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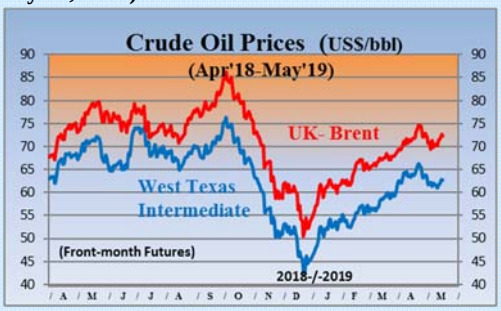
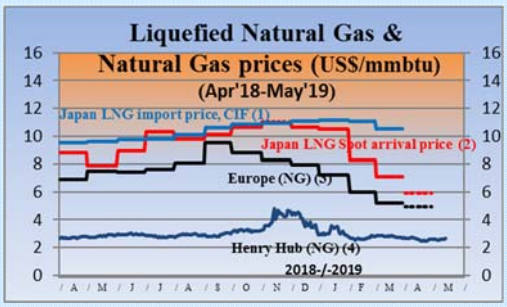


Sources:
(1) DOE-EIA
(2) Investing.com



Sources:
(1) Ministry of Finance "Japan Trade Statistics"
(2) Ministry of Economy, Trade and Industry (arrival month basis)
(3) Estimated by World Bank (Netherland Title Transfer Facility)
(4) DOE-EIA, NYMEX (Front-month Futures)
(5) Investing.com and Finance.Yahoo.com

Source: x-rates.com

Source: Investing.com and Finance.Yahoo.com

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1. US: Impact of the Water Issue on the Energy Industry

Ayako Sugino, Senior Researcher
Electric Power Group
Electric Power Industry & New and Renewable Energy Unit

On April 12, the US Court of Appeals with jurisdiction over Texas, Louisiana, and Mississippi sided with environmental groups' claim that the Environmental Protection Agency's (EPA's) final rule in 2015 during the Obama administration on the limits for heavy metals and other pollutants from nuclear and thermal power plants is not strict enough and directed the EPA to strengthen it. The rule was the first revision to the wastewater standards for power plants since 1982 and added heavy metals, which used not to be covered, to the scope. The basis for the decision was that the "best available reduction technology" required by the EPA does not reflect current technological levels and is not sufficient to protect health and safety. The power sector had strongly opposed the rule since the study phase under the Obama administration, citing the cost burden, and the EPA under Trump had announced plans for its abolishment in 2017. The decision came as if to forestall such move. The ruling is curious considering that it was made by a court in a region where the energy industry is concentrated and with 18 of the 26 justices Republican-appointed, and reflects the keen interest of American society in the water issue.

The connection between the energy industry and the water issue has received much attention in relation to shale development. The issues arising from the consumption of large quantities of water for hydraulic fracturing, such as the disposal of wastewater and conflict over supplies with water for drinking and domestic and agricultural uses, were widely reported in Japan, too. Limitations on water intake have been imposed and recycling and purification technologies have improved in recent years, but forecasts have also suggested that in the Permian basin in Texas where drilling is booming and oil production is increasing, water consumption will double in two to three years even if 100% of wastewater is reused. Further, in the 2000s, the gasoline additive MTBE, which increases the octane rating, leaked into and contaminated the groundwater and was banned, boosting the use of ethanol. Furthermore, some of the dozens of pipeline accidents that occur each year, most of them in gas pipelines, are causing oil pollution and water contamination. One of the causes of such accidents is aging, but new construction and upgrading of pipelines are often blocked due to environmental and safety concerns, leading to more accidents. The situation implies that while the oil industry has long faced water issues, the power industry was slow to take action.

Despite the ruling, the water quality standards of power plants are unlikely to be tightened under the current administration. However, the power industry is very likely to face additional pressure in connection to water quality and resource recycling. The cost of water quality improvement will be added onto wholesale prices, placing nuclear and coal/oil-fired thermal power in an even more challenging position in the generation mix.

Meanwhile, the cost of closing power plants must also be considered. Closing a power plant involves dismantling the buildings, and decontaminating and recycling or reusing the land. Ancillary off-site facilities such as for water treatment and fuel transportation must also be cleaned up. Municipalities often collaborate in devising plans for site reuse in terms of employment measures and provide financial support, but electricity producers should still shoulder a heavy responsibility. The main reason for the mass closure of power plants in America is competition with cheap natural gas and with renewable energies whose costs are coming down quickly. However, regarding policies which determine the competitiveness of certain power sources and which may affect their supply capacity, it is necessary to examine their decision-making procedure while excluding no options, as well as the extent to which secondary and tertiary impacts should be considered.

2. EU: The European Commission Publishes Two Important Reports

Kei Shimogori, Senior Researcher
Global Energy Group 1
Strategy Research Unit

On April 10, the European Council agreed to a further extension to allow for ratification of the withdrawal agreement from the EU by the United Kingdom. The extension should not run beyond October 31, 2019, and if both sides complete their respective ratification procedures at an earlier date, the withdrawal should take place on the first day of the month following the completion of the ratification procedures. Although the Council has agreed to the extension, it has emphasized that the EU will not negotiate Brexit again. The situation in the UK Parliament remains extremely unstable, and it is not clear whether the extension will lead to success.

The European Commission released interesting reports related to energy in April, with one of them concerning cybersecurity. On April 3, the European Commission adopted a recommendation on how to address the specific challenges of cybersecurity for the energy sector. The recommendation takes into account the major characteristics of the energy sector such as the risks of real-time requirements and cascade effects (described below), and the combination of legacy systems (designed before cybersecurity considerations) with state-of-the-art technologies, and requests that member states ensure that their energy network operators and technology suppliers in particular implement the relevant cybersecurity protection measures. Real-time requests in this context refer to reacting to commands within a few milliseconds in networks, while cascade effects point to the possibility that a disruption in part of the energy system might trigger far-reaching cascade effects in other parts of the system as electricity grids and gas pipelines are highly interconnected across Europe. Member states should report to the Commission detailed information regarding the state of implementation of this recommendation within 12 months after its adoption and every two years thereafter. On the basis of the information submitted by member states, the Commission will review the implementation of the recommendation and assess whether further measures are required.

The other is the Fourth Report on the State of the Energy Union. This is the latest assessment of the progress made on the Energy Union Strategy established at President Jean-Claude Juncker’s initiative, ahead of the European parliament elections in May. The report concludes that the European Commission has completely fulfilled the vision of the Energy Union Strategy (providing all Europeans with accessible, affordable, secure, competitive, and sustainable energy.) The report points out that between now and 2030, interactive dialogue between member states and the European Commission over the National Energy and Climate Plans will be critical. These plans are intended to ensure that the EU jointly delivers on its energy and climate change commitments and member states are required to submit their plans to the Commission by the end of 2019. The plans of member states based on a common framework are expected to promote mutual learning and maximize opportunities for regional cooperation. Going forward, the European Commission will issue a recommendation based on the plans from member states by the end of June, to enable the states to finalize their plans by the end of December. As indicated by the Fourth Report, the upcoming dialog between the European Commission and member states will be crucial for the states to jointly deliver on their policy commitments. The development of the discussions must be closely monitored.

3. China: Systematic Realignment of the New Energy Vehicle Policy System

Li Zhidong, Visiting Researcher
Professor at Graduate School, Nagaoka University of Technology

US-China ministerial trade talks were held on April 3 to 5, the ninth such talks to date and the fifth since the beginning of the year. At the end of each meeting, progress has been announced by the United States through the White House and by China through Xinhua News Agency, but a final agreement is yet to be reached. On the US side, President Trump and other parties, while rating the talks highly, have said that it may take time to reach an agreement and nothing should be assumed. Some think this may be a bluff to gain the upper hand in the negotiations. Meanwhile, the parties on the Chinese side remain tight-lipped about anything other than the official announcements, but newspapers such as the Global Times, which is linked with the Communist Party's official newspaper, the People's Daily, despite having high expectations for the agreement, stress that it is important to prepare for the worst while doing their best, meaning that China can respond to any situation if it keeps control of itself.

One of the jobs that must be done properly is to develop an internationally-competitive new energy vehicle (NEV) industry that does not rely on subsidies, to transform from a major car manufacturing country to a car manufacturing powerhouse. To do this, the government launched a sales target regulation and credit trading system for NEVs while announcing that the purchase subsidies launched in 2009 will be terminated in 2021. As part of this plan, on March 26, the Ministry of Finance and others announced the subsidy policy for June 26 onwards, which features two key points.

First, the requirements for cruising distance, which is the key issue for NEVs, as well as the energy density and electric mileage (electricity consumption per unit distance) were raised while the subsidies were lowered significantly. For example, for passenger EVs, the required cruising distance was increased from 150 km to 250 km and the energy density from 105 Wh/kg to 125 Wh/kg. Meanwhile, the subsidy per unit was slashed from 45,000 yuan (approx. 720,000 yen at 1 yuan = 16 yen) to 18,000 yuan for a cruising distance of 300 to 400 km, down 60%, and from 50,000 yuan to 25,000 yuan for 400 km or more, down 50%. Taking electric mileage into account, the upper limit was lowered from 66,000 yuan to 27,500 yuan, down 58%. The upper limit on subsidies for passenger PHEVs was also lowered by 55% from 22,000 yuan to 10,000 yuan. The new system is designed to support companies with high-performance NEVs and a strong business structure. Meanwhile, FCVs were excluded from the revision.

The second point is the revision of local government measures for the dissemination of NEVs. Municipalities have so far been allowed to provide up to half the amount of national subsidies. However, this system had been criticized as overprotecting the regions. Following the revision, local governments will be banned from providing purchase subsidies and the funds will be used to improve the charger and hydrogen infrastructure and enhance services. The aim is to build a unified national market and encourage fair competition.

NEVs are also one of the focus areas specified in "Made in China 2025," a sticking point in the US-China trade talks, but China's efforts to revise and improve its policies for disseminating NEVs and foster the industry are being pursued irrespective of whether the trade talks succeed or fail. China became the first country to surpass 1 million units in NEV sales per year, reaching 1.26 million. The country is well on the way to achieving its target to sell 2 million units in 2020. With no subsidies from 2021, attention must be paid to whether the country can become a powerhouse in the manufacturing of NEVs, as well as in production and sales.

4. Russia: Recent Developments in Oil and Gas

Sanae Kurita, Senior Researcher
Global Energy Group 2
Strategy Research Unit

According to the IMF's World Economic Outlook released on April 2, Russia's GDP growth rate is estimated at 1.6% in 2019 (down 0.2 point from the October 2018 outlook) and at 1.7% for 2020 (down 0.1 point). As the reason for the downward revision, the IMF cites the downward pressure exerted by cheap oil prices on economic growth. Meanwhile, according to forecasts of main indicators affecting the Russian economy through 2024 (Ministry of Economic Development) released on April 9, the GDP growth rate is forecasted at 1.3% for 2019, 2.0% for 2020, and 3.3% for 2024 with the Urals oil price forecasted to decline gradually from $63.4/bbl to $59.7/bbl and to $53.5/bbl. The Ministry predicts that oil prices will fall at the end of 2019 as the joint OPEC and non-OPEC supply cuts expire in June and US oil supplies increase in the global market, causing the value of Russia's oil and gas exports to decline. However, it believes that revenues other than from oil and gas will increase steadily and prop up economic growth beyond 2020.

The International Arctic Forum held on April 9 and 10 in Saint Petersburg was attended by around 350 companies from Russia and other countries. In his keynote speech, President Putin said that Russia is prepared to continue to collaborate with OPEC, but will not support an excessive rise in oil prices and considers the present level to be suitable. He also said Russian companies' intention to develop new fields should be taken into account. He refrained from drawing any conclusion regarding the extension of the joint supply cuts, commenting that he will decide based on the market situation in June when OPEC and non-OPEC countries meet.

President Putin also said that Russia will continue to support companies participating in Arctic development, draw up a new strategy for the development of the Russian Arctic up to 2035 and aim to obtain its approval within this year, while combining measures stipulated in the national projects and state programs, the investment plans of infrastructure companies, and programs for developing Arctic regions and cities. He also stressed that the economic sanctions by the United States do not affect Russia's development of the Arctic region. Incidentally, on April 10, US State Secretary Mike Pompeo admitted at the Senate Foreign Relations Committee that the US has been trying to persuade Europe, particularly Germany, to halt the construction of Nord Stream 2, an international gas pipeline that will connect Russia and Germany via the Baltic Sea, but without success.

On April 11, the operator of Nord Stream 2 announced that the offshore section of the pipeline under construction surpassed 1,000 km in length, highlighting the progress of the project. However, the project still faces uncertainties. The company has been negotiating for two years with the Danish government for the pipeline to pass through Danish waters, but was asked in March 2019 to consider an alternative plan, which the company submitted on April 15. The operator suspects the motives for delaying the project, but the Danish government explained that "it is not possible to set a deadline due to the great number of matters to consider, including safety." As the prolonged construction period and increasing costs may render the project economically uncertain, the decisions of the Danish government must continue to be watched. Attention must also be paid to the stance of the European Commission, which is yet to present its official view or position on the matter.

5. ME: Rising US-Iran Tension in the Persian Gulf

Sachi Sakanashi, Senior Research Fellow
Manager of Research Group
Acting President, JIME Center

Tensions are rising between the United States and Iran in the Persian Gulf. While US President Donald Trump and Iran's Supreme Leader Ali Khamenei have both stated that they do not want a war, tensions are rising as the US has already dispatched a nuclear aircraft carrier and strategic bombers to the Persian Gulf and has ordered US Embassy staff to leave Iraq.

The situation was triggered by the Trump administration's decision to ban the import of Iranian oil. The Iran nuclear deal agreed under the Obama administration in July 2015 allowed Iran to resume oil exports. However, President Trump pulled out of the deal in May 2018, calling it the "worst deal ever" and reinstated all sanctions against Iran in November 2018. Eight countries and regions including Japan were granted "special exemptions" allowing them to continue importing oil from Iran. However, six months later, the import of Iranian oil was banned this time "without exceptions."

The sanctions are being applied solely by the United States and have no connection with the UN Security Council. However, the effect of the sanctions, which pledge to shut out all financial institutions that handle payments for Iranian oil from the United States, is remarkable. Iranian oil exports are predicted to decline to possibly under 0.25 mb/d in May 2019 from over 2.5 mb/d in May 2018.

As the US sanctions were tightened, Iran initially chose to persevere. However, when the US introduced sanctions that would bring Iran's oil exports to zero, Iran began to act. Timed to coincide with the visits by Foreign Minister Mohammad Javad Zarif to Iran's key oil importers India, Japan, and China, Iran declared that it would suspend some of its obligations under the nuclear deal and "increase both the pace and level of uranium enrichment and expand the nuclear development program if Iran's oil exports are not normalized."

The parties concerned, notably the non-US signatories to the nuclear deal (the United Kingdom, Germany, France, Russia, and China) which remain in the deal to keep it alive, recognize that it is the United States which is forcing Iran to act the way it does. However, none of these countries have enough power to change US policy, and only the US continues to exert "maximum pressure" to make Iran stop resisting the US.

Iran's acceleration of its nuclear development program will inevitably make its neighbors such as Israel and Saudi Arabia nervous. With rising regional tensions, even a small miscalculation could cause a military clash which nobody wants. Relying on the Persian Gulf countries for energy, Japan cannot remain indifferent and thus must make efforts to ease the tension. Countries with good relations with both the US and Iran, such as Switzerland and Oman, have already begun efforts to serve as intermediaries.

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IEEJ e-Newsletter Editor: Yukari Yamashita, Director
IEEJ Newsletter Editor: Ken Koyama, Managing Director
Inui Bldg. Kachidoki, 13-1 Kachidoki 1-chome, Chuo-ku, Tokyo 104-0054
Tel: +81-3-5547-0211 Fax: +81-3-5547-0223