

## **The Significance of ASEAN Energy Challenges**

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On May 7, the International Energy Agency, the Economic Research Institute for ASEAN and East Asia, and the Thai Ministry of Energy cosponsored a workshop titled “ASEAN Energy Outlook” in the Thai capital of Bangkok. The workshop was timed before the IEA takes up the Association of Southeast Asian Nations as one of the key topics in its World Energy Outlook 2013. In the large-scale workshop, participants numbered nearly 180 including IEA officials and energy experts, and government and industry representatives from the host country of Thailand and other ASEAN countries. On the day after the workshop, I also had an opportunity to exchange views with representatives from the Thai Ministry of Energy and energy industry. This report discusses impressive points I found through the workshop and the exchange of views.

First, the workshop provided me with an opportunity to reaffirm that substantial growth in ASEAN energy demand is of great significance to international energy markets. Regarding global energy demand growth, attention may frequently be paid to China, India and the Middle East. In fact, however, ASEAN as well is expected to steadily expand energy demand against the backdrop of social and economic factors including robust economic growth, increasing population, urbanization, growing middle-income population, and subsidy and other systems to keep energy prices low. According to the IEEJ's Asia/World Energy Outlook 2012, for example, primary energy demand in ASEAN is projected to increase by 685 million tons of oil equivalent (Mtoe) from 2010 to 2035. The increase following 1,767 Mtoe in China and 852 Mtoe in India will play a key role in driving global energy demand growth.

The abovementioned ASEAN energy demand increase includes 235 Mtoe in coal, 188 Mtoe in natural gas and 182 Mtoe in oil, indicating a remarkable rise in fossil fuel consumption. The growing fossil energy demand in ASEAN and its increasing dependence on energy imports, as discussed later, will become key challenges for its security of energy supply. At the workshop, various projections were given about energy demand growth in ASEAN. Many views were presented on the importance of energy conservation promotion to hold down demand growth. Particularly, I felt great expectations placed on energy conservation through the workshop and the exchange of views. Many stakeholders recognized and pointed out that various challenges including those involving subsidy systems exist for implementing energy conservation.

Second, ASEAN including many energy exporters rich with resources is destined to rapidly increase its dependence on energy imports. This point attracts attention. While Indonesia,

Malaysia, Brunei and Vietnam are rich with fossil fuel resources and export oil, gas (LNG) and coal outside ASEAN, the region's energy production expansion is failing to catch up with the rapid domestic energy demand growth. The ASEAN oil supply-demand balance in the abovementioned IEEJ outlook indicates that the region shifted from 31 million tons in net oil exports in 1990 to 71 million tons in net imports in 2010. Its net oil imports are projected to substantially expand to 270 million tons (with the import dependence rate at 71%) in 2035. As for natural gas, ASEAN is expected to shift from 61 billion cubic meters in net exports in 2010 to 31 billion cubic meters in net imports in 2035. The IEEJ outlook also indicates that ASEAN may import 40 million tons of LNG in 2035, rivaling India's LNG import level in 2035.

Under such situation, security of energy supply is likely to become a key challenge for ASEAN. The region will be urgently required to implement energy security policy measures such as developing domestic/regional fossil fuel resources including unconventional resources in the region, diversifying supply and import sources, strengthening relations with resource-rich countries and enhancing emergency response capacity including oil reserves. Another challenge for ASEAN would be how best to promote and deepen cooperation between ASEAN member countries. In this sense, ASEAN may give priority to developing regional energy infrastructure. Not only quantitative security of supply but also price-related security of supply will be important in securing stable energy supply. In this respect, participants in the workshop and the exchange of views indicated great interests in the Asian premium on LNG prices, the feasibility and impact of LNG imports from North America to address the Asian premium problem, and possible gas trading hubs in Asia.

Third, I felt that ASEAN is greatly interested in renewable energy and nuclear power generation with a view to diversifying energy sources and reducing its dependence on fossil fuels. ASEAN countries have seriously promoted various renewable energy sources including biomass, photovoltaic, wind, geothermal and hydro energy, reflecting their respective characteristics and resource endowments. Great expectations are placed on renewable energy as domestically available energy and as distributed energy/electricity sources for areas isolated from grid networks. I felt that ASEAN is highly interested in the new global renewable energy market situation including challenges for introducing renewable energy in Europe (including Germany and Spain), while renewable energy has been introduced under various policy support measures. As Vietnam has decided to introduce nuclear power plants and is implementing relevant measures, Thailand, Indonesia and Malaysia are also greatly interested in nuclear power generation as a long-term strategic option. In analyzing ASEAN countries' future energy portfolios and their growing dependence on energy imports, we may have to pay attention to developments involving non-fossil energy sources in the region.

Japan has maintained close relations with ASEAN not only in the energy field but also in international politics, economic cooperation and business transactions. As ASEAN's importance for international markets increases with various energy challenges emerging in the region, Japan's deepening of relations with ASEAN will be of growing strategic importance.

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