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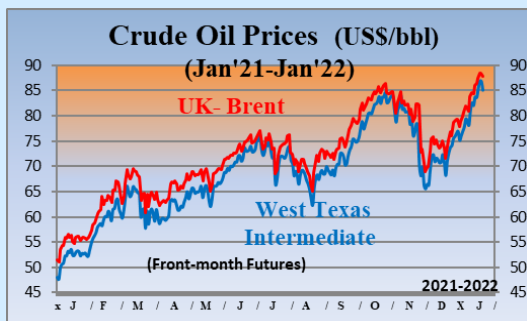
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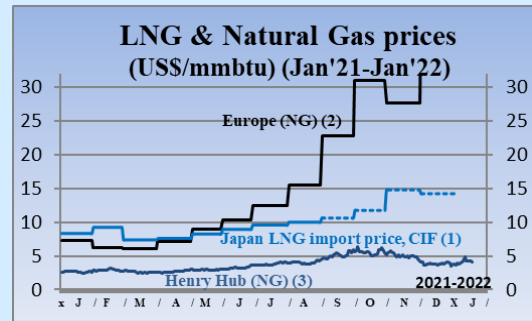
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The Institute of Energy Economics, Japan

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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 (Netherlands Title Transfer Facility)
(4) DOE-EIA, NYMEX (Front-month Futures)



Source: x-rates.com



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

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Summary

【Key Points for 2022 (2)】

I. The Domestic Energy Industry and the Challenges It Faces

1. Oil Industry

Oil demand is expected to recover after the Covid-induced decrease, but there are many uncertainties. The structural decline in oil demand could accelerate amid the current trend toward decarbonization. Progress in the structural business reform efforts of major wholesale companies deserves attention.

2. Electricity and Gas Industries

Spot LNG prices are soaring, together with wholesale electricity prices, which could have an impact on electricity and gas retailers. System and policy design will be considered for both electricity and gas businesses to ensure consistency with decarbonization.

II. International Politics, Geopolitics, and Energy

1. Biden Administration Facing Hardships Heading into the Mid-terms

The November mid-term elections are expected to be challenging for the Democratic Party, which holds a historically slim majority in both houses. Voters are greatly frustrated with inflation. Attention must be paid also to any revision to climate measures in the US.

2. EU: Focus on Surging Energy Prices and Gas Market Decarbonization

EU regulators will issue keenly-awaited analysis and assessment reports on the issue of high energy prices in April. Other issues include the decarbonization of the gas market and the moves to develop a hydrogen market and industry.

3. China: Stability as Top Priority ahead of the Autumn National Congress of CPC

Politics will be a key issue in 2022, when the five-yearly National Congress of CPC will be held. As the leadership places top priority on stability, its success in meeting the dual goals of decarbonization and a stable energy supply deserves attention. Meanwhile, it remains to be seen whether sales of NEVs exceed 5 million units.

4. ME: Oil Producers Start Moving toward Net-Zero Emissions

Middle Eastern oil producing countries have begun to declare their net-zero emission targets, starting with Gulf countries. Covid-19 has been contained and oil prices have recovered, but the economic outlook is uncertain due to the omicron variant.

5. Russia: Putin Leans toward China amid Standoff with the West

Amid tensions with the West over Ukraine and other issues, Russia is strengthening ties with China, which is also wary of the West's "coalition" against it. 2022 will be another tough year for Russia as its growth is expected to slow.



I. The Domestic Energy Industry and the Challenges It Faces

Oil Industry

Akio Ichihara
Board Member
President of The Oil Information Center

With the economic recovery from the Covid-19 pandemic, Japan's fuel oil demand for the first half of FY2021 (April–September) measured 71.18 million KL, up 3.2% year-on-year. Demand for jet fuel increased sharply by 30.6% year-on-year, while gasoline and light oil also showed signs of recovery, growing by 1.7% and 1.8%, respectively. Refineries had an availability factor of 68% in the first half of the fiscal year, up 6% year-on-year.

The domestic petroleum product market has been following the fluctuations in benchmark oil prices with a two- to three-week delay. In 2021, the domestic gasoline price began the year in the upper 130 yen range per liter in January and continued to increase with oil prices as the economy recovered from the pandemic. The price climbed for 10 consecutive weeks starting from the end of August, marking an all-year high of 169.0 yen on November 8, the highest in seven years since August 2014. As the price threatened to exceed 170 yen, the Ministry of Economy, Trade and Industry established an emergency remedial project to cope with the surging price by providing wholesalers with funds for curbing wholesale price increases, to prevent further rises in oil prices from hurting the economic recovery.

While oil demand is expected to recover from the Covid-induced decline in 2022, there is great uncertainty as this will depend on the spread of the omicron variant and whether therapeutic agents become available. Meanwhile, domestic fuel oil demand has already decreased by 38.5% between the peak in FY1999 and FY2020, and as efforts to attain carbon neutrality accelerate, this structural decrease in demand is likely to accelerate in the medium to long term.

The Sixth Strategic Energy Plan positioned oil as the “energy supply of last resort” in a disaster, as did the previous Plan, and required the oil industry to strengthen the fuel supply system so that it can function in emergencies as well as in normal times, while promoting measures to decarbonize.

Major oil wholesale companies have long been transforming their businesses, anticipating a drastic decline in oil demand from the 2040s. However, with decarbonization proceeding faster than expected, they are also working on structural reform of their businesses, including aiming to attain carbon neutrality for their own emissions by 2040 or 2050, concentrating investments on offshore wind power and other renewable energies and hydrogen-related projects, and utilizing existing service stations as a new regional infrastructure that caters to the needs of each region.

Meanwhile, even in the transition phase of energy headed towards decarbonization, the industry will still need to fulfill important roles, including securing stable supplies and supply chains for petroleum products, including for depopulated areas and remote islands, and a resilient supply structure in the event of disasters.



2. Electricity and Gas Industries

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In 2021, many electricity retailers were hit hard by the soaring day-ahead spot electricity price in January. The day-ahead price has been on the rise again since around October due to high LNG prices. In western Japan, some thermal power plants have been reportedly experiencing fuel constraints since early November due to an increase in LNG-fired power plant operation caused by unscheduled outages of coal-fired power plants, and an increase in oil-fired power plant operation due to high LNG prices. However, major power companies currently have more LNG in stock than in past years, and the fuel constraints that occurred during the tight supply period last January and caused power supply constraints are unlikely to be a major problem this winter.

Meanwhile, in Europe, there are concerns that high electricity prices will linger, as electricity futures for 2022 were trading at just under 10 yen/kWh in the Nasdaq market as of December in Nordic countries, which are less susceptible to gas prices, but at almost 30 yen/kWh in the OMIP market in Spain, which is strongly affected by LNG prices. Being highly exposed to LNG prices, Japan should prepare for a daily average price range of 15–20 yen/kWh until at least around March.

Amid unstable primary energy prices, securing medium- to long-term supply capacity is becoming a challenge. To simultaneously pursue carbon neutrality and supply stability, the Subcommittee for Sustainable Power Systems has presented an idea for encouraging new investments by guaranteeing capacity income over the long term by using the capacity market mechanism. The Subcommittee will flesh out the detailed design going forward. While this initiative will apply only to mixed combustion of hydrogen and ammonia in thermal power for the time being, the path up to 2050 must be defined carefully to ensure that assets do not become stranded. Meanwhile, as renewables increase, it is becoming harder to find the optimum operational patterns of energy storage-type equipment such as batteries and pumped-storage hydropower plants that offer adjustment capacity, making them less profitable. The UK is considering supporting pumped-storage hydropower by changing its category to low-carbon power supply. Japan should consider the cases in other countries when determining how to improve the business environment.

Regarding the city gas business, there is concern that the extremely wild fluctuations and increases in spot LNG prices may affect competition among retailers. Because major power companies are required to maintain high LNG stocks to prepare for fuel constraints, the high spot LNG prices could undermine their competitiveness in the gas retail business. Meanwhile, in April 2021, the Study Group on the Future of the Gas Business toward 2050 issued an interim report that describes the essential role of gas in decarbonization, the contribution of gas to resilience, and the industry's active efforts for attaining carbon neutrality, including synthetic methane. The question is, under what kind of framework will the gas industry specifically contribute to the enhanced 2030 GHG reduction goal presented in the Sixth Strategic Energy Plan?



II. International Politics, Geopolitics, and Energy

1. US: Biden Administration Facing Hardships Heading into the Mid-terms

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The US will hold the mid-term elections in November 2022. It is usual for the president's party to lose seats in the mid-term election, and likewise, the media are reporting that the Republicans are in the lead for 2022. If the Republicans gain a majority in one or both houses, by however small a margin, America will have a divided government instead of the current united government with a Democratic president and a Democratic majority in both houses. Legislation struggles to make progress under a divided government; however, not much is expected to change even if the government becomes divided. Currently, the Democrats have a majority in both houses, but with an extremely small margin: they have a majority of 51 seats in the 50-50 equally split Senate only by counting Vice President Harris and have a mere 10-seat margin in the House. In the past, the Clinton government, for example, after losing the mid-terms and becoming a divided government, focused on Congressional affairs, and achieved legislative success by listening to the opposition party and seeking the middle ground. Thus, the same as during the past year, the key point will be whether the Biden administration and the Republicans can meet in the middle and whether the progressive Democrats will accept that.

The Biden administration enacted the 1.9 trillion-dollar American Rescue Plan Act in March and the 1.2 trillion-dollar Infrastructure Investment and Jobs Act in November 2021. This is a remarkable legislative success compared with any past governments. However, the infrastructure bill was slashed from the initial plan of 2.3 trillion dollars, while the climate measures portion, a topic of fierce partisan contest, had to be moved to the Build Back Better bill (which covers childcare support and free education, alongside climate measures), which is still under deliberation. The Build Back Better bill, too, has been halved from the initial 3.5 trillion dollars to 1.75 trillion. Even after this cut to appease the Republicans and Democratic fiscal conservatives, the Democrats are still wary that the bill might accelerate inflation.

Inflation is one of the major threats to the Biden administration delivering on key promises and to the support for the Democratic Party. The current inflation is caused by the excess money supply injected through the financial easing and fiscal stimuli of national governments after the 2008 financial crisis, the pandemic-induced supply chain disruptions around the world, as well as bottlenecks at ports on the US West Coast (the result of a historical lack of infrastructure investment), and the Biden administration has already begun strengthening the supply chains for semiconductor production, large-capacity batteries including for EVs, important minerals including rare earths, medicines, agricultural produce, and foods. It is almost certain, however, that the ambitious decarbonization commitments made by countries around the world, including the US, as well as their municipalities and companies, have indirectly disrupted the supply-demand balance of these essential supplies and fossil fuels.

During the Trump presidency, the US was so reluctant to take climate measures that it even questioned the scientific knowledge on climate change issued by the IPCC. In 2022, attention will focus on whether the US issues a proposal to explore a realistic timeline and intensity for climate measures, for the stability of supply chains and in turn the economy of the US and the world.



2. EU: Focus on Surging Energy Prices and Gas Market Decarbonization

Kei Shimogori, Senior Researcher
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Surging energy prices remain an urgent issue in Europe, and measures will continue to be taken in 2022. In November 2021, the European Union Agency for the Cooperation of Energy Regulators (ACER) and the European Securities and Markets Authority each released an interim report on the functions of the energy and carbon markets. The final reports are due in April 2022, and will analyze and assess the current EU-wide energy market design, which deserves attention.

In the UK, following the rapid exit of a string of suppliers from the market due to surging energy prices, the Office of Gas and Electricity Markets announced that they will conduct a stress test of energy supplier finances from January 2022. The UK's initiative should serve as a reference not only for the EU but also for other countries with a liberated energy market.

In December 2021, the European Commission proposed a new framework for decarbonizing the gas market, promoting hydrogen energy, and reducing methane emissions. The Hydrogen and Decarbonized Gas Package (regulation and directive) aims to facilitate the transition from natural gas to renewable and low-carbon gases (particularly biomethane and hydrogen) and to make the gas system more resilient.

One of the key objectives of the Package is to establish a hydrogen market, prepare an optimal investment environment, and assist the development of dedicated hydrogen infrastructure. Further, the European Network of Network Operators for Hydrogen (ENNOH) will be established as a new governance structure to promote dedicated infrastructure and cross-border adjustment, construction of cross-border networks, and formulation of technical rules. In November 2021, the European Clean Hydrogen Alliance released a list of hydrogen-related projects currently under way by European industry. The list included more than 750 projects spanning various areas from hydrogen production to its use in industry, mobility, energy, and buildings. In 2022, in addition to the progress of discussions on the Package, attention must be paid to how the hydrogen market and industry develop in the EU as these numerous projects are implemented.

The Council of the European Union will be chaired by France in the first half of 2022. President Macron has named promotion of a new growth model for the EU as one of the focuses during France's term as chair. The President's goals during the term include introducing mirror clauses to avoid unfair competition between imports and locally-produced goods in the EU, accelerating the Carbon Border Adjustment Mechanism, and combating deforestation related to imports. President Macron's leadership deserves attention as France heads toward the presidential and parliamentary elections in 2022.



3. China: Stability as Top Priority ahead of the Autumn National Congress of CPC

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2021 was the first year of China's "second centenary goal" of building a "modern socialist country" with the world's highest national strength and international influence, and the first year of the Fourteenth 5-Year plan, which is a milestone in reaching the goal. The government worked hard to fully contain the Covid-19 pandemic and revive the economy, and achieved success. There were 12,852 Covid cases between January 1 and December 14, 2021, and the cumulative total up to December 14 was 99,923. The GDP growth rate showed slowdown from 18.3% for Q1, to 7.9% for Q2, and to 4.9% for Q3, but is expected to be around 8% for the full year, and thus the goal of "at least 6%" is certain to be surpassed. The growth rate is high compared with other countries.

2021 was also a year which saw massive efforts toward reaching peak CO₂ emissions before 2030 and net-zero GHG emissions before 2060 (see the December 2021 edition of this Newsletter). As an international commitment, China raised its 2030 NDC and released its long-term low-emission strategy. Within the country, the government set forth the basic policy and specific measures for achieving the targets. As examples of specific efforts, the country established the world's largest national emissions trading system that covers 4.5 billion tonnes of CO₂ emissions and commenced its operation on July 16. A cumulative total of 84.95 million tonnes worth 3.5 billion yuan were traded in the 100 business days through December 13 (1 yuan = 17.8 yen). Further, renewable power sources increased from 935 GW at the end of 2020 to 1,002 GW at the end of October 2021 (including 385 GW of hydropower, 299 GW of wind power, and 282 GW of solar PV and heat), and the share of renewables in generation capacity increased 1 point to 43.5%. The electrification of cars also made progress with 2.99 million new energy vehicles (NEVs) sold between January and November, 2.2 times the 2020 total, and their share of total sales reached 12.7%, up 7.3 points. In November, sales of NEVs reached 450,000 units, accounting for 17.8%.

2022 is a year of politics in which the five-yearly National Congress of Communist Party of China (CPC), the 20th, will be held in the autumn. At the Central Economic Work Conference held in December 2021, the leadership set "seeking progress, with stability as the top priority (穩字當頭、穩中求進)" as the basic governance policy for 2022. The reason for "setting stability as the top priority" is because the government considers that stable economic growth and stable expansion of domestic markets, international trade, and foreign investment are crucial for the success of the 20th National Party Congress, which will decide on Xi's third term, as well as for turning around worsening foreign relations, particularly with the US. To ease the downward pressure on the economy, it was decided to introduce new tax reductions and infrastructure investment ahead of schedule and to support the housing market in line with real demand. The target growth rate has yet to be announced, but the Chinese Academy of Social Sciences predicted a rate of around 5.3% in its study released on December 6, 2021.

At the Central Economic Work Conference mentioned earlier, the simultaneous pursuit of decarbonization and a stable supply of energy was emphasized. Given the current dominance of coal, the decision was made to secure a stable electricity supply through the clean use of coal-fired power, then to expand renewables, particularly variable renewable energies. Key points for 2022 include whether electricity supply problems will be resolved and whether NEV sales will surpass 5 million units.



4. ME: Oil Producers Start Moving toward Net-Zero Emissions

Shuji HOSAKA, Board Member
Director of JIME Center

The Covid-19 pandemic hit Middle Eastern oil-producing countries hard, causing oil demand to weaken and oil prices to plummet. However, hopeful signs began to appear in the second half of 2021 as the pandemic came under control mainly in the Gulf countries and oil prices recovered. However, the economic future became uncertain again with the emergence of the omicron variant at the end of last year. The Middle East is scheduled to host a series of major international events in 2022, including the Dubai Expo (continuing from last year), FIFA World Cup Qatar 2022, and COP27 in Egypt. A resurgence of the pandemic could affect these events.

Meanwhile, in 2021, there were changes in the Middle East regarding climate measures, particularly in Gulf oil-producing countries which have been slow to act compared to Western countries. The UAE declared its net-zero emissions target for 2050, followed by Saudi Arabia and Bahrain which set 2060 as their goal. Other countries are expected to follow suit in declaring net-zero emission targets.

These countries are also switching to renewable energies, mainly solar PV, and have also announced various projects, mainly for hydrogen and ammonia. In recent years, there is growing attention on the geothermal power generation potential of Saudi Arabia. However, many Middle Eastern countries, whether oil producers or not, are seeing their economies deteriorate, and their top priority is rebuilding the domestic economy.

For example, in Iran, Ebrahim Raisi, purportedly a conservative hardliner, became president, and Iran began talks with the US and other countries to restart the Iran nuclear deal (JCPOA). However, as the opinions of Iran and the US still differ greatly, restarting the JCPOA remains a distant prospect. Meanwhile, the Iranian economy is worsening and public frustration is mounting. In particular, extreme water shortages caused by droughts are sparking anti-government protests in various parts of the country. Mounting frustration and public anger are also approaching the limit in Iraq and Lebanon, which have been hit by serious electricity and fuel shortages. Meanwhile, the withdrawal of US military forces from Iraq at the end of 2021 is not expected to cause major problems.

Regarding foreign relations, the Qatar crisis was resolved in early 2021 and the relationships among GCC countries improved. This has caused changes in the overall power balance in the Middle East, and moves toward reconciliation have emerged between the GCC and Iran, Syria, and Turkey. However, there is no end in sight for the war in Yemen, and turmoil is also deepening in North African countries. Relations between Algeria and Morocco are strained to breaking-point, while in Tunisia, the opposition parties and the people are becoming frustrated with the concentration of power in the president. Emerging from the long civil war, Libya was scheduled to hold a presidential election on December 24, 2021, but it was postponed due to disputes about fundamental rules for it. Few expect the election to restore order in the country.

5. Russia: Putin Leans toward China amid Standoff with the West

Shoichi Itoh, Manager, Senior Analyst
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Tensions between Russia and the West are coming to a head yet again over Ukraine. On December 3, 2021, the Washington Post, based on reports of US intelligence agencies and others, released a shocking report on Russia's plot to invade Ukraine by mobilizing as many as 175,000 troops in the early 2022. Just a week earlier, in a press conference on November 26, Ukrainian President Zelensky had alerted the international community that he had received information on a plot involving Russia to topple the Ukrainian government on December 1. The Russian government dismissed the plot to invade Ukraine and its involvement in a coup as a complete fabrication.

On December 7, 2021, in a virtual summit with Russia, US President Biden issued a stern warning that the US and its allies would respond with strong economic and other measures in the event of a military invasion, which would have profound consequences for Russia, but in effect, did not reach an agreement with President Putin who demanded guarantees that NATO would not expand eastward toward Russia's borders, including into Ukraine. Government officials and experts of both countries are now more openly pessimistic about any improvement in bilateral relations in the near future. The day after the summit, President Biden held a virtual summit with the leaders of nine NATO member states in central and Eastern Europe and the Baltic region and made clear that the US will be strongly involved in the "Ukraine crisis." On December 12, the G7 foreign ministers issued a joint statement to prevent the invasion of Ukraine.

While the West is firmly united in its policies toward Russia, on December 15, 2021, Russia held a video summit with China, which dislikes the West's "coalition" against China. President Putin promised to attend the opening ceremony of the Beijing Olympics scheduled for February 2022, which the leaders of the UK, US, Canada, and others decided to boycott diplomatically. Yuri Ushakov, Assistant to the President of Russia for Foreign Policy, expressed support for President Xi Jinping who hailed China-Russia relations and quoted him as saying: "although they [China and Russia] are not allied, their effectiveness even exceeds this level." China and Russia have reportedly agreed to cooperate in international affairs in the Asia Pacific, by countering groups such as QUAD (Japan, the US, Australia, and India) and AUKUS (the UK, the US, and Australia).

In its Russia Economic Report released on December 1, 2021, the World Bank predicted Russia's GDP growth rate would reach 4.3% in 2021 as it rebounds from the slump the year before, but then slow to 2.4% for 2022 (oil price: \$74/bbl) and 1.8% for 2023 (oil price: \$65/bbl). As early signs of worsening relations with the West become a reality and as tougher sanctions become more likely, Russia is reportedly in talks with China on the possibility of building a financial system that is independent of the West. Russia also hopes to attract investment from China. However, as of the first half of 2021, China's direct investment in Russia is less than 1% of all foreign investments.

In 2022, Japan will be preparing for the G7 summit it will host in 2023. Japan must exercise caution in its diplomatic relations with Russia, mindful of a possible worsening of ties between the West and Russia, and with China too.



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