

423<sup>rd</sup> Forum on Research Works on July 26, 2016

## **Outlook for Gas Market**

### **<Summary>**

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#### 2016-2017 LNG price outlook

1. In the international LNG market, demand will increase from 268 million tons in 2016 to 282 million tons in 2017. However, oversupply will accelerate on supply's faster expansion from 288 million tons to 336 million tons.
2. As crude oil prices gradually rise toward 2017 (see "Outlook for International Oil Market" for the 423rd Forum on Research Works), however, long-term LNG contract prices indexed to oil prices are expected to increase. Therefore, prices are expected to gradually rise for Japan's LNG imports that are mostly subject to long-term contracts with prices indexed to oil prices. The average price for LNG arriving in Japan will thus rise from \$6.60 per million British thermal units in the second half of 2016 to \$7.40/mmbtu in the whole of 2017. (The average for January-May 2016 stood at \$7.0/mmbtu.)
3. The average Asian spot LNG price is expected to weaken to around \$5/mmbtu as oversupply expands. Therefore, a gap between long-term contract and spot prices is likely to widen.

#### Demand trend: Slackening global natural gas growth

4. "World Energy Outlook 2011" by the International Energy Agency had a chapter titled "Are we entering a golden age of gas?" forecasting that progress in the shale revolution and continuous growth in global natural gas demand would bring about a golden age where stable energy supply and climate change measures would be simultaneously achieved. In fact, however, Asian and European markets have failed to expand as much as expected earlier.
5. The first factor behind the failure is the world economy's deceleration in which energy demand growth mainly in developing countries has slackened. Other factors include competition from coal with greater price competitiveness and renewable energy with policy support in the power generation sector, and LNG prices indexed to high crude oil prices in the Asian market.
6. For forecasting future LNG demand, emerging countries such as China and India

are important. The IEA's "Midterm Gas Market Report" published in June 2016 forecasts that Chinese and Indian natural gas demand growth would account for 47% of global growth between 2015 and 2021. LNG demand will change greatly depending on macroeconomic trends and energy demand growth, competition from other fuels including coal, and domestic natural gas production in the two countries. If surplus LNG continues to be absorbed into Europe as at present, European LNG demand may increase eventually.

#### Supply trend: North American supply capacity growing important

7. On the supply side, LNG production capacity is expected to expand by about 74 million tons in two years through 2017 mainly in the United States and Australia. Investment decisions for the additional capacity had been made amid high crude oil prices. As a result, the supply capacity expansion in the two years will exceed demand growth, leading oversupply to increase further. Therefore, some projects are likely to postpone production launches or adjust capacity utilization ratios.
8. In the circumstances, a matter of concern is a future investment slump in the upstream sector that could result in constraints on supply expansion over a medium to long term. Projects under planning will provide capacity large enough to meet demand growth over a medium to long term. For securing future LNG supply capacity, how to smoothly launch projects particularly in Canada and eastern Africa would be important.
9. In February 2016, LNG export from the lower 48 in U.S. started. At present, major U.S. LNG export destinations are limited to the Atlantic market. Full-blown inflow of U.S. LNG into the Asian market will come in the future. Through 2020, the United States will expand its LNG supply capacity by more than 60 million tons. Transactions in massive U.S. LNG without destination clauses will be significant for improving international LNG market liquidity and creating pricing benchmarks.

#### Constructing an LNG market

10. The Japanese Ministry of Economy, Trade and Industry published the Strategy for LNG Market Development in May 2016, seeking to procure cheaper and flexibly available LNG. If an LNG market with high liquidity and functions, given priority in the strategy, is realized, it may contribute to the sound expansion and development of the natural gas market. LNG market development will also allow LNG to be flexibly provided in supply disruptions and other emergencies, contributing to supply security.
11. Specific moves to invigorate LNG transactions have been seen in Asia. In Japan, the Tokyo Commodity Exchange (TOCOM) opened an LNG OTC market in

September 2014. In January 2016, the Singapore Exchange launched futures and swaps on Singapore's new price index for LNG (SGX LNG Index Group: SLInG). These moves seek to develop trading hubs. LNG transaction liquidity must be enhanced to expand and invigorate hub trading. In this respect, it is important to improve the flexibility of transactions through the elimination of destination clauses and other measures. Next, the improvement of pricing benchmarks' reliability and the standardization of contractual terms and conditions for transactions would be required to pave the way for invigorating spot LNG transactions.