

Reviewing Japanese and International Energy Situations in 2018

Ken Koyama, PhD
Chief Economist, Managing Director
The Institute of Energy Economics, Japan

Six days are left before the end of 2018. The year saw many important events and great changes in the Japanese and global energy situations and the overall international situation. Regarding them, I would like to summarize the impressive points for me.

First, wild crude oil price fluctuations characterized 2018 as a year of turbulence. As crude oil prices enhanced their uptrend from late 2017, the benchmark Brent futures price rose above \$70 per barrel in the beginning of 2018 for the first time since December 2014 and basically remained above the level from April before hitting the year's high of \$86.29/bbl on October 3. When the Brent price surpassed \$80/bbl, some analysts said that the price could soar above \$90/bbl or \$100/bbl.

Since early October, however, the market environment has turned around, with crude oil prices declining rapidly. The Brent price slipped below \$60/bbl in November and fell to \$50.47/bbl on December 24, threatening to drop below \$50/bbl. Factors behind the price hike included declining oil inventories, concerns about a drop in Iranian oil exports and growing geopolitical risks in the Middle East. Those behind the later downturn included increasing inventories and concerns about global economic risks. In only less than three months, the Brent price plunged more than 40%, reversing market sentiment.

When seeing background factors behind the turbulence from a different angle, we find the presence, behavior and influence of major actors such as the United States, China, the Middle East and Russia, which affected the oil market and prices. The US policy destabilized the oil market and induced oil price hikes by withdrawing from the Iran nuclear deal in a manner to cause concerns about a tighter oil supply-demand balance and play a role in destabilizing the Middle East. On the other hand, the US market development suppressed price hikes by expanding shale oil production substantially to provide a supply and demand factor triggering the oil price plunge in the second half of the year. The U.S.-China trade war and the recent U.S. economic deceleration resulted in economic downside risks that contributed to the oil price plunge. China played a role in driving demand growth in the international energy market by expanding oil demand to support the oil market and prices. On the other hand, China as a main actor in the trade war became subject to concerns about economic downside risks, shaking the market in the second half of the year.

In the Middle East as the gravity center of supply in the international energy market, the economic sanctions on Iran and their influence on oil exports, a rivalry between Saudi Arabia and Iran, a suspected killing of an antigovernment Saudi journalist and other developments in the region increased geopolitical risks, making the international energy situation more uncertain. The oil production policy of the Saudi Arabia and Organization of the Petroleum Exporting Countries, as well as the Middle East's relations with the United States, China and Russia attracted global attention. Russia expanded oil and gas production even under Western economic sanctions,

increasing its presence in the international energy market. Russia also entered the spotlight as a key player in the OPEC/non-OPEC coordinated oil production cut designed to stabilize the market. Russia's expansion into the growing Chinese or Asian energy market and its rivalry with the Middle East and the United States over the expanding Asian market attracted global attention.

Second, China's great presence in and influence on the international oil market were recognized anew in 2018 while the gravity center of consumption and imports in the international energy market shifted further to Asia. Not only in the oil market but also in the natural gas/LNG and coal markets, China's consumption and imports exerted great influence on the supply and demand environment and market sentiment. China also attracted global attention by expanding renewable energy substantially and building new nuclear power plants to replace Japan as the world's third largest owner of nuclear plants. At the same time, China aggressively expanded into the international nuclear energy market, increasing its presence in the market. Therefore, the fate and influence of the U.S.-China trade war will exert great influence on the international energy situation through changes in China's economy and energy market.

Third, the year saw various interesting developments in the non-fossil energy field. Bid prices in auctions for solar, wind and other renewable energy power generation declined further, attracting global attention. How best to utilize renewable energy or integrate renewable energy into the electric power system has loomed as a key challenge or a global matter of interest. China and other emerging countries, as well as Russia, expanded nuclear power generation capacity, while developed countries saw stagnation in nuclear expansion, including the United States where some existing nuclear plants were shutdown. Behind such developments have been weak U.S. natural gas prices amid the shale revolution as well as power market deregulation and expanding renewable energy power sources. In such situation, interests grew in small module reactors (SMR) technology as a new technological option mainly in developed countries.

As interests globally grew in hydrogen in the new or innovative technology field, the first international ministerial meeting on hydrogen took place in Japan. As serious air pollution became an urgent challenge in China and India, their implementation of relevant countermeasures began to affect energy choices. As for climate change, the 24th Conference of Parties to the United Nations Framework Convention on Climate Change adopted work programme for implementing the Paris Agreement, paving the way for climate change countermeasures to be carried out in line with the programme.

In Japan, the cabinet decided on the fifth Strategic Energy Plan reaffirming that Japan should seek to achieve the FY2030 target energy mix as set in 2015. The plan calls for renewable energy to become an economically independent major power source through policy revisions and cost cuts. However, the cumulative burden on consumers was estimated to expand to 6.1 trillion yen if renewable energy power generation capacity totaling 86 gigawatts as approved (by March 2018) under the feed-in tariff system becomes fully operational, indicating a challenge for the economically reasonable promotion of renewable energy.

As for nuclear energy, the plan calls for efforts to establish a stable business environment while giving top priority to sincere remorse for the Fukushima accident and Fukushima's reconstruction and revitalization and seeking to continuously improve safety. However, the number of restarted nuclear power plant is limited to nine in late 2018. Japan is still far away from attaining the target of increasing nuclear energy's share of the energy mix to 20-22%, with the future of

nuclear power generation left uncertain. The ongoing electricity and gas system reform, though designed to promote competition and efficiency in the energy market, has brought about new challenges including how to secure necessary investment in a deregulated market and how to realize a desirable energy mix. After a wide-area blackout in Hokkaido in September indicated the significance of stable electricity supply, Japan is required to consider energy policies and implement necessary investment and measures in a changing and complicated situation.

It is interesting for the new energy plan to indicate a “multi-path scenario” to resolve problems over a long term through 2050. The plan thus became the first basic energy policy document to specify the significance of a scientific review mechanism to prepare and check a “multi-path scenario” to respond to uncertainties about the long-term future. How to implement long-term initiatives including the realization of the target energy mix will be important.

Given the significant Japanese and global situations, I would like to keep a close watch on what the year 2019 will be like.

Contact: report@tky.iecej.or.jp

The back issues are available at the following URL

http://eneken.iecej.or.jp/en/special_bulletin.html