



Asia-Pacific  
Economic Cooperation

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## **Sustainable Development Strategy for Viet Nam Coal Sector**

Purpose: Information  
Submitted by: Viet Nam



**Ministers Responsible for Mining Meeting  
Perth, Australia  
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MINISTRY OF INDUSTRY OF VIETNAM

**SUSTAINABLE DEVELOPMENT  
STRATEGY FOR  
VIETNAM COAL SECTOR**

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**OUTLINE:**

- **I. Overview OF VIETNAM COAL SECTOR'S CURRENT STATUS AND COAL DEMAND FORECAST TOWARDS 2025**
  - **II. SUSTAINABLE DEVELOPMENT STRATEGY OF VIETNAM COAL SECTOR FOR THE PERIOD 2006-2015 AND DIRECTIONS UP TO 2025**
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## I. Overview OF VIETNAM COAL SECTOR'S CURRENT STATUS

### I.1. Coal production in period 2001 – 2005, 10<sup>6</sup> T

<b>Producer</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Total</b>	<b>13.4</b>	<b>16.4</b>	<b>19.3</b>	<b>27.3</b>	<b>33.9*</b>
<i>Growth R (%)</i>	<i>15.4</i>	<i>22.5</i>	<i>17.7</i>	<i>41.6</i>	<i>24.1</i>
<b>-Vinacoal</b>	<b>12.7</b>	<b>15.2</b>	<b>18.2</b>	<b>25.1</b>	<b>31.0</b>
<i>% of Total</i>	<i>94.9</i>	<i>92.3</i>	<i>94.0</i>	<i>91.9</i>	<i>91.4</i>
<b>- Other SOEs</b>	<b>0.27</b>	<b>0.49</b>	<b>0.36</b>	<b>1.27</b>	<b>1.30*</b>
<b>-Vietmindo</b>	<b>0.20</b>	<b>0.41</b>	<b>0.57</b>	<b>0.62</b>	<b>0.57</b>
<b>- Non-SOEs</b>	<b>0.21</b>	<b>0.29</b>	<b>0.23</b>	<b>0.32</b>	<b>1.04*</b>

### I.2. Coal consumption in period 2001 - 2005, 10<sup>6</sup> T

<b>Consumer</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Total</b>	<b>13.7</b>	<b>16.0</b>	<b>20.0</b>	<b>26.6</b>	<b>33.7*</b>
<b>1. Domestic</b>	<b>9.4</b>	<b>10.0</b>	<b>12.7</b>	<b>15.0</b>	<b>15.7</b>
- Power product.	2.29	2.62	3.85	3.95	4.75
- Cement product.	0.97	0.86	1.15	1.40	2.06
- Fertilizer product.	0.24	0.25	0.36	0.37	0.42
- Paper product.	0.13	0.15	0.12	0.16	0.16
- Other sectors	5.80	6.10	7.25	9.10	8.31
<b>2. Export</b>	<b>4.29</b>	<b>6.05</b>	<b>7.26</b>	<b>11.64</b>	<b>18.00</b>

### I.3. Coal resources and reserves up to 2005 (10<sup>6</sup>T)

#### a) By regions:

Coal-field	Total (10 <sup>6</sup> T)	Category A+B	Category C1	Category C2	Category P
<b>Total</b>	<b>6,068.5</b>	<b>370.6</b>	<b>2,157.2</b>	<b>2,464.4</b>	<b>1,076.3</b>
<b>I.Q.Ninh</b>	<b>4,049.6</b>	<b>315.2</b>	<b>1,401.4</b>	<b>1,768.2</b>	<b>564.8</b>
- C.Pha	1,962.9	260.3	727.6	530.4	444.5
- H.Gai	740.4	37.5	229.7	446.6	26.6
- U.Bi	1,346.3	17.3	444.1	791.2	93.7
<b>II. Interior</b>	<b>2,018.9</b>	<b>55.5</b>	<b>755.8</b>	<b>696.2</b>	<b>511.4</b>
- K.Chau	<b>1,581.0</b>	<b>0</b>	<b>524.9</b>	<b>563.6</b>	<b>492.5</b>
- Others	437.9	55.5	230.9	132.6	18.9

### I.3. Coal resources and reserves up to 2005 (10<sup>6</sup>T)

#### b) By kinds of coal:

Kinds of Coal	Total (10 <sup>6</sup> T)	Category A+B	Category C1	Category C2	Category P
<b>Total</b>	<b>6,068.5</b>	<b>370.6</b>	<b>2,157.2</b>	<b>2,464.4</b>	<b>1,076.3</b>
<b>Anthra-xite</b>	<b>4,155.8</b>	<b>327.8</b>	<b>1,450.0</b>	<b>1,794.2</b>	<b>583.8</b>
<b>Subbitu-minous</b>	<b>1,581.0</b>	<b>0</b>	<b>524.9</b>	<b>563.6</b>	<b>492.5</b>
<b>Lignite</b>	<b>96.3</b>	<b>42.8</b>	<b>53.5</b>	<b>0</b>	<b>0</b>
<b>Peat</b>	<b>235.4</b>	<b>0</b>	<b>128.8</b>	<b>106.6</b>	<b>0</b>

## OBSERVATIONS:

- The coal sector is the largest of mining industries in Vietnam; its annual production over the period 2001-2005 is very highly increased, rose from 13.4 Mt in 2001 to about 34.0 Mt in 2005, reached annual growth rate at average of 24,3%. Majority of coal production is anthracite; the one of coking coal is very small, not enough to meet domestic demand.
- Domestic coal consumption rose from 9.4 Mt in 2001 to 15.7 Mt in 2005, reached annual growth rate at average of 9.2%. Exports rose rapidly, from 4.3 Mt in 2001 to 18,0 Mt in 2005 with annual growth rate at average of 41.6%.
- Majority of coal reserves lies in Quang Ninh coalfield (about 66.7%) and its reserves of anthracite (about 68.5%). The proven reserves are very low (41,7%).

### I.4. Coal demand forecasts up to 2025 (10<sup>6</sup>T)

Kinds of demand	2010	2015	2020	2025
1. Power product.	11.7-12.3	22.6-23.8	40.0-41.6	76.2-78.5
2. Cement prod.	5.3	6.4	7.1-7.3	7.3-7.9
3. Building mater.	4.9-5.1	5.6-5.9	6.4-6.8	7.3-7.9
4. Chem. product	1.1	1.8	1.9-2.8	2.3-3.4
5. Paper product.	0.3	0.4	0.6	0.7
6. Textile product	0.3	0.4	0.6	0.8
7. Metallurgy	1.6-3.3	4.4-6.3	7.1-7.8	8.0-9.1
8. Others	3.8-4.3	5.4-6.0	7.3-7.5	9.4-9.7
<b>Total domestic</b>	<b>29-32</b>	<b>47-51</b>	<b>71-75</b>	<b>112-118</b>

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## **OBSERVATIONS:**

- Domestic coal demand will rise with very high speed, from 15.0 Mt in 2005 to 112-118 Mt in 2025 (10 times); of which:
  - Demand for power generation will rise from less than 5 Mt in 2005 to 76-78 Mt in 2025 (to rise by over 15 times).
  - Demand for cement and building material production will rise from about 3 Mt in 2005 to about 15 Mt in 2025.
  - Demand for metallurgy will rise from about 0.25 Mt in 2005 to about 8-9 Mt in 2025.
  - Coal exports depend mainly on levels of coal production and domestic demand as well as price of coal consumed in domestic market.
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## **The Main Challenges for Vietnam Coal Sector:**

- Domestic demand of coal rapidly increases, while coal production growth is much lower, therefore, Vietnam will face severe coal shortage after 2015 and difficulties of a coal import country.
  - To achieve the targets of coal production it is necessary to exploit the coal reserves situated deeper and in Red River Delta, that will lead to exceptionally huge finance needs and high production cost.
  - Difficulties in exploiting the coal reserves situated deeper and in Red River Delta and environmental protection to comply with more strict requirements.
  - Increasing the added value, efficiency as well as reducing environmental impacts of coal require intensive processing technology, that still has not been developed in Vietnam.
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## II. SUSTAINABLE DEVELOPMENT STRATEGY OF VIETNAM COAL SECTOR FOR PERIOD 2006-2015 AND DIRECTIONS UP TO 2025

- **II.1. Development standpoints:**
  - *To carry out a sustainable development of the coal sector in line with production increasing to meet as much as possible the coal demand of the economy and in harmony with socio-economic development of the community, friendly with environment and continuously improving life-standards of the workers on the basis of following directions:*
  - 1) To intensify the renovation and modernization of technology in all stages of coal exploitation following the cleaner production and increasing a labor safety.
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- 2) Coal production increase has to couple with maximizing coal reserves utilization and strict environment protection.
  - 3) To rationally and economically use coal in combination with intensification of coal processing in order to diversify coal products and create clean products and increase its value and use value.
  - 4) To develop the coal sector on the basis of maximizing the use of all domestic resources combined with attracting foreign interest and investment.
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## II.2. Development objective:

- **2.2.1. Overall objective:**
  - To develop the coal sector into a modern economic-technical industry, having high efficiency on the basis of the below specific objectives.
  - **2.2.2. Specific objectives:**
  - **1) Coal production development:**
  - To further investigate and explore, upgrade and increase coal reserves.
  - To increase coal production to 2025 as follow (Mt):
  - 2007: **37-40**; 2008: **40-42**; 2009: **42-44**; 2010: **44-47**; 2015: **55-60**; 2020: **65-70**; 2025: **75-80**.
  - To intensify technology research and development of coal processing projects.
  - To constantly increase business efficiency.
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- **2) To development harmonically with the community:**
  - To take part in socio-economic development, poverty reduction, gender equality, to maintain national security and social order in the regions, where the coal mines are situated.
  - To develop harmonically with partners and customers to aim for “win – win”.
  - To improve material, cultural and spiritual life of the workers in the sector. To aim for annual average income growth higher than the growth rate of the economy.
  - To expand the grass-root democracy in enterprises.
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- **3) On labor safety and environment protection:**
    - Regarding safety, to consistently strive carrying out the goal “no accident”.
    - In terms of environment protection: To realize the strategy for environment protection “green - clean - beauty” with specific targets as follows:
      - Up to 2010, to stop environment degradation in coal areas;
      - Up to 2015 to basically improve environment indicators in sensitive areas;
      - Up to 2025 to meet all environment requirements in mines and around mine areas.
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### **II.3. Coal development directions towards 2025 and key implementation measures:**

*Overall directions:*

To develop the coal sector following the targets: to increase the coal production to meet as much as possible the demand of the economy; increase value added and socio-economic efficiency; reduce loss of natural resources, ensure labor safety and environment protection.

*Specific directions:*

- 1. Directions for investigation and exploration of coal resources.
  - 2. Directions for coal exploitation and processing.
  - 3. Directions on development of science and technology for coal production and processing.
  - 4. Directions for coal use.
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- 5. Directions for development of infrastructures serving coal production.
  - 6. Directions for labor safety.
  - 7. Directions for environment protection.
  - 8. Directions for human resource development.
  - 9. Directions for improving coal domestic market.
  - 10. Directions on investment of coal exploitation abroad and coal import.
  - 11. Directions for development of multi-business based on the coal industry.
  - 12. Directions for international cooperation.
  - 13. Investment capital requirement ( $10^6$  USD): For the period 2006-2010: 1,817; (363/year); 2011-2015: 1,319 (264/year); 2016-2025: 2,824 (282/year).
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thank you very much for  
attention

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