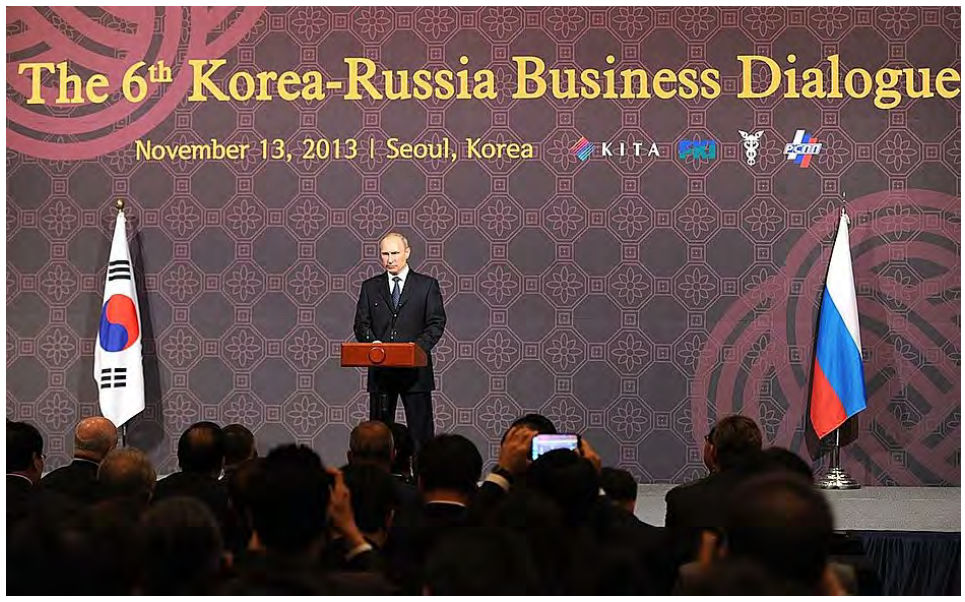
ENERPO NEWSLETTER

Volume 2 Issue 8
1st April 2016

Week in Review

- Lina Nagell, Zachary Waller

Energy News Blog



President Putin at the 6th Annual Korea-Russia Business Dialogue. Public Domain

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Energy security of South Korea: All comes down to relations with DPRK?

–Soojeong Shin

South Korea is the ninth-largest energy consumer based on 2014 data by EIA. The energy consumption has continued to increase in line with economic growth. It relies heavily on imports to meet 97% of its total primary energy consumption as a result of insufficient domestic resources. As it does not have yet international oil or natural gas pipelines, it relies exclusively on tanker shipments of LNG and crude oil which also contributed the nation to become one of the world's top on shipbuilding industry. Due to climate issue such as high seasonal variations in the weather and the rainfall in Summer, the potential for hydroelectric power is limited. Most energy producers are government enterprises such as KEPCO, KOGAS, KDHC, and KNO. In addition, KNOC (Korea National Oil Corporation) is the largest entity in South Korea's upstream sector. In the downstream sector, Korea boasts several large international oil companies including SK energy, which is the nation's largest IOC (International Oil Company), GS Caltex, and S-Oil Corporation, as well as operating one of the largest and the most advanced oil refineries in the world. According to FGE (Facts Global Energy), the country exported about 1.1 million b/d of refined oil products in 2014, mostly in the form of middle distillates such as gasoil and jet fuel. As its economy heavily depends on exports, the economic situation and relationships to trading partners are significant.

According to EIA data from 2014, the nation consumed petroleum and other liquids places 39%, coal 31%, and natural gas 16%. The four main Middle East countries, Saudi Arabia, Kuwait, and UAE are the biggest trading partners on crude oil imports which accounted for more than 84% of oil imports. Regarding LNG imports, Korea relies on Qatar for 35%, Indonesia 14%, and Russia for the remaining 5%. In addition, South Korea imported 42% of its coal from Australia, 28% from Indonesia, and 14% from Russia.

In the Middle East: nuclear technology

As one of the major energy import partners, Korea tries to maintain a stable relationship in the Middle East. Recently, South Korea and Saudi Arabia agreed on SMART cooperation starting in 2017. SMART is a 330 MWt pressurized water reactor with integral steam generators. Korea, via technology transfer, will help Saudi Arabia to attract investment and employment opportunities as it localizes alternative energy industries and assure the importance of utilizing alternative sources of generating electricity.

The Key to Including North Korea in Regional Cooperation: Engage Russia

In the later 19th century, the idea of Trans-Korean railway crossing linked from the Trans-Siberian was initiated. However, after the 1905 Russo-Japanese War, plans were suspended. In 2000, the idea was re-discussed by three nations, which is now called as the Rajin-Khasan Railway. Raijin is a city located in the north of North Korea, and Khasan in south-east part of Russia. Russian Railways has already invested US$ 300 million, making this project possibly the largest Russian commercial and political project with North Korean participation. According to Lyudmila Zakharova, a Korean expert from the RAS Institute of Far East Studies, South Korea's strong reaction to its northern neighbor's satellite launch and nuclear tests makes it clear that Seoul will not return to the project at least until 2018. Meanwhile, it is still regarded as an important and beneficial project to all of three participants. Russia would gain the viewpoint that the nation works not only with North Korea, but both Korean governments. In addition, through coal supplies via Rajin-Khasan, local consumers in South Korea could save up to 15% in transportation costs. Furthermore, maintaining a stable relationship with Russia does not only help stability of domestic imports, but also raises the possibility of holding Six Party Talks.

Korea Wolsong Nuclear Power Plant By IAEA Imagebank - Flickr: 04790183, CC BY-SA 2.0,

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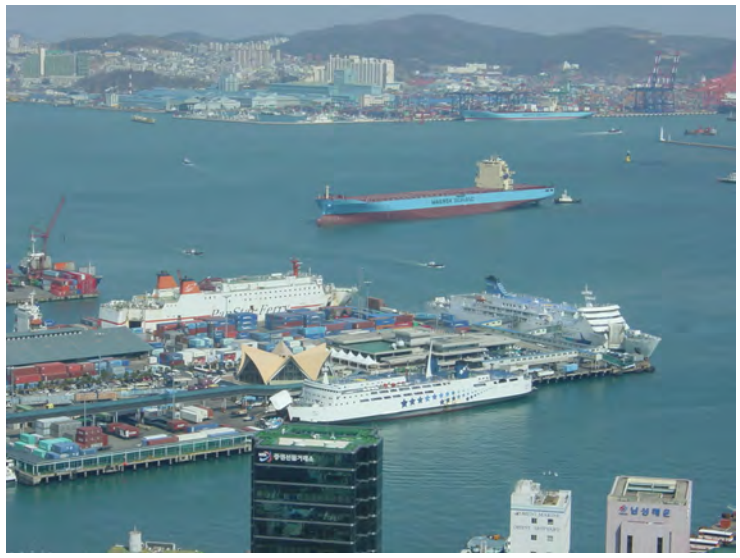
Maybe Russia is Not Enough... So Here Comes the United States

South Korea is the United States' sixth-largest goods trading partner with a trillion-dollar economy. These two nations through Mutual Defense Treaty, KORUS FTA, and coordinating closely on the North Korean nuclear issue and the denuclearization of the Korean Peninsula, maints a comprehensive alliance that endures today. the nation supports a development of energy industry in the U.S. These two nations recently agreed on imports of higher amounts LNG from the U.S. starting in 2017. According to Mark Mills, a senior fellow at the Manhattan Institute think tank, "If you're a buyer in, say, South Korea, and you're offered the same price from Saudi Arabia, Russia and the U.S., you're going to make the obvious choice: the U.S.," "It's the one supplier you know is never going to threaten you or cut off supplies, which is certainly not the case with Saudi Arabia, Russia or Iran."

South Korea, where 97% of its total primary energy consumption relies on imports, has suffered from occasional shortages in electricity and gas due to country's rapid economic growth which fastened an energy demand. Therefore, maintaining a stable relationship with energy exporting partners is a significant task in order to secure the country's energy supply. Although South Korea recently increased the amounts of energy imports and investment from non-OPEC partners like the U.S. and Australia, still more than 80% of crude oil and 50% of gas are shipped from the Middle East partners. The country has progressed in several projects such as SMART Cooperation with Saudi Arabia, the Rajin-Khasan railway project with Russia, and increasing investment to the United States's energy development. Its attempt is not only to support the country's stable relationship with main trading partners but also to bring economic and political benefits for the future.



Port of Busan By Bergmann at the Japanese Wikipedia - File:Port of Busan.JPG from the Japanese Wikipedia, CC BY-SA 3.0,

Retired Oil and Gas Platforms Transform Into Marine Sanctuaries

–Glenda Pavon-Suriel

What happens to an offshore oil rig when it retires? A few years before an offshore oil well is no longer producing oil the decommissioning process begins. This involves sealing and plugging the well with cement. The process can cost oil companies several million dollars, about as much as it cost to construct the entire oil rig. Full decommissioning includes not only sealing the well but also removing the platform. Consider an alternative to complete removal. Imagine a retired platform being described as an underwater oasis. An "oasis" is precisely how Ashley Palinkas, a conservation biologist described the Eureka platform off the coast of Long Beach, California, to the New York Times.

The Eureka oil platform is located eight miles off the coast of California. Beneath the water there is a thriving and diverse marine habitat. Coral and crustaceans enclose the platform's columns, fish hide amidst the reef, and sea lions swim in teams. Thanks to the Eureka oil platform and similar ones like it, there is a movement to transform decommissioned oil platforms off of the California coast into artificial reefs.

Artificial reefs have been used since the 18th century and items ranging from trees, cars, sunken ships, and old tires have been used. The benefits of artificial reefs are often under-considered. Unlike many artificial reef formations used throughout history that are horizontal, offshore oil and gas rigs are unique because of their depth and the fact that they are vertical. Distinct aquatic life can thrive at varying depths beneath the ocean so the platforms provide uncommon and bio-diverse ecosystems. The Eureka stands at a depth of about 720 feet.

California in particular is unique in its marine bio-diversity because of its coldwater currents from British Columbia that give rise to a plethora of aquatic wildlife uncommon to other parts of the world and in combinations only found in the Golden State.

But the Golden State has more than a little problem; known as environmentalists. Many environmentalist groups want oil platforms like the Eureka removed entirely, once they are retired. Groups like the Environmental Defense Center based in Santa Barbara, claim that people have been waiting for these rigs to be removed because of repeated oil spills that were in fact, heartbreaking. But removing these rigs does not change the fact that the oil spills happened. Perhaps one of the few ways we can rectify the tragedy of oil spills is by partially decommissioning these platforms and allowing

them to become a rich and abundant habitat beneath the tide.

Blue Latitudes, in partnership with Rigs-to-Reefs, is an organization started by two oceanographers hoping to bring awareness to the extraordinary ecosystems offshore oil and gas platforms can provide.

Part of the reason environmentalists do not want to see the rigs remain is that it is seen as a way to save oil and gas companies money. The environmentalist position is that the companies agreed to pay to remove these structures when they were built. However, lawmakers in California have already proposed that a large percentage of the money oil companies would save by not removing the entire platform must be donated to marine wildlife conservation and research. Perhaps the greenies in the golden state are cutting their nose to spite their face.

Off shore oil and gas drilling will not go away. Whether it's off the California coast or in the North Sea. Many offshore rigs nearing retirement were built decades ago. Since then there have been many accidents that cost countless innocent marine lives. But as a realist, one must recognize that the planet's needs for fossil fuels and our love of animals (those that swim and those that live on land) must be reconciled.

By forcing oil companies to remove the oil rigs, environmentalists are not only essentially removing what could be an important research tool, but they're costing what could amount to millions of dollars in funding for marine wildlife conservation.

Programs like Rigs-to-Reefs could serve as a model for other organizations and eventually transform a percentage of oil and gas platforms all over the world into artificial reefs.

A diver inspects coral growing on an oil platform leg, Gulf of Mexico (US Bureau of Ocean Energy Management) Public Domain

Fish at an oil platform, Gulf of Mexico (US Bureau of Ocean Energy Management) Public Domain

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The Week in Review

Deputy PM Says Russian Economy Adjusting to Low Oil Prices, Weak Ruble Will Help Stabilize It

Russian Deputy Prime Minister Arkady Dvorkovich said Wednesday that Russia's economy is adjusting to low oil prices and that the weak ruble is helping the economy stabilize, as Russian exports to Europe and China are becoming more attractive. Dvorkovich cited the pharmaceutical and agricultural industries in particular, citing the fact that Russian agricultural exports to China have increased 25% in the last year. Interestingly, he stated that he hopes oil prices remain at about the level they are at today (US$ 41/barrel for Brent crude). He also went on to state that Russia was interested in selling shares of some state-owned companies, including strategic companies in the financial, logistics and oil sectors (although he ruled out any chance of shares being sold in Sberbank).

Cutmore, G., Matthew, A., 2016. Russia growing, low ruble will help: Deputy PM. CNBC, 23 March.

Challenges Facing the LNG market, Longer Recovery Than Oil as Spot Prices Crater?

Woodside Petroleum announced Wednesday 23rd of March that it would shelve the US$ 40 bln browse LNG project. Observers are stating that although this is a step in the right direction in trying to decrease future production, it is not able to bring the market into balance. The decision came just days after the first shipment of gas from the Australian Gorgon field set out for Japan, led by Chevron with partners Shell and Exxon Mobil. An IEA analyst warned that $200 bln in Australian LNG projects wouldn't break even for investors at $60 a-barrel oil prices. Analysts at Citigroup has estimated that the global market will be oversupplied by 28 million mt by 2018, albeit before the news from Woodside – these analysts did not include projects in the U.S. which are still expected to proceed. The issue, however, is not the spot market and crude prices, but long-term contracts signed in flush times, which are now coming under pressure. As the article states: "The energy companies should have seen it coming. Tight conditions earlier this decade enabled owners of reserves to cut some sweet deals on paper. Now, the potent market weapon they wielded is flying back at them".

Spencer Jakab, 2016. Big Oil's Next Big Energy Problem. The Wall Street Journal, 23 March

Angela Macdonald-Smith, 2016. Maiden Gorgon LNG cargo sets sail for Chubu Electric in Japan. The Sydney Morning Herald, 21 March.

Kenya and Uganda Meet to Discuss Possible Oil Export Pipeline Route

Uhuru Kenyatta, the president of Kenya, and Yoweri Museveni, the president of Uganda, met Monday to discuss the route of a proposed oil export pipeline originating in Uganda. Uganda is currently in the process of deciding what route the country would like the pipeline to take in order to export oil to the world market and has decided the pipeline will run to the Indian Ocean via Kenya or Tanzania. Uganda has given mixed signals on the pipeline, with President Museveni last year calling for the pipeline to be built through Kenya only for the government to state it will be built through Tanzania earlier this year. While no agreement was reached at the meeting on Monday, the pair will meet again in two weeks in Kampala to discuss technical reports experts are currently compiling. France's Total and Britain's Tullow Oil both have stakes in Uganda's oil fields and Total has been vocal about its concerns over the Kenyan route, citing security concerns, specifically over the fact the Kenyan route could run close to the border with Somalia. Tullow Oil on the other hand, has pushed hard for the Kenyan route, stating it would be cheaper due to more producers being involved in construction (it is important to note that Tullow Oil has stakes in Kenya's oil fields as well).

Nussbaum, A., 2016. Kenya, Uganda discuss rival routes for oil export pipeline. Reuters, 21 March.

Singapore's Ambition for LNG Trading Hub Presses Forward

It was during last week's LNG supplies for Asian Markets 2016 Conference in Singapore that Minister for Trade and Industry, S. Iswaran explained that the city state aims to allow domestic gas customers to import up to 10% of their annual LNG intake from the international spot market. Many have regarded this as a brilliant move that could help establish Singapore's regional gas trading hub ambitions. This is part of a greater effort to increase the flexibility of gas buyers through other initiatives such as the secondary gas trading market launched last October which aims at allowing customers to trade gas on a short time basis. These moves, along with the launch of futures and swaps linked to its own index of spot prices from LNG traded in Asia, is said to indicate that Singapore is pushing not only to become the premier LNG trading hub in Asia (accounting for 2/3 of global LNG demand), but also trying to replace long-held oil indexation. There are, however, some structural weaknesses set out in Singapore's plans. The new pricing system set out in January (SLInG) is only for spot deals. While the volume of LNG spot trading in Asia will surely increase in the mid-term, spot trades in the short-term will still account for a small percentage of trades. Competition is expected from JERA Co. in price setting. In regards to LNG trading hubs, major competitors are Malaysia, UAE and Qatar. Some analysts are claiming that Singapore holds an advantage (although it currently only has one LNG terminal) due to its leading role in Asian oil pricing and oil trading hub, and therefore has considerable infrastructure in place. Important to note is that numbers this week shows that layoffs in Singapore have hit their highest levels since the global financial crisis, highlighting the adverse impact of sustained low oil prices on the city state.

Tim Daiss, 2016. Singapore's LNG Trading Hub Ambitions Press Forward. Forbes, March 21.

Huileng Tan, 2016. Singapore layoffs in focus ahead of budget as oil flounders. CNBC, 24 March.

Saudi Aramco Wants More U.S. Refining and Chemical Plants

Amidst the Saudi Aramco-Royal Dutch Shell breakup of joint venture Motiva Enterprises, Saudi Aramco has announced it would like to acquire more refining and chemical plants in the United States. Saudi Aramco and Shell announced last week their plan to end their joint venture and break up Motiva Enterprises, a move which will see Saudi Aramco gain control of the United States' largest crude oil refinery (in Port Arthur, Texas), a plant that processes 603,000 barrels of oil every day. Shell, on the other hand, will get two Louisiana plants with a combined capacity of 473,000 barrels per day. After making the announcement, Saudi Refining (a downstream division of Saudi Aramco) stated it would buy more refining and chemical assets in the United States. By expanding its operations in the world's largest energy market, the move is largely seen as a Saudi bid to maintain a market for its products in an increasingly competitive global oil market. That desire is seen to be the cause of the split between Saudi Aramco and Shell, as Saudi Aramco is looking to expand, while Shell is currently pursuing a US$ 30 bln asset sale program.

Reuters, 2016. Saudi Aramco to target US refiners, chemical plants after Shell breakup. CNBC, 19 March.

The Meeting Between Presidents of Uganda and Kenya for Oil Pipeline Construction

Iran can't boost oil production without investment, but how to attract investment with oil at a low price? It is based on this assumption: "Tehran's participation in a production freeze talks is not crucial, as it won't be able to significantly increase output without foreign funding", by Lukoil's Vice President Leonid Fedun. This comes along side statements from OPEC delegates stating that Saudi Arabia is prepared to join an oil output freeze next month without Iran taking part – changing the view presented by Gulf officials last month, suggesting that any deal was conditional on Iranian participation. Representatives from the IEA on the other hand, have stated that a deal among some OPEC producers and Russia to freeze production is meaningless, as the only actor with real power to influence the market is Saudi Arabia. Concerns over an increasing Iranian global market share might be exacerbated by numbers published suggesting that South Korea increased imports of crude oil from Iran by over 100% in February, compared to the same month last year.

RT, 2016. Iran's oil catch 22. RT, 24 March 2016.

Anjli Raval, 2016. Saudi Arabia will Freeze oil output without Iran, says OPEC delegate. The Financial Times, 22 March.

Press TV, 2016. South Korea boosts imports of Iranian crude. Press TV, 22 March.

Reuters, 2016. OPEC, Russia oil output freeze may be 'meaningless': IEA. Reuters, 23 March.

India Inks Deals with Rosneft for Stakes in Siberia

State-run Indian companies signed deals with Rosneft last week to boost their stakes in two Siberian oil fields. What is interesting about these fields is they are linked to the East Siberia-Pacific Ocean pipeline, which links the fields to China, which buys the majority of oil in the pipeline. By raising its stakes in the fields, India could redirect its share of oil to its own refineries. This would cause a large change in how oil is shipped in Siberia, as Siberian oil typically ends up nearby in China, Korea and Japan. India is quickly overtaking China as the center of world oil demand and having stakes like this are of strategic importance to India, which imports 80% of its energy. India also appears interested in selling its share on the open market. The deals struck last week give Indian companies a 29.9% stake in Taas-Yuriakh Neftegazodobycha, while negotiations are still underway on a deal that could give Indian companies a 23.9% share in Vankorneft. If the Vankorneft deals go through, Indian companies would hold a 49.9% share in Russia's second-largest oil development project. Russia is welcoming this investment from India as a way to keep sales up during the currently supply glut and also take market share in South Asia away from Middle Eastern producers.

Chakraborty, D., Sundria S., 2016. Russia Deals Deepen India Hold in China Oil-Buying Backyard. Bloomberg, 22 March.

Challenger Energy Ltd (ASX:CEL) Raises Fund to Fuel Shale Gas Project in South Africa.

ASX:CEL announced that it has received commitments from shareholders to raise US$ 900,000 via a private placement at $0.03 each. It is the first explorer to apply for exploration rights in South Africa's shale gas province Karoo Basin. This news comes along side news that The Council for Geoscience (CGS), in conjunction with other research bodies, is improving the understanding of the stratigraphy and basinal settings of potential shale gas reserves in the Karoo Basin region. The study focuses on two recently drilled deep-cored boreholes in the southern part of the Karoo basin.

Proactive Investors, 2016. Challenger Energy Ltd raises funds to fuel shale gas project in South Africa. Proactive investors Australia, March 21.

Jlan Solomons, 2016. New Study aimed at improving understanding of potential Karoo shale gas reserves. Creamers Media's mining weekly, 24 March.

Venezuela to Import Millions of Barrels of American Crude After U.S. Lifts Oil Export Ban

Venezuela has purchased more than 6 million barrels of American crude since the U.S. export ban on oil was lifted last year. Possessing the world's largest oil reserves, Venezuela imports a lighter oil to mix with its heavier oil in preparation for export. Last year, Venezuela imported 40,000 barrels a day from countries like Russia, Nigeria and Angola to meet that need, but now the United States looks poised to become a major supplier to the South American country, with Venezuela receiving its first shipment of West Texas Intermediate at its refinery in Curacao in January. While relations between the United States and Venezuela remain strained, Petroleos de Venezuela SA, the state oil company, has always been interested in purchasing American crude, even before the export ban was lifted. Simply put, it is much cheaper for Venezuela to purchase and import American crude than ship oil from Russia and Africa. With the oil export ban lifted, practicality is trumping politics in Venezuela's decision to purchase so much American crude.

Nussbaum, A., Global Oil Power Venezuela Suddenly Has a Thirst for U.S. Crude. Bloomberg, 31 March.

Giant Indonesia Offshore Gas Project Sunk by Nationalist Economic Pressure

Indonesia's rejection of a US$ 15 bln gas project by Inpex Corp. and Royal Dutch Shell PLC. bodes ill for the revival of the flagging petroleum industry and highlights the nationalist pressures facing foreign investment in Southeast Asia's largest economy, energy analysts say. Inpex and Shell suffered a blow Wednesday in their joint bid to develop one of Southeast Asia's largest known deep-water gas blocks. President Joko Widodo rejected their plan to use a giant floating refinery in the country's remote east, calling instead for onshore facilities to help develop the region in the Arafura Sea. Energy experts say Mr. Widodo's rejection is a sign of nationalist pressures in an industry led by foreign players like Chevron Corp. and Total SA, at a time when exploration and new petroleum projects have fallen drastically. While the country was the world's largest exporter of liquefied natural gas a decade ago it is now set to become a net importer in the coming years. The recent decision casts doubt on the major hopes of growth in the country's oil and gas output.

Ben Otto, 2016. Giant Indonesia offshore Gas Project Sunk by Nationalist Economic Pressure. The Wall Street Journal, 24 March.

Bintulu LNG Port By Ahmad Afif Isa from Kuala Lumpur, Malaysia. - CC BY 2.0,

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Volume 2 Issue 8
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