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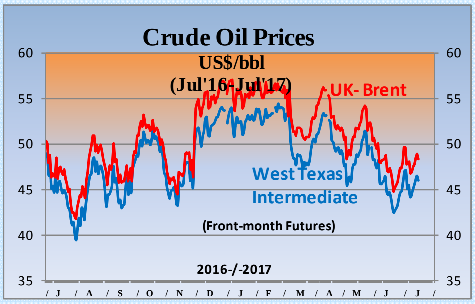
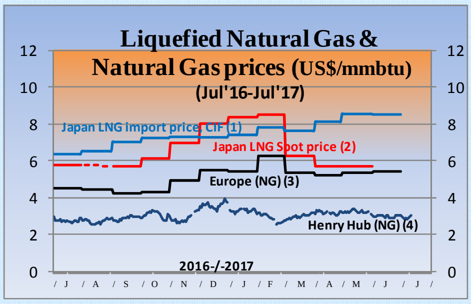
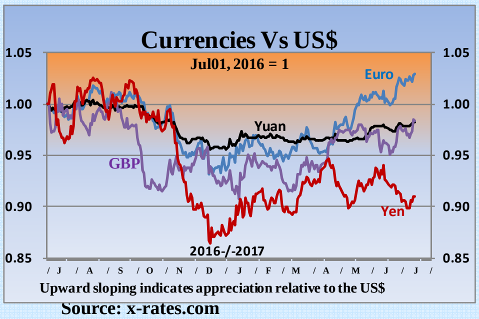


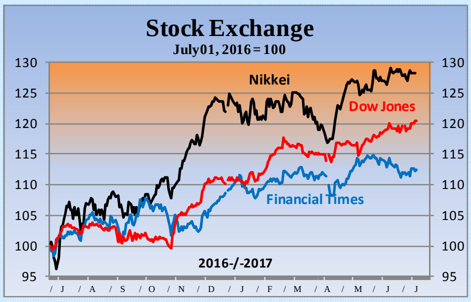
Source: DOE-EIA, NASDAQ



Sources:
(1) Ministry of Finance "Japan Trade Statistics"
(2) Ministry of Economy, Trade and Industry
(contract month basis)
(3) Estimated by World Bank and World Gas Intelligence
(4) DOE-EIA, NYMEX (Front-month Futures)
(5) Investing.com



Source: x-rates.com



Source: Financial Times

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1. US: New Moves in Nuclear Policy

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On June 20, the House of Representatives of the United States passed a bill to extend the tax credit for nuclear facilities. Under the Energy Policy Act of 2005 established by the G.W. Bush administration, a production tax credit of 1.8 cents per 1 kWh is given to electricity from the first 6,000 MW of "advanced nuclear facilities" approved from 1993 and which would enter operation before the end of 2020, for eight years after the start of operation. The Act also established a loan guarantee scheme for nuclear new builds on the back of the increasing demand for electricity and soaring prices of resources caused by the booming economy. However, with only four new builds planned to enter operation by the end of 2020, including the two plants for V.C. Summer, the total capacity remains at 4,400 MW, and the tax credit for 1,600 MW is due to expire unused. The newly adopted bill aims to boost support for nuclear new builds by abolishing the expiry date of the tax credit and extending eligibility for the credit to public and cooperative electric companies and "eligible project partners."

Concurrently, the House Energy and Commerce Committee is deliberating a bill to advance the licensing activities for the construction of the high-level radioactive waste repository in Yucca Mountain, Nevada. Yucca Mountain had been selected as the primary candidate repository site under the Nuclear Waste Policy Act of 1987. However, due to staunch opposition by state residents, the Obama administration removed Yucca Mountain from the list, preferring a decision based on consensus. However, new moves are emerging after the Energy Department's budget published by the Trump administration in mid-March allocated funds for procedures for approving construction of the Yucca Mountain nuclear waste repository, and at the end of May, the Nuclear Regulatory Commission published a collection of information for public comment on the construction of the Yucca Mountain repository.

Throughout the election campaign, Donald Trump made very few comments on nuclear power, the only reference being the Republican Platform which mentioned "support for the development of all forms of energy that are marketable in a free economy without subsidies, including coal, oil, natural gas, nuclear power, hydropower, and geothermal." The recent moves reflect the policy of both the administration and Congress to actively promote nuclear power. This policy is generally consistent with the direction of the GOP, which advocates the expansion of energy supplies, particularly through the development of domestic resources.

However, these efforts may have limited impact given the fundamental change in the market situation for nuclear power, including inexpensive and abundant natural gas supplies and expansion of renewable electricity amid slowing growth in electricity demand. There have already been reports that the extension of the production tax credit is designed to bail out the V.C. Summer project which is facing delays and cost overruns. However, a tax credit of 1.8 cents is not enough to raise the cost competitiveness of nuclear new builds when even existing nuclear plants are forced to close due to competition with inexpensive gas. The eight-year duration of the tax credit is not enough either, considering the scale of initial investment of a nuclear power plant. If the true aim of the tax credit bill currently being deliberated in Congress is to bail out V.C. Summer and protect Westinghouse from unwanted acquisitions, the size of the tax credit and the definition of "eligible project partners" could be expanded in the process of deliberating the bill.

2. EU: Europe's Gas Infrastructure

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Based on the EU Directive and the EU gas regulation which set out the requirements for promoting regional cooperation, each Transmission System Operator (TSO) of Europe is required to publish a Gas Regional Investment Plans (GRIPs) every two years. GRIPs provides additional information to the EU's 10-year network development plan 2017, estimates the future needs for gas infrastructure in the region and presents forecasts on the gas infrastructure. In formulating the GRIPs, the TSOs are divided into six groups based on the analysis of interconnection and operation of the transportation systems and need for development of infrastructure. In May 2017, the TSOs for Central and Eastern Europe (CEE) released the GRIPs for 2017. CEE consists of Austria, Bulgaria, Croatia, the Czech Republic, Germany, Hungary, Poland, Romania, Slovakia, and Slovenia.

The CEE GRIPs performed a model analysis assuming a disruption of Russian gas to the region via Ukraine and Belarus and a total disruption of all Russian gas to the region, for the summer and winter of 2017, 2020, and 2025. The analysis showed that Bulgaria, Croatia, Hungary, Romania, and Poland are the most vulnerable to such gas disruptions. For instance, Bulgaria and Romania would not be able to meet their domestic demand in the winter of 2017 if gas supplies via Ukraine were to be severely disrupted. However, according to the TSO, such vulnerability can be mitigated or removed by implementing the existing and planned infrastructure projects, diversifying sources of import and strengthening the interconnection of gas transport. We must note, however, that of the 111 gas infrastructure projects in the region, including the renovation and construction of LNG terminals, only 18 have reached the stage of final investment decision.

In June 2017, the BP Statistical Review of World Energy 2017, which includes supply-demand data for energy in 2016, was released. Europe's gas demand increased 6% (28 billion m^3) as the energy became more competitive with coal due to lower prices and the introduction of the carbon floor price in Britain. This rise in demand and drop in gas production in the Netherlands pushed up Europe's gas imports, but the supplies were covered mostly by pipelines from Algeria and Russia, and little LNG was imported. According to the BP statistics, Europe has no need for large volumes of LNG import in normal times, but has been considering LNG as an important option for easing concerns for its dependence on Russia for 30% of its gas and concerns for energy security in general. The European Commission issued a communication in February 2016 on the EU's strategies on LNG and gas storage, in which it stressed the need for its members to upgrade their infrastructure including LNG access and enhance collaboration. In February 2017, the second report on the

State of the Energy Union mentioned that new LNG terminals have begun to operate in Poland, France, and Finland. However, to achieve the policy objective of reducing its dependence on Russia, Europe must improve its infrastructure further.

3. China: Aiming to Fully Attain Its Global Warming Prevention Obligation

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In relation to recent developments in President Trump's policies, the international community turned to China to see its response, having played a key role in reaching a consensus on the Paris Agreement and speedily implementing it. This occurred amid mounting concern over the US's withdrawal from the Agreement and its impact. Two days before President Trump's inauguration, on January 18, President Xi Jinping addressed the European Headquarters of the United Nations in Geneva, Switzerland to call on the member states to implement the Agreement, and declared that "China will fulfill its obligations 100 percent." In response to President Trump's announcement to withdraw from the Agreement (June 1), Prime Minister Li Keqiang, Special Representative Xie Zhenhua for Climate Change Affairs, the Foreign Ministry spokesperson and other senior government officials stated that "the Paris Agreement represents the broadest consensus of the international community, which all parties need to jointly safeguard," and emphasized that it would fully implement its obligations.

Through these actions, China is stressing its complete commitment to the Agreement and seeking to enhance its presence as the driver of efforts to curb global warming. Needless to say, the main thrust of the "100 percent implementation" is to fulfill 100 percent its voluntary medium-term action target for 2020 to reduce its CO_2 emissions per unit GDP (emissions intensity) by 40-45% from 2005 levels, and its long-term target to reduce the emissions intensity by 60-65% by 2030, as it has pledged in the Intended Nationally Determined Contributions (INDC) submitted to the UN.

In China, both the voluntary action target and INDC are regarded as international commitments, for which the government is responsible. To ensure the implementation, the government has formulated the Energy supply and Consumption Revolution Strategy (2016-2030) as its long-term action policy, alongside the 13th Five-Year Plan on decarbonization and energy (see the December 2016 edition and February 2017 edition of this Newsletter). The Strategy sets targets, on condition that the 13th Five-Year Plan will have been achieved, to reduce primary energy consumption to 6 billion tce (standard coal-equivalent, 1 t = 7×10^6 kcal) or lower by 2030 and to increase the ratio of natural gas to 15%, non-fossil energies to 20%, and non-fossil power sources to electricity output ratio to 50%. For 2050, the Strategy aims to stabilize primary energy consumption and achieve a non-fossil energy ratio of 50% or more. While the corresponding power mix is not specified, an international joint study led by the Energy Research Institute (ERI) of China estimates in its Reinventing Fire scenario[1], in which energy revolution should be implemented, a non-fossil energies ratio of 55% and a non-fossil power sources to electricity output ratio of 82%.

According to the latest statistics, as of 2016, the emissions intensity has decreased by 42.4% from 2005 levels, and is within the range of the voluntary action target for 2020. If the emissions intensity can be reduced by 18% in five years, which is the target in the 13th Five-Year Plan, the emissions intensity will be cut by about 49% from 2005 levels in 2020, and will surpass the upper limit of the voluntary action target. Meanwhile, to achieve the 2030 target in the INDC, the emissions intensity must be reduced by a further 3.6% per annum for 10 years from 2021. Views vary on how ambitious China's INDC targets are, but I personally believe that "100 percent implementation" is not easy. China is expected to set an example by keeping its word.

1 For the Japanese translation of the summary of "Reinventing Energy: China – energy consumption and supply innovation roadmap 2050," see http://renewable-ei.org/activities/reports_20170131.php.

4. Russia: US Moves Ahead with Bill to Toughen Sanctions on Russia

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On June 1-3, the Saint Petersburg International Economic Forum was held, attended by more than 14,000 participants from 143 countries including the US, Germany, China, Italy, and Japan. More than 475 investment agreements and MOUs worth over 30 billion dollars were signed during the event. From Japan, Hiroshige Seko, Minister for Economy, Trade and Industry and also for Economic Cooperation with Russia, participated for the first time, and had a meeting with Maxim Oreshkin, Minister for Economic Development and the president's special representative for trade and economic cooperation with Japan. The parties confirmed that the eight-item cooperation plan is progressing smoothly, and exchanged views on how to work on each area of cooperation ahead of the Japan-Russia Summit in September in Vladivostok. Concurrently, a meeting was held between Japanese trading houses, JBIC and Gazprom for possible cooperation.

From the EU, many businesspeople participated in the Forum. Shell agreed with Gazprom on the joint promotion of the Baltic LNG Project, and BP agreed with Rosneft on collaborating on a natural gas project. Further, the Austrian prime minister and President Putin have apparently discussed the extension of TurkStream in central and southern Europe. As gas is not included in the EU's sanctions on Russia, European firms are moving forward, albeit cautiously, with studies on their Russia-related projects despite the sanctions. Incidentally, the European Council announced a one-year extension of the Crimea sanctions on June 19, but the scope of the sanctions remains unchanged.

On the other hand, no major agreements were reached between Russia and the US. The US sanctions on Russia are tougher than those of the EU, and accordingly, Exxon's projects with Russia in the Arctic region, deep sea exploration, and tight oil are all currently on hold. On June 15, the US Senate almost unanimously passed a bill that imposes new sanctions on Russia and requires Congressional approval when easing or lifting existing ones. The bill reflects the strict stance of the US toward the alleged Russian interference in the US presidential election, annexation of Crimea, and support for Syria's Assad administration. The bill targets Russia's mining, metals, shipping, and railway industries, and if passed, will enshrine into law the sanctions that were issued as executive orders under the previous administration. However, the bill still needs to pass the House of Representatives and be signed by President Trump. Further, on June 20, the US Treasury added two authorities and 36 individuals and organizations from Russia to the sanctions list. Their assets in US banks will be frozen, and US firms will be prohibited to trade with these individuals and firms.

As the US prepares to toughen its sanctions on Russia without first consulting the EU, on

June 16, German Economic Affairs and Energy Federal Minister Brigitte Zypries accused the US of "giving up a joint approach with Europe on sanctions against Russia," and warned of possible countermeasures if Washington ends up fining German companies. The impact of this move on the Gazprom-led Nord Stream 2 gas pipeline must also be closely monitored, as the project is being funded with loans from Germany's Wintershall, France's Total and other European companies. As the US bill on Russian sanctions remains uncertain, there is growing fear that its impact may spread beyond the US. With Japanese firms participating in projects with Russian companies mainly in the Russian Far East and Eastern Siberia, any developments in the bill must be closely monitored.

5. ME: Looming Uncertainty in the Gulf States

Koichiro Tanaka, Managing Director &
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On June 20, King Salman of Saudi Arabia made a key decision to depose Crown Prince and Interior Minister Muhammad bin Nayef, who is deeply trusted by the US, and appoint his own son, Deputy Crown Prince Muhammad bin Salman, as crown prince and first deputy prime minister. This move empowers the new crown prince, who will also retain key posts such as defense minister and chairman of the Council for Economic and Development Affairs. While the change in the line of succession was considered inevitable, the uncertainties in the Salman regime are attracting renewed attention in the wake of Saudi Arabia's boycotting Qatar, and causing concern to the international community.

On June 5, Saudi Arabia, UAE, Bahrain, and Egypt unilaterally cut diplomatic ties with and declared an economic blockade on Qatar, claiming that the country was supporting terrorism and appeasing Iran, and closed their land, sea, and air borders to the gas-rich country. Qatar denied the allegation that it is not complying with the Riyadh Agreement, which ended the confrontation within the Gulf Cooperation Council (GCC) in 2014, but reacted calmly and did not retaliate. From a humanitarian standpoint, Turkey and Iran have begun to help Qatar by exporting food. Further, the Grand National Assembly of Turkey approved increasing its troops in Qatar.

Later, Kuwait as mediator conveyed 13 demands to Qatar, including curtailing ties with Iran, closing Al Jazeera and its affiliate broadcasters, shutting down the Turkish military base, severing ties with the Muslim Brotherhood, and accepting regular checks on compliance with these points. Qatar is angered by such high-handed stance and is expected to refuse them as a sovereign country. The situation is worsening as President Trump's reckless tweet intensified the hard-line stance of Saudi Arabia, despite State Secretary Tillerson's utmost efforts to mend the situation, as Qatar is home to the largest US airbase in the Middle East.

Following the coordinated terrorist attacks by ISIS/ISIL in the Iranian capital of Tehran, Iran's conservative hard-liners condemned Saudi Arabia, and even the US, remembering the words of then Deputy Crown Prince Muhammad a month ago which referred to "the battle in Iran." In retaliation for the terrorist attacks, on June 18, the Islamic Revolutionary Guard Corps launched six medium-range ballistic missiles at the ISIS/ISIL base in eastern Syria. The anti-US hard-liners in Iran now have renewed vigor after the State Department released declassified documents on the CIA-backed coup in 1953 that reinstated the Shah (King) Mohammad Reza Pahlavi, and State Secretary Tillerson referred to a regime change in Iran as an option of the Trump administration. The operations to recapture Mosul and Raqqah are well under way, but the shooting-down of a military jet of Assad regime by a US military jet has made it more difficult for the US and Russia to enhance military to cooperation against ISIS/ISIL.

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