

Natural Gas's Roles and Challenges in Asia

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From November 6 to 8, I visited Shanghai, China, and had an opportunity to exchange views on the future outlook of the Asian natural gas market and relevant challenges with representatives from state-run Chinese oil companies CNPC, SINOPEC, and CNOOC, and with experts from major Asian nations, such as Japan, South Korea, and India. Participants in the meeting shared the expectation that natural gas will grow more important in Asia and play a major role in the Asian energy mix.

According to the Asia/World Energy Outlook 2012 our institute released on November 5, Asian natural gas demand is expected to increase at an annual average rate of 4.3%, from 448 million tons of oil equivalent (500 billion m³) in 2010 to 1,284 Mtoe (1.43 trillion m³) in 2035 in a reference scenario where the present energy-economic trends will continue. The sharp growth in Asia in the period will account for 48% of global growth, indicating that Asian gas oil demand growth will drive global growth as in the case of overall energy demand. Natural gas's share of primary energy demand in Asia is projected to rise from 11% in 2010 to 17% in 2035, indicating that the importance of natural gas in total primary energy demand will be boosted.

Out of overall natural gas demand, liquefied natural gas is estimated to score a particularly high increase. Our outlook projects Asian LNG demand to expand from 133 million tons in 2010 to 322 million tons in 2035. Even in 2010, Asia accounted for 60% of global LNG demand, standing as the center of the global LNG market. The Asian share is expected to rise further to 69%. The Asian LNG demand expansion is likely to exert great influences on the global LNG market.

In the discussions among Chinese and other Asian experts, they provided their respective countries' natural gas/LNG demand outlooks meeting national conditions. These outlooks varied and differed from our institute's outlook, but they commonly indicated high expectations on demand for natural gas featuring many benefits, such as cleanness, abundant resources including unconventional gas deposits, and stable supply.

At the same time, the discussion participants reaffirmed that Asian countries' respective conditions and energy market challenges lie behind their expectations of expanding gas demand. In Japan, as a matter of fact, natural gas/LNG demand has substantially increased due to the decline in nuclear power generation since the March 2011 Fukushima nuclear power plant accident. In the absence of any clear position fixed for nuclear energy, expectations have increased toward gas as a promising feasible energy option. In South Korea and Taiwan, where domestic conditions differ from Japan's, gas's relations with the problem of nuclear energy are important. Both use nuclear power as a key energy source but will be required to reconsider their respective energy mixes due to the Fukushima accident's adverse impact on their domestic nuclear energy. In the process of the reconsideration, they may have great expectations toward natural gas, particularly LNG. China also has increasing expectations toward gas as it seeks to reduce its heavy dependence on coal for power generation, to introduce significant low-carbon electricity sources for achieving a 2020 target for reducing greenhouse gas emissions per gross domestic product, and to develop abundant domestic unconventional natural gas resources. Even in China, however, I pay attention to natural gas's relationship with nuclear power generation.

On October 24, the Chinese government released two important nuclear policy documents: the Nuclear Power Safety Plan and the Medium to Long-Term Nuclear Power Development Plan. The plans put forward a basic policy to proceed with China's nuclear power generation development while making greater efforts to secure safety, based on lessons from the Fukushima accident. They attracted our attention by calling for an orderly, steady construction pace for new nuclear power plants planned for future construction and a ban on nuclear plant construction in inland regions for the immediate future. It may be needless to say that the most important point is to enhance safety measures and steadily proceed with nuclear power generation. If the policy leads to a downward revision of nuclear power generation, however, the problem will be how to make up for a shortfall in overall power generation. While energy conservation and renewable energy promotion may be enhanced, expectations toward natural gas may heighten in this respect.

Despite great expectations placed on natural gas/LNG, the discussion participants pointed to various natural gas/LNG market challenges in Asia. The most controversial challenge was how to further enhance the price competitiveness of natural gas/LNG. In this context, how to address the Asian premiums on LNG prices is significant. Asian experts' great interest in this issue strongly impressed me. Their great interest might have stemmed from the great expectations toward gas and the importance of relevant challenges. In the future, how to address Asian gas problems will become more and more important as a common challenge for Asian countries. Many participants in the Shanghai meeting noted that, while Asian countries' respective actions to address the Asian premium problem would be important, they should enhance their cooperation in tackling the problem as their common issue. Japan has raised its awareness of the Asian premium problem through a meeting it hosted between LNG producers and consumers (LNG Producer-Consumer Conference on September

19th). Japan's future strategy for working out how to proceed with cooperation in Asia will be tested.

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