transport: 4.3%
4. Household: 35.1%
5. Trade and services: 5.3%
The Vietnam Energy Balance 2015
## ENERGY BALANCE OF VIETNAM 2015

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<tr>
<th>Category</th>
<th>Details</th>
<th>Value (Unit)</th>
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</thead>
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<tr>
<td>1. Indigenous production</td>
<td>CO2 (Ton)</td>
<td>41,664</td>
</tr>
<tr>
<td>2. Total petroleum product</td>
<td>Total (Ton)</td>
<td>106,770</td>
</tr>
<tr>
<td>3. Domestic production</td>
<td>Gas (Kon)</td>
<td>1,641</td>
</tr>
<tr>
<td>4. Total electricity</td>
<td>Total (Ton)</td>
<td>34,927</td>
</tr>
<tr>
<td>5. Non-commercial energy</td>
<td>Total (Ton)</td>
<td>5,573</td>
</tr>
<tr>
<td>6. Total primary energy supply</td>
<td>Total (Ton)</td>
<td>19,686</td>
</tr>
<tr>
<td>7. Condensate</td>
<td>Total (Ton)</td>
<td>41,664</td>
</tr>
<tr>
<td>8. International Marine bunker</td>
<td>Total (Ton)</td>
<td>41,664</td>
</tr>
<tr>
<td>9. International Aviation bunker</td>
<td>Total (Ton)</td>
<td>41,664</td>
</tr>
<tr>
<td>10. Total transformation sector</td>
<td>Total (Ton)</td>
<td>41,664</td>
</tr>
<tr>
<td>11. Petroleum Refinery</td>
<td>Total (Ton)</td>
<td>41,664</td>
</tr>
<tr>
<td>12. Power Plants</td>
<td>Total (Ton)</td>
<td>41,664</td>
</tr>
<tr>
<td>13. Total energy sector</td>
<td>Total (Ton)</td>
<td>41,664</td>
</tr>
<tr>
<td>14. Statistical Difference</td>
<td>Total (Ton)</td>
<td>41,664</td>
</tr>
<tr>
<td>15. Total primary energy supply</td>
<td>Total (Ton)</td>
<td>41,664</td>
</tr>
<tr>
<td>16. Total domestic energy consumption</td>
<td>Total (Ton)</td>
<td>41,664</td>
</tr>
<tr>
<td>17. Total final energy supply</td>
<td>Total (Ton)</td>
<td>41,664</td>
</tr>
</tbody>
</table>

### Notes
- CO2 (Ton): Carbon Dioxide (Tons)
- Gas (Kon): Gas (Kons)
- International Marine bunker: International Marine Bunker
- International Aviation bunker: International Aviation Bunker
- Total transformation sector: Total Transformation Sector
- Petroleum Refinery: Petroleum Refinery
- Power Plants: Power Plants
- Total energy sector: Total Energy Sector
- Statistical Difference: Statistical Difference
- Total primary energy supply: Total Primary Energy Supply
- Total domestic energy consumption: Total Domestic Energy Consumption
- Total final energy supply: Total Final Energy Supply

### Additional Information
- Indigenous production: 41,664 Ton (Tons)
- Total petroleum product: 106,770 Ton (Tons)
- Domestic production: 1,641 Ton (Tons)
- Total electricity: 34,927 Ton (Tons)
- Non-commercial energy: 5,573 Ton (Tons)
- Total primary energy supply: 19,686 Ton (Tons)
- Condensate: 41,664 Ton (Tons)
- International Marine bunker: 41,664 Ton (Tons)
- International Aviation bunker: 41,664 Ton (Tons)
- Total transformation sector: 41,664 Ton (Tons)
- Petroleum Refinery: 41,664 Ton (Tons)
- Power Plants: 41,664 Ton (Tons)
- Total energy sector: 41,664 Ton (Tons)
- Statistical Difference: 41,664 Ton (Tons)
- Total primary energy supply: 41,664 Ton (Tons)
- Total domestic energy consumption: 41,664 Ton (Tons)
- Total final energy supply: 41,664 Ton (Tons)
Some difficulties for energy statistics in Viet Nam

- International methodology of energy statistics
- International methodology of making energy balance
- Sampling method for enterprises and households consuming energy
- Method of analyzing indicators from the energy balance sheet