

## “Asia - Gas Market No.1?” Variety, Challenges and Potential

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### a. Background

Asia has a large regional variety, and one regional gas market in Asia is quite different from another. The following are the major characteristics of Asian gas markets:

- 1) China has the largest potential as a gas market. They have varied gas supply resources, including domestic production (both conventional and unconventional gas), pipeline gas imports from Central Asia and Russia, and LNG imports.
- 2) Southeast Asia (ASEAN) is changing from a major gas supplier to a gas importing region with domestic gas demand increasing.

Gas demand in the matured economies (Japan, South Korea, Taiwan) is forecasted to grow relatively stably. However, there are some uncertainties such as the increase of alternative gas demand in Japan after the Fukushima nuclear power station accident.

### b. Aims

We study the characteristics of Asian gas markets for better understanding toward future development of the markets.

### c. Methods

Asian gas markets have the largest potential to grow among the world regional gas markets. However, their gas markets, especially in Asian developing economies, have several challenges to face for the future growth. The challenges they will face include the following:

- 1) Controlled gas price with subsidies (China, South East Asia): Several countries including China & Malaysia commenced a gradual increase in the gas price.
- 2) Lack of investment incentives on the domestic gas E&P activities
- 3) Lack of infrastructure; transmission network, LNG receiving terminal

We can think of some comments regarding the gas markets in Asia. They include the following:

- 1) Market Price mechanism is a key to sustainable growth of the gas markets.

- 2) How much will the Chinese gas market expand? What will be the contribution of unconventional gas supply to the Chinese gas market, and when?
- 3) How can Southeast Asia supply gas to meet the increasing regional demand? What will be the selection of energy resources in Southeast Asia?

We have to carefully watch the status of alternative energy resources which will fill the shortage of energy supply due to the decreasing usage of nuclear power stations in Japan.

From the comments we intend to convey to the conference audience, here we will briefly present the following two subjects:

- 1) Controlled gas prices (with subsidies) and its effect on the supply and demand of gas
- 2) Unconventional gas development in Asia

#### **d. Results**

##### **1) Controlled gas prices and their effect on the supply and demand of gas**

Low gas prices based on subsidies have been set to promote gas supply to domestic markets in Southeast Asia (there are similar policies on the subsidies for oil products), and gas demand has been stimulated and increased as such. At the same time, however, it has been pointed out that gas has been consumed inefficiently as a result. Now that the future gas supply is likely to decline, the inherent contradiction in this gas price control policy has become more noticeable.

Gas policy in Southeast Asia is often criticized for its inefficiency by international energy and gas-related organizations. They aim to support development of a healthy energy market. These organizations point out that a subsidized, cheap gas supply will produce the following effects, and will impede the development of a healthy market:

- a. It will harm gas producers' investment incentives, obstructing the promotion of gas supply, and;
- b. Cheap gas supply will produce a wasteful manner of gas consumption and will increase the gas demand beyond the supply capacity, thus harming the supply and demand balance.

Now that gas supply capacity is showing its future limits, concerned governments are finding it a big challenge to bring gas prices close to market prices and to maintain an appropriate gas supply and demand balance while reducing subsidies. As a matter of course, populations object to changes to the low-price energy policy to which they have become accustomed. It is still doubtful whether the gas supply to Southeast Asian markets will progress smoothly in the future. This also leads to a problem in the choice of energy sources in the long term. There is the prospect that the share of coal in future power generation will increase across the whole of Southeast Asia. If this becomes the case, domestic gas use promotion policies may face large changes. The status of gas supply and demand in Southeast Asia should be carefully observed to determine which will be a reasonable selection of energy resources, the choice between competing fuels and energy sources.

##### **2) Unconventional gas development in Asia**

Unconventional gas development in Asia is at an extremely early stage. As for shale gas development in China, the Chinese government and the state-owned oil companies in

charge have not made any clear stance regarding development. Instead, expectations seem to come mainly from outside the country.

Entry into shale gas development in China by foreign capital is limited due to Chinese institutional regulations. All the companies chosen for a short list in the first round of shale gas acreage bidding in the first-quarter in 2011 were Chinese.

One foreign investor considers that deficiencies in transportation facilities are an obstacle to unconventional gas development in China, because third-party access to the main pipeline, operated exclusively by state PetroChina, is not guaranteed. Shell carries out gas business worldwide in cooperation with PetroChina (e.g. in Australia), and has the deepest understanding of Chinese gas policy among the foreign majors through their partnership with PetroChina.

Other's opinion is that China should learn from successes in America, encourage foreign participation and introduce public incentives to foster successful shale gas development.

Other points out the difference between Chinese government policy and the state-run oil company's action as the holder of development rights. PetroChina's priorities in the gas business are, first, the development of conventional gas resources, and second, pipeline gas imports from Central Asia and Russia. Unconventional gas development is a future business that is superseded by these priorities. However, PetroChina seems willing to push forward development work in alignment with government policy to some extent, because it does not want to lose its existing development rights.

Experts often comment that unconventional gas production in China will only get into full swing after 2020 at the earliest. The timing of shale gas' contribution to gas supply in the Chinese market is still uncertain.

It is generally believed that for unconventional gas development to take off in China, and across Asia as a whole, more geological surveys, and improvements to the regulatory environment and related systems are required. This business will take time.