



IEEJ e-NEWSLETTER

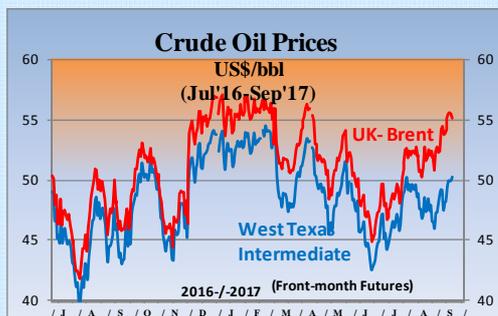
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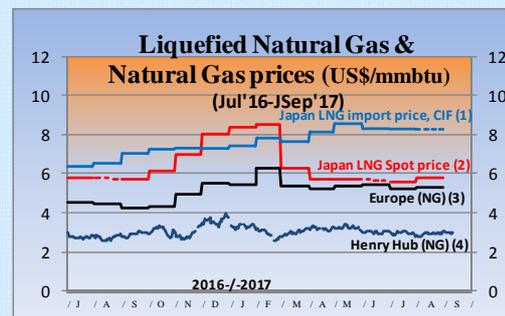
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Source: DOE-EIA, NASDAQ



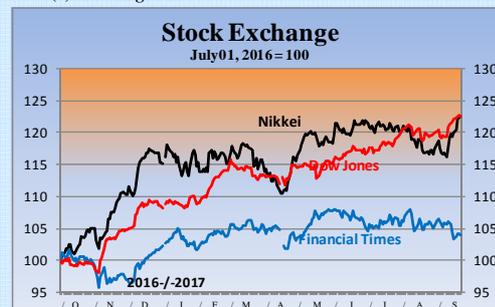
Sources:

- (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



Upward sloping indicates appreciation relative to the US\$

Source: x-rates.com



Source: Financial Times

Contents

【World Monitoring】

1. US: Slumping Wholesale Electricity Prices and the Review of the Capacity Market
2. EU: Expectations for Cross-Border Carbon Dioxide Transport Projects
3. Political Jockeying Heats Up between US and China: China's View
4. ME: Hard and Soft Approach in Saudi Arabia's Regional Diplomacy
5. Russia: Changes in the Worsening US-Russia Confrontation



Summary

【World Monitoring】

1. US: Slumping Wholesale Electricity Prices and the Review of the Capacity Market

The peak wholesale electricity price dropped to as low as 3-4 yen/kWh in 2016, and it is becoming difficult to secure investments in power generation. PJM is considering an appropriate price formation scheme which addresses the renewable subsidies issue, and it could be a model for Japan.

2. EU: Expectations for Cross-Border Carbon Dioxide Transport Projects

A cross-border carbon dioxide transport project was short-listed for the “Projects of Common Interest” for the first time. If selected, it could be a positive step for CCS development in Europe which is facing extreme difficulties.

3. Political Jockeying Heats Up between US and China: China's View

Political jockeying is intensifying between the US and China over the North Korea issue and trade imbalance. China thinks the two countries will eventually find a middle ground.

4. ME: Hard and Soft Approach in Saudi Arabia's Regional Diplomacy

Saudi Arabia has softened its Iraq policy. The second Rouhani administration is facing headwinds both in and outside the country. Iran-Turkey collaboration is being tested over the Kurdish referendum issue. The Trump administration announced its first foreign policy strategy (toward Afghanistan).

5. Russia: Changes in the Worsening US-Russia Confrontation

US-Russia confrontation is intensifying due partly to the tougher US sanctions on Russia. With oil prices stagnant, uncertainty over the Russian economy is increasing due to the impact of US sanctions on European economic activities involving Russia and the prolonged Ukraine crisis.



1. US: Slumping Wholesale Electricity Prices and the Review of the Capacity Market

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In 2016, coal-fired thermal power accounted for just 0.6% of the US power mix, having little effect on the price formation for wholesale electricity. Meanwhile, the price of gas-fired electricity, which is also a peak load power source, has declined due to low gas prices. The prices in the peak electricity market fell as low as 3.5 cents (/kWh, the same applies hereafter) in 2016 for PJM, 3.5 cents in New York, 3.2 cents in California, and 2.6 cents in Texas, which are equivalent to 3-4 yen/kWh.

Wholesale electricity prices have been slumping since around 2012, and in 2016, as much as 10 GW of coal-fired thermal capacity was closed. Meanwhile, prices in the capacity market, which Japan is also considering establishing, also dropped by as much as 30-50% from the previous year.

According to Market Oversight Report by the Federal Energy Regulatory Commission, the slump in wholesale electricity prices is thought to be caused largely by the falling demand for electricity and the increase in renewable electricity capacity due to net metering (a program for purchasing excess residential renewable electricity), which is causing grid power sales to drop. The total capacity registered for net metering increased by around 10 GW between 2012 and 2016 (the amount of electricity purchased has grown by 680 GWh).

As the slump in wholesale electricity prices and capacity market prices could deter investment in sustainable power generation, PJM, the country's leading designer of wholesale electricity markets, is reviewing the trading schemes for wholesale electricity and the capacity market.

Considering that the introduction of renewable electricity is being promoted through RPS and other subsidies, a capacity market repricing proposal released in June 2017 recommends setting the "bid capacity" without considering subsidies but adding subsidies to the prices in the "price formation" stage. A proposal has also been released for the entire energy market at around the same time, requesting the reimbursement of flexible power sources for the loss of opportunity to generate power as a result of having to operate in load-following mode to accommodate the soaring renewable electricity capacity. The proposal also calls on the Federal Energy Regulatory Commission to solve the issue of negative bidding prices in the wholesale electricity market caused by accommodating renewable electricity from plants constructed with subsidies.



These proposals are not necessarily hostile to renewable electricity, but rather are an attempt to integrate new unconventional capacities with existing ones and to achieve an appropriate pricing mechanism.

The sale of FIT electricity at the power exchange has also begun in Japan from this fiscal year, directly influencing the formation of spot wholesale prices, and studies are also underway to create a capacity market. Drawing on the abovementioned efforts in the US, Japan too needs to consider how to achieve appropriate price formation.



2. EU: Expectations for Cross-Border Carbon Dioxide Transport Projects

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Nuclear Energy Group, Strategy Research Unit

From March through August 2017, the European Commission conducted consultations on the four proposed “Projects of Common Interest” (PCI) in the area of cross-border carbon dioxide transport infrastructure. The objective of such projects is to construct infrastructure for transporting the carbon dioxide collected from power generation and industrial processes to storage sites suitable for CCS. While the carbon dioxide transport network is a prioritized field of the Commission's Trans-European Networks for Energy (TEN-E) strategy, it is the first time for a project on cross-border carbon dioxide transport infrastructure to be short-listed for PCI. For a carbon dioxide transport project to obtain the status of PCI, it has to contribute in the three following areas: (1) avoidance of carbon dioxide emissions while maintaining a stable supply of energy, (2) resilience of the carbon dioxide transport infrastructure against technological failures and natural and man-made disasters, and its enhanced security, and (3) efficient use of resources.

The four proposed projects all span several North Sea countries such as the Netherlands and Britain. One of the projects is the CO₂ Sapling project (named after CO₂ Shipping And PipeLine Infrastructure and North Sea ReGeneration) led by a British corporate. The project is an extension of the existing Acorn CCS project and Phase 1 is scheduled to start operation in 2022 and subsequent phases by 2030. The Acorn CCS project repurposes an existing CO₂ capture plant at the St Fergus gas processing plant in Scotland, and uses an existing offshore pipeline awaiting decommissioning to transport CO₂ and store it in the North Sea. In May 2017, the Acorn CCS project was selected for a subsidy from Horizon2020, an R&D funding program of the EU, under the Accelerating CCS Technologies program (Horizon2020 is an EU research funding program running from 2014 through 2020 with funds of 80 billion euros available in total). Should a related project obtain PCI status, it would be a step forward for Europe's CCS development which is facing extreme difficulties.

Some of the expected benefits of selection as a PCI are fast-track licensing, lower administrative costs through a rationalized environmental assessment process, increased public participation through consultation and improved transparency for investors. Further, access to financial assistance of 5.35 billion euros in total (Connecting Europe Facility: CEF, the amount is the total for 2014 through 2020) is another great benefit.

The development and practical use of CCS is extremely challenging in Europe, and it was only recently that expectations for CCS were downgraded in the EU Reference Scenario 2016 released in July 2016. While the economic rationality of investing in CCS is difficult to justify with the present coal prices, the long-term research and development initiatives of the EU through 2050 and even to 2060 must continue to be closely monitored.



3. Political Jockeying Heats Up between US and China: China's View

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Political jockeying is intensifying between the US and China over the North Korea issue and trade imbalance.

First, regarding North Korea's nuclear and missile development, China has consistently sought the complete implementation of the UN economic sanctions against North Korea, peace on the Korean Peninsula and a peaceful resolution through dialogue and consultations. As a new endeavor, China's Ministry of Commerce banned the import of North Korean iron ore, lead and lead ore, and seafood from August 15. The ban is a national policy based on the UN sanctions resolution adopted on August 5. China's Foreign Ministry is calling for a "double suspension," demanding that North Korea suspend its nuclear and missile activities in exchange for the suspension of US-South Korea military exercises. Accordingly, Kim Jong-un, Chairman of the Workers' Party of North Korea, announced the suspension of plans to launch a missile in the vicinity of Guam, a US territory, on August 14. One week later, however, the US and South Korea began a joint military exercise in South Korea. The exercise is a regular event, nevertheless, the Foreign Ministry condemned it as undermining the ongoing efforts to ease tensions and promote dialogue. At the same time, the Ministry urged those directly involved in the stand-off not to exacerbate the situation, and again urged the parties to seriously consider and accept the "double suspension," the most impartial, rational and achievable proposal currently available. This sequence of actions strongly conveys China's stance that the North Korea issue is purely between the US and North Korea, and China is not involved, just offering to help solve the problem (see the August 2017 Edition of this Newsletter).

Regarding the US-China trade imbalance which is at the top of President Trump's list, the 100-day plan is already underway and the countries have agreed to continue to collaborate to solve the issue at the first US-China Comprehensive Economic Dialogue at the ministerial level in July. However, on August 18, the United States Trade Representative (USTR) began an investigation based on Section 301 of the Trade Act of 1974 on China's alleged violation of US corporate intellectual property, opening the door to possible sanctions. The probe is based on President Trump's decision four days earlier. China's Ministry of Commerce expressed "strong dissatisfaction" against the probe through its spokesperson on the 21st. The Ministry claimed that the US side, ignoring WTO rules, is irresponsible in initiating trade investigations according to domestic law and is making unsubstantiated allegations against China, and accused the US of "sending a wrong signal" for which it will face strong opposition from the international community and even its own industries. China also declared that it will closely monitor any developments in the investigation and take all necessary measures to resolutely defend the interests of China and Chinese firms.

Regarding the "countermeasures" on which the government remains tight-lipped, the state-run Xinhua News Agency introduced an "expert's view" predicting measures such as



filing a WTO complaint and restricting imports of US products that depend heavily on China such as soybeans (56% in the first half of 2017), aircraft (26%), automobiles (16%) and integrated circuits (15%).¹ The News Agency also suggested that the US and China, as major powers and equals, are aware that intense diplomatic disputes are unavoidable but that a stand-off would only harm both of them, and concluded that the two countries will eventually find a middle ground. This is effectively the mainstream view in China.

¹ For example, see http://news.xinhuanet.com/world/2017-08/20/c_1121512818.htm,
http://us.xinhuanet.com/2017-08/18/c_129683725.htm



4. ME: Hard and Soft Approach in Saudi Arabia's Regional Diplomacy

Koichiro Tanaka, Board Member &
President of JIME Center

A domestic feud in Saudi Arabia's royal family is causing a stir. There are rumors that the deposed Crown Prince Muhammad bin Nayef is being confined to his palace, banned from leaving the country, or even abusing drugs, but the truth remains a mystery. Meanwhile, under King Salman, Saudi Arabia is making diplomatic efforts to mend relations with Iraq, its long-alienated neighbor. Following visits by Prime Minister Haider al-Abadi in June and Interior Minister Qasim al-Araji in July, Shiite religious leader and anti-US hardliner Muqtada al-Sadr visited Riyadh to meet Crown Prince Muhammad bin Salman. Saudi Arabia had long been skeptical of the Iraq's Shiite administration which they view is close to Iran, a Shia country, but is assumed to have changed its Iraq policy in order to counter Iran's influence in the region.

Meanwhile, the policy of Saudi Arabia and the UAE to isolate Qatar has not changed. In retaliation, Qatar has decided to normalize ties with Iran by reinstating its ambassador to Iran who was recalled in January 2016. This is a breakaway from the coordinated actions of the GCC members taken in January 2016 after Saudi Arabia severed ties with Iran. Saudi Arabia's tough stance against Qatar, in this case, seems to have backfired.

After being sworn in for a second term, President Hassan Rouhani of Iran got off to a smooth start by having 16 of his 18 cabinet picks approved by parliament. However, the administration sees a rocky road ahead, with the US Trump administration hostile toward Iran and pressure from conservative hardliners at home. Increasingly critical of the president, Supreme Leader Ali Khamenei appointed former chief justice and his close ally Mahmoud Hashemi Shahroudi as Chairman of the Expediency Council, an advisory body to the supreme leader, as a clear warning to the administration.

The mopping-up operation against ISIS/ISIL in Iraq is now focused in Tal Afar in northwestern Iraq. Meanwhile, the Syrian Democratic Forces (SDF) is approaching ISIS/ISIL's stronghold of Raqqah with the support of US forces and others. Iran, Turkey and Syria, all with Kurdish populations in the country, are increasingly concerned about President Masoud Barzani of the Iraqi Kurdistan Region, who seeks to seize the opportunity to hold a referendum on independence from Iraq. A rare meeting was held between the military leaders of Iran and Turkey in the Turkish capital of Ankara. They apparently discussed the response to the Kurdish movements in Syria and Iraq, which is a common challenge for both countries.

President Trump announced a US strategy in South and Central Asia including Afghanistan, which envisages a limited increase in US troops for "killing terrorists," and called on Britain and others to follow suit. The strategy has infuriated Pakistan by calling the country a state sponsor of terrorism, and, having no medium- to long-term prospects, the strategy is not expected to fundamentally cure the problem. Meanwhile, the commander of the United States Central Command visited the southern border of Saudi Arabia with Yemen to



check the circumstances, suggesting a possible expansion of involvement of US forces in the Yemeni civil war. Regarding this civil war, former Yemeni President Ali Abdullah Saleh is now falling out with Houthis, an insurgent group who were his ally in the civil war. After causing a serious humanitarian crisis, the civil war in Yemen is entering a new phase. Further, the Trump administration surprised observers by announcing a reduction and cancellation of about 300 million dollars of military assistance to Egypt, citing human rights concerns.



5. Russia: Changes in the Worsening US-Russia Confrontation

Sanae Kurita, Senior Researcher
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On August 2, the Russia Sanctions Review Act of 2017 passed Congress, rendering the president unable to lift the sanctions without Congressional approval. Russian Prime Minister Medvedev announced that the situation is a "full-scale trade war," and in retaliation, ordered all 755 US diplomats in Russia to leave the country. Meanwhile, the US stopped issuing visas except at its embassy in Moscow.

The new sanctions will limit investment in Russian firms by US firms, prohibit US companies from participating in energy exploration projects in which Russia has a 33% stake or higher, and impose additional sanctions on foreign firms investing in or supporting Russia's exploration activities and also on those companies involved in the construction of pipelines for transporting Russian gas. As a result, US major drilling service provider Schlumberger, which announced plans to purchase a 51% stake in Russian drilling company EDC in late July, could fall under the new sanctions.

The US sanctions may even affect the EU. The new sanctions include the Nord Stream 2 gas export pipeline in which Germany's Wintershall and other European firms are investing. Germany and others are voicing concerns over securing Russian gas supplies and energy security within the EU's borders. At the same time, European gas markets are working hard to reduce dependence on Russia. Following Poland in June, in August, Lithuania decided to buy American LNG for the first time, and thus the US is helping to diversify gas supply sources.

The US-Russia confrontation over Ukraine is worsening. As tensions rise between the US and North Korea, on August 14, The New York Times reported that the engine of the ICBM that North Korea launched may have been made in Ukraine. The Ukrainian government denies involvement, and there are rumors of a possible information war by Russia. In Ukraine, where the coal-producing, eastern part of the country is ruled by pro-Russian militants, the disruption of coal supplies is becoming serious, and there is an urgent need to reduce dependence on Russia, which accounts for about 70% of Ukraine's coal imports. Amid such circumstances, in late August, American steam coal was exported to Ukraine for the first time. 700,000 tonnes of American coal is due to be shipped to Ukraine by December, replacing roughly 14% of Ukraine's annual steam coal imports.

On August 11, the Russian Federal State Statistics Service announced a 2.5% increase (preliminary) in GDP in the second quarter of 2017. GDP increased for the third consecutive quarter as oil prices recovered somewhat and favorably affected industrial production, and consumer spending recovered as inflation fell. However, with oil prices remaining generally low and with little prospect for a sizable rise, the impact of the worsening US-Russia relations, including the tougher sanctions, on the Russian economy (including foreign investment in the country in general) must be closely monitored.



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)



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