



IEEJ e-NEWSLETTER

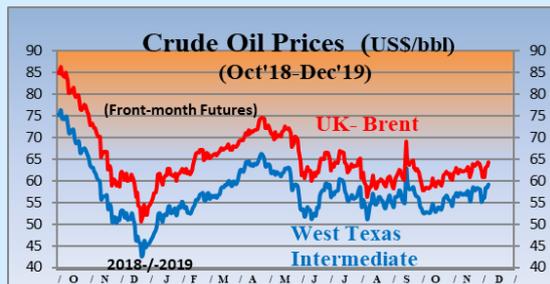
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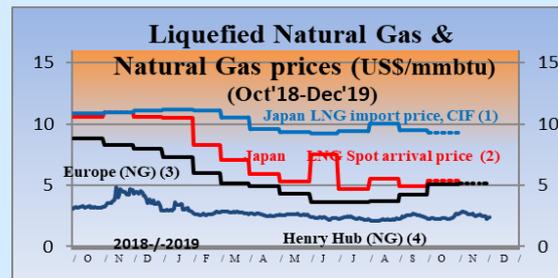
The Institute of Energy Economics, Japan

(As of December 6, 2019)



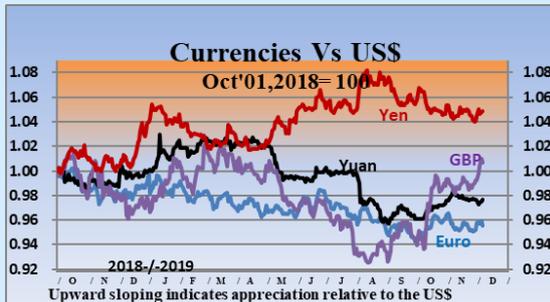
Sources:

- (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



Upward sloping indicates appreciation relative to the US\$

Source: x-rates.com



Source: Investing.com and Finance.Yahoo.com

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Summary

1. Developments in Nuclear Power

Czech Prime Minister Andrej Babiš announced plans to commission a new plant in the Dukovany NPP (four 510 MW Russian PWRs) in 2036, aiming to increase the ratio of the country's nuclear power in the power mix to 40% by 2040.

2. Recent Developments in the Oil Market

Assuming that the uncertain US-China trade talks, OPEC Plus joint production cut, and the situation of oil-producing countries remain stable, the supply and demand for oil is forecasted to remain generally balanced, with prices in 2020 largely unchanged from current levels.

3. Recent Developments in the LNG Market

While global LNG trades grow steadily, LNG demand in Northeast Asia is slowed. More effective use of increasingly flexible LNG requires enhanced supports to infrastructure investment.

4. Update on Policies Related to Climate Change

With Chile cancelling the hosting of COP25 in December, the event is held in Madrid, Spain instead. The US submitted formal notification of its withdrawal from the Paris Agreement to the United Nations.

5. Update on Renewable Energies

In the Subcommittee on System Reform for Renewable Energy as Main Power Source, discussions are under way on the topics aiming for FIT reforms, such as dealing with non-operating commercial PV projects and projects divided into low-voltage plants, and the method for determining grid enhancement costs attributable to renewable energy.

6. ME: Protests Throughout the Region

Protests have erupted in Lebanon, Iraq, and Iran since mid-October. The situation may destabilize further if the already ineffective nuclear deal heads toward collapse. The Middle East is descending into deeper turmoil.



1. Developments in Nuclear Power

Tomoko Murakami, Senior Economist, Manager
Nuclear Energy Group, Strategy Research Unit

On November 1, Rosenergoatom, a group company of the state-run nuclear firm Rosatom, announced that Unit 2 of its Novovoronezh Nuclear Power Plant II (PWR, 1,200 MW) entered commercial operation one month ahead of schedule. With this 33rd commercial reactor of Russia (excluding reactors smaller than 30 MW for supplying heat), Russia's nuclear generation capacity exceeded 30 GW. Russia is on track to surpass Japan, with a generation capacity of about 33 GW as of November 2019, and to become the fourth largest nuclear capacity owner in the world by around 2023 when its Leningrad II Units 1/2 (two 1,200 MW reactors) and Kursk II Units 1/2 (two 1,250 MW reactors) start commercial operation.

In the not too distant future, China, Russia, and the emerging economies to which they supply their technology will be generating most of the world's nuclear power. Iran started full-scale construction of its second plant, Bushehr Unit 2, a Russian reactor, on November 10. The league table of the global nuclear industry beyond 2020 will change beyond recognition.

On November 13, Czech Prime Minister Andrej Babiš, in a press conference held after the second meeting of the Standing Committee for the Construction of New Nuclear Resources which he chairs, announced plans to commission a new plant in the Dukovany NPP (four 510 MW Russian PWRs) by 2036. The schedule is to hold a bid to select a plant vendor by 2021, sign a contract with the vendor by the end of 2022, and to start construction in 2029.

Citing the reason for hurrying to build a new plant, the prime minister named ramping up the country's energy security foundation and reducing GHG emissions. He pointed to the risk that the country may become a net electricity importer in the 2030s as aging domestic coal-fired thermal power plants close one by one, and reiterated his intention to follow through on the plan. The Czech Republic's energy self-sufficiency rate was 64% as of 2017, which is relatively high among European countries. This makes it even more remarkable that the Czech Republic feels a sense of crisis about its energy security, regards nuclear power as the most promising solution, and aims to increase the ratio of nuclear power in the power source mix from the current 30% to 40% by 2040.

On November 11-15, an international workshop for improving the public acceptance of nuclear power was held in Kashiwazaki City, Tsuruga City, and Tokyo attended by communication experts from Asia, Europe, and the US and by representatives of resident groups from nuclear plant hosting communities. The discussions highlighted the need for power companies to promptly release necessary information to residents to enable members of the nuclear power industry to gain the trust of the hosting communities, and the importance of independent third parties acting as intermediaries in the information-sharing and opinion-exchange processes to secure transparency. The achievements and policy proposals from this workshop will be used to set a model for the involvement of stakeholders in nuclear power in Asia.



2. Recent Developments in the Oil Market

Tetsuo Morikawa, Senior Economist, Manager
Oil Group
Fossil Energies & International Cooperation Unit

Oil prices have hardly changed. Brent, which was around \$60 at the end of September after Saudi Arabia restored oil supplies following the disruption caused by the attacks on oil facilities, stayed within a very narrow range of \$61 to \$63 in November. This is because focal factors in the market such as the slowing world economy, the OPEC Plus' joint production cut, and the decelerating increase of US production have temporarily eased, though there is the possibility of turbulence in each of these.

The IMF downgraded its forecast for global growth for 2019 to 3.0% in its World Economic Outlook released in October, causing widespread pessimism over the global business climate and oil prices. In November, however, US stock prices posted a new record high owing to the US rate cut, robust corporate earnings, and hopes for progress in the US-China trade talks, and some suggest that the global economic risk has bottomed out. However, the course of US-China trade talks remains uncertain and the US might still raise tariffs again on December 15. In the monthly Oil Market Report released on November 15, the IEA maintained its estimate for oil demand growth at previous levels (1 mb/d yoy for 2019 and 1.2 mb/d yoy for 2020), which may also be limiting swings in prices.

For the OPEC Plus meeting scheduled for December 5-6, the focus of attention is whether the current production cut target (1.2 mb/d) will be deepened. The market apparently assumes that the cut will continue while maintaining its level, and is not considering further production cut. The US continues to boost production but the number of drilling rigs is declining from its peak of 1,083 at the end of December 2018, reflecting the downward pressure on oil prices. However, the US Energy Information Administration estimates that the country's 2019 increase in crude output will reach 1.3 mb/d yoy, thanks to the easing of capacity limits on the pipeline from Permian, a major shale field, which is raising the incentive for boosting production. While the increase will ease to 1 mb/d yoy in 2020, US production will remain robust nonetheless. Accordingly, the most likely scenario for 2020 is that the oil supply and demand will remain generally in balance and that prices will be relatively stable, provided that the US-China trade talks do not collapse, the OPEC Plus joint cut remains at current levels, and the Middle East suffers no unexpected supply disruptions.

Turning to Japan's policy developments, JOGMEC is expected to play a greater role in various areas such as providing assistance for energy and mineral resource development, resource diplomacy, and stockpiling. The report issued in July by the Natural Resources and Fuel Committee, Advisory Committee for Natural Resources and Energy also refers to utilizing JOGMEC's support scheme and JOGMEC's upstream development data for upstream oil and natural gas deals. It also refers to the importance of JOGMEC working with other governmental organizations to establish an all-Japan support framework for developing rare metals. To secure a stable supply of energy and mineral resources, it is desirable to expand JOGMEC's functions to promote rare metal development, including up to the refining sector, and resource diplomacy leveraging carbon recycling, not to mention the upstream oil and gas developments, by revising the law as necessary.



3. Recent Developments in the LNG Market

Hiroshi Hashimoto, Senior Analyst
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Assessed spot LNG prices in Northeast Asia have been the lowest in ten years for some time, reflecting abundant supply capacity combined with slower market demand. The prices went up beyond USD 7 per million Btu only briefly in the middle of October but have stayed under USD 6 since the end of the month for delivery in December 2019 and January 2020.

The four LNG markets in Northeast Asia imported 158 million tonnes of LNG during the first ten months of 2019, a 2% decrease year-on-year. Japan's import shrunk by 7.2%, or 5 million tonnes to 64.25 million tonnes during the period, while Korea's decreased by 9% and Chinese Taipei's decreased by 5%. On the other hand, China's natural gas production and consumption both increased by 10% during the same ten-month period, although the consumption growth rate was smaller than 15% and 18% in the whole years of 2017 and 2018, respectively. China's natural gas import during the same period amounted to 77.71 million tonnes, an 8% increase year-on-year, of which LNG represented 47.70 million tonnes, a 15% increase over the same period in 2018. But the latter growth rate is still considerably lower than 46% and 41% in the whole years of 2017 and 2018, respectively. And the increase of LNG import in China was largely offset by the decreases in Japan, Korea, and Chinese Taipei.

As global LNG trades increased year-on-year by 12% to nearly 260 million tonnes during the first nine months of 2019, the share of the four importers in Northeast Asia in the world was squeezed to 55% in the nine months from 62% in the twelve months of 2018. On the other hand, the European region including Turkey increased LNG import by more than 80% during the nine-month period in 2019 compared to the same period one year ago to more than 60 million tonnes.

The enabling factors of the significant increase of European LNG import have included previously underutilised receiving terminals, as well as large capacities of underground natural gas storage facilities. As of the end of October 2019, European natural gas storage inventories equated to 71 million tonnes of LNG equivalent, which was 8.7 million tonnes, or 14%, higher than those one year earlier, and represented 98% of the total capacity, much higher than 87% of the peak inventories of 2018 and the highest in the history. Uncertain prospect of talks on gas issues between Russia and Ukraine is also thought to have played a role in the increasing inventories.

So far in 2019, sales contracts and agreements in principle for LNG amounting to annual volumes of 30 million tonnes have been concluded, with no destination restrictions. Investment decisions have been made on five new LNG production projects amounting to 63 million tonnes per year. In addition, in November in the United States, federal regulators approved construction of four additional projects of 48 million-tonne-per-year capacity. Effective utilization of more flexible LNG supply to be created by the above developments would require more infrastructure investment in the LNG downstream as well - including transshipment facilities, FSRUs and LNG bunkering facilities - to which, in turn, Japanese public supports - including those from JOGMEC - could play a role.



4. Update on Policies Related to Climate Change

Takahiko Tagami, Senior Coordinator, Manager
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The month of November was spent responding to the Chilean government's cancellation of its hosting of COP25.

On October 30, President Sebastian Pinera announced that Chile would no longer host COP25 in December. A massive protest had occurred on October 18 after subway tariffs in Santiago, the capital, were raised by 30 pesos (about 4 yen), or 4%. President Pinera declared a state of emergency after midnight that night, dispatched military forces (20,000 troops) for the first time since the end of the military regime in the 1980s, and imposed a curfew. This brought back memories of the days of military rule, bringing more than one million people out into the city squares of Santiago and causing chaos which forced the government to cancel its hosting of COP25. As Spain offered to host COP25 in Madrid, the event will convene as originally scheduled.

On November 4, US State Secretary Mike Pompeo announced that the United States had begun the process of withdrawing from the Paris Agreement and submitted formal notification of its withdrawal to the United Nations. The withdrawal will take effect one year from delivery of the notification. He also stated that in international climate discussions, the United States will continue to offer a realistic and pragmatic model showing innovation and open markets lead to greater prosperity, fewer emissions, and more secure sources of energy, and that the United States will continue to research, innovate, and grow its economy while reducing emissions and extending a helping hand to its friends and partners around the globe.

Meanwhile, Russia accepted the Paris Agreement on October 7. Regarding the ratification of the Paris Agreement, the government previously intended to submit the decision to parliament but, after months of opposition from industry lobbyists, decided to endorse the Paris Agreement by acceptance, which is a simpler procedure than ratification, to circumvent the parliament. Prime Minister Dmitry Medvedev signed the government decree. Both ratification and acceptance have the same binding power over a treaty. Russia is also discussing the need for a greener economy as a European Commission proposal for a carbon border tax could have a big impact on Russia's economy. Moreover, although higher temperatures are creating opportunities including the ice-free Arctic sea and more farmland, associated risks include the thawing and destabilization of the permafrost on which oil and gas infrastructure has been built.

COP25 kicked off in Madrid, Spain on December 2. At COP24 last year in Katowice, Poland, all except for a part of the rulebook for implementing the Paris Agreement was formulated. COP25 will mainly discuss deferred matters, such as guidance on cooperative approaches that involve the use of internationally transferred mitigation outcomes referred to in Article 6, paragraph 2, of the Paris Agreement, and rules, modalities and procedures for the mechanism for mitigation activities established by Article 6, paragraph 4, of the Agreement.



5. Update on Renewable Energies

Yoshiaki Shibata, Senior Economist, Manager
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Electric Power Industry & New and Renewable Energy Unit

Aiming for a fundamental revision of the FIT law, the Subcommittee on System Reform for Renewable Energy as Main Power Source has grouped renewable energy into “competitive power sources” and “regional use power sources” and is holding discussions on shaping the system for each group. The first and second meetings (September 19 and October 15) agreed to apply the FIP (Feed-in-Premium) mechanism to competitive power sources such as solar PV and wind power. A detailed system design process is set to follow.

Meanwhile, the third meeting held on October 28 discussed regional use power sources. First, a proposal was made to evaluate the regional benefit of each power source from the perspective of inputs and outputs for the power station. The evaluation criterion for inputs is whether local resources and energy are being used, and those for outputs are self-consumption, intraregional consumption, and contribution to resilience. Next, the meeting agreed to group the regional use power sources into two types: small commercial solar PV on the one hand, and small geothermal, small hydropower, and biomass on the other. The decision was made to set requirements for self-consumption for the former and requirements for self-consumption and intraregional consumption for the latter, and to maintain the basic framework of the current FIT system for these energies.

At the fourth meeting held on November 18, the Subcommittee mainly discussed dealing with non-operating projects, responding to “projects divided into low-voltage plants” (described later in this report), and the next-generation network in the era of renewable energy as a main power source. Measures have already been taken for non-operating projects, including setting a deadline for signing a connection contract or starting operation, and enabling licenses to be cancelled, the purchase period to be curtailed, and the purchase price to be reduced. However, there are projects which are unlikely to operate even after their purchase period has been curtailed and purchase price lowered, and the grid capacities currently reserved for these projects need to be opened up. For these projects, the members generally agreed to a proposal to take legal procedures to invalidate their licenses if they do not start operation within a certain period.

In a “project divided into low-voltage plants” a large plant located on a single plot of land is divided into several plants each smaller than 50 kilowatts, to escape the safety regulations that apply to large plants. These have been dealt with by revising the FIT licensing criteria, but questionable projects still remain. As such, a proposal to conduct a more rigorous identity check of the registered landowner was proposed and approved.

Regarding the next-generation network in the era of renewable energy as a main power source, an idea was presented on the handling of the share of renewable energy in the overall upgrade cost for inter-regional transmission lines. Upgrading of inter-regional transmission lines has three benefits: enhanced supply stability, lower prices, and reduced CO₂ emissions. Through the discussions so far, a direction has been set that the cost for enhancing supply stability should be borne by the regional general transmission and distribution companies and that the cost for lowering prices and CO₂ should be charged nationwide through transmission fees, with the portion attributable to renewable energy to be paid as a surcharge. The Subcommittee presented a new calculation method in which the cost attributable to renewable energy is obtained by multiplying the overall cost by the share of renewable energy’s benefit in the overall benefit. In this method of calculation, the decrease in fuel consumption and CO₂ from thermal power plants achieved by replacing thermal power with renewable electricity that can escape from curtailment as a result of upgrading of the grid is considered as a benefit of renewable energy.



6. ME: Protests Throughout the Region

Sachi Sakanashi, Senior Research Fellow
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Acting President, JIME Center

A wave of protests is spreading across the Middle East in what has been called a “Second Arab Spring.” In Lebanon, they began in mid-October and forced Prime Minister Saad Hariri to resign at the end of October. In Iraq, there have been more than 300 deaths in clashes with the security forces in a series of protests since the end of October in southern cities as well as in the capital Baghdad. The government has not come up with an effective solution for the protesters who are deeply dissatisfied with the country’s politics and economy, and there are no signs of the situation improving.

Meanwhile, in Iran the public took to the streets on November 15 to protest against a sudden rise in gasoline prices. The rallies quickly spread to dozens of cities across Iran, but the situation remains largely unknown since November 16 when the authorities shut down the Internet. Iran’s regime calls the protesters an “agent of the enemy” and is determined to clamp down on them. According to Amnesty International, more than 100 people have been killed in the protests as of November 20.

These protests have been welcomed by some US officials of the Trump administration as a sign that its “toughest sanctions on Iran” are having an effect. Former US National Security Advisor John Bolton and others have long assumed that the current Iranian regime would collapse from within if “most powerful” sanctions were imposed on the country. Iran’s revenues from oil exports have plummeted since the US launched sanctions to cut Iranian exports to zero. As the country’s finances deteriorated, the Iranian government was forced to drastically curb its subsidies and raise gasoline prices, which had been kept extremely low.

Since the United States left the nuclear deal to put pressure on Iran, the deal has been losing its effectiveness. Iran has already declared the start of its “fourth step” away from the deal and has begun enrichment in an underground uranium enrichment plant called Fordow. Meanwhile, Europe has been unable to meet Iran’s request and build a viable system for trading with Iran amid US sanctions, which has made it seem more likely that the nuclear deal may gradually collapse.

If that happens, the UNSC sanctions against Iran which had ended following the nuclear deal will return. This would further damage Iran’s economy and cause even more frustration among the Iranian people. If at that stage the Iranian regime cannot come up with measures other than clamping down on the protests by the frustrated public, on top of the tense diplomatic situation surrounding Iran, there could also be a crisis within the country as frustration boils over. With protests spreading in neighboring countries too, the Middle East appears to be descending into even deeper turmoil.



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