VIETNAM GAS INDUSTRY MASTER PLAN

Prepared by: Ngo Thuy Quynh - Vu Thi Hong Minh
Department of Oil, Gas and Coal,
Ministry of Industry and Trade,
VIETNAM
I. About Vietnam

- **Area**: Total area: 331,212 km²
- **Location**: Indochina Peninsula, Southeast Asia
  - Neighboring countries: China, Laos, Thailand, Cambodia
- **Population (2017)**: Total: 93.7 million
  - World Ranking: 14th
- **City & Province**: 63
  - Capital: Hanoi
  - Big city: Hanoi, Haiphong, Danang, Can Tho, Hochiminh City
- **GDP (2017)**: Total GDP: 5,008 trillion VND (~221 billion USD)
  - GDP growth: 6.81%
  - GDP per capital: 2,385 USD
Oil & Gas Reserves

2P reserves discovered:
1,436 mill. m³ oil equivalent, of which:
- Oil: 711 mill. m³ (49.5%);
- Gas: 725 bill. m³ (50.5%).
Natural Gas resource (2016 – 2030)
Oil and Gas Production

1. The crude oil production of Vietnam is about 15-17 millions tons per year, part of which is supplied for the first refinery and the remaining is exported.

2. The first refinery produces about 30% of demand petroleum product.

3. Vietnam has been importing remain 70% of petroleum products.

Oil & Gas Production

- Currently supply 9 - 10 bcm/year of gas through existing pipeline network.
- Consumers:
MINISTRY OF INDUSTRY AND TRADE

(under Government’s Decree No. 98/2017/ND-CP dated August 18th, 2017 stipulating functions, power and organization structure of Ministry of Industry and Trade)

Position and tasks
The Ministry of Industry and Trade is a governmental agency performing state management on industry and trade in following branches and domains: electricity, coal, oil and gas, new energy, renewable energy, chemicals, industrial explosives, mechanical engineering, metallurgy, mining and mineral processing industries, consumer-goods industry, food-industry and other processing industries, domestic goods circulation and market; import and export, cross-border trade, external market expansion, market surveillance, trade promotion, E-commerce, trade services, international economic-trade integration, competition management, imposing safeguard, anti-dumping, anti-subsidy and other measures to protect consumer-interest; state management on public services in the fields under scope of state management assigned to the Ministry.
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Ministerial Units

Departments

Department of Planning
Department of Finance and Enterprise Development
Department of Science and Technology
Department of Asia – Africa Market
Department of Europe – America Market
Department of Multilateral Trade Policy
Department of Domestic Market

Department of Oil, Gas and Coal

Department of Energy Efficiency and Stable Development
Department of Organization and Personnel
Department of Legal
Ministry Inspectorate
Ministry Office
Minsterial Units

General Directorate and Agencies

- General Directorate of Market Surveillance
- Electricity Regulatory Authority
- Electricity and Renewable Energy Authority
- Industrial Promotion Agency
- Agency for Foreign Trade
- Industry Agency
- Vietnam Trade Promotion Agency
- Industrial Safety Techniques and Environment Agency
- Vietnam E-Commerce and Analog Economy Agency
- Vietnam Chemicals Agency
- Competition and Consumer Protection Agency
- Commercial Defense Agency
- Provinces Industry and Trade Agency
- The South Agency
VIETNAM GAS INDUSTRY MASTER PLAN
According to the Decision No.60/QD-TTg dated 16\textsuperscript{th} January, 2016 about Vietnam gas industry development master plan, the development objectives of Vietnam gas industry as follows:

- Overall development of Vietnam gas value chain from upstream, midstream and downstream with projected indigenous gas volume in period of 2016 – 2035 as follows:
  - From 2016 – 2020: 10 – 11 bil. m\textsuperscript{3} per annual
  - From 2021 – 2025: 13 – 19 bil. m\textsuperscript{3} per annual
  - From 2026 – 2035: 17 – 21 bil. m\textsuperscript{3} per annual
DEVELOPMENT OBJECTIVES

☑ Planned LNG volumes shall be imported and distributed in Vietnam market in 2021-2035:
  - From 2021 – 2025: 1 – 4 bil. m³ per annual
  - From 2016 – 2020: 6 – 10 bil. m³ per annual

☑ Planned gas demand in Vietnam market in 2021-2035:
  - From 2016 – 2020: 11 – 15 bil. m³ per annual
  - From 2021 – 2025: 13 – 27 bil. m³ per annual
  - From 2026 – 2035: 23 – 31 bil. m³ per annual
### Northern Vietnam Region

<table>
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<tr>
<th>No.</th>
<th>Project Name</th>
<th>COD</th>
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<tbody>
<tr>
<td>1</td>
<td>Ham Rong - Thai Binh phase 2</td>
<td>2018 -2020</td>
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<tr>
<td>2</td>
<td>Gas Distribution Network in Tien Hai (Thai Binh)</td>
<td>2018 -2020</td>
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</tbody>
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### Central Vietnam Region

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Ca Voi Xanh – Quang Nam pipeline system</td>
<td>2023 -2025</td>
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<tr>
<td>2</td>
<td>Bao Vang – Quang Tri pipeline system</td>
<td>2023-2025</td>
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## KEY GAS UTILIZATION PROJECTS 2016 - 2025

### Southeast Vietnam Region

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<tbody>
<tr>
<td>1</td>
<td>White Lion – NCS 2 pipeline system - phase 2</td>
<td>2019-2020</td>
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<tr>
<td>2</td>
<td>Gas Processing Plant 2</td>
<td>2019-2020</td>
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<tr>
<td>3</td>
<td>CRĐ – Lan Tây pipeline system</td>
<td>2018- 2019</td>
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<tr>
<td>4</td>
<td>ĐN/SV – NCS2 pipeline system</td>
<td>2019- 2021</td>
</tr>
<tr>
<td>5</td>
<td>Thi Vai LNG Terminal</td>
<td>2020-2021</td>
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<td>6</td>
<td>Son My LNG Terminal</td>
<td>2023</td>
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### Southwest Vietnam Region

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<tr>
<td>1</td>
<td>Block B pipeline system</td>
<td>2021-2022</td>
</tr>
<tr>
<td>2</td>
<td>Southwest LNG Terminal</td>
<td>2022-2025</td>
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LNG DEVELOPMENT PLAN
According to the Viet Nam Gas Industry Development Master Plan upto 2035, the import of LNG will be started by 2021 and import demand will be increased to around 5 million tons of LNG by 2025, 10 million tons by 2030, 15 million tons by 2035 (accounting for about 1.6% of total world LNG imports).

To achieve this target, Viet Nam will develop the LNG terminal systems and related facilities as follows:

- In the period of 2021-2025, it is planned to build 3-4 LNG terminals with a the estimated capacity of each depot around 1-3 million ton per year (and can be increased if needed), mainly located in the Southern Viet Nam (such as Thi Vai LNG Projects, Son My LNG Project, Tien Giang LNG Projects, South West LNG Projects).

- In the period of 2026-2035, it is planned to build about 5-6 LNG terminals with the estimated capacity of each terminal around 3 million tons/year.
LNG IMPORT PROJECTS

FSRU LNG Terminal
- Capacity: 0.2-0.5 MMTA
- Schedule: 2026 - 2030

Cat Hai – Hai Phong LNG Terminal
- Capacity: 1-3 MMTA
- Schedule: 2030 - 2035

Son My – Binh Thuan LNG Terminal
- Capacity: 6 MMTA
- Schedule: 2022-2025

My Giang – Khanh Hoa LNG Terminal
- Capacity: 3 MMTA
- Schedule: 2030 - 2035

South East LNG Terminal
- Capacity: 4-6 MMTA
- Schedule: 2022 - 2025

Thi Vai – Vung Tau LNG Terminal
- Capacity: 1-3 MMTA
- Schedule: 2020 - 2022

South West LNG Terminal
- Capacity: 1 MMTA
- Schedule: 2021 - 2030
To implement the master plan, Viet Nam will establish and issue the legal framework for the development of the LNG sector in Viet Nam.

In the short term, to study and propose mechanisms and policies for importing and distributing LNG (such as LNG price control mechanisms for power plants, technical standards for LNG depot, terminal, pipeline,...).

At the same time, to promote investment in LNG storage, terminal projects; to prioritize the timing, schedule of the storage project to call for investment.
1) LNG Import and Terminal Regulatory Development and Market Frameworks

2) LNG terminal and pipeline project Development

3) LNG technology and value chain

4) LNG Project Financing and Contracting

5) Gas markets (pricing, pooling price, price mechanism).
THANK YOU!
2018年7月25日プレゼンの様子@JCCP