

Current International Oil and Gas Situation and Issues

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<Issues and Study Objectives>

In the first half of 2011, the West Texas Intermediate (WTI) crude oil futures as the benchmark price for international crude oil market averaged \$98.5 per barrel on the basis of daily closing price for the front-month contracts. During the above period, the highest price marked was \$113.9 per barrel and the lowest, \$84.3 per barrel. The above price trend, when compared with the same period a year ago, indicates an average value higher by \$20 with a significantly broader range of price fluctuations. Such price movements were a result of intricate and intertwined effects of supply/demand factors, financial factors, and risk factors, with the increasingly volatile situations in the Middle East and North Africa as well as uncertainties about the future world economy giving a particularly large impact.

Meanwhile, in the natural gas market, noteworthy new movements are emerging including a recovery of world gas demand from the slump following the financial crises, an expansion of LNG demand in Japan after the Great East-Japan Earthquake, and activities by major economies in relation to the development of non-conventional resources such as shale gas.

The international oil and gas situation has a significant impact on the world economy and international relationships as well as on Japan's energy security. Crude oil price is a crucial factor affecting various energy prices including that of LNG for Japan. It is therefore vitally important to grasp their trends regularly and analyze their future outlook based on the latest state of affairs. This report explores the prospects for future international oil and gas situations as well as crude oil prices from the above viewpoints.

<Main Conclusions>

Points related to current international oil situation and crude oil price outlook:

1. The most important factor when forecasting the future international oil situation and crude oil price outlook is the global economic trends. Particularly crucial among issues is to interpret how the lately increasing uncertainty about the future of the world economy will develop from now on. Factors boding future unpredictability are becoming more conspicuous as exemplified by the prospect of spillover of the "sovereign debt crisis" in Europe, the tangled political negotiations at the U.S. Congress over the federal debt-limit

increase with an associated sense of apprehension about deteriorating economy, inflation and asset bubble issues in China, and so on. Under these circumstances crude oil prices have been subjected to a downward pressure since early May when they were hovering in a high-price zone. As of the most recent dates, the WTI crude was quoted in a range at high \$90s per barrel, reflecting also a weakening trend for the dollar. In the coming months, if the above-mentioned uncertainties become more pronounced with aggravating overtones towards the latter half of this year, crude oil prices could fall in sync with the stock prices as a mirror reflecting the economic trend, possibly even to a level below the \$90 mark. On the other hand, if such uncertainty factors are calmed down and dispelled to quicken the pace of economic recovery down the road, crude prices may rise, along with expectations for an increase in crude oil demand, to a level well above the \$100 mark.

2. The main cause for the steep rise in crude oil prices in the first half of 2011 was the increasingly volatile situations in the Middle Eastern and North African regions as represented by the Libya crisis. The geopolitical risks existing in major oil producing regions and the actual occurrence of supply disruptions have worked on both supply/demand balance as well as market psychology, causing the oil futures to run up sharply. However, while the volatile and confused state of affairs per se continues to this day, as a stalemated situation sets in, its influence as a factor to affect the oil market is diminishing in relative terms. If there is not much of a change in the relevant local situations, then its impact on the crude prices, in particular from the market psychology angle, is likely to become a limited one. Conversely, if any unexpected incidents crop up to aggravate the conflict between the establishment and the dissident groups, increasing the instability in the oil producing countries and their vicinity, thus leading to or spreading any supply disruptions, a strong upward pressure could again act on crude oil prices.
3. Judged simply from standard indicators such as the surplus crude production capacity in the OPEC countries or the OECD countries' private-sector crude oil and petroleum products inventories, there is no element to suggest any shortage of spare supply capacity in the present international oil market. Recently, however, there are signs pointing towards a possible decline in the spare supply capacity due to general demand increases since 2010, supply disruptions caused by the civil unrest in Libya, and OPEC's response to make up for the lost supplies. Under such circumstances, the decision by the IEA in June to undertake a set of market stabilizing measures including a coordinated inventory release was taken by the market participants with a sense of "surprise" attracting their attention. In other words, it can be said that such initiative and actions by the IEA may now have become a new factor in examining the future for their impact on the supply/demand balance, interaction with OPEC oil producers, or response by the market players, etc. While the first half of 2011 has seen a variety of notable supply/demand

factors as discussed above, for the immediate future, issues such as the global oil demand trend and crude production policy in the OPEC countries, especially that of Saudi Arabia, will have to be closely watched.

4. In light of various factors and their current status discussed in the previous sections, crude oil prices are likely to maintain the present high level for the time being. While the uncertainty surrounding the global economy may persist, barring its further aggravation or any turbulence in the supply/demand front, the WTI crude futures are considered to move more or less along the range between \$90 per barrel and \$100 per barrel in the latter half of 2011 through 2012 (the scenario being referred to as a Base Case). Behind such price trend are conceivable market actions such as a response by oil producing countries by increasing production to counter concerns about an adverse impact on the global economy when the prices go beyond \$100 per barrel, or, conversely, in the event of the crude prices falling to low \$90s and further down, the likelihood of producing countries revising their production policies completely the other way around. Meanwhile, in the case where the uncertainties over the global economy become a reality and worsen, crude oil prices may fall to a level approximately between \$85 and \$90. Alternatively, in the event such uncertainty factors are dispelled under a bullish environment where, for instance, geopolitical risks are being rekindled, crude prices may rise to an approximate range between \$105 and \$110. It should be noted here that currently the WTI crude price is artificially depressed relative to other marker crudes, due to some special circumstances such as a large stockpile of oil at the Cushing, Oklahoma storage and pricing point. Taking such a factor into account, the CIF crude import price into Japan should be higher than WTI by about \$10 to \$15 per barrel, which should translate to approximately \$110 per barrel for the Base Case scenario.

Points related to current natural gas/LNG market situation:

5. The world natural gas demand, which fell in 2009 from a year earlier due to the aftereffect of the global financial crisis, recovered in 2010 on an underlying trend of general economic recovery and expanded by a healthy 7.4% over the previous year to reach 3.17 trillion cubic meters. At the center of such demand growth are Asian markets where extensive economic expansion is taking place. Reflecting the steady growth in gas demand worldwide, the global LNG demand is also increasing significantly. The volume of global LNG imports in 2010 rose by 23% over the previous year to 297.6 billion cubic meters, with the main contributor countries being Japan, Korea, Taiwan, India, and the Europe. At the back of the robust demand expansion for natural gas and LNG are various factors working in addition to the general economic growth, including the advantages in their environmental characteristics, stable supply availability, or quickened progress in non-conventional gas resources development. With the above-mentioned situation as the backdrop, expectations are mounting that the expansion

of gas demand will continue on a long term basis as well.

6. As a new factor contributing to the expansion of gas demand, emergence of additional LNG requirements resulting from a drastically reduced operating level of nuclear power stations in Japan can be mentioned. In addition to those directly affected by the Great East-Japan Earthquake, a number of other nuclear plants were shut down for regular maintenance work or other unscheduled causes. Because of the uncertain prospect concerning the criteria and procedures for permitting the resumption of operations for those plants after inspection and maintenance, increasing the utilization rate of LNG thermal power stations is being chosen as one of the main solutions to address the imminent power shortage. As a result, the incremental requirement for Japan's LNG imports could rise to 15 million tons maximum in 2011 and to as much as 20 million tons in 2012, depending on the future scenario on the reactivation of the suspended power stations and the future of power supply balance. Furthermore, various projects elsewhere in the world on new construction of nuclear power plants could be postponed or slowed down from their original plans, potentially accelerating the pace of expansion in natural gas demand.
7. In dealing with the additional requirement for LNG and natural gas resulting from the above causes, measures aimed to secure stable supplies both on the basis of short- as well as medium/ long-term will become important. For the immediate future, since there is an ample amount of surplus supply capacity of LNG in the world which is large enough to absorb the additional requirement in Japan, there will not be any disturbance affecting the macro supply/demand balance. However, measures for ensuring stable supplies are still required from a practical business operations point of view, including procurement of LNG vessels or development of receiving terminal capacities. In this aspect, it may become crucial to devise a system of cooperation for putting together the effort by the government and the related business community as a whole, as well as to engender adequate cooperative relationships with the producing countries. Further, it will also be required to pay constant attention to the evolvement of future LNG spot prices. On the global perspective, since there exists a sufficient amount of supply potentials, covering mid- to long-term futures, identified from the viewpoints of total available reserves including non-conventional gas sources as well as planned LNG production projects, it will be necessary to accelerate investment programs in a timely fashion to make sure there will be adequate supply capability that could respond to ever growing demand for natural gas and LNG. Finally, for further promotion of gas utilization, the key challenge will be to strive for the stable procurement of natural gas and LNG at a more competitive price.

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