

A Review of Japanese and Overseas Energy Situations in 2015

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The year 2015 is ending in a few days. The year's energy situations in Japan and other countries saw many key developments. In the following, I would like to take up impressive points for me regarding these developments.

First, 2015 was a year of lower prices in the international energy market, symbolized by a sharp plunge in crude oil prices. Crude oil prices had remained above \$100 per barrel for three and a half years until the first half of 2014 before plunging more than 50%. In 2015, crude oil prices hit a total of three bottoms -- the first in March, the second in August, and the third, the year's low in December. The benchmark West Texas Intermediate crude price slipped below \$35/bbl to the lowest level in about seven years. Behind the oil price plunge has been an oil supply glut caused by various factors including high-level U.S. shale oil production, Saudi Arabia's maintenance of a strategy giving priority to keeping its market share, concerns on downside risks in emerging economies and the expected impact of Iran's comeback to the international oil market accompanying Western countries' termination of economic sanctions on Iran over the nuclear development problem. Historically, the international oil market has seen several price plunges. Some analysts have pointed out that the latest plunge is similar to the sharp fall in the mid-1980s in that they featured growing supply from oil producing countries outside the Organization of the Petroleum Exporting Countries and OPEC's strategy of keeping market shares. But others have noted that the current non-OPEC oil supply including U.S. shale oil production differs from the past one in that U.S. shale oil production can increase or decrease flexibly in response to price changes over a relatively short term. Crude oil prices and international oil market developments in the future are thus attracting much attention. The present oil prices apparently represent excessively low levels. But the low oil prices were the base for the international energy situation in 2015.

Second, natural gas, LNG and coal prices declined along with oil prices in 2015. As shale gas production remained high in the United States, the benchmark Henry Hub natural gas price slipped below \$2 per million British thermal units (MMBtu) in line with the loosening supply-demand balance in the second half of 2015. In Europe, the benchmark National Balancing Point price fell below \$5/MMBtu. In Asia, spot LNG prices weakened to a \$6-7/MMBtu range. LNG prices for long-term contracts that are dominant in Asia also declined sharply as they were linked to crude oil prices. LNG import prices for Japan fell to an \$8-9/MMBtu range. There is a time lag of some five months between Japanese LNG import and crude oil price changes. Given that crude oil prices hit the 2015 bottom in the second half of December, Japanese LNG import prices can be expected to remain low until the middle of 2016. Spot prices for steam coal for power generation also followed a downward trend in response to the loosening supply-demand balance in the international market. They have stayed in a low range of \$50-55 per ton since November. The overall fossil fuel market in 2015 featured the global loosening of the supply-demand balance as

described above. Lower prices under the loosening supply-demand balance became a basic trend for the year.

Third, the year 2015 saw growing security and geopolitical risks and international tensions in the overall international situation while the loosening energy supply-demand balance and lower energy prices became a basic trend. In Paris, terrorist attacks killed more than 130 people in November following the Charlie Hebdo incident in January. Confrontation with and military operations against the Islamic State militant organization, which claimed responsibility for the terrorist attacks, were enhanced internationally, highlighting counterterrorism and security measures as a key problem. Behind the problem are the complicated Syrian and Iraqi situations that have induced massive refugees who flowed into Europe. The overall situation is complex. While an international alliance against the Islamic State was given priority, Turkish fighter aircraft shot down a Russian military plane. Tensions grew between Turkey and Russia with Western countries getting involved, complicating the situation further. Tensions over the Russia-Ukraine problem also continued, leading Western countries to maintain or enhance economic sanctions on Russia. The high-level tensions in the Middle East, Europe and Eurasia represent a key point in reviewing the overall international situation in 2015. The growing tensions coexisted with the loosening supply-demand balance and low prices in the international energy situation in 2015.

Fourth, the Chinese economy's growth deceleration and dwindling demand greatly contributed to loosening the supply-demand balance in the international energy market in 2015. Oil demand including crude oil for filling into national stockpiles remained relatively firm in China, and natural gas, coal and electricity demand growth decelerated substantially, making great contributions to loosening the supply-demand balance in the overall international commodity market. While the Chinese leadership is attempting to achieve a soft landing on a "New Normal" economy, the future course of the Chinese economy is still largely uncertain. Developments in 2015 highlighted the importance of China for anticipating the world economy and the international energy situation in and after 2016. While Chinese energy demand growth slowed down in 2015, nuclear power plant construction in China made great progress. Furthermore, the Chinese nuclear industry aggressively expanded into British, French and other foreign markets, attracting global attention.

Fifth, the year 2015 saw the Paris agreement on a new international framework for climate change measures beyond 2020. At the 21st Conference of Parties to the United Nations Framework Convention on Climate Change in Paris, a total of 196 countries and regions participated in the pact, agreeing to offer voluntary greenhouse gas emission reduction targets, and review the targets every five years and verify emissions. Particularly, the agreement attracted attention by calling for improving the voluntary targets every time they are to be submitted. It was significant that the world successfully created a "global framework" (in comparison to Kyoto Protocol) for tackling the climate change problem for the first time. As the implementation of the Paris agreement is expected to greatly influence the global energy mix, future country-by-country efforts are likely to attract attention.

Sixth, various important developments came in Japan's energy situation in 2015. The No. 1 unit of Kyushu Electric Power Co.'s Sendai Nuclear Power Station restarted in August, followed by the restart of the No. 2 unit there, allowing Japan to reach a turning point to put an end to the absence of domestic nuclear power generation. The government worked out a target energy mix for FY2030 through some six months of discussions from the beginning of 2015. The long-awaited

target energy mix, given as a desirable picture for Japan to solve energy security, economic and environmental problems in a balanced manner on the precondition of safety, calls for an electricity generation share of 22-24% for renewable energy, 20-22% for nuclear energy, 27% for LNG and 26% for coal. As the desirable picture was presented, how to realize the picture became the next important challenge in 2015. In this respect, the government launched deep discussions on renewable energy, nuclear, coal, LNG and oil policies in the year. In 2015 just before the full deregulation of the electricity and gas market in Japan, energy industry policy discussions heated up, with very significant developments seen for realigning the oil industry. Given these developments in Japan and the rest of the world in 2015, how the year 2016 would be is attracting attention.

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