



IEEJ e-NEWSLETTER

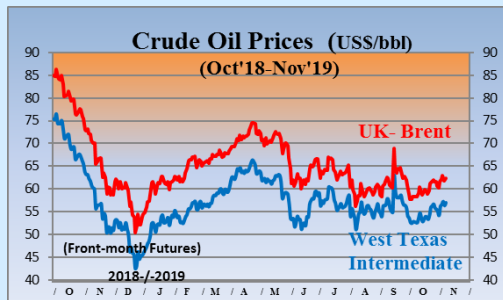
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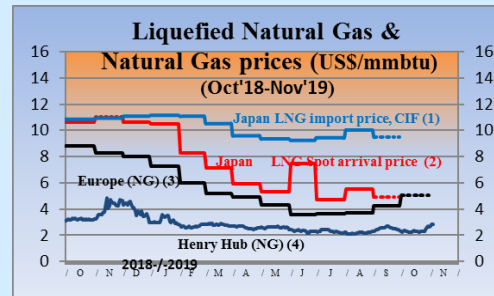
The Institute of Energy Economics, Japan

(As of November 7, 2019)



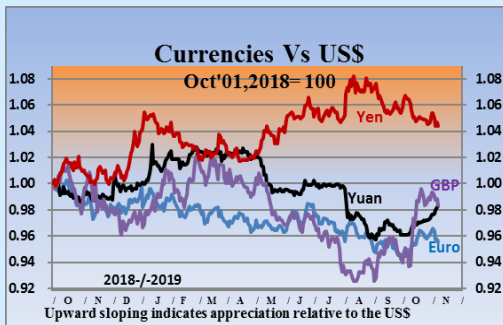
Sources:

- (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



Source: x-rates.com



Source: Investing.com and Finance.Yahoo.com

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Summary

1. Developments in Nuclear Power

On October 23, Russian nuclear firm Rosatom signed a cooperation agreement with Ethiopia in the nuclear energy area. The accelerating cooperation between Russia and emerging countries in Africa and other regions deserves attention.

2. Recent Developments in the Oil Market and LNG Markets

The international oil market remains stable, but the tanker charter market has recently experienced wild fluctuations. In the international LNG market, investment is proceeding to develop demand in South Asia, backed by the easing supply-demand balance.

3. Update on Policies Related to Climate Change

Three international conferences on innovation including ICEF were convened in Tokyo, alongside the Green Innovation Summit hosted by the Prime Minister. The draft roadmap for industrial heat decarbonization was unveiled at ICEF.

4. Update on Renewable Energies

At the Subcommittee on System Reform for Renewable Energy as Main Power Source, which was established under the Strategic Policy Committee in August, fundamental reform of the renewable energy policy based on the FIP scheme is discussed.

5. Update on Policies Related to Energy Conservation

The joint meeting of the Ministry of Economy, Trade and Industry and the Ministry of Transportation was held on October 24, and agreed on the standards and target fiscal year for the “Housing Top Runner Program” as part of the revisions to government regulations and public notifications related to the Revised Building Energy Efficiency Act enacted in May this year.

6. ME Monitoring: Tensions Remain High in the Persian/Arabian Gulf

Tensions remain high in the Persian/Arabian Gulf. Japan is considering not participating in the US-led shipping security initiative but dispatching the Self-Defense Forces on its own. Turkish forces invaded Northern Syria.



1. Developments in Nuclear Power

Tomoko Murakami, Senior Economist, Manager
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On October 23-24, the Summit and Economic Forum Russia-Africa was held in Sochi, Russia. This Summit is held by Russian government inviting the leaders of African countries to promote cooperation between Russia and Africa in the economy and many other areas, with the participation of government officials and industry. Russia-Africa cooperation in nuclear technology was also discussed at the event, culminating in the signing of a cooperation agreement on nuclear energy between Rosatom and Ethiopia on the 23rd. The agreement consolidates the nuclear cooperation agreement that the two countries signed in 2017.

The areas of cooperation are not limited to developing infrastructure and the institutional framework for introducing commercial nuclear reactors in Ethiopia, but also include the use of radiation and nuclear substance control technologies, with a view to establishing a nuclear technology center in Africa in the future. There are many countries in Africa which are hoping to solve their energy woes and raise living standards by using nuclear energy, and Rosatom has worked hard to develop cooperative ties with these countries. Japan has also been engaging with African countries under the Tokyo International Conference on African Development (TICAD), and the approaches of the Russian government and companies could provide a model for Japan in forging cooperative ties with emerging economies in Asia, Africa, and Latin America in nuclear energy.

Africa is not the only focus of Russian attention as a potential partner in nuclear energy. On October 19, Rosatom Director General Alexey Likahchev and Nenad Popovic, Serbian minister in charge of innovations and technological development, signed a cooperative agreement in Belgrade, Serbia on building the Center for Nuclear Science, Technology and Innovations in the country, witnessed by Russian Prime Minister Dmitry Medvedev and Serbian President Alexander Vucic. The Center will produce radiation sources for health care, industry, and agriculture (inhibition of potato sprouting) and conduct wide-ranging basic research activities using a 20 MW demonstration reactor. Nuclear power attracts the most attention among nuclear energy as a whole, but in fact, securing a stable supply of radiation sources which are used widely in health care and agriculture is also a major challenge. Some countries can benefit from accepting nuclear technologies even if they do not have commercial nuclear power stations.

Nuclear new build projects led by Russian companies are business opportunities for nuclear suppliers of developed countries as well. On October 22, Rosatom's subsidiary Rusatom Automated Control Systems (RASU) signed a contract with Framatome and Siemens on the manufacturing and installation of IC equipment in Paks Units 5 and 6, which Rosatom is building in Hungary. Framatome and Siemens won orders for manufacturing and installing IC equipment through a bidding process from RASU, which is acting as the general manager of the construction project. Though not so profitable, such deals may be a promising option for suppliers who wish to maintain their technologies and human resources while avoiding various project risks associated with construction. The case provides an interesting example of technology transfer to emerging economies.



2. Recent Developments in the Oil Market and LNG Markets

Yoshikazu Kobayashi, Senior Economist
Planning & Administration Unit

Despite a series of geopolitical events hitting the Middle East, the international oil market has surprisingly remained stable. Incidents that could have a direct impact on the energy supply continue to occur, with an Iranian tanker being attacked in the Red Sea this month following the attack on Saudi Arabian oil facilities in September. Nevertheless, the Brent price is at \$61.67/bbl at the time of writing (October 24), almost unchanged from before the attacks on Saudi Arabia last month. The downward pressure on oil prices caused by the recent slowdown of the global economy appears to be absorbing this unprecedented rise in geopolitical risk. The IMF has downgraded its forecast for global growth for 2019 in its World Economic Outlook released on October 15, and as the oil demand threatens to slow down further, international oil prices will remain under downward pressure.

Unlike the stable oil market, the spot tanker market has been fluctuating wildly. Concern over the tightening tonnage supply shot up after the US imposed sanctions on Chinese shipping company for allegedly engaging in ship-to-ship operation for Iranian oil, and after ExxonMobil, Unipet and other international oil firms decided to cease chartering tankers that have called on the Venezuelan ports, causing spot VLCC rates from the Middle East to the Far East to quintuple from \$1.9 to \$9.2/bbl from the end of September to early October. Rates eased after the U.S. announced the suspension of sanctions on China until December 20, but the demand for spot tanker tonnage may grow toward the peak winter season. The impact of soaring spot rates on Japanese oil companies should remain limited as they mainly use tankers for time charter to transport oil. However, if the rates do not come down, they may affect the pattern of crude oil procurement by other Asian oil companies that use spot charters and alter the trade flows in the international crude oil market. The US sanctions on the Chinese companies are also affecting the supply and demand for LNG tanker tonnage.

In the international LNG market, the major LNG players of Japan and Europe announced plans to invest in South Asia. Total will partner with Adani Group to operate two LNG terminals in India, supply LNG to India and Bangladesh, and enter the gas retail business in India. JERA announced two investment projects in Bangladesh through which it will start to supply LNG and enter the country's gas-fired thermal power business. The importance of developing LNG demand in Asia has been highlighted for some time, but now that the LNG supply-demand situation looks set to remain unconstrained, making it easier to decide to invest in LNG-related businesses in emerging economies, there is an unprecedented opportunity to expand the LNG business in Asia.

Subcommittee for Oil and Natural Gas Policy was held on October 4. The IEEJ presented its view that, now that the risk in Middle East is heightened, Japan should be cautious about reducing the required inventory days for its oil stockpiling; that an infrastructure upgrade is needed to utilize the Arctic route for LNG trade; and that the government should clarify its policy on carbon recycling.



3. Update on Policies Related to Climate Change

Takahiko Tagami, Senior Coordinator, Manager
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On October 8-11, three international conferences were held in Tokyo as part of the Green Innovation Week: the TCFD (Task Force on Climate-related Financial Disclosures) Summit, ICEF (Innovation for Cool Earth Forum), and RD20 (Research and Development 20 for Clean Energy Technologies). In addition, the Green Innovation Summit was convened on October 9 hosted by the Prime Minister.

The Green Innovation Summit brought together representatives of the three international conferences (TCFD Summit, ICEF, and RD20) to exchange views on ways to accelerate disruptive innovations to achieve a decarbonized society. Prime Minister Abe announced that Japan (i) will inaugurate an International Joint Research Base for Zero Emission Technologies including carbon recycling and hydrogen energy, as a hub for aggregating knowledge from all over the world, (ii) will formulate a Zero Emission Innovation Strategy by the end of 2019 as scheduled in the Long-Term Strategy and encourage public and private sectors to invest in R&D on energy and environment at around 30 trillion yen for a decade, and (iii) has just formulated the Green Investment Guidance, which gives guidelines that are used by financial institutes and other organizations in assessing environmental investments.

On October 8, the first TCFD Summit was convened, attended by the leaders of global companies and financial institutions actively engaged in implementing the TCFD recommendations. In his opening remarks, Bank of England Governor Mark Carney, who was the Chair of the Financial Stability Board when the TCFD recommendations was formulated, said companies should use their next two annual financial reports to road test how they document the impact of the climate emergency on their business before global regulators devise their own rules for reporting climate risks and make them compulsory.

At the 6th Annual Meeting of the ICEF convened on October 9-10, plenary sessions were held on the themes of (1) business decarbonization initiatives, (2) global hydrogen network, and (3) industrial decarbonization. There were twelve concurrent sessions, with sessions related to carbon capture and use such as “CO2 Utilization” and “Impact of Carbon Removal Technologies” receiving attention alongside sessions on “Grid Integration of Renewables” and “Digital Technology for Distributed Energy Resources.” Further, a draft roadmap for industrial heat decarbonization was unveiled at the ICEF. Roughly 10% of global greenhouse gas (GHG) emissions come from the production of heat for industrial processes, which makes decarbonizing this area essential to achieving net-zero emissions, yet technological approaches for doing so are far from maturity. The roadmap explores the challenge of industrial heat decarbonization by discussing four technological approaches for providing low-carbon industrial heat, namely hydrogen, biomass, electrification, and CCUS, while examining decarbonizing heat production in the cement, iron and steel, and chemical industries. The final Roadmap will be released at the COP25 in December following a public comment period.

At the RD20 held on October 11, the representatives of research institutes from the G20 members reviewed the status of clean energy technologies including hydrogen energy and CCUS and discussed collaborations among research institutes.



4. Update on Renewable Energies

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

The first and second meetings of the Subcommittee on System Reform for Renewable Energy as Main Power Source were held in September and October, respectively. Prior to these meetings, renewable energy policy had been discussed at the Large-scale Renewable Energy Introduction and the Next-Generation Power Network set up under the Electricity and Gas Industry Committee of the Committee on Energy Efficiency and Renewable Energy. On the other hand, this Subcommittee is placed under the Strategic Policy Committee alongside the Subcommittee for Sustainable Power Systems. This is because preparing an environment for making renewable energy a main power source must be discussed together with restructuring of the power systems. As noted under the purpose of inauguration, making renewable energy a main power source, alongside decarbonization, is apparently regarded as one of the key strategic policies in light of its contribution to diversifying energy sources and improving the energy self-sufficiency rate, which are necessary for strengthening resilience against disasters and preparing geopolitical risks.

To make renewable energy a main power source, first it is necessary to fundamentally revise the FIT law. In order to divide renewable energy into “competitive power sources” and “regional use power sources,” separate the “competitive power sources (large commercial solar PV and wind power)” from the FIT system and integrate them into the electricity market, the Subcommittee is discussing setting up a system centered around the FIP system.

Before designing the FIP system in detail, it will be necessary to prepare the market environment by (1) introducing a system for trading kWh values in the market, (2) revising the “imbalance exception,” and (3) introducing environmental value trade. Options for item (1) include wholesale electricity trade by renewable operators themselves, bilateral trade with electricity retailers, and wholesale electricity trade through aggregators. The issues pointed out for each option include setting a minimum trading unit that does not hamper participation in trading, the need for incentives to encourage retailers to take up bilateral trading, and the importance of fostering the aggregation business. For item (2), it was decided to also make power producers pay for imbalances, while considering setting up a transition period so that renewable operators can accumulate know-how. For item (3), the Subcommittee agreed that the environmental values should belong to power producers, who could sell non-fossil certificates by themselves.

Next is the FIP system, which is structured such that the sum of the reference price (which uses the market price as an indicator) and the premium will be the income for renewable energy operators. If the premium is set as the difference between a prescribed reference price (equivalent to the FIT purchase price) and the hourly market price, the renewable operators will be able to receive the reference price at all times, be free of business risk, and thus are likely to invest continuously. However, this will not encourage market-conscious activities and so will not be very different from the FIT system (variable premium FIP system). On the other hand, setting a fixed premium (fixed premium FIP system) would incur business risk as revenues would vary depending on the market price, but would encourage renewable power producers to take market-conscious activities. Therefore, a halfway system between variable and fixed premiums, in which the premium changes at a certain interval by changing the reference price, was proposed. This is similar to the German FIP system which uses the monthly average market price (to be precise, the average of only renewable energy traded in the market) as the reference price. Discussions on the detailed system design will continue.



5. Update on Policies Related to Energy Conservation

Naoko Doi, Senior Economist, Manager
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On October 24, the 13th joint meeting of the Ministry of Economy, Trade and Industry and the Ministry of Transportation was held to discuss the partial revision of government regulations and public notifications related to the Revised Building Energy Efficiency Act. The following three revisions were agreed on and will be put into effect in November or later following a public comment period.

First, the scope of the “Housing Top Runner Program” (residential energy incentive program) was expanded to include built-to-order houses and apartments for lease, in addition to the current ready-built houses, and the target fiscal year and standards will be prescribed for each. Second, the designers of detached houses and small buildings will be required to explain the energy conservation performance of their buildings to the builder. A new evaluation system will be introduced to enable the energy conservation performance to be easily evaluated by small- and medium-sized builders, who will be the main producers of those buildings. Third, for apartments, the submission of a construction plan will be mandatory. To lessen the burden on both applicants and reviewers, a new method for calculating the energy efficiency will be adopted, which used to be done separately for each apartment within a building as heat transmission differs by floor and the relative position of the apartment in the building. Meanwhile, plans that do not meet the energy conservation standards will be subject to more rigorous supervision.

Further action is required to promote energy conservation for buildings. The meeting pointed out “the need to indicate the future direction of facilitating energy efficiency remodeling of existing buildings, not only improving new buildings” and “the importance of raising the heat insulation standards for health benefits, in addition to energy efficiency.”

On October 1, the EU adopted new requirements for its eco design regulation with the aim of cutting CO₂ emissions and consumers’ energy tariffs. This regulation requires that manufacturers create designs that are eco-friendly, from the acquisition of raw materials to waste disposal. As a new requirement of the regulation, the EU added the “repairability” and “recyclability” of refrigerators, dishwashers, and television sets. The EU sets “energy conservation as the first priority” among its five energy strategies, and eco design contributes to this policy. The organization believes that the new requirements will cut annual electricity and gas costs per household by 150 euros.

In the United States, after the Trump administration announced a policy to ease auto fuel standards, the California Air Resources Board (CARB) established its own auto fuel economy standards on July 25. These standards are more rigorous than those of the federal government, but CARB and four automakers (Ford, BMW, Honda, and Volkswagen) have agreed to a framework of voluntary compliance. In response, the Department of Justice launched an antitrust probe of the four automakers in September. The federal government, Department of Transportation and EPA have sent letters to CARB urging them to cancel the deal with the four automakers. However, the federal government’s response can be seen as an abuse of authority by the Trump administration, and a lengthy process, including an investigation in Congress, is expected before the situation is resolved.



6. ME Monitoring: Tensions Remain High in the Persian/Arabian Gulf

Shuji Hosaka, Senior Research Fellow
President
JIME Center

The attacks on Saudi Aramco facilities in eastern Saudi Arabia have inflamed tensions in the Persian/Arabian Gulf, with the United States and Saudi Arabia harshly denouncing Iran for the attacks and the US announcing that it would impose tougher sanctions on Iran and send more troops to Saudi Arabia. There was also an attack on an Iranian tanker in the Red Sea, but it is not clear who was responsible. Meanwhile, the US-led shipping security initiative is now joined by Bahrain, Saudi Arabia, and the UAE as well as the US, the United Kingdom, and Australia. Japan will not participate out of consideration for Iran, and is planning to dispatch its Self-Defense Forces to the area independently.

Saudi Arabia's oil production returned to pre-attack levels by early October and oil prices have stabilized. However, the damage is considerable, and Aramco's IPO has reportedly been postponed. Saudi Arabia's opening-up policy has been making progress, with K-pop group BTS doing shows in the country and tourist visas being issued from October. Nationals of 49 countries including Japan can now obtain visas online or at designated airports upon arrival. It was also announced that unmarried non-Saudi couples will be allowed to stay in the same hotel room. On October 23, a royal decree was issued announcing the change of foreign minister and transportation minister.

Since September, Arab countries have seen major demonstrations and riots in Egypt, Iraq, and Lebanon. In all these cases, frustration with the worsening economy has sparked criticism of the government and the situation is dire. In Egypt, the anger of the poor is reaching the limit, with the poverty rate exceeding 30% due to allowance cuts, tax increases, and accelerating inflation. In Iraq, protests by mainly young people have spread throughout the country since October, causing more than 100 deaths in a week. Frustration and anger toward the government had been rising in Iraq due to prolonged electricity cuts amid brutal heat caused by the inability to maintain basic infrastructure, and due to the corruption of politicians and those in power. In Lebanon, people's anger exploded when the government submitted a bill to tax calls on popular message apps such as What'sApp, even as frustration with the poor economy was mounting.

Following the US announcement of the withdrawal of troops from Northern Syria, Turkish forces attacked the region across the border to drive out the Kurdish forces which they consider to be terrorist organizations, and effectively brought the Syrian border area under control. On October 27, President Donald Trump announced that the US had conducted a raid in the Idlib Governorate in northeastern Syria and killed Islamic State leader Baghdadi. IS has not officially confirmed the death of their leader, but there is a risk of retaliatory attacks by IS in those regions it still controls.

Israel had a re-election of its parliament, after which the incumbent Prime Minister Binyamin Netanyahu attempted to start negotiations to form a coalition, but failed, so now opposition leader Benny Gantz is attempting to form a cabinet. Meanwhile, in Tunisia's presidential runoff, former college professor Kais Saied won a sweeping victory.



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