IEEJ e-NEWSLETTER

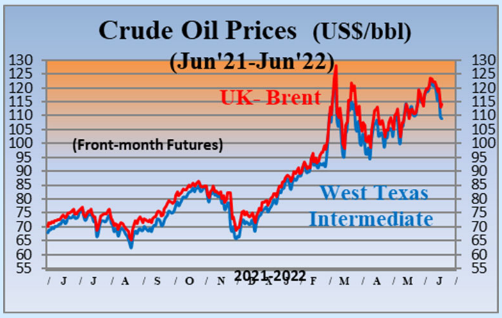
No. 234

(Based on Japanese No. 225)

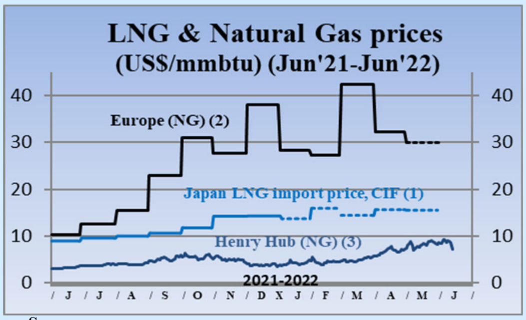
Published: June 20, 2022

The Institute of Energy Economics, Japan

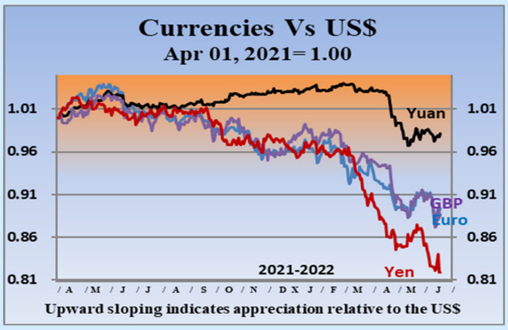
(As of June 20, 2022)



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)



Source: x-rates.com

Sources:
(1) Finance. Yahoo.com
(2) Investing.com

Contents

Summary

1. Developments in Nuclear Power

Finland's Fennovoima terminated the EPC contract for its Hanhikivi Unit 1 nuclear new build project with Rosatom. The decision will have a major impact on the stable supply of power in Northern Europe. Developments must be monitored.

2. Recent Developments in the Oil and LNG Markets

As the LNG trade flow from the United States shifted to Europe, LNG imports in Japan and China decreased year-on-year during the first four months of 2022. The gap between TTF and NBP is widening, while the Henry Hub price is also expensive. Upward pressures are on oil prices, too.

3. Update on Climate Change, Energy Conservation, and Renewable Energies

The Joint Meeting on the Clean Energy Strategy published an interim report on the Clean Energy Strategy. The direction of green transformation (GX) was indicated for 17 industries.

4. Shift Away from Russia Accelerates but the Reality Remains Difficult

Active efforts to shift away from Russia continue in Europe, such as disposing of assets in Russia and securing alternative energy sources. Despite these efforts, it will not be easy to break free from Russia soon, especially for natural gas.

5. China: Growing Attention to the Course of China-Russia Energy Trade

China and Russia are becoming increasingly dependent on each other in energy. The bilateral relationship is attracting closer scrutiny in view of the Ukraine crisis; the countries' trading of energy, particularly long-term trading of natural gas, is likely to expand.

6. ME: Ukraine Crisis Prompting Food and Fuel Crises in Non-oil-producing Countries

Turkey's position as an intermediary for Russia and Ukraine and as the holder of the casting vote over allowing Finland and Sweden to join NATO is growing.

7. Russia: Ukraine Crisis Descends into Quagmire as International Pressure Mounts

As the Ukraine crisis deepens and international pressure on Russia increases, signs are emerging as to what might weaken the foundation of the Putin administration, including the visible impact of economic sanctions on people's lives and calls to end the war.

1. Developments in Nuclear Power

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

On May 2, Finnish electric utility Fennovoima announced that it had terminated the EPC contract for plant delivery with RAOS Project (a European subsidiary of Rosatom) for its Hanhikivi Unit 1 nuclear new build project. The company attributed the termination to the significant delay by RAOS to deliver the project, which has been worsened by the Russian invasion of Ukraine. Fennovoima has also commented, "Unfortunately, the termination of the EPC contract is estimated to have a significant employee impact in Fennovoima and Pyhäjoki region (where Hanhikivi is to be hosted)," and expressed its intention to make utmost effort to mitigate the impact.

Meanwhile, Rosatom stated that the decision is utterly inexplicable as the project has been progressing without issues and that it will consider demanding some form of compensation and engage in dialog to resume construction. This setback for one of the largest power plant construction projects in Northern Europe is a major miscalculation for European countries which are seeking to shift away from Russian natural gas. Further decisions by Fennovoima will be closely watched.

Besides Hanhiviki, the Rosatom group's other international nuclear new build projects seem to be progressing without problem. On May 11, pre-assembly of the containment vessel at Rooppur Unit 1 in Bangladesh began. On the 19th, the first concrete was poured for Unit 4 of the Xudapu Nuclear Power Plant under construction in China. At Rooppur Units 1 and 2 and Xudapu Unit 3, the impact of the pandemic has been kept to a minimum in the past two years and the situation has not changed even after the invasion of Ukraine.

This compares with the Hinkley Point C project (two 1720-MW EPRs) by EDF Energy in Britain. On May 20, EDF Energy announced that it will postpone the start of commercial operation of Hinkley Point C by yet another year to around June 2027, adding to the pandemic-induced delays in the schedule. With the construction cost for the two plants combined having risen further to 25 to 26 billion pounds (at 2015 prices), it is not clear how long it will take to recoup the investment even with the compensation from the FIT-CfD program. On May 20, the UK government announced plans to work with the Nuclear Decommissioning Authority (NDA) to consider measures to support the siting of nuclear plants in Wales; however, currently it is more important for the future of the UK's nuclear program to get Hinkley Point C back on track toward completion. Future actions by the UK government and EDF Energy deserve attention.

2. Recent Developments in the Oil and LNG Markets

Hiroshi Hashimoto, Senior Analyst, Head of Gas Group
Fossil Energies & International Cooperation Unit

Japan imported 25.97 million tonnes of LNG during the first four months of 2022, 8% less than the same period in 2021. Notably LNG import from the United States nearly halved from one year earlier to 1.60 million tonnes. China's LNG import also declined during the four-month period by 17% to 21.59 million tonnes. As a result, Japan surpassed China to return to the position of the largest LNG importer in the world for the first four months of 2022. Most of the decrease of LNG imports in Japan and China was effectively shifted to Europe.

Shipments of LNG to Europe, notably from the United States, have increased in recent months. The United States exported 22 million tonnes of LNG during the first quarter of 2022, the largest ever from one country for a three-month period. The share of the European Union and the United Kingdom in destinations of LNG from the United States has nearly doubled to 65% from around a third in 2020 and 2021. As European gas prices have been often traded at higher levels than Asian spot LNG prices so far in 2022, trade flows have also shifted.

NBP's (the gas hub price in the United Kingdom) discount against TTF (the most prominent gas hub price on the continent) expanded from less than USD 2 at the end of March briefly to USD 14.5 per million Btu in early May. This was partially caused by relatively relaxed supply balance in the United Kingdom with increasing number of laden LNG carriers waiting for discharge at different LNG import terminals around Europe, as well as limited transportation capacity of interconnecting pipelines from the United Kingdom to the continent.

The Henry Hub Futures settlement prices for front-month delivery, after USD 6.032 of 4 April 2022, have been the highest since December 2008 and the highest since the shale revolution, hitting USD 8.783 on 5 May and USD 9.322 on 6 June 2022.

Numerous long-term LNG sales contracts have been negotiated for supply from those grassroots and expansion LNG production projects in the United States in recent weeks. Progresses have been announced for LNG receiving terminal projects in Europe, notably FSRU chartering activities in Germany where LNG imports have been recently proposed.

International crude oil prices have been traded higher than USD 100 per barrel since early May. As EU member countries agreed to ban imports of Russian oil except for volumes transported via pipeline at the end of May, EU's import of Russian oil is expected to decline in the coming months. As other markets cannot absorb all the redirected volumes from Russia, reduction of Russian oil production looks inevitable, resulting in further upward pressures on prices. The balance between the import ban and the sluggish outlook of major economies is expected to dictate the direction of crude oil prices in the coming months.

3. Update on Climate Change, Energy Conservation, and Renewable Energies

Takahiko Tagami, Senior Coordinator, Manager
Climate Change Group
Climate Change and Energy Efficiency Unit

On May 19, the Joint Meeting on the Clean Energy Strategy, which is a joint meeting between the Green Transformation Promotion Subcommittee of the Industrial Structure Council and the Subcommittee on the Next Generation Supply-Demand Structure in View of 2050 Carbon Neutrality of the Advisory Committee for Natural Resources and Energy, released an interim report on the Clean Energy Strategy. For Japan to decarbonize while simultaneously growing and developing its economy, it is essential to transform its energy supply-demand structure and industrial structure. To achieve this, since December 16, 2021, discussions have examined the actual transformation path for each potential growth industry, demand-side energy transformation, and policy measures necessary for transformation into clean-energy-centered socioeconomic and industrial structures. Given Russia's invasion of Ukraine and the tight electricity supply, possible measures for decarbonizing while establishing energy security were also identified.

The interim report indicates the direction of GX (green transformation) for 17 industries: 1) ammonia, 2) hydrogen, 3) offshore wind power, 4) battery cells, 5) nuclear power, 6) CO_2 capture, 7) concrete and cement, 8) sustainable aviation fuel (SAF), 9) synthetic methane, 10) synthetic fuels and green LPG, 11) chemicals, 12) biotech-based *monozukuri* (manufacturing), 13) steel, 14) automobiles, 15) transportation, 16) housing, building, and infrastructure, and 17) foods, and agriculture, forestry and fisheries. The report also identifies the challenges and the direction for commercializing the technologies essential for carbon neutrality, such as CCS and negative emission technologies (NETs).

As for the transformation of the energy supply-demand structure for industry, the report pointed out the need to pursue thorough energy conservation and switching to carbon-free energy consumption as a cross-industry policy, and to draw up appropriate transition paths depending on what technologies are available and the position of the sector in the supply chain.

The report described renewable energy as a power source featuring high energy security and decarbonizing effect, along with nuclear power. By utilizing it to the maximum, it is expected to contribute to shifting away from Russian energy in the short term and to the transition toward decarbonization in the medium to long term. The report set out policy directions such as attracting investments by formulating an offshore wind power industry vision, strengthening inter-regional transmission lines, upgrading grid operations by digitalization, and promoting battery storage and demand response (DR).

The basic concepts to improve the foreseeability of GX investment are "maximum utilization of growth-oriented carbon pricing," and "investment stimulus packages that integrate regulations and support," including roadmaps. Five initiatives for achieving GX were announced (1. budget measures, 2. regulatory and institutional measures, 3. financing package, 4. phased development of the GX league, a voluntary framework for emissions trading, and 5. global strategies for the decarbonization-related industries to gain overseas market share), which initiatives (pillars) are slated to be firmed up toward the end of the year.

4. Europe and US: Shift Away from Russia Accelerates but the Reality Remains Difficult

Ichiro KUTANI, Senior Research Fellow, Manager
Global Energy Group 1, Assistant to Managing Director
Strategy Research Unit

Active efforts to shift away from Russia continue in European countries. European oil majors such as Shell and BP are disposing of their assets in Russia at the cost of posting huge losses, as has been reported in Japanese newspapers. The countries are also scrambling to secure replacements for Russian pipeline gas for natural gas supplies. Being the most dependent on Russian gas, Germany began constructing a floating LNG import terminal and put together ship charter contracts at an extraordinary speed. The country has reportedly managed to reach a basic agreement with Qatar on a new LNG agreement thanks to ministerial-level diplomacy. Italy, among others, is making similar efforts by negotiating on natural gas procurement with neighbors Algeria and Egypt through its leading oil and natural gas company, ENI.

Given their extremely high dependency on Russian gas supplies, however, it will not be easy for European countries to shift away from Russian natural gas soon despite these efforts. It is important to understand first that the LNG supplies which Europe is seeking to use are not particularly large relative to Europe's demand. According to BP's statistics, the world's total LNG imports were about 490 billion m^3 in 2020, while in that same year, Europe (including Turkey) imported roughly 170 billion m^3 of Russian natural gas. If Russian gas is to be replaced with LNG, the global LNG trade volume will have to increase by as much as 35%. It is impossible to increase the volume by so much in a short time, and the impact is already appearing; there have been frequent reports in the media that European natural gas majors are making preparations to pay in rubles, and that the European Commission has set guidelines to enable this. This suggests that while Europe will continue its policy to shift away from Russia, it will do so only gradually and will secure Russian gas imports in the meantime. Faced with the need for a stable energy supply, Europe's decision seems inevitable.

Meanwhile, Russia has begun to implement countermeasures. In late April, Russia cut off natural gas supplies to Bulgaria and Poland which refused to pay for the gas in rubles, and has announced that it will stop transporting gas via the Yamal-Europe pipeline and cut off supplies to Finland which announced its intention to join NATO. Russia has so far acted as a reliable supplier for Europe, but now appears ready to wield its influence without restraint. Japan currently plans to hold on to its interest in Sakhalin, but it must remain vigilant of Russia's moves and be aware of the possibility of supply disruptions and make preparations.

The United States is working with its allies across the Atlantic to further strengthen the anti-Russia network. At the online G7 summit in May, the US announced that it will work toward phasing out or banning the import of Russian oil. The US has increased its LNG exports to Europe, assisting Europe's policy to turn away from Russia. The US is also weaponizing its abundant fossil energy resources in the fight against Russia.

5. China: Growing Attention to the Course of China-Russia Energy Trade

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

According to the China Customs Statistics, China imported 510 million tonnes of crude oil in 2021, of which 16% or 79.66 million tonnes came from Russia. Natural gas imports measured 161.8 billion m^3, including 10% or 16.5 billion m^3 from Russia. Coal imports totaled 320 million tonnes, of which 18% or 56.99 million tonnes came from Russia. For China, Russia is the second largest crude oil supplier after Saudi Arabia, the third largest natural gas supplier after Australia and Turkmenistan, and the second largest coal supplier after Indonesia. Meanwhile, according to the US Energy Information Administration (EIA), Russia exported 240 million tonnes of oil, 252 billion m^3 of natural gas, and 240 million tonnes of coal in 2021, of which exports to China presumably accounted for 33%, 7%, and 24%, respectively. For Russia, China is the largest export destination of its oil and coal. In other words, the two are so mutually dependent in terms of energy that China's stable energy supply is integrally linked with Russia, and Russia's energy exports with China. The Ukraine crisis has amplified attention on the direction of this bilateral energy trade, which is likely to expand going forward for the following reasons.

First, expanding China-Russia energy trade is a fixed policy for both countries. On February 4, before the Ukraine crisis, President Xi Jinping and President Vladimir Putin held talks in Beijing and announced a joint statement to strengthen cooperation. At the same time, cooperative agreements were signed in 15 areas. One of these was an agreement to build pipelines in Russia's Far East to export 10 billion m^3 of Sakhalin's natural gas to China via Vladivostok. When complete, combined with an annual volume of 38 billion m^3 transported via the Power of Siberia Pipeline (signed in May 2014, started operation in December 2019, and planned for completion in 2024), the total natural gas exports by pipeline to China will expand to 48 billion m^3. As for crude oil, Russia plans to export 10 million tonnes annually to China through a pipeline in Kazakhstan. When combined with the East Siberia Pacific Ocean (ESPO) pipeline already in operation, pipeline oil exports to China will increase to 40 million tonnes from the current 30 million.

Next, the US-led economic sanctions against Russia could induce China-Russia trade to expand. According to media reports, Russia is selling energy below international market prices to counter the sanctions. For example, according to one China-Russia broker, "The CIF price of ESPO oil for Chinese ports is set at 10 dollars below those of comparable North Sea Brent oil prices per barrel. Prices are not negotiable. There is no limit on the supply volume. The currency for settlement is open to negotiation (yuan, ruble, euro)." These conditions are surely attractive for oil refiners. As China opposes the sanctions, it would not be surprising if China opts to expand its imports of cheaper Russian energy. In a written interview with the TASS News Agency released on May 5, Chinese Ambassador to Russia Zhang Hanhui said that the two countries will continue to deepen their ties in the energy area in a spirit of fairness and mutual benefit, implying that imports will be expanded.

China and Russia are also thought to be accelerating negotiations to export an estimated 50 billion m^3 of natural gas per year via the West Siberia pipeline via Mongolia. Chinese companies are also believed to be keen to acquire the natural gas and other interests previously held by Shell and other Western oil majors that have pulled out of the development projects in Russia. All of these factors will contribute to expanded natural gas trade in the long term.

6. ME: Ukraine Crisis Prompting Food and Fuel Crises in Non-oil-producing Countries

Shuji HOSAKA, Board Member
Director of JIME Center

Middle Eastern countries are being hit hard by the Ukraine situation. Particularly, in the countries that rely on Russia and Ukraine for wheat and cooking oil, people are facing increasing difficulties in daily life due to soaring energy prices and inflation.

Turkey's presence as an intermediary for Russia and Ukraine is growing. However, the country has not joined the sanctions against Russia and is viewed critically by the West as being pro-Russia. Meanwhile, the plunging Turkish lira has caused consumer prices to surge in the country, adding to the difficulties of making a living.

Furthermore, when Finland and Sweden applied to join NATO (North Atlantic Treaty Organization) as the Ukraine situation worsened, Turkey criticized the countries for supporting the Kurdistan Workers' Party (PKK), whom they designate as a terrorist group, and expressed its intention to oppose their NATO membership. This gives Turkey the casting vote for the expansion of NATO as admission to the Organization requires unanimous approval, and could in turn affect Turkey's admission to the EU in future.

Meanwhile, Europe's effort to break away from its reliance on Russian fossil fuels has brought renewed attention to Middle Eastern oil and gas producing countries as alternative sources. In April, Italy's ENI signed a contract with Algeria's Sonatrach to expand natural gas supplies, and on May 20, the German government exchanged a document with Qatar to strengthen cooperation in energy-related areas, including LNG imports.

On May 13, UAE President Sheikh Khalifa died and was succeeded by Crown Prince Muhammad of Abu Dhabi, his younger half-brother and effectively the most powerful figure in the UAE. The death of the leader of a top oil-producing country caused heads of state and other Western leaders to flock to the UAE, including French President Emanuel Macron, UK Prime Minister Boris Johnson, German President Frank-Walter Steinmeier, and US Vice President Kamala Harris (House of Representatives member Akira Amari visited from Japan).

The West has been pressuring Middle Eastern oil producers to produce more, but has not received a favorable answer. In particular, the "special bilateral relationship" between the US and Saudi Arabia has lost its effect and has soured following the murder of a Saudi journalist. Some speculate that US President Biden may visit Saudi Arabia but the situation remains uncertain.

Another uncertainty is the course of the Joint Comprehensive Plan of Action (JCPOA) with Iran. The JCPOA was believed to be close to being revived in March, but the situation then stagnated as both sides struggled to compromise over the removal of Iran's Islamic Revolutionary Guard Corps from the list of designated foreign terrorist groups. There is also growing international attention to the clash between Israel and Palestine after anger flared up on the Palestinian side over the murder of a renowned Palestinian American journalist.

7. Russia: Ukraine Crisis Descends into Quagmire as International Pressure Mounts

Shoichi ITOH, Manager, Senior Analyst
Global Energy Group 2, Strategy Research Unit

On May 8, Russia celebrated Victory Day for World War II with a military parade in Moscow's Red Square, with no foreign leaders attending, unlike in other years. President Putin delivered a speech in which he justified what Russia calls the "special military operation" as the only correct decision and called for loyalty to the country and solidarity. Despite initial fears, he did not declare that Russia is at war, which would have made it possible to mobilize the entire nation, nor could he boast of any concrete accomplishments.

On May 14, the Ukrainian forces announced that Russian forces had begun to retreat from Kharkiv, the country's second largest city located in northeastern Ukraine. On the 15th, the UK Ministry of Defence shared the view that Russian forces' plan to invade Donbas in eastern Ukraine is falling behind the initial plan. However, on May 11, the pro-Russian provisional government in the southern Ukrainian city of Kherson asked President Putin to incorporate the city into Russia, and on the 21st, the Russian forces announced the complete seizure of the Azovstal iron and steel works in Mariupol in southeastern Ukraine. Amid media reports that Russia's initial aim is to gain control of the entire Donbas region, on May 22 the Ukrainian parliament approved the presidential decree to extend the period of martial law and general mobilization, in place since the start of the invasion, by 90 days.

On May 4, European Commission President von der Leyen announced the sixth round of EU sanctions against Russia that include a ban on oil imports through the end of 2022 and the removal of Russia's largest bank Sberbank from SWIFT. The sanctions are yet to be enacted due to Hungary's opposition, but it is widely believed that with the right conditions, Hungary will eventually agree as even those countries that are more dependent on Russian oil have agreed. On May 12, the Japan-EU summit reaffirmed that the parties will cooperate on the sanctions against Russia, and in a joint statement on the 20th, the G7 Finance Ministers and Central Bank Governors Meeting underscored their commitment to isolate Russia from the global economy. On May 18, Finland and Sweden submitted an official application to join NATO (North Atlantic Treaty Organization). Turkey alone is withholding approval due to its disagreement with Northern European countries over the Kurdish issue, but as with the case of Hungary above, the move is seen as an attempt by Turkish President Erdogan to "obtain better conditions." On May 21, US President Biden signed into law a $20.1 billion supplemental appropriations bill to strengthen military, economic, and humanitarian support to Ukraine, which had passed both houses with bipartisan support.

International pressure against Russia is mounting and is starting to affect people's lives. Inflation has soared to 17.83%, the highest since January 2002 (May 13, 2022, Federal Bureau of Statistics), and on May 17, the Russian Ministry of Economy released a projection that the country's full-year GDP will shrink by 7.8% in 2022. With calls to stop the war emerging even within the Putin administration, social discontent is likely to mount as the Russian military death toll rises. Any impact of the international sanctions on Russia on the administration's stability must be watched closely.

Past IEEJ Events

Energy and Economy Indicators of Japan

IEEJ Homepage Top

Back Numbers of *IEEJ e-Newsletter*

Back Numbers of *IEEJ Newsletter* (Original Japanese Version - Members Only)

IEEJ e-Newsletter **Editor: Yukari Yamashita, Managing Director**
IEEJ j-Newsletter **Editor: Ken Koyama, Senior Managing Director**
The Institute of Energy Economics, Japan (IEEJ)
Inui Bldg. Kachidoki, 13-1 Kachidoki 1-chome, Chuo-ku, Tokyo 104-0054, Japan
Tel: +81-3-5547-0211 Fax: +81-3-5547-0223