

**GENERAL STATISTICS OFFICE (GSO)  
VIETNAM**



**LOGO**

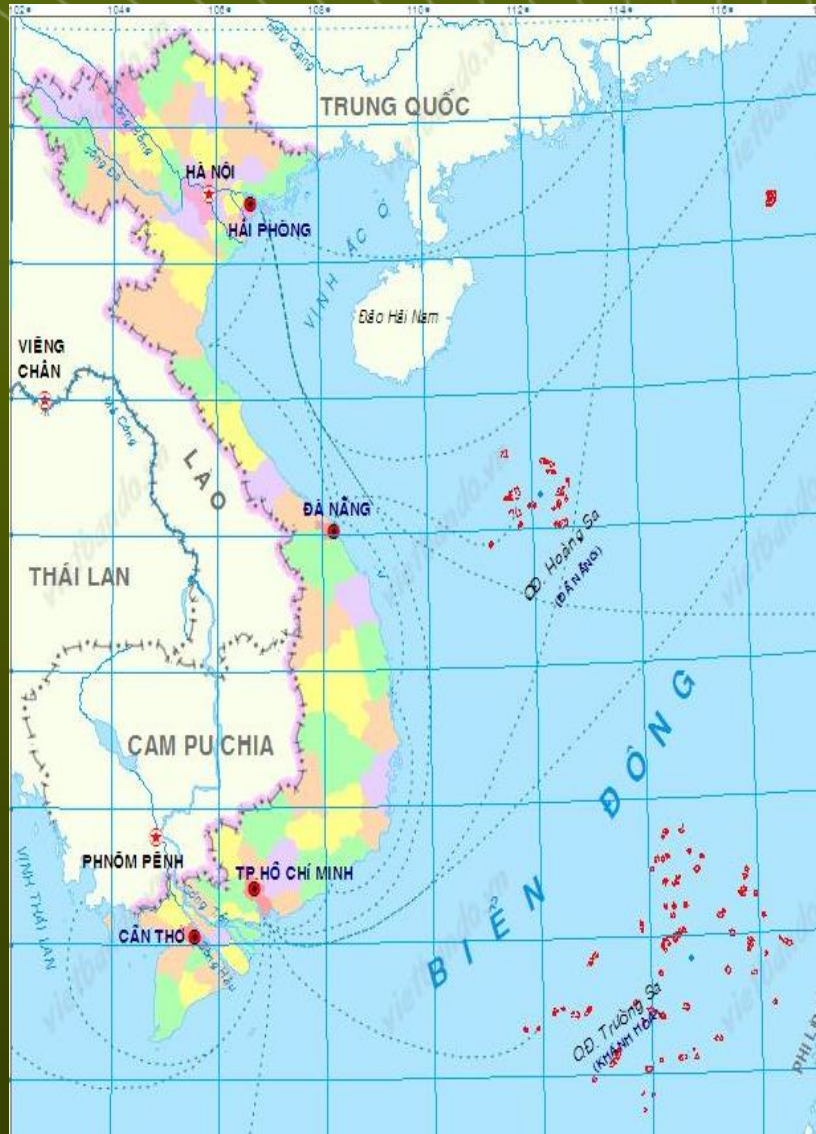
**THE REAL SITUATION OF VIET NAM'S  
ENERGY STATISTICS**



**Presentation by Le Thi Hanh  
Industrial Statistics Department**



# 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

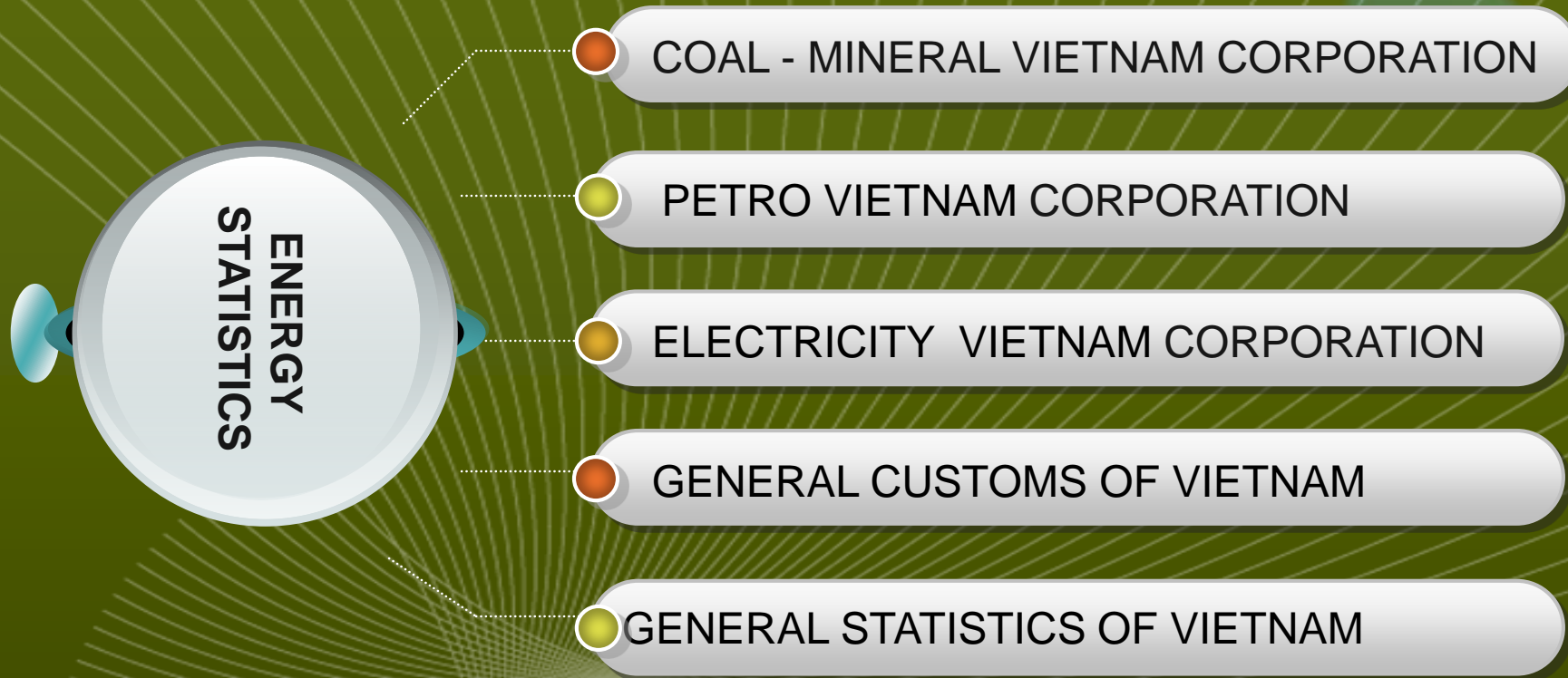




## . Introduction about GSO Vietnam

- ❖ 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.

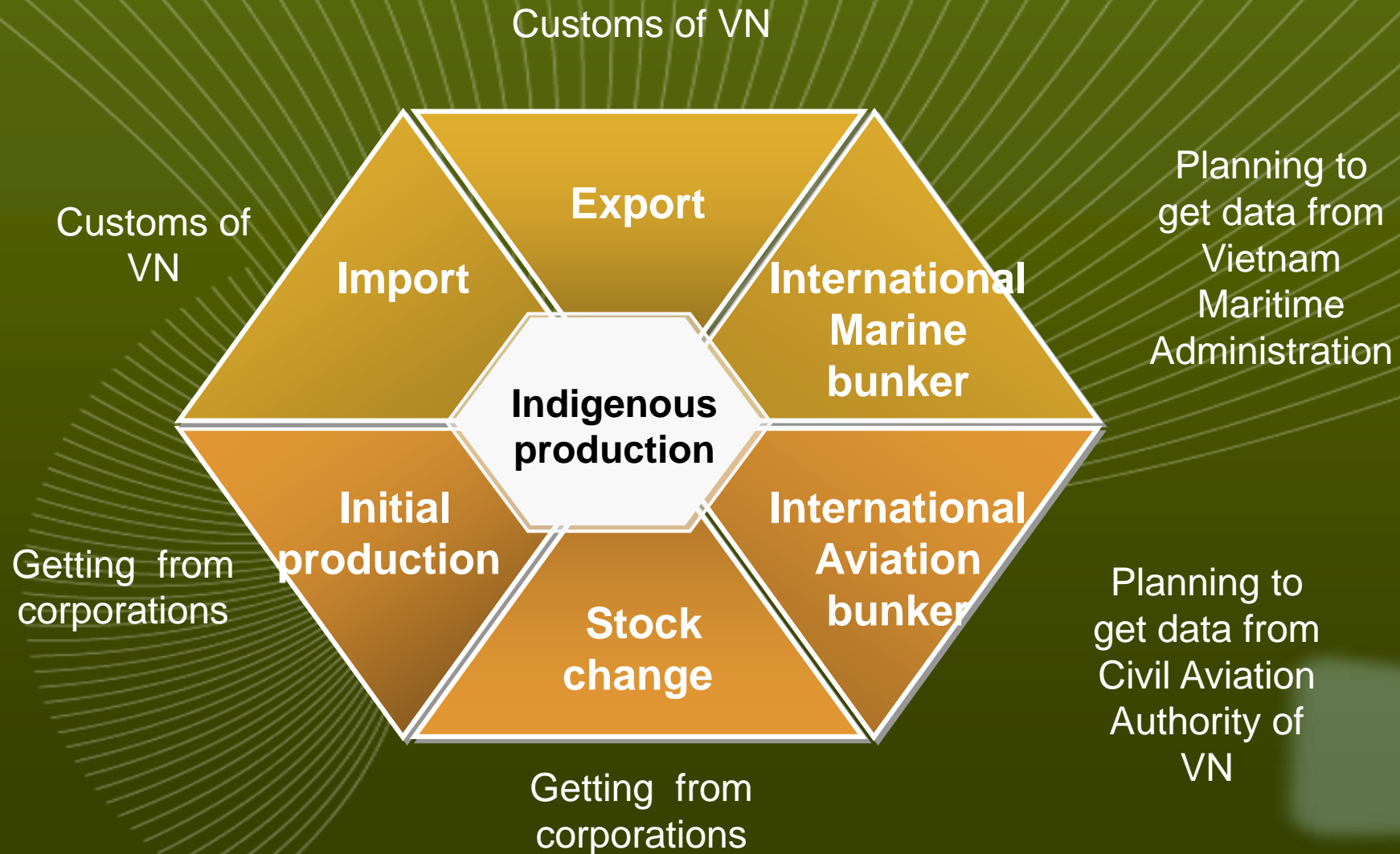
# THE REAL SITUATION OF VIET NAM'S ENERGY STATISTICS



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







# 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 m<sup>3</sup> of natural gas per day to produce 600 tons of LPG per day, 34 tons of condensate per day and 5.7 million m<sup>3</sup> of dry gas per day.

## Electricity Plant

There are many electricity plants: hydro , wind, thermal electric in Electricity Vietnam Corporation



## Total domestic energy consumption



Enterprise survey



House hold survey



Living stadard survey

- 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 servey



# 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



**-1748** (ths tons)  
Japan, Thailand, Malaysia





# COAL

Indigenous  
production

Click to add  
text  
46.184  
(ths.tons)

Transformation  
sector – Power plant

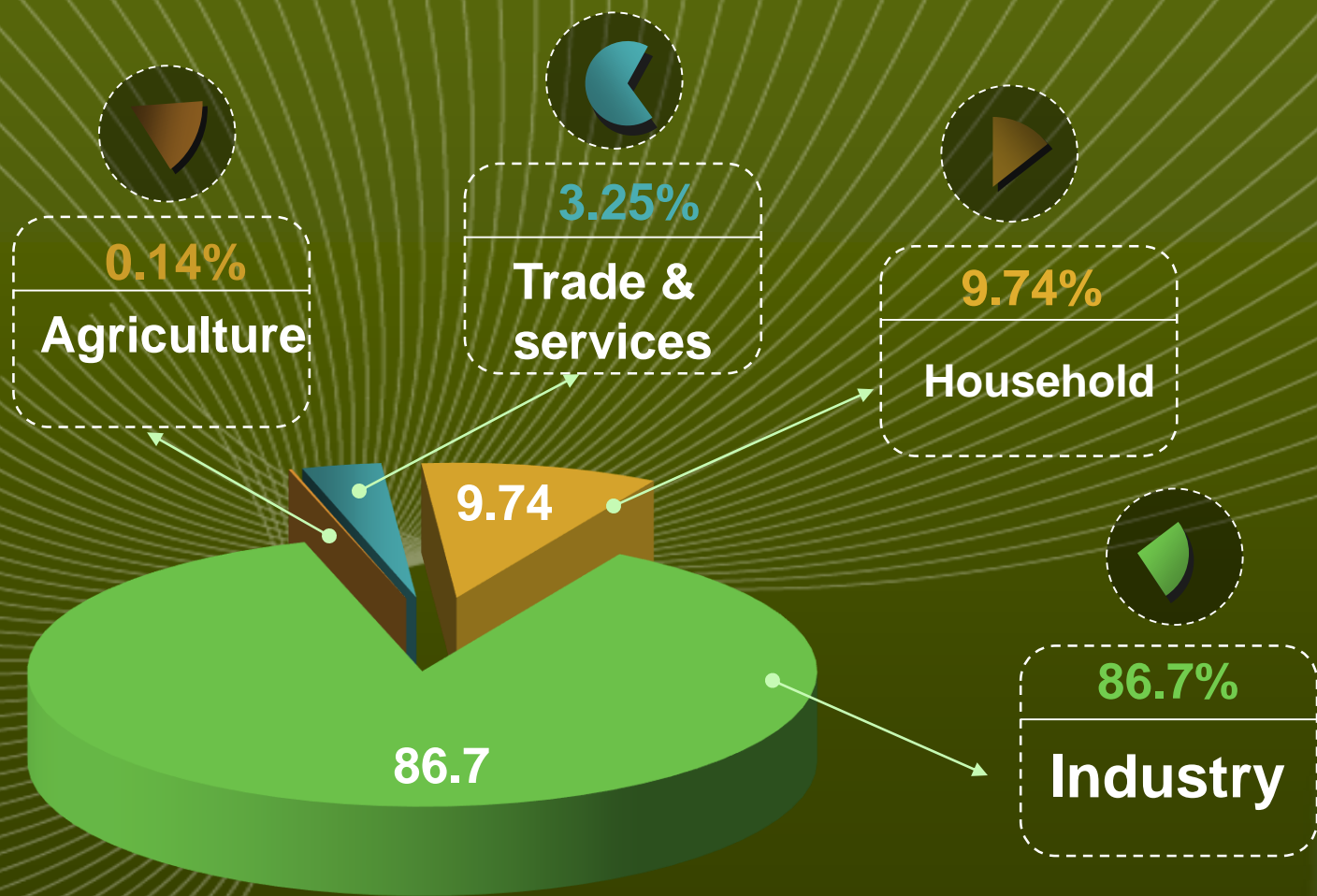
22.599  
(ths.tons)

23.584  
(ths.tons)

Domestic Energy  
consumption



# Total domestic energy consumption for Coal 2015





# Crude oil

**Intinal**  
**16.880**  
**(ths.tons)**

**Import**  
**182**  
**(ths.ton)**

**Export**  
**-9.486**  
**(ths.ton)**

**Stock**  
**change**  
**-659**  
**(ths.ton)**

**Refinery Dung Quat Factory**

**7.118**  
**(ths.ton)**

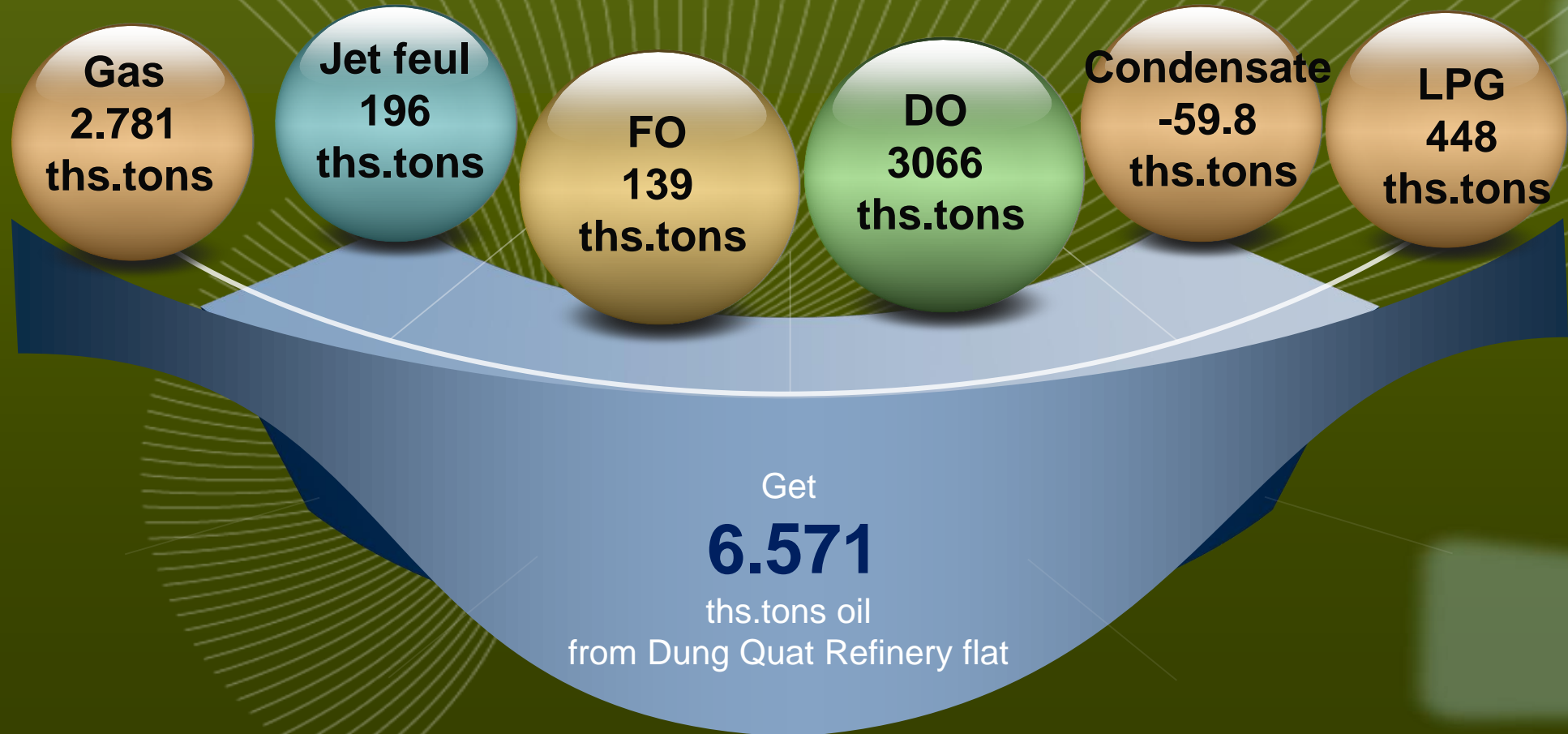
**Imp: Singapore,**  
**Malaysia, Korea**

**Exp: Mainly exp to China,**  
**Australia, Japan**





# Product of refinery:

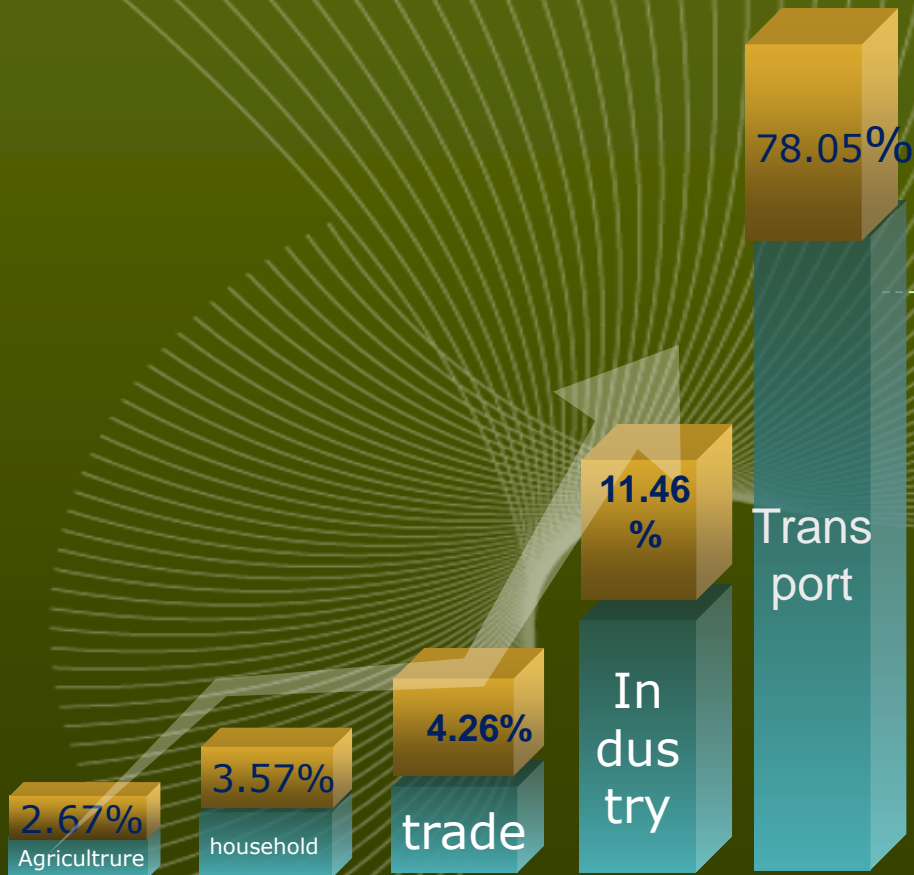




# Total petroleum product

**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**  
**Gas processing Plant: 348 ths.tons**  
**Power Plants: -157 ths.tons**





# Associated Gas

|                                 | Total gas     | Associated gas | Non- Associated gas | Note  |
|---------------------------------|---------------|----------------|---------------------|---|
| Gas mining                      | <b>10.670</b> | <b>1.641</b>   | <b>9.029</b>        | From 398 billion m3 through Gas processing plant<br>288 ths.tons LPG and 59.8 ths.ton Condesate |
| Gas processing Plant            |               | <b>-398</b>    |                     |   |
| Power Plants                    | <b>-8.769</b> | <b>-1.243</b>  | <b>-7.526</b>       |   |
| Energy consumption for industry | <b>1.503</b>  |                | <b>1.503</b>        |   |

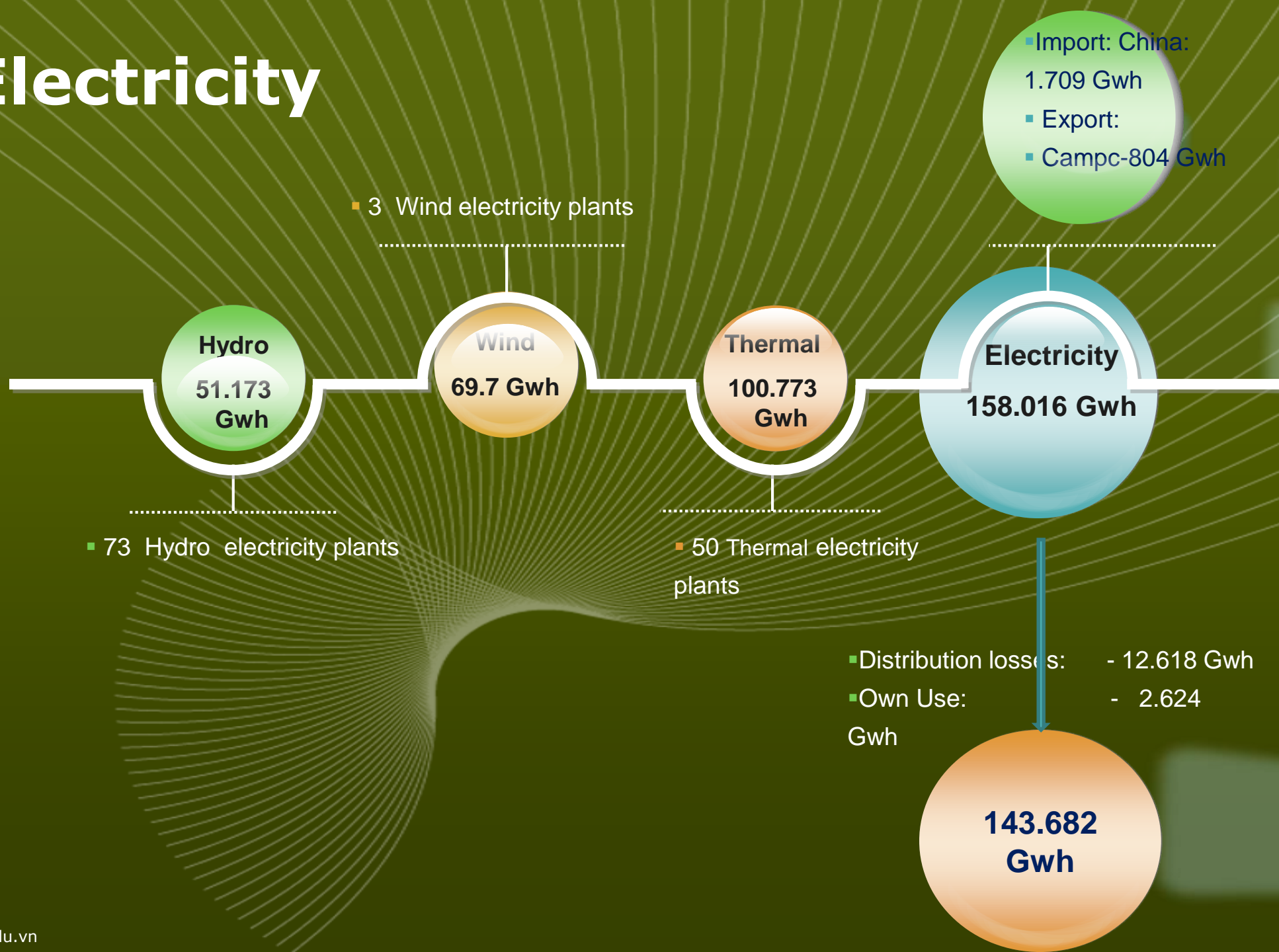
Unit: billion m3

- . 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



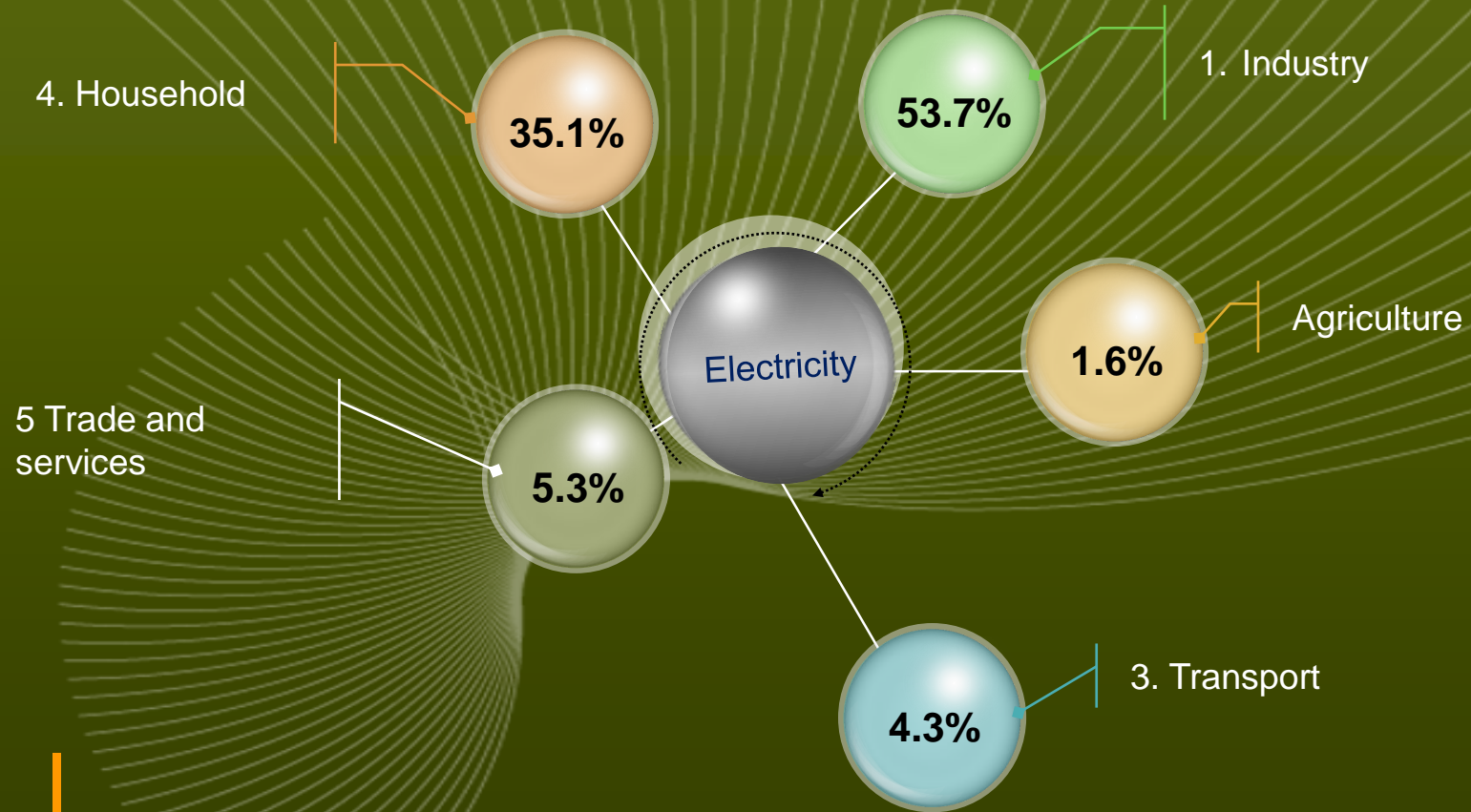


# Electricity



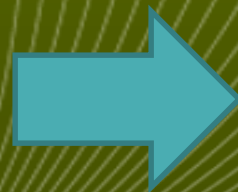


# Electricity consumption





# The Vietnam Energy Balance 2015





**ENERGY BALANCE OF VIETNAM 2015**

|  | 1               | 2                         | 3   | 3.1          | 3.2                              | 3.3                          | 3.4                            | 3.5                   | 3.6        | 3.7          | 4                          | 4.1                                  | 4.2   | 5   | 6.1                  | 6.2                     | 6.3                     | 6                     |   |   |                            |  |
|--|-----------------|---------------------------|---|--------------|----------------------------------|------------------------------|--------------------------------|-----------------------|------------|--------------|----------------------------|--------------------------------------|---|---|----------------------|-------------------------|-------------------------|-----------------------|---|---|----------------------------|--|
|  | Coal<br>(Than)  | Crude<br>Oil<br>(Dầu thô) | Total<br>petroleum<br>product<br>(Tổng sản<br>phẩm dầu) | Gas<br>(Khí) | Jet<br>Fuel<br>(Xăng máy<br>bay) | Mazut<br>(FO)<br>(Dầu Mazut) | Diezel<br>(DO)<br>(Dầu Diezel) | Kerosene<br>(Dầu hỏa) | Condensate | LPG          | Associated<br>gas<br>(Khí) | Associated<br>gas (Khí đồng<br>hành) | Non-<br>Associated<br>gas<br>(Khí tự nhiên) | Non-<br>Commercial<br>Energy<br>(Năng lượng<br>phi thương<br>mại) | Hydro<br>(Thủy điện) | Wind<br>(Phong<br>điện) | Thermal<br>(Nhiệt điện) | Electricity<br>(Điện) |   |   |                            |  |
|  | 1000 tons       |                           |   |              |                                  |                              |                                |                       |            |              | 106m3                      | 106m3                                | 106m3                                       | Tr.TWE  | GWh                  | GWh                     |                         | GWh                   |   |   |                            |  |
| <b>1. Indigenous production</b>              | 41,664          | 16,880                    |   |              |                                  |                              |                                |                       |            |              | 10,670                     | 1,641                                | 9,029                                       | 36  | 57,173               | 69.7                    |                         |                       | 1. Khai thác trong nước                       |   |                            |  |
| 2. Initial production                        | 41,664          | 16,880                    |   |              |                                  |                              |                                |                       |            |              | -                          | 1,641                                | 9,029                                       | 36  | 57,173               | 69.7                    |                         |                       | 2. Sản xuất tinh                              |   |                            |  |
| 3. Import                                    | 6,927           | 182                       | 11,088  | 2,676        | 1,776                            | 711                          | 5,213                          | 41                    |            | 673          | -                          | -                                    | -   | -   | -                    | -                       | -                       | 1,709                 | 3. Nhập khẩu                                  |   |                            |  |
| 4. Export                                    | (1,748)         | (9,486)                   | (306)   |              |                                  |                              |                                |                       |            | (306)        | -                          | -                                    | -   | -   | -                    | -                       | -                       | (804)                 | 4. Xuất khẩu                                  |   |                            |  |
| 5. International Marine bunker               |                 |                           |   |              |                                  |                              |                                |                       |            |              | -                          | -                                    | -   | -   | -                    | -                       | -                       |                       | 5. Dự trữ hàng hải quốc tế                    |   |                            |  |
| 6. International Aviation bunker             |                 |                           |   |              |                                  |                              |                                |                       |            |              | -                          | -                                    | -   | -   | -                    | -                       | -                       |                       | 6. Dự trữ hàng không quốc tế                  |   |                            |  |
| 7. Stock change                              | (659)           | (458)                     | 203   |              |                                  |                              | 205                            |                       |            | (3)          | -                          | -                                    | -   | -   | -                    | -                       | -                       |                       | 7. Chênh lệch tồn kho                         |   |                            |  |
| <b>8. Total Primary Energy supply</b>        | <b>46,184</b>   | <b>7,118</b>              | <b>10,985</b>   | <b>2,676</b> | <b>1,776</b>                     | <b>711</b>                   | <b>5,418</b>                   | <b>41</b>             | <b>-</b>   | <b>365</b>   | <b>10,670</b>              | <b>1,641</b>                         | <b>9,029</b>                                | <b>36</b>   | <b>57,173</b>        | <b>69.7</b>             | <b>100,773</b>          | <b>905</b>            | <b>8. Tổng năng lượng sơ cấp</b>              |   |                            |  |
| <b>9. Total transformation sector</b>        | <b>(22,599)</b> | <b>(7,118)</b>            | <b>6,761</b>  | <b>2,781</b> | <b>196</b>                       | <b>139</b>                   | <b>2,909</b>                   | <b>-</b>              | <b>-</b>   | <b>736</b>   | <b>(9,167)</b>             | <b>(1,641)</b>                       | <b>(7,526)</b>                              | <b>-</b>  | <b>(57,173)</b>      | <b>(69.7)</b>           | <b>(100,773)</b>        | <b>158,016</b>        | <b>9. Tổng năng lượng chuyển đổi</b>          |   |                            |  |
| 10. Petroleum Refinery                       |                 | (7,118)                   | 6,571   | 2,781        | 196                              | 139                          | 3,066                          |                       | (59.8)     | 448          | -                          | -                                    | -   | -   | -                    | -                       | -                       |                       | 10. Nhà máy lọc dầu                           |   |                            |  |
| 11. Gas processing Plant                     |                 |                           | 348   |              |                                  |                              |                                |                       | 59.8       | 288          | -                          | (398)                                | -   | -   | -                    | -                       | -                       |                       | 11. Nhà máy chế biến khí                      |   |                            |  |
| 12. Power Plants                             | (22,599)        | -                         | (157)   | -            | -                                | -                            | (157)                          | -                     | -          | -            | (8,769)                    | (1,243)                              | (7,526)                                     | -   | (57,173)             | (69.7)                  | (100,773)               | 158,016               | 12. Nhà máy điện                              |   |                            |  |
| <b>13. Total Energy sector</b>               |                 |                           |   |              |                                  |                              |                                |                       |            |              |                            |                                      |   |   |                      |                         |                         |                       | <b>13. Tổng năng lượng hỗ trợ và tổn thất</b> |   |                            |  |
| 13.1 Petroleum Refinery                      |                 |                           |   |              |                                  |                              |                                |                       |            |              |                            |                                      |   |   |                      |                         |                         |                       | (15,239)                                      | 13.1 Nhà máy lọc dầu                          |                            |  |
| 13.2 Distribution losses                     |                 |                           |   |              |                                  |                              |                                |                       |            |              |                            |                                      |   |   |                      |                         |                         |                       | (12,618)                                      | 13.2 Tổn thất                                 |                            |  |
| 13.3 Own Use                                 |                 |                           |   |              |                                  |                              |                                |                       |            |              |                            |                                      |   |   |                      |                         |                         |                       | (2,621)                                       | 13.3 Tự dùng                                  |                            |  |
| <b>14. Statistical Difference</b>            |                 |                           |   |              |                                  |                              |                                |                       |            |              |                            |                                      |   |   |                      |                         |                         |                       |   | <b>14. Sai số thống kê</b>                    |                            |  |
| <b>15. Total Final Energy Supply</b>         | <b>23,585</b>   | <b>(0)</b>                | <b>17,746</b>   | <b>5,457</b> | <b>1,972</b>                     | <b>850</b>                   | <b>8,327</b>                   | <b>41</b>             | <b>-</b>   | <b>1,101</b> | <b>1,503</b>               | <b>-</b>                             | <b>1,503</b>                                | <b>36</b>   | <b>-</b>             | <b>-</b>                | <b>-</b>                | <b>-</b>              | <b>143,682</b>                                | <b>15. Tổng năng lượng cung cấp cuối cùng</b> |                            |  |
| <b>16. Total domestic Energy consumption</b> | <b>23,585</b>   | <b>-</b>                  | <b>17,113</b>   | <b>5,457</b> | <b>1,972</b>                     | <b>850</b>                   | <b>8,327</b>                   | <b>41</b>             | <b>-</b>   | <b>1,101</b> | <b>1,503</b>               | <b>-</b>                             | <b>1,503</b>                                | <b>36</b>   | <b>-</b>             | <b>-</b>                | <b>-</b>                | <b>-</b>              | <b>143,682</b>                                | <b>16. Tổng năng lượng tiêu thụ cuối cùng</b> |                            |  |
| 16.1. Industry                               | 20,486          | -                         | 2,033   | 1,346        | 15                               | 169                          | 1,503                          | 11                    | -          | -            | -                          | -                                    | -   | -   | -                    | -                       | -                       | -                     | 77,188  | 16.1. Công nghiệp                             |                            |  |
| 16.2. Agriculture                            | 35              | -                         | 474   | 128          | -                                | -                            | -                              | -                     | -          | -            | -                          | -                                    | -   | -   | -                    | -                       | -                       | -                     | 2,327   | 16.2. Nông nghiệp                             |                            |  |
| 16.3. Transport                              | -               | -                         | 13,850  | 5,329        | 1,972                            | 346                          | 6,204                          | -                     | -          | -            | -                          | -                                    | -   | -   | -                    | -                       | -                       | -                     | 6,242   | 16.3. Giao thông vận tải                      |                            |  |
| 16.4. Trade and services                     | 766             | -                         | 755   | -            | -                                | -                            | -                              | 6                     | -          | 332          | -                          | -                                    | -   | -   | -                    | -                       | -                       | -                     | 7,548   | 16.4. Thương mại, dịch vụ                     |                            |  |
| 16.5. Household                              | 2,298           | -                         | 634   | -            | -                                | -                            | -                              | 14                    | 19         | 600          | -                          | -                                    | -   | 25  | -                    | -                       | -                       | -                     | 50,377  | 16.5. Hộ gia đình                             |                            |  |
| 16.6. Non-energy                             | -               | -                         | -   | -            | -                                | -                            | -                              | -                     | -          | -            | -                          | -                                    | -   | -   | -                    | -                       | -                       | -                     | -   | 16.6. Phi năng lượng                          |                            |  |
| <b>Exchange rate</b>                         | <b>0.56</b>     | <b>1.02</b>               |   | <b>1.05</b>  | <b>1.03</b>                      | <b>0.99</b>                  | <b>1.02</b>                    |                       |            | <b>1.09</b>  | <b>1.80</b>                | <b>0.90</b>                          | <b>0.90</b>                                 | <b>330.19</b>   | <b>0.0860</b>        | <b>0.1</b>              |                         | <b>0.0860</b>         |   | <b>Hệ số chuyển đổi</b>                       |                            |  |
|  |                 |                           |   |              |                                  |                              |                                |                       |            |              | 0.00                       |                                      |   |   |                      |                         |                         |                       |   |   |                            |  |
| <b>1. Indigenous production</b>              | 23,332          | 17,218                    | -   | -            | -                                | -                            | -                              | -                     | -          | -            | 9,603                      | 1,477                                | 8,126                                       | 11,887  | 4,917                | 6.0                     | -                       | -                     | 1. Khai thác trong nước                       |   |                            |  |
| 2. Initial production                        | 23,332          | 17,218                    | -   | -            | -                                | -                            | -                              | -                     | -          | -            | 9,603                      | 1,477                                | 8,126                                       | 11,887  | 4,916.9              | 6.0                     | -                       | -                     | 2. Sản xuất tinh                              |   |                            |  |
| 3. Import                                    | 3,879           | 186                       | -   | 2,809        | 1,829                            | 704                          | 5,317                          |                       |            | 734          | -                          | -                                    | -   | -   | -                    | -                       | -                       | 147                   | 3. Nhập khẩu                                  |   |                            |  |
| 4. Export                                    | (979)           | (9,676)                   | -   | -            | -                                | -                            | -                              |                       |            | (334)        | -                          | -                                    | -   | -   | -                    | -                       | -                       | (69)                  | 4. Xuất khẩu                                  |   |                            |  |
| 5. International Marine bunker               |                 |                           |   |              |                                  |                              |                                |                       |            |              | -                          | -                                    | -   | -   | -                    | -                       | -                       |                       | 5. Dự trữ hàng hải quốc tế                    |   |                            |  |
| 6. International Aviation bunker             |                 |                           |   |              |                                  |                              |                                |                       |            |              | -                          | -                                    | -   | -   | -                    | -                       | -                       |                       | 6. Dự trữ hàng không quốc tế                  |   |                            |  |
| 7. Stock change                              | (369)           | (467)                     | -   | -            | -                                | -                            | 209                            |                       |            | (3)          | -                          | -                                    | -   | -   | -                    | -                       | -                       |                       | 7. Chênh lệch tồn kho                         |   |                            |  |
| <b>8. Total Primary Energy supply</b>        | <b>25,863</b>   | <b>7,260</b>              | <b>-</b>  | <b>2,809</b> | <b>1,829</b>                     | <b>704</b>                   | <b>5,526</b>                   | <b>-</b>              | <b>-</b>   | <b>397</b>   | <b>9,603</b>               | <b>1,477</b>                         | <b>8,126</b>                                | <b>11,887</b>   | <b>4,917</b>         | <b>6.0</b>              | <b>-</b>                | <b>78</b>             | <b>8. Tổng năng lượng sơ cấp</b>              |   |                            |  |
| <b>9. Total transformation sector</b>        | <b>(12,655)</b> | <b>(7,260)</b>            | <b>-</b>  | <b>2,920</b> | <b>202</b>                       | <b>138</b>                   | <b>2,967</b>                   | <b>-</b>              | <b>-</b>   | <b>802</b>   | <b>(8,250)</b>             | <b>(1,477)</b>                       | <b>(6,773)</b>                              | <b>-</b>  | <b>(4,917)</b>       | <b>(6.0)</b>            | <b>-</b>                | <b>-</b>              | <b>13,589</b>                                 | <b>9. Tổng năng lượng chuyển đổi</b>          |                            |  |
| 10. Petroleum Refinery                       |                 | (7,260)                   | -   | 2,920        | 202                              | 138                          | 3,127                          |                       |            | 489          | -                          | -                                    | -   | -   | -                    | -                       | -                       |                       | -   | 10. Nhà máy lọc dầu                           |                            |  |
| 11. Gas processing Plant                     |                 |                           | -   | -            | -                                | -                            | -                              |                       |            | 314          | (358)                      | (358)                                | -   | -   | -                    | -                       | -                       |                       | -   | 11. Nhà máy chế biến khí                      |                            |  |
| 12. Power Plants                             | (12,655)        | -                         | -   | -            | -                                | -                            | (160)                          | -                     | -          | -            | (7,892)                    | (1,119)                              | (6,773)                                     | -   | (4,917)              | (6.0)                   | -                       |                       | 13,589  | 12. Nhà máy điện                              |                            |  |
| <b>13. Total Energy sector</b>               |                 |                           |   |              |                                  |                              |                                |                       |            |              |                            |                                      |   |   |                      |                         |                         |                       |   | <b>13. Tổng năng lượng hỗ trợ và tổn thất</b> |                            |  |
| 13.1 Petroleum Refinery                      |                 |                           |   |              |                                  |                              |                                |                       |            |              |                            |                                      |   |   |                      |                         |                         |                       |   | (1,311)                                       | 13.1 Nhà máy lọc dầu       |  |
| 13.2 Distribution losses                     |                 |                           |   |              |                                  |                              |                                |                       |            |              |                            |                                      |   |   |                      |                         |                         |                       |   | (1,085)                                       | 13.2 Tổn thất              |  |
| 13.3 Own Use                                 |                 |                           |   |              |                                  |                              |                                |                       |            |              |                            |                                      |   |   |                      |                         |                         |                       |   | (225)   | 13.3 Tự dùng               |  |
| <b>14. Statistical Difference</b>            |                 |                           |   |              |                                  |                              |                                |                       |            |              |                            |                                      |   |   |                      |                         |                         |                       |   |   | <b>14. Sai số thống kê</b> |  |
| <b>15. Total Final Energy Supply</b>         | <b>13,208</b>   | <b>(0)</b>                | <b>-</b>  | <b>5,729</b> | <b>2,031</b>                     | <b>841</b>                   | <b>8,493</b>                   | <b>-</b>              | <b>-</b>   | <b>1,200</b> | <b>1,353</b>               | <b>-</b>                             | <b>1,353</b>                                | <b>11,887</b>   | <b>-</b>             | <b>-</b>                | <b>-</b>                | <b>-</b>              | <b>12,357</b>                                 | <b>15. Tổng năng lượng cung cấp cuối cùng</b> |                            |  |
| <b>16. Total domestic Energy consumption</b> | <b>13,208</b>   | <b>-</b>                  | <b>-</b>  | <b>5,729</b> | <b>2,031</b>                     | <b>841</b>                   | <b>8,493</b>                   | <b>-</b>              | <b>-</b>   | <b>1,200</b> | <b>1,353</b>               | <b>-</b>                             | <b>1,353</b>                                | <b>11,887</b>   | <b>-</b>             | <b>-</b>                | <b>-</b>                | <b>-</b>              | <b>12,357</b>                                 | <b>16. Tổng năng lượng tiêu thụ cuối cùng</b> |                            |  |
| 16.1. Industry                               | 11,472          | -                         | -   | 498          | 1,373                            | 498                          | 1,373                          |                       |            | 184          | 1,353                      | -                                    | 1,353                                       | 3,632   | -                    | -                       | -                       | -                     | 6,638.17                                      | 16.1. Công nghiệp                             |                            |  |
| 16.2. Agriculture                            | 19              | -                         | -   | 134          | -                                | -                            | 353                            |                       |            | -            | -                          | -                                    | -   | -   | -                    | -                       | -                       | -                     | 200.12  | 16.2. Nông nghiệp                             |                            |  |
| 16.3. Transport                              | -               | -                         | -   | 5,595        | 2,031.2                          | 343                          | 6,328                          |                       |            | -            | -                          | -                                    | -   | -   | -                    | -                       | -                       | -                     | 536.81  | 16.3. Giao thông vận tải                      |                            |  |
| 16.4. Trade and services                     | 1,287           | -                         | -   | -            | -                                | -                            | 15                             |                       |            | 654          | -                          | -                                    | -   | 8,255   | -                    | -                       | -                       | -                     | 4,332.42                                      | 16.4. Thương mại, dịch vụ                     |                            |  |
| 16.5. Household                              | 429             | -                         | -   | -            | -                                | -                            | 426                            |                       |            | 362          | -                          | -                                    | -   | -   | -                    | -                       | -                       | -                     | 649.13  | 16.5. Hộ gia đình                             |                            |  |
| 16.6. Non-energy                             | -               | -                         | -   | -            | -                                | -                            | -                              |                       |            | -            | -                          | -                                    | -   | -   | -                    | -                       | -                       | -                     | -   | 16.6. Phi năng lượng                          |                            |  |

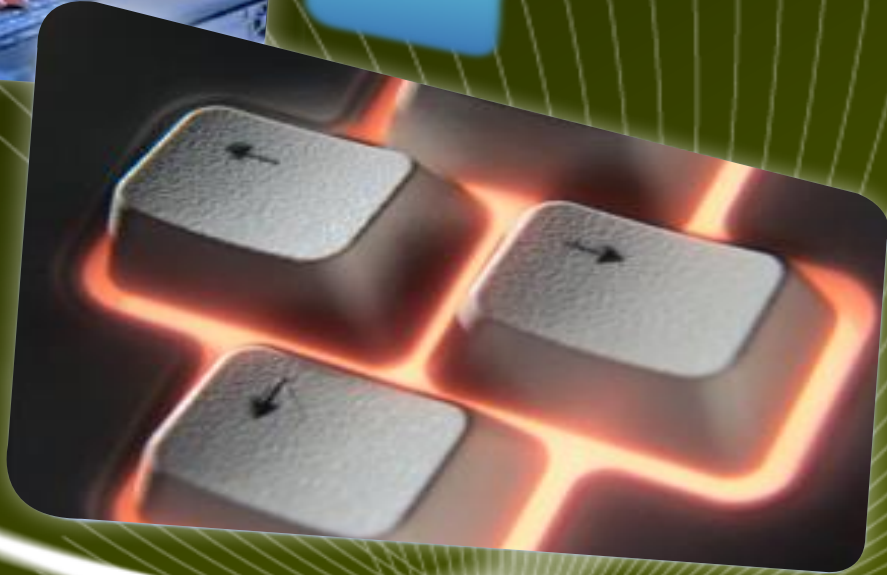


# Some difficulties for energy statistics in Viet Nam

- 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



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# Thank You !

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