Gas Transmission and Distribution Development in Indonesia

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Agenda

• PGN’s Business Overview.
• Indonesia Gas Industry
• Natural Gas Development & Utilization
PGN’s Business Overview
Company Overview

- PGN is an Indonesia state company in downstream natural gas business activities.
- PGN controls 87% market share of transmission business (743.14 MMScfd) and 93% of distribution (551.28 MMScfd), providing natural gas to its customers on industrial, commercial and household sector.
- Listed on Indonesia Stock Exchange, and known as PGAS. The Republic of Indonesia currently retains a 55% of PGAS shares while the remaining is owned by the public.

Gas Supply for Distribution Business
- Gas Sales & Purchase Agreement (GSPA)
  - Long-term contract
  - Take-or-pay volumes
  - Fix price in US$

Distribution – Sale of Gas to End User
- Gas Sales Agreements (GSA)
  - Minimum pay volumes
  - Price in US$ & IDR

Transmission – Transport Third Party’s Gas
- Gas Transmission Contract (GTA)
  - Long-term contract
  - Minimum ship-or-pay volumes
  - Tariffs in US$

• Retail & Industry Customers
  • IPP

• Chevron
  • Singapore

• SSWJ (PGN)
  • Grissik – Duri (TGI)
  • Grissik – Singapore (TGI)
Strong Distribution Customer Base

- Three customer categories: Household, Commercial, and Industrial.
- Industrial customers continue to dominate PGN’s customer base and drive PGN’s distribution business growth. As of June 30, 2008, sales volume of industrial customers was 544 MMScfd or equal to 98.7% of PGN’s sales.
Completion of the SSWJ Gas Transmission Pipeline enables PGN and its 60%-owned subsidiary, TGI, to operate transmission pipelines with a total length of 2109 km with capacity of 1,839 MMScfd. Of the capacity figure, 650 MMScfd is allocated for PGN internal use.
Distribution Pipeline Network

- Extensive distribution network covering 9 major cities in Indonesia
- The network and facilities are managed by three SBUs – Western Java (SBU I), Eastern Java (SBU II) and Northern Sumatra (SBU III)
Indonesia Gas Industry
Indonesia Gas Reserves

- Indonesia has the largest proven natural gas reserves in Asia Pacific. As of Jan 2008, total gas reserves was 170.07 TSCF with 112.47 TSCF proven and 57.60 TSCF potential.
- Majority of the gas reserves are located in Sumatra and Kalimantan which far away from industrial areas.
## Indonesia Gas Market Outlook

Contracted, Committed and Potential Gas Supply & Demand for Major Regions in Indonesia

### REG II (NORTH SUMATERA) (MMSCFD)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2009</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>35</td>
<td>27.5</td>
<td>101</td>
</tr>
<tr>
<td>Demand</td>
<td>481.5</td>
<td>526.7</td>
<td>535.7</td>
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<tr>
<td>Balance</td>
<td>-446.5</td>
<td>-499.2</td>
<td>-434.7</td>
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### REG III (CENTRAL, SOUTH SUMATERA & WEST JAVA)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2009</th>
<th>2011</th>
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<tbody>
<tr>
<td>Supply</td>
<td>2,413.8</td>
<td>2,761.9</td>
<td>3,100.5</td>
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<tr>
<td>Demand</td>
<td>3,557.6</td>
<td>4,408.6</td>
<td>4,467.3</td>
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<td>Balance</td>
<td>-1,143.8</td>
<td>-1,646.7</td>
<td>-1,366.8</td>
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### REG IV (CENTRAL JAVA)

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<tr>
<td>Supply</td>
<td>0.7</td>
<td>167.9</td>
<td>195.0</td>
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<tr>
<td>Demand</td>
<td>198</td>
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<tr>
<td>Balance</td>
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<td>-86.6</td>
<td>-64.9</td>
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### REG V (EAST JAVA)

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<th>Year</th>
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<th>2009</th>
<th>2011</th>
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<td>Supply</td>
<td>419.8</td>
<td>794.8</td>
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<td>Demand</td>
<td>926.4</td>
<td>1,155.3</td>
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<tr>
<td>Balance</td>
<td>-506.6</td>
<td>-360.4</td>
<td>-369.7</td>
</tr>
</tbody>
</table>

Source: Directorate General Oil & Gas
Master Plan of Natural Gas Infrastructure

[Diagram of national gas infrastructure transmission and distribution]

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Gas Production and Utilization in Indonesia

- Natural gas utilization (export and domestic) reached 2.805 TSCF in 2007 and expected to increase going forward.
- The GoI’s policy to promote domestic gas utilization by implementing Domestic Market Obligation to gas producers.
Natural Gas Development & Utilization
Main Factors for natural gas development and utilization

- Gas Supply
- Gas Market
- Infrastructure Availability
(1) Gas Supply

- Security of Supply from Gas Producers
  - Certified gas volume
  - Supply period
- Attractive Gas Price scheme
Gas Market Development

Opportunities & challenges

• Pricing dynamic promotes higher gas demand
• Gas price for industry
• Environmental Issue
• Limited gas infrastructures
**Pricing Dynamics Promotes Gas Demand**

- Oil contribution to total energy consumption is declining due to the surging oil price and reducing oil subsidies in Indonesia.
- Oil subsidy reduction generates a major shift from oil to gas consumption of domestic industries.

**Relative Energy Price (as of November 1, 2008)**

<table>
<thead>
<tr>
<th>Energy Type</th>
<th>Price (USD/MMBtu)</th>
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<tbody>
<tr>
<td>Gasoline (non-subsidized)</td>
<td>17.3</td>
</tr>
<tr>
<td>Kerosene (non-subsidized)</td>
<td>17.3</td>
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<tr>
<td>HSD (non-subsidized)</td>
<td>15.8</td>
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<tr>
<td>Diesel (non-subsidized)</td>
<td>15.0</td>
</tr>
<tr>
<td>Gasoline (subsidized)</td>
<td>17.5</td>
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<tr>
<td>LPG (non-subsidized)</td>
<td>14.8</td>
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<tr>
<td>HSD (subsidized)</td>
<td>13.9</td>
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<tr>
<td>MFO (non-subsidized)</td>
<td>10.7</td>
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<tr>
<td>LPG (subsidized)</td>
<td>11.8</td>
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<tr>
<td>Kerosene (subsidized)</td>
<td>6.5</td>
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<tr>
<td>Distributed Gas</td>
<td>5.5</td>
</tr>
</tbody>
</table>

Source: Pertamina

**Indonesia’s Energy Consumption by Energy Type**

**PGN Gas Price Vs HSD Price**

Note: based on crude oil price of USD 68/barrel
Infrastructure Development

- Optimization and Risk based infrastructure development
- Gas pipelines categories as facilities for public interest by the law
- Economic feasibility in transmission and distribution tender.
- Other non-pipe gas infrastructure development
  - Small scale LNG
  - CNG
Third Parties Access (1)

- Third parties access according Oil & Gas Law
  - Regulation by BPH Migas (Downstream Regulatory Agency)
  - Purpose of Open Access
- Principles in Open Access implementation
  - Excess capacity
  - Technically Possible
  - Enhance economics viability
Third Parties Access (2)

1. Gas Transportation Agreement & Access Arrangement
   - Operational philosophy
   - Gas Management System
   - Regulation related to technical aspect
   - Regulation related to legal aspect

2. Transportation Fee
   - Based on project economics which is case by case bases
   - The fee proposed to the regulatory agency (BPH Migas)
Given its low penetration and infrastructure coverage, natural gas infrastructure development is a very attractive investment opportunity in Indonesia.

Natural gas market in Indonesia is very attractive due to relatively cheaper gas price compared to oil based product.

To accelerate natural gas market development, new natural gas fields development is required. In addition there is also possibility to utilize other gas sources like CBM, Coal Gasification, and Flared Gas.

To ensure economics of the gas infrastructure projects, gas availability with sufficient volume and supply period become key factors.

Small scale LNG and CNG could be utilized as natural gas transportation mode for remote areas.
Thank You

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