





Creating Traded and Competitive Gas Markets in Asia

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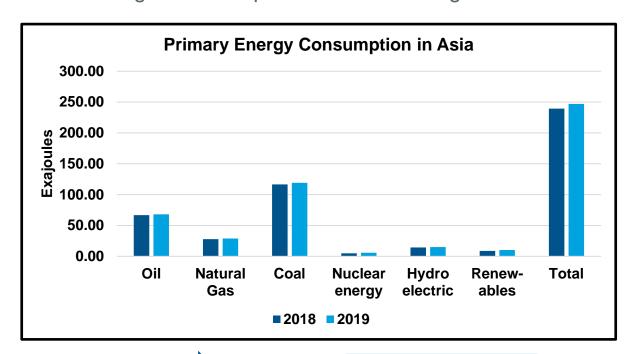
December 2020

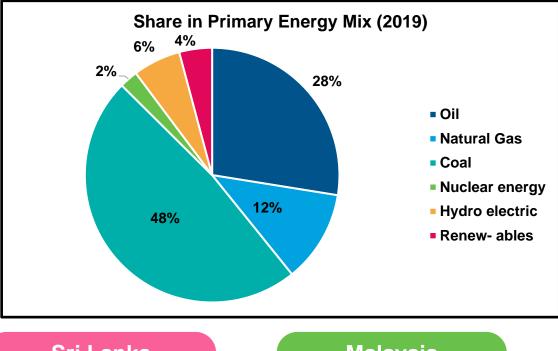
What we will discuss

- The share of natural gas in Asia's primary energy mix
- The big potential for natural gas in Asia
- What makes a competitive gas markets
- Stages of gas market hub development
- Current development status of Asian gas markets
- Key takeaways
- Discussion points

Asia: The share of natural gas in primary mix amounts to ~12%

- Total primary energy consumption in Asia has increased from 240 Exajoules in 2018 to 247 Exajoules in 2019
- Total gas production in Asia amounted to ~489 Bcm in 2019
- Total gas consumption in the Asian region amounted to ~801 Bcm in 2019







Singapore
Philippines

Sri Lanka

Bangladesh

Thailand

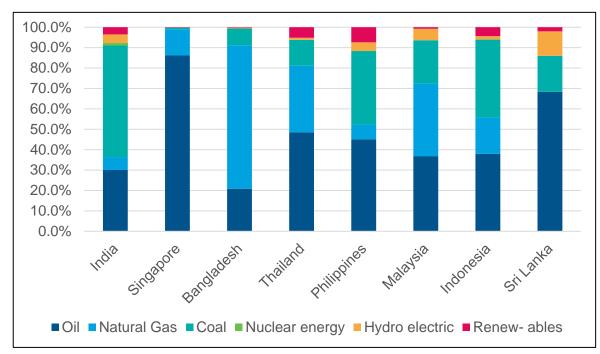
Malaysia Indonesia

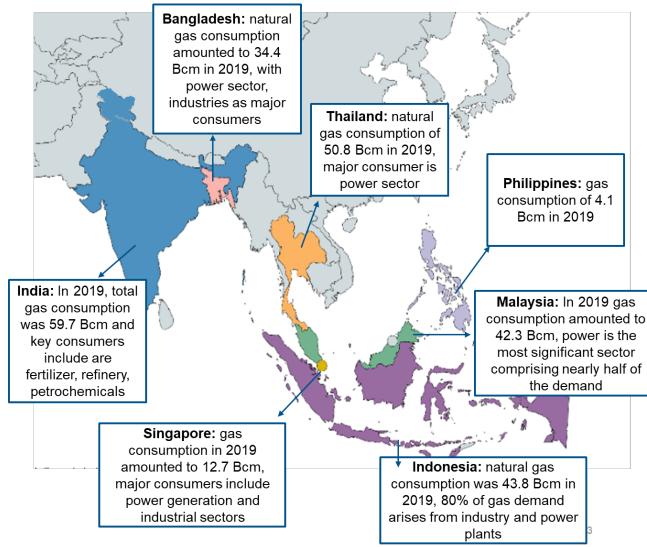




With growing economy and high consumption of liquid fuels, these Asian countries have a big potential for natural gas

The chart below shows the heavy reliance on liquid and solid fuels of Asian countries





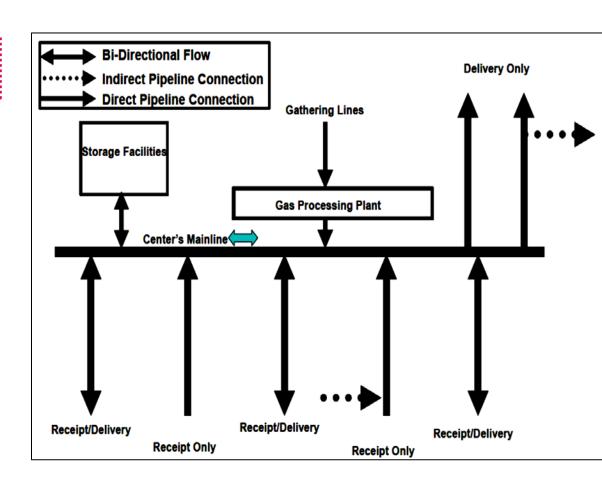


Competitive gas markets & its prerequisites

Competitive gas markets:

- Natural gas market hubs are a key feature of competitive gas markets in the US, the UK, and Europe
- These hubs provide physical locations for trading gas and for price discovery of natural gas sold in the hub

What is needed for a gas hub? Non-A hub operator **Facilities** discriminatory Strategic offerina interconnectin third-party seamless location near g supply and access (TPA) transfer of gas markets or demand to the pipeline at minimum production system cost







Stages of gas market hub development







Current Status: Development Stage of Asian Countries

| S. No. | Country | Controlled Gas Pricing | Controlled Allocation | Third Party Access |
|-----------|-------------|----------------------------|--|-----------------------|
| 1 | India | Price Linked to other hubs | Majority allocated; new gas have marketing freedom | ✓ |
| 2 | Bangladesh | ✓ | ✓ | |
| 3 | Singapore | | | ✓ |
| 4 | Thailand | ✓ | | ✓ |
| 5 | Philippines | | | ✓ |
| 6 | Malaysia | ✓ | \checkmark | \checkmark |
| 7 | Indonesia | | | √ |

- The national gas markets in Asia pacific are in early stages of liberalization
- Singapore is an exception with its fully deregulated gas market
- Only Singapore has fully achieved stages 1 & 2 as described in the previous slide
- Japan, Singapore and China are competing to become the LNG hub for Asia Pacific

- In Thailand Regulators enforced only an account unbundling of PTT natural gas distribution
- Malaysia: In 2019, unbundling of GMB (Gas Malaysia Berhad) had not yet happened
- **Indonesia:** Deregulation & Liberalization were introduced in 2001 by the new gas law



Key Takeaways

- The principal policies that create a competitive gas market include the following: unbundling of natural gas from transportation and delivery services, guarantee of non- discriminatory thirdparty access to transportation services and the deregulation of natural gas prices
 - All other gas market hubs have been based on pipeline models of delivery.
 - Large Asian markets (Japan, South Korea, Taiwan) have traditionally relied on LNG.
 Asia is highly dependent on LNG and its progress towards market hub-based price discovery will depend on several factors like more spot trading of LNG, full TPA to LNG facilities, other institutional and regulatory reforms for individual countries
- Government must be firmly committed to carry through with the liberalization reforms.
- The consensus is that LNG trading norms are undergoing many changes, with substantial variability and uncertainty in the market regarding pricing and contract terms

Discussion points

- Understanding of market and regulatory reforms towards achievement of liberalization.
- Understanding how these countries have progressed in terms of market liberalization and ease of access from the point of view of an LNG supplier.
- View on how governments of different countries are committed towards liberalization and their view on cost and benefits of market reforms.
- Understanding of how LNG trading norms are changing across all these countries and what is their stage of development.
- Understanding of how LNG suppliers view the market and regulatory changes taking place in these countries and how the suppliers will react in terms of products and services offered, pricing arrangements, contractual terms to buyers, and capital investments to supply the Asian markets.

Thank You!

For any questions on the slides, please contact

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