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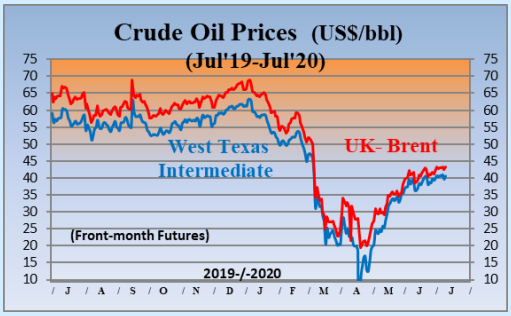
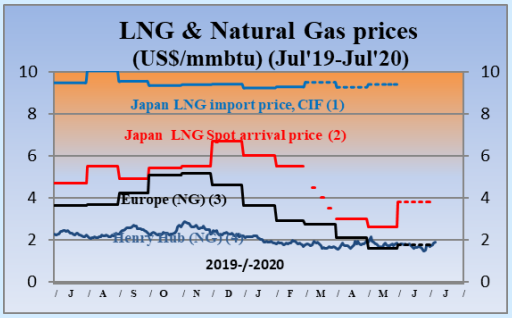
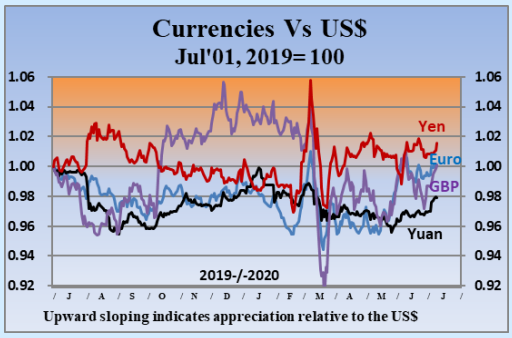


Sources:
(1) DOE-EIA
(2) Investing.com



Sources:
(1) Ministry of Finance "Japan Trade Statistics"
(2) Ministry of Economy, Trade and Industry (arrival month basis)
(3) Estimated by World Bank (Netherland 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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1. Developments in Nuclear Power

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On June 18, Russia's state nuclear energy corporation Rosatom signed a memorandum of understanding to team up with France's Framatome and US General Electric in the selection of strategic investors for the construction of Bulgaria's Belene Nuclear Power Plant. The three-company team has made the shortlist of final candidates, alongside China National Nuclear Corporation (CNNC) and Korea Hydro & Nuclear Power (KHNP). If Rosatom is selected as a strategic investor, GE will supply the turbine system and Framatome the instrumentation and control system. Rosatom will serve as the main contractor, defining the basic concept of the reactor and key facilities such as the reactor system in a direct contract with the Belene project company.

A main contractor differs from an equipment supplier in terms of the influence on the overall project and sales, as well as shouldering the project risk. GE and Framatome have apparently chosen to avoid the main contractor status and to maintain their technical capability and production capacity for now by supplying higher-performance equipment than Russian ones. However, as they do so, Rosatom is steadily accumulating experience as a main contractor. KHNP is currently the only developed country vendor, Japanese manufacturers included, that conducts marketing to non-OECD countries. Unless developed country vendors revise their strategies and take more risks, they may never become a main contractor for an overseas project.

On June 3, Tokyo Electric and Toshiba Energy Systems & Solutions (Toshiba ESS) signed a memorandum on the establishment of a company for constructing safety features for Kashiwazaki-Kariwa Unit 6. The new company will be owned 50% each by the two companies and will undertake project management, design, and construction management for works for safety measures. Kashiwazaki-Kariwa Units 6 and 7 obtained a reactor installation and modification permit from the Nuclear Regulation Authority in December 2017 and are now preparing to apply for a construction permit. Tokyo Electric and Toshiba ESS describe the significance of this new company as "bringing together technological expertise and knowledge across industry borders" and "generating maximum synergies and complementary effects between the two companies." Regarding the establishment of nuclear JVs by power companies and vendors, Tokyo Electric, Chubu Electric, Toshiba, and Hitachi signed a basic agreement in August 2019 for a feasibility study on a joint boiling water reactor business (reported in this Newsletter on October 2019), but there have been no reports of significant progress since then. The progress of this initiative must be watched over the medium to long term to see what kind of "synergies and complementary effects" will be generated between power companies and vendors that have different roles and specialties.

On June 23, a bill on holding a referendum on the restarting of Tokai No.2 Power Station was voted down by the Ibaragi prefectural assembly. Moreover, nuclear operators and regulators cannot ignore the fact that over 86,000 signatures opposing a restart were collected. The parties involved are expected to address the concerns of residents head-on.

2. Recent Developments in the Oil and LNG Markets

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After fluctuating wildly since the start of the year, international oil prices are finally settling down, with Brent stable in the lower $40/bbl range. Factors behind the price recovery since last month include OPEC-Plus-Plus reducing production by 9.4 mb/d month-on-month in May, mostly meeting the agreed target of 9.7 mb/d; the decline in demand of only around 20 mb/d in April-May as opposed to predictions of a decrease of up to 30 mb/d; and the recovery of demand and decrease in inventory mainly in China and the United States as economies reopened around the world. On the other hand, the extent of the recovery of demand varies. Demand has returned only to around 80% of last year's levels in the US even for gasoline demand which recovers relatively quickly, while in China, it has returned almost to pre-Covid 19 levels. Saudi Arabia's oil minister considers that the international oil market is still in "crisis mode" and has indicated that OPEC-Plus-Plus production cuts will continue. For the market to remain stable, supply-side adjustments (continuing certain curbs on output), including production cuts in other areas including North America, may still be necessary.

Covid-19 is also causing international oil industry to reform their activities. On June 15, BP announced a major write-off of up to $17.5 billion in assets. As reasons, BP cited its benchmark price forecasts which were lowered to $55/bbl for Brent and to $2.9/MBtu for Henry Hub until 2050, based on the prospect that energy demand will remain weak for a sustained period due the pandemic and that the energy transition to renewables will accelerate as economies recover from the pandemic. BP is set to transform into a leaner organization and push reforms aiming for the goal announced in February this year to become a net zero emissions company by 2050 or sooner. BP has always set new management trends in the oil industry, such as engaging in mega mergers and shifting to environment-aware management policies. The reforms pursued by the company may show what the oil industry will look like in the post-Covid 19, net-zero-emissions age, which deserves much attention.

In the Asian LNG market, Myanmar took delivery of its first LNG import this month. A Chinese company reportedly delivered LNG from Malaysia on a small vessel to a newly-built thermal power plant near the former capital Yangon in the south. Without facilities for large-scale imports such as FSRU, Myanmar is unlikely to take many deliveries for the time being. However, Myanmar's LNG demand may grow rapidly once its import infrastructure is upgraded, as domestic gas production has stopped growing in recent years and the development of new gas fields has stagnated, while it already has a substantial natural gas supply network.

Japan's average LNG import price for May remained in the lower $9 range, mostly unchanged from April. The impact of plummeting oil prices since March has yet to be seen, but is expected to appear in July and beyond due to the time lag related to the pricing system.

3. Recent Developments in the Coal Market

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The Covid-19 pandemic is expected to affect coal demand enormously. According to the IEA's Global Energy Review 2020, the Covid-19-induced slump in economic activity has triggered a global decline in coal demand, adding to the impact of pre-existing factors such as the decline in natural gas prices and increase in renewable energy. The global demand for coal (including coking coal) fell by 8% year-on-year in Q1 of 2020 as Covid-19 hit China, which accounts for around 50% of global coal demand, in the early stages of the pandemic. The IEA predicts that the demand will shrink by 8% year-on-year also for the full year.

Meanwhile, the impact on coal prices has so far been limited. The spot price for steam coal (globalCOAL® NEWC® Index representing FOB price of Physical NEWC spec coal shipped from Port of Newcastle, Australia,) was around $65–70/tonne from January through early April 2020, but then plummeted once it slipped below $65, down to a four-year low of $49.26 in late April. It recovered to the $55 range in early June and is at $51.28 at the time of writing (June 22), $2 or 4.1% above the bottom price. In contrast to Brent which crashed 67% from $59.12 in late February to $19.33 in late April, steaming coal began to fall in late March ($69.48/tonne), one month after Brent, and by just 29% before bottoming out. The Brent price has since risen to 2.2 times the bottom price, but the rise in the price of steam coal is more moderate.

In terms of export and import trends for steam coal, Australia exported 15 million tonnes in April, down 13% year-on-year. Some media reports associated this fall with the intensifying US-China confrontation and the rapidly shrinking global economy due to Covid-19, but cumulative exports for January-April were at last year's levels and the rapid decline in April presumably occurred in reaction to the rapid increase in March (up 12% year-on-year). Meanwhile, China's imports of steam coal grew by 69% year-on-year to 55 million tonnes during the same period (January-April), compensating for the disruptions in domestic production in January-February as Covid-19 took hold. China's imports are expected to decrease from May as domestic production has now recovered to last year's levels. Considering that coal exports are arranged two to three months before actual delivery, the impact of Covid-19 in the form of a rapid decline in Australian coal exports should only appear from May-June. On the supply side, Australian producers are responding to the situation by adjusting their effective output, but the impact of a prolonged slump in demand requires attention.

In the medium term, the demand for high-efficiency coal-fired thermal power is solid, propped up by the growing demand for electricity in ASEAN countries, India, and others. In Japan, the Round-Table Panel for the Post 2020 Infrastructure Systems Export Strategy was established by the Ministry of Economy, Trade and Industry in April, and discussions are under way on the export strategy for energy and environmental infrastructure, including coal-fired thermal power. The interim report (May 21) indicates that infrastructure exports should be coupled with innovative technologies to reduce environmental impact, to utilize Japan's technological capability to decarbonize the world.

4. Update on Policies Related to Climate Change

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On May 27, the European Commission proposed the Recovery plan for Europe. It states investing in a large scale renovation wave, renewables energies and clean hydrogen solutions, and clean transport has enormous potential to get Europe's economy growing. On whether the plan will include blue hydrogen, natural gas, and nuclear power, the details will be unveiled through the individual strategies due to come out in July or later. The plan also says options for new own resources to repay the funds raised under the plan could include an ETS-based own resource including its possible extension to the maritime and aviation sectors, and a carbon border adjustment mechanism. It must be watched whether and how the ETS extension and the carbon adjustment mechanism will be realized.

Regarding the EU climate target for 2030, the parliamentary group of CDU/CSU, the party with which Chancellor Angela Merkel is affiliated, adopted a position paper which rejects an increase in the EU's climate target for 2030 to avoid as far as possible burdens caused by the coronavirus pandemic on employees and companies. Germany will assume the presidency of the EU Council starting in July, and some think that the priority of increasing the 2030 target may have been lowered on its EU presidency agenda. Further, on May 25, the Czech government, rowing back from its previous positions "forget about the Green Deal now and focus on the coronavirus instead," approved a statement that the implementation of some of the European Green Deal objectives may present an opportunity for an effective process of economic recovery. However, the Czech government also remained cautious about increasing the 2030 EU target, and stated that in order to make a responsible decision regarding the 2030 target, it is first necessary to quantify the actual impact of the current pandemic on the economy.

On June 18, the IEA presented a Sustainable Recovery Plan as a World Energy Outlook Special Report. The report estimated that due to the impacts of the Covid-19 crisis, the global economy shrinks by 6% in 2020, 6 million jobs in energy and related areas are at risk, and global energy investment is set for a plunge of 20% in 2020. The report assessed more than 30 specific energy policy measures encompassing electricity, transport, industry, buildings, fuels, and emerging low-carbon technologies for their effects on economic growth, employment, and sustainable energy, and concluded that the largest portion of new jobs created would be in retrofitting buildings and in grids and renewables. Based on these assessments, the IEA put forth the Sustainable Recovery Plan spending $1 trillion per year for the next three years which would increase global GDP by 1.1% in each of the next three years, save or create 9 million energy-related jobs a year, and reduce annual global energy-related GHG emissions by 4.5 billion tonnes by 2023. The report informed discussions at the IEA Clean Energy Transitions Summit on July 9.

In the United States, the broad left-of-center coalition has reportedly come into alignment around a climate policy platform. The Biden-Sanders joint task force on climate change consists of five members including former State Secretary Kerry on Biden's side and three members including Representative Ocasio-Cortes on Sanders's side. On July 8, the task force made recommendations ahead of the Democratic National Convention scheduled in August for the party platform. It remains to be seen whether Biden will incorporate this new climate alignment in the platform.

5. Update on Electric Power and Renewable Energies

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Electricity demand plunged in many countries and regions during the quarantines and lockdowns to fight Covid-19. A decline of around 20% was observed on business days in Italy, France, and Britain where strict lockdowns were implemented, and a decline of around 15% was also observed in New York City. California ISO and PJM (Mid-Atlantic) experienced a decrease of around 10% while Australia's New South Wales, TEPCO Power Grid area, and Kansai Transmission and Distribution area saw falls of around 5–8%. Demand remains around 10% lower in continental Europe even after the restrictions have been lifted, probably due to the effects of restrictions on transport within the EU.

In some countries where industrial activity was restricted, these declines in electricity demand led to changes in the load curve, such as large falls during the daytime. As this made it difficult to predict the demand a few hours ahead, some transmission grid operators in the US and others increased the frequency of their predictions. In California ISO and Italy which have large solar PV capacities, sharp rises in the net load (demand minus wind and solar PV) were observed toward the evening (surges in output from sources other than wind and solar PV). In many countries, the ratio of renewables with mandatory purchase quotas increased as electricity demand decreased.

Meanwhile, wholesale electricity prices hit historically low levels of 2–3 yen/kWh in continental Europe, around 1–3 yen in the US, and a little under 4 –7 yen/kWh in the Tokyo and Kansai areas. In northern Europe, the average wholesale electricity price has been less than 1 yen/kWh for some time due mainly to the fall in fossil fuel prices in addition to low electricity demand. In Japan, the jump in renewable electricity in Kyushu Electric's area, which was large enough to trigger solar PV curtailment, apparently also had a major impact on wholesale electricity prices.

In addition to the impact on demand and wholesale prices described above, Covid-19 is causing the rescheduling of maintenance plans for many power facilities, resulting in the North American Electric Reliability Corporation (NERC) suggesting in its summer reliability assessment report an increased risk of power generation equipment failures (this impact was apparently small in Japan). As construction projects for wind power facilities and transmission lines are reportedly falling behind as a precaution against Covid-19, infrastructure construction may be delayed in the short term. Further, work on recovering from hurricanes, typhoons, and other disasters may be more difficult than before in view of the need for protection measures against Covid-19.

In the discussions on economic measures, it has been widely suggested that the introduction of renewable energy and digitalization should be accelerated to prepare for the post-Covid-19 era. However, many companies are losing the capacity to make new investments due to the slump in wholesale prices and deterioration in corporate earnings. Electricity demand had been falling in developed countries even before the virus hit, making new investments difficult except in renewables which have a support system, and this trend seems to be accelerating. In the US, the construction of transmission lines has been declining in recent years. It may be necessary to simultaneously consider measures to boost electricity demand, in other words, increase the electrification ratio.

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