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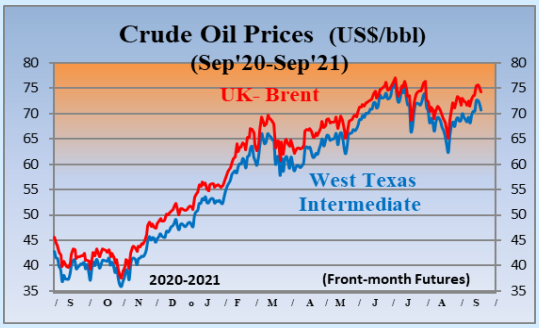
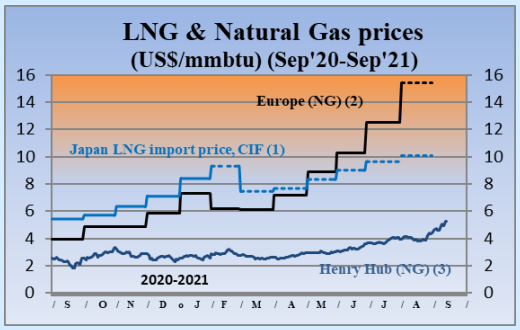
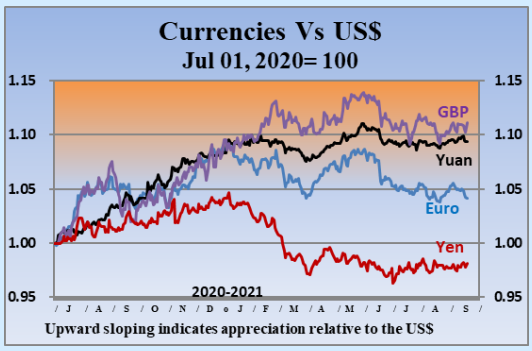


Sources:
(1) DOE-EIA
(2) Investing.com



Sources:
(1) Ministry of Finance "Japan Trade Statistics"
(2) World Bank (Netherland Title Transfer Facility)
(3) DOE-EIA, NYMEX (Front-month Futures)



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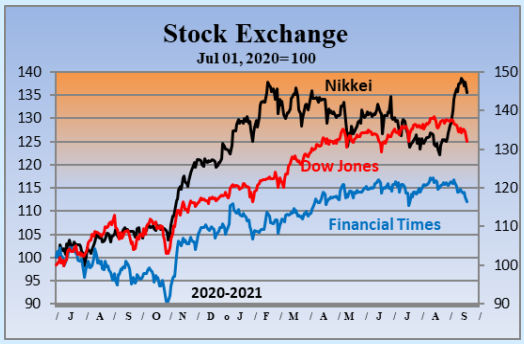

Sources:
(1) Finance. Yahoo.com
(2) Investing.com

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The UK released its hydrogen strategy. The strategy sets different time frames, as well as a roadmap for the production, networks, and use of hydrogen, key milestones, and necessary supporting policies.

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1. US: Political Bargaining Accelerates to Pass Infrastructure Bill in Late September

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On August 10, the US Senate passed the bipartisan Infrastructure Investment and Jobs Act by 69 votes to 30. The Senate bill is a $1.2 trillion package including $550 billion of new spending, and is a huge reduction from the $2.2 trillion infrastructure resilience and decarbonization investment plan that President Biden announced in April. Its scope was also scaled back. The President's proposal included decarbonizing the power sector and expanding the use of EVs, as well as climate measures (such as reinforcing power grids and EV charger facilities, and making buildings more efficient), funded by raising taxes for companies and the rich. In contrast, although the Senate bill appropriates $15 billion for expanding the use of EVs, $65 billion for modernizing power grids (including R&D for carbon capture and hydrogen), and $250 billion for transportation infrastructure, it has removed $566 billion in investments for innovative R&D and building domestic manufacturing hubs and $363 billion in tax breaks for clean energy, and has dropped the proposed tax raises. The Senate bill gave priority to the bipartisan agreement, and compromised by cutting back the scale and softening the emphasis on decarbonization.

On August 23, the House returned from its summer recess and resumed legislative activities. There is a growing rift among the House Democrats on how to proceed with the infrastructure bill: whether to deliberate and vote on the infrastructure bill passed from the Senate immediately, or whether to do so simultaneously with the 2022 budget resolution and the voting rights bill that prevents the violation of voting rights by state governments, in which case the infrastructure vote would be delayed. Progressive House Democrats lawmakers, who account for the majority, are eyeing appropriating $3.5 trillion for climate measures and social security including free preschool and community college and paid family leave, in addition to the $1.2 trillion infrastructure bill. However, with no prospect of gaining Republican support, Democrats intend to pass the $3.5 trillion social security spending through a special procedure for budget deliberation called "financial reconciliation" that allows the bill to pass with only a simple Senate majority (51 votes from 50 Democratic lawmakers plus Vice President Harris). Financial reconciliation becomes possible only after passing the budget resolution, which sets the federal government revenue and expenditure for the fiscal year.

The fiscal 2022 budget resolution passed the Senate on August 11 in a partisan vote with 50 votes to 49. All Senate Republicans voted against the resolution as it was clear that Democrats would push ahead with the $3.5 trillion reconciliation once it passes. However, with an eye on the midterm election next year, nine moderate Democrats in the House and two in the Senate declared that they would vote against both the bill and the reconciliation if House Speaker Nancy Pelosi and progressive Democrats insist on the liberal public promise and delay the vote on the infrastructure bill. With such a small difference in votes between the parties, a rebellion by moderates would lead directly to the rejection of the bill.

This game of chicken between moderates and progressives, holding the president's infrastructure legislation hostage, was suspended temporarily by Speaker Pelosi's proposal to advance the voting rights bill and vote on the infrastructure bill by September 27. The House immediately voted on the voting rights bill and the budget resolution sent from the Senate. All Republicans voted against both of them. However, Democrats have yet to agree on even the faintest outline of which policies to include in the $3.5 trillion financial reconciliation. Given that the president's party almost always loses seats in the midterm elections, there are fears that Democrats may suffer a major loss of seats as President Biden's popularity declines with the recent surge in Covid-19 and the situation in Afghanistan. Even so, progressives show no sign of easing their demands; rather, the political game is intensifying.

2. EU: UK Releases Its Hydrogen Strategy

Kei SHIMOGORI, Senior Researcher
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Strategy Research Unit

On August 17, the United Kingdom released its first-ever hydrogen strategy. The strategy is based on the Ten Point Plan for a Green Industrial Revolution announced by Prime Minister Boris Johnson in November 2020 and sets the goal of obtaining the capacity to produce 5 GW of low-carbon hydrogen by 2030. The Strategy admits that the role of hydrogen in 2030 or 2050 is highly uncertain, including the production method and the scale of demand, but that support for new technologies must start in the 2020s in the commercial, technological, and user sectors across the entire value chain. The Strategy is based on different timeframes, namely the early 2020s, the mid and late 2020s, and the mid-2030s, and sets a roadmap for the production, networks, and use of hydrogen, key milestones, and necessary support policies.

Taking the mid-2020s (2025–2027) as an example, the roadmap sets the following goals. Production: establishing large-scale CCUS-enabled production of blue hydrogen in at least one location, and expanding the scale of water electrolytic production of green hydrogen. Networks: enhancing dedicated small-scale pipelines and trucking and promoting small-scale storage. Use: applications to industry and transport (heavy goods vehicles (HGVs), rail and shipping trials), use of heat in houses, and hydrogen blending. As shown by the roadmap, the UK's hydrogen strategy is not limited to a single hydrogen production technology. It intends to use both green and blue hydrogen, currently comprises nine hydrogen production technologies, and consultations are underway toward designing the UK Low Carbon Hydrogen Standard. The scope of the consultations includes: (1) setting the scope of and designing the system for the Net Zero Hydrogen Fund to support the commercial deployment of new low-carbon hydrogen production plants (240 million pounds, or roughly 36 billion yen), and (2) a business model for narrowing the cost gap between low-carbon hydrogen and fossil fuels, such as applying the CfD mechanism to low-carbon hydrogen. The details are to be released in early 2022, based on the results of the consultations.

In the Ten Point Plan for a Green Industrial Revolution, the UK government set a milestone to complete the trials necessary to mix gas with 20% hydrogen in the residential gas networks by 2023. The Hydrogen Strategy goes one step further, and aims to assess the cost performance of mixing hydrogen into existing gas networks by autumn 2022 and to make the final policy decision in late 2023.

Other European countries are also looking into using hydrogen in their gas networks. One example is the Netherlands, whose domestic natural gas production is declining. In its report for the first half of 2021 released in July, Dutch Gasunie announced that it will invest 7 billion euros by 2030 at the request of the government to build a hydrogen network. The network, which is scheduled to be built by 2027, will use existing gas networks for 85% of the pipelines and is believed to cost only one quarter of that of a new build. While hydrogen entails uncertainties such as future demand, supply, and transport, the concrete efforts being pursued by various countries amid such circumstances must be watched.

3. China: Ramping Up Efforts to Make Renewables a Main Electricity Source

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China is aiming to achieve net-zero carbon emissions before 2060. To meet this goal, it is necessary to make renewables, mainly wind power and solar PV, a main power source. This involves challenges including ensuring grid stability and reducing integration costs. The government has released a series of measures in quick succession.

On July 29, the National Development and Reform Commission (NDRC) issued a notice on further improving the time-of-use electricity tariff mechanism. Since the 1980s, China has been implementing a seasonal and time-of-day-based (peak, daytime excluding peak, and nighttime ("valley" hours)) electricity tariff system nationwide to level the electricity demand and ease supply-demand crunches. Meanwhile, fluctuations in demand have widened and the demand structure has changed in recent years with the spread of air-conditioning, resulting in the occurrence of peak loads in winter as well as in summer. Further, an increase in variable power sources has caused significant fluctuations in supply capacity. According to NDRC, while summer and winter peak hours are less than 60 hours in aggregate in most regions, an estimated installed capacity of over 100 GW is required to deal with the peak, pushing up the cost of stabilizing supply and demand. The key points of the new electricity tariff system are a larger electricity tariff difference and finer time slots. First, the price ratio between peak hours and "valley" hours will increase from the current level of a maximum of 3:1 to at least 4:1 in regions where the peak-to-valley excess ratio is expected to be over 40%, and to at least 3:1 in other regions. This will make the peak-hour electricity tariffs more expensive than they are now. Further, the hours with a load of 95% of the maximum electricity generation or higher are designated as "high peak hours," with a price that is 20% higher than the peak price. Furthermore, for regions with a high ratio of renewables and a serious demand shortage in some hours, a "deep valley price," which is 20% lower than the "valley" price, will be introduced. Consequently, in regions where the peak-to-valley excess ratio exceeds 40%, the price difference between the "high peak" and "deep valley" hours will be six times or more.

The new electricity tariff will be applied first to the industrial and commercial sectors and then will be expanded to the residential sector when conditions are met. Incentive measures include simultaneously promoting the following, to spur the expansion of variable renewable electricity and ensure grid stability: (1) peak shifting (by utilizing batteries), peak cutting (introducing variable solar PV, etc.), and the bottom-up approach (charging EVs, etc.) on the demand side, (2) securing output adjustment capacity for electricity sources (retrofitting CCS coal thermal power for flexibility and increasing gas thermal power, expanding pumped-storage hydroelectricity plant and batteries, etc.) on the power generation side, and (3) enhancing power storage capacity on the electricity network side. Regarding any rise in integration costs resulting from these measures, NDRC states that the revenue from electricity sales (paid through tariffs by all consumers) will not change. However, it will be a challenge to control the rise in costs.

Measures exclusively for enhancing energy storage capacities have also been announced. On July 23, NDRC and the National Energy Administration issued the Guidance on Accelerating the Development of New Energy Storage. The Guidance defines new energy storage technologies to include all storage technologies aside from pumped-storage hydroelectricity, and sets a goal of increasing their combined capacity from 3.81 GW in 2020 to at least 30 GW in 2025, and further, to a level necessary for renewables to serve as a main power source in 2030. Then, on August 10, a notice was issued to encourage renewable power producers to acquire energy storage capacity. The notice promises to allow additional grid connection capacity for those renewable power producers that have a certain level of storage capacity, whether built for themselves or purchased.

Making renewables a main power source has now become a global movement. To achieve this, China is accelerating the establishment of an institutional framework. Developments in this effort and their effects will continue to be monitored.

4. ME: Taliban Movement Seizes Control of Afghanistan

Shuji HOSAKA
Director of JIME Center

The Taliban, an insurgent group opposed to the Afghan government, rapidly expanded its area of control and entered the capital, Kabul, on August 15. President Ghani fled to the UAE and his government collapsed. The Taliban has started the power transition process, and a coordination council has reportedly been set up, joined by former President Karzai and former Chief Executive of Afghanistan Abdullah, to discuss the change of government. Many foreign embassies have closed temporarily and embassy staff have been evacuated. The Japanese Embassy has also evacuated all embassy staff and opened an interim office in Doha, Qatar.

The Taliban has promised to continue to allow education and jobs for women, as well as business activities including banking and investment, and that no attacks on other countries by foreign combatants operating in Afghanistan will be tolerated. However, whether the international community will recognize the new government depends on whether the Taliban lives up to its promises. Islamic State, an international terrorist group which is against the Taliban, issued a statement condemning them, and on August 26, carried out a suicide bombing that killed and injured many U.S. military members and local citizens.

Meanwhile, in Tunisia, anti-government protests have broken out in various parts and on July 25, President Saied dismissed Prime Minister Mechichi and suspended parliament, fueling confrontation within the country. On August 24, Algeria announced that it had cut diplomatic ties with Morocco.

In both Turkey and Algeria, forest fires have broken out in more than one hundred places, causing many deaths and injuries. The fires have also caused indirect damage in Turkey, including the crash of a Russian-manufactured amphibious fire-fighting aircraft while in operation. Algeria's fires are suspected to have been caused by torching.

In Iran, the new President Raisi submitted a list of cabinet members to parliament and gained approval. Many of the new cabinet of hardliners are veterans in their respective areas of responsibility, including former Deputy Foreign Minister Hossein Amir-Abdollahian who was appointed as Foreign Minister, and Javad Owji, former managing director of the National Iranian Gas Company (NIGC), who was appointed as oil minister.

On July 29, an Israeli-operated oil tanker owned by a Japanese shipping company was attacked off the coast of Oman, killing two crew members. The G7 foreign ministers issued a joint statement on August 6 condemning the attack and blaming Iran for involvement.

On August 28, the Baghdad Conference for Cooperation and Partnership began in Iraq, joined by the presidents of Egypt and France, the King of Jordan, the Emir of Qatar, the Vice President of the UAE, and the foreign ministers of Saudi Arabia and Iran. The conference saw improvement in ties between Qatar and UAE, but it is not clear whether there were direct talks between adversaries Saudi Arabia and Iran.

Japan's Foreign Minister Motegi visited Egypt, Palestine, Israel, Jordan, Turkey, Iraq, Iran, and Qatar from August 15 through 24.

5. Russia: Developments in Hydrogen and Moves around Nord Stream 2

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On August 5, the Russian government approved the Concept for the Development of Hydrogen Energy in Russia for realizing a low-carbon society. In the first phase (from the present to 2024), a pilot project for low-carbon hydrogen production will be launched with the goal of exporting 200,000 tonnes of hydrogen in 2024. A hydrogen consortium of facility companies and manufacturers will also be established, and infrastructure for hydrogen storage and transport will be constructed. In the second phase (2025–2030), commercial production will start with the goal of exporting 2–12 million tonnes of hydrogen in 2030, as well as hydrogen-related facilities (blue hydrogen production plants, electrolytic baths, and facilities for storing, liquefying, and transporting hydrogen). In the third phase (2031–2050), the export of green hydrogen will start with the goal of exporting 15–50 million tonnes in 2050. The goal is to export large volumes of hydrogen to the Asia Pacific region and Europe, as well as hydrogen technologies to the world.

Further, the Concept proposes establishing three hydrogen production clusters, with the North-West cluster exporting hydrogen to Europe and alleviating the carbon footprint of export companies. The East cluster will export hydrogen to Asia, aiming to develop hydrogen infrastructure in the transport and energy areas. The Arctic cluster will supply low-carbon electricity to the Russian Arctic.

The following technologies are regarded as necessary to develop the hydrogen industry and are being given priority: hydrogen production from natural gas and gasified coal by combining the steam reforming of methane and CCS technology, water electrolysis using electricity from nuclear and hydropower plants, and the development of storage and transport technologies for hydrogen energy (liquefied hydrogen, ammonia, and metal hydrides). Prime Minister Mishustin has expressed high hopes, stating “The development of hydrogen energy will allow mitigating the risks of losing energy markets and support economic growth through the formation of new production operations, as well as the creation of high-tech jobs, export of products and technologies.” On August 23, the concept and roadmap for the production and use of EVs and hydrogen vehicles up to 2030 were released. Created jointly by the Industry and Trade Ministry and the Economic Development Ministry, they set the targets of producing 25,000 EVs by the end of 2024 and 217,000 by 2030. No numerical targets were announced for hydrogen vehicles.

On August 20, US President Biden signed the Executive Order on Blocking Property with Respect to Certain Russian Energy Export Pipelines. “Certain pipelines” refers to Nord Stream 2, TurkStream, and their succeeding projects. On the same day, the US Treasury Department also announced additional sanctions on Russia. However, with only 15 kilometers of Nord Stream 2 remaining to be built, the sanctions are unlikely to have any real impact on its completion.

On August 25, Germany’s Dusseldorf Higher Regional Court dismissed an appeal by the Nord Stream 2 operating company, a Gazprom subsidiary. The company had demanded exemption from the EU directive which requires pipeline owners and gas suppliers to be legally independent from one another and denies the company exclusive pipeline access. As a result, the company will be entitled to use just 50% of the capacity of Nord Stream 2. The project continues to suffer court rulings that are delaying the pipeline’s launch and worsening the project’s profitability, including the July ruling by the Court of Justice of the European Union that dismissed the German government’s appeal and supported Poland’s complaint that Gazprom should be denied exclusive use of OPAL, the onshore extension of Nord Stream and Nord Stream 2 in Germany.

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