IEEJ e-NEWSLETTER

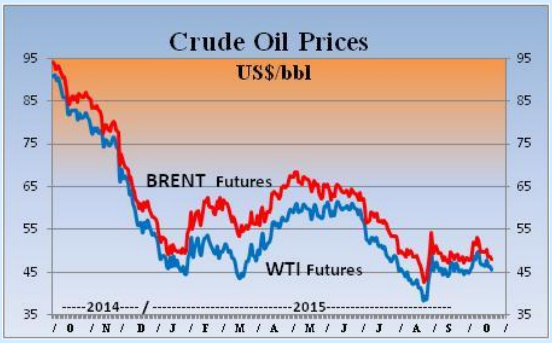
No. 72

(Based on Japanese No. 145)

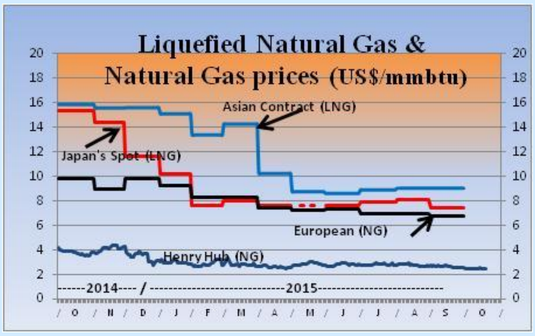
Published: October 22, 2015

The Institute of Energy Economics, Japan

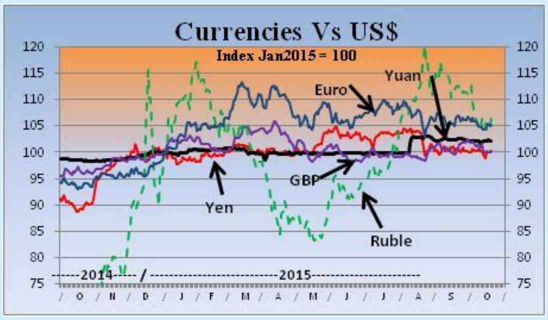
(As of October 22, 2015)



Source: Financial Times



Sources: Henry Hub NG/DOE-EIA, European NG/WB LNG spot/METI, LNG contract/WB



Source: x-rates.com

Source: Financial Times

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1. US: Shale Production and Federal Environmental Regulations on Hydraulic Fracturing

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For nine months since the end of 2014, WTI has remained at around $50 dollars, give or take $10. Drilling companies reacted quickly, stopping 60% of the operating rigs in the US in just the first six months of 2015. Meanwhile, shale oil output continued to grow until April 2015, displaying unexpected endurance against low prices, but has dropped for three consecutive months since July after peaking at 9.6 million B/D in June. Recently, many organizations, including the Department of Energy (DOE), announced grim forecasts that American oil output could decline by up to 600,000 B/D in 2016 from 2015.

Behind the present decline in output and forecasts for yet further declines lie the worsening finances of upstream companies. DOE's analysis of financial reports of 44 domestic onshore oil developers this month showed that the ratio of debt repayment to operating cash flow soared from 44% in Q1 of 2012 to 83% in Q2 of 2015. Further, in half of the 60-odd companies on Bloomberg's oil stock index, total debt has reportedly reached 40% of the companies' net worth. Such debt burden has caused a spate of Chapter 11 bankruptcies and delistings by upstream companies, while those struggling to survive face a tough choice between stopping their rigs, borrowing under worse terms, or selling off their assets.

A few years ago, tougher environmental regulations on hydraulic fracturing were seen as a major risk factor in predicting whether shale oil and gas output would continue to grow steadily. Today, the attention on environmental regulations seems to have subsided due to the immense impact of falling oil prices. However, since the beginning of the year, there have been developments in several rules that could affect the use of hydraulic fracturing to develop oil and gas fields. In March, the Interior Department issued a standard for the use of hydraulic fracturing on US territory. The oil industry opposes the standard, arguing that it overlaps with existing state regulations and voluntary industry rules and will impose an unnecessary burden. The Department explains that the standard merely complements existing standards, and wants all states to adopt it as a best practice. The Department is also formulating standards for gas flaring (incineration) and ventilation (discharge) for drilling activities within US boundaries. In addition, the Environmental Protection Agency is now drawing up a standard for the treatment of wastewater from hydraulic fracturing, which, if promulgated, will be applied to all onshore oil and gas fields nationwide.

Even when oil prices were high, these regulations drew a strong reaction from the oil industry which feared a squeeze on the earnings of developers and slow shale development. Introducing multiple regulations now when oil prices seem permanently stuck at around $50 would have an even greater impact. The federal environmental regulations will all be out by the first half of 2016, but it will take some time until a new regulatory system, including the stance of the state governments, is set. 2016 is the year of local elections in the US in addition to the presidential and Congress elections. Thus, the battle for power between the federal, state and municipal governments must be closely monitored.

2. EU: Leveraging LNG and Gas Storage

Kei Shimogori, Researcher
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On September 22, the European Commission (EC) met to discuss the EU's future strategy on LNG and gas storage. With new suppliers such as the US and Australia expected to enter the market, LNG is becoming increasingly important for Europe. LNG, together with gas storage, is regarded as a key for diversifying gas supply sources and making Europe's gas system more flexible. The meeting discussed the need for new infrastructure, and whether any regulatory, commercial and legal barriers exist.

One option being considered for Europe to escape its dependence on Russian natural gas is leveraging LNG and gas storage. The EU has an LNG import capacity of 197 billion m^3 (equivalent to 146 million tonnes of LNG) per year, but most facilities are located in Spain, Portugal, France and the UK, with utilization factor of only 24% in 2013. The EC believes that improving access to LNG through stronger regional cooperation is particularly important for the EU member countries of Central and Eastern Europe which do not yet have access to LNG or which rely on one country for natural gas imports. The EU's gas storage capacity has been expanding for the past decade, but growth has been slowing recently. According to the organization, the stock level of an average storage facility is about 30%, and combined with underground reserves, Germany and the UK have 92 days' and 25 days' worth of stockpiles, respectively, as of the beginning of 2013. In general, it is more expensive to storage gas, particularly LNG, than oil. Nevertheless, the EC believes that gas storage is worthwhile even considering the declining demand for gas and the falling gas prices in the last two years.

Regarding natural gas imports, the EC is continuing its efforts to hold a trilateral talk on gas supplies with Ukraine and Russia, starting by holding a bilateral talk with Russia on September 11. The Commission is now planning to propose a date for the trilateral talk. Meanwhile, energy companies of various countries are also taking action. European partners (E.ON, BASF/Wintershall, OMV, ENGIE and Royal Dutch Shell) announced that they have signed an MOU with Gazprom on Nord Stream II that can carry Russian gas without passing through Ukraine. The Nord Stream II Project will add two pipelines with the capacity to transport an additional 55 billion m^3 of gas (equivalent to 41million tonnes of LNG) per year. The project is reportedly slated to commence by the end of 2019, but the EC is unlikely to be positive toward this project.

From July 8 to September 30, the EC held public consultations on the EU's strategy on LNG and gas storage. There is a considerable gap between the interests of the member countries regarding this issue, and so the result of the consultation is keenly awaited.

3. China: Concerns for Expansion of Coal Thermal Capacity

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On September 21, the China Electricity Council (CEC) released a preliminary report on the supply and demand for electricity for January through August this year. Electricity consumption measured 3,678 TWh, up only 1.0% year-on-year. Regarding supply, the ratio of non-thermal power sources increased to 31.6% of capacity or 22.1% of output, showing further decarbonization of the generation mix. The Xi administration's "New Normal" for economic development is becoming increasingly prominent in the supply and demand for electricity (see the September edition of this Newsletter).

Despite the slowing growth in the demand for electricity, generation capacity increased by 9.0% year-on-year to 1,374 GW, clearly indicating an oversupply. As a result, the average hours of operation of all power sources dropped by 205 hours to 2,658 hours. In particular, thermal power lost as much as 250 hours of operating time, squeezing the finances of electricity producers.

The greatest concern of all is the expansion of thermal power capacity, particularly coal-fired thermal. According to the CEC, new capacities for all power sources from January to August measured 60.74 GW, of which thermal power accounted for 30.82 GW, or 50.7%. Further, as of the end of August, 181 GW of new capacity is under construction, of which 87.58 GW or 48.3% is thermal power. According to experts, the amount of thermal power either in operation, under construction or given a construction license totals 1,300 GW (as of the end of 2014, operating capacity is 916 GW), of which more than 1,200 GW is coal-fired thermal.[1]

As it takes about five years from planning to completion of a new coal-fired thermal power plant in China, the capacities that were launched or being built as of August were licensed presumably when the demand for electricity was high. Thus, it is safe to say that the current oversupply of generation capacity was caused by the power source developers which misestimated the electricity demand and the National Energy Administration of China (NEA) which issued construction licenses.

In contrast, the reasons behind the 270 GW of licensed capacity awaiting construction are complex. Due to the administrative reforms of 2014, the NEA transferred the authority to license coal-fired thermal power plants to regional governments, having lost an effective policy instrument to prevent oversupply. Meanwhile, coal-fired power operators are enjoying the benefits of low coal prices in recent years, and believe without reason that they could somehow survive unprecedented over-competition if it occurs. Also, the regional governments that now have the licensing authority are awarding the maximum possible number of construction licenses to counter the weakening the local economy, so long as environmental regulations and generation efficiency standards are met. For instance, Hebei Province licensed six coal-fired power plants in August totaling 4.2 GW while the Inner Mongolia Autonomous Region licensed two plants in April and four in June amounting to 5.98 GW, and these are just the ones that could be identified. But is so much coal-fired thermal power necessary? It is the time for policymakers and power industry leaders to stop and reconsider the situation, rather than taking short-term views without considering the consequences. As the saying goes, "don't drink poisoned liquor to quench one's thirst".

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[1] For instance, "interest groups would not want to admit, but coal power is clearly in oversupply " says Chang Po Ting. See http://www.china5e.com/news/news-916783-1.html.

4. Middle East: The Refugee Crisis Focusing Renewed Attention on the Civil War in Syria

Koichiro Tanaka, Managing Director &
President of JIME Center

In addition to terrorist attacks by Islamic State (ISIS/ISIL) and other radicals, the influx of refugees such as those fleeing the civil war in Syria is exacerbating the West's sense of crisis. The situation is rocking Western humanitarianism, as Western countries struggle to establish viable measures for ending the civil war while trying to decide how to accept the refugees. The recent failure to train a "moderate armed group" to fight ISIS/ISIL has caused the US and other countries, which have sought to remove President Assad, to change their stance. Now some Western and other countries seem ready to allow Assad to play a role during the transitional phase. The international community, however, has been unable to act with unity due to the fierce opposition of France and Saudi Arabia which see Assad as the source of all evil. As the West becomes alarmed by Russia's military intervention in Syria, the UN envoy has renewed his mediating role to put an end to the bloodshed.

The opposition to the Iran nuclear agreement led by Republican Congressmen has failed to stop President Obama from lifting the sanctions, as not enough Democratic Senators switched sides. The IAEA's investigation into the alleged activities related to nuclear weapons development is advancing ahead of schedule, and the arrival of the Adoption Day was announced on 18 October by relevant states. As EU countries race to visit Iran, President Rouhani may visit France and Italy as early as this autumn. At the UN, the President met with Prime Minister Abe and the two discussed early completion of an investment agreement.

Saudi King Salman visited the US after missing the US-GCC Summit this spring, and the countries searched for ways to restore the cooling bilateral relations. Saudi Arabia expressed support for the nuclear agreement with Iran after being briefed by the US, but also expressed its intention to counter any "negative action" by Iran within Saudi borders jointly with the US. Taking this summit as a green-light by the US for military intervention in Yemen, the Saudi forces stepped up air strikes on the Houthi rebel forces, on whom ties with Iran were reported, and the supporters of former President Saleh. Meanwhile, a series of disasters struck this year's Hajj pilgrimage which attracted approximately two million Muslims to Mecca, causing numerous deaths of pilgrims including those from Iran. The Iran leadership harshly criticized the House of Saud which is responsible for managing the holy site.

Seizing the Saudi air strikes on Yemen as an opportunity, President Hadi of the transitional government returned from exile in Saudi Arabia to the southern city of Aden. The chances of recapturing the capital are rising as Qatar and North Sudan have sent in ground troops following Saudi Arabia and UAE, but the civil war in Yemen has overshadowed so many important developments, among them the danger of terrorist attacks by ISIS/ISIL and AQAP which is not being tackled properly.

5. Russia: Oil & Gas Industries Seek Opportunities in Asia under the Sanctions

Sanae Kurita, Senior Researcher
Global Energy Group 2, Strategy Research Unit

From September 3 to 5, the First Eastern Economic Forum was held in Vladivostok. President Putin re-emphasized the initiative to accelerate the development and export of oil and gas from the Russian East to Asia-Pacific countries, positioning development of the region as the top priority of the 21st century, and called for active investment in the region.

During the Forum, several agreements were reached between major Russian oil and gas companies and Chinese and Indian financial institutions and oil and gas companies. Regarding gas, Novatek and China's Silk Road Fund reached a framework agreement to sell a 9.9% interest in Yamal LNG Project to the Fund, while Gazprom and CNPC signed an MOU on a project to supply natural gas from Sakhalin to China via pipeline. Regarding oil (petrochemicals), Rosneft signed a heads of agreement (HOA) with Sinopec on the joint development of two oil and gas fields, one of them is the field in Eastern Siberia, and an agreement with ChemChina on investment in petrochemical plants. Rosneft also reached an agreement with India's ONGC (Oil and Natural Gas Corporation Limited) to sell a 15% interest in the Vankorneft oil field, which is the main oil field for the ESPO (East Siberia - Pacific Ocean) pipeline. While Russia has signed quite a number of agreements with foreign companies, the prospects are unclear, as some of these agreements are not legally binding.

On August 25, the Ministry of Economic Development announced a downward revision of Russia's GDP growth outlook from minus 2.8% to minus 3.3% for 2015 and from plus 2.3% to plus 1-2% for 2016. At the end of July, Gazprom announced a forecast that gas output for 2015 would be considerably less than the target announced in May (450 billion m^3, equivalent to 333 million tonnes of LNG) at 414 billion m^3 (equivalent to 306 million tonnes of LNG) due to the decline in exports and domestic demand and shrinking upstream investments. Russia's oil output is currently at its highest level since the Soviet breakup at 10.7 million B/D, but the finances of the country's oil companies are worsening due to falling oil prices.

The Russian participants at the Forum uniformly stressed the country's focus on Asia. One of the reasons for this is the West's decision to extend and tighten the sanctions on Russia. The US strengthened its sanctions on July 30, and on August 7, added the South Kirin gas field of Sakhalin 3 to the scope of the sanctions. On September 14, the EU decided to extend its sanctions for six months.

On top of weak oil prices and the limit on borrowing in international financial markets, the sanction on the promising mining oil and gas field is a huge blow for Russia. Accordingly, the country is likely to accelerate its shift to Asia, also to secure the necessary technology and investments. Meanwhile, the Russian government is working to revise the law to ease the restriction on foreign investors for the exploration and development of domestic fields. The implications of such moves for Japan, including legal revisions, and whether they will provide Japanese companies with new investment opportunities, must be closely monitored.

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