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Week in Review

- Bogdan Polishchuk, Seejeong Shin

Energy News Blog

Three Gorges Dam By Source file: Le Grand Portage Derivative work: Rehman - CC BY 2.0,

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China and the ECT

–Lina Nagell

The Silk Road Initiative, Leading China Towards Energy Charter Treaty Membership?

In an effort to diversify trade routes and sustain growth rates, the Chinese government presented the One Belt, One Road (OBOR) initiative in 2013. One of the major challenges facing the ambitious project that stretches from China to Europe, Africa, and Latin America, is long-term cooperation with countries bordering the route, as well as security of investments in the energy sector. While China has bilateral agreements with some of the countries along the route, some of these are limited and they vary to an extent, others are non-existent. Stability and security for investments along the route is needed. In this context this blog post will look further into the potential for Chinese accession to the Energy Charter Treaty (ECT).

A short introduction to the ECT for the unfamiliar.

For readers unfamiliar with the ECT, a short introduction and historical overview is necessary. Signed in 1994, entering into force in 1998, the ECT builds on the 1991 Energy Charter (EC). The EC, also known as the European Energy Charter is an expression of the foundations which should underlie international energy cooperation. In the period following the Cold War, efforts to overcome previous economic division were initiated. The energy sector was indeed deemed one sector with great potential for mutually beneficial cross-border cooperation. The creation of the EC and the subsequent signing of the ECT may in this context be viewed as an effort to establish common accepted foundations for energy cooperation amongst states – the alternative being individual bilateral agreements. China gained observer status in 2001, and signed the International Energy Charter (IEC) in May 2015. The IEC differs from the ECT in that it is a declaration of political intention, aiming at strengthening energy cooperation between the signatory states, but does not bear any legally binding obligation or financial commitment. The IEC can be seen in the large-scale context of expanding the ECT internationally. The main goal of the ECT is to strengthen the rule of law on energy issues, by creating a level playing field of rules and mitigating risks associated with energy related investment and trade.

The Ji'an Yalu River Railway Bridge By Whoisgalt - Own work, CC BY-SA 3.0,

One Road, One Belt

OBOR consists of two main ideas, building on the traditional Silk Road that reached its height during the Tang Dynasty (618 – 906): the construction of a 21st century Maritime Silk Road and a Silk Road Economic Belt from western and inland China, crossing Central Asia on its way towards Europe. China is hoping to diversify its trade routes, sustaining its appetite for growth and reaching new areas where trade volumes could be expanded. OBOR could have great potential for increasing or at least sustaining Chinese economic growth. The country is currently struggling with a glut in industrial materials, something that could be alleviated by the help of new trade routes and easily accessible markets. Chinese dependence on oil shipped through ports in the Pacific could also decline as a result of OBOR. The initiative also has the potential to translate Chinese economic dominance into geopolitical power.

Although increased Chinese influence on the global stage is desired from a Chinese point of view, some of the countries along the route have not been so inclined in the past. Some observers are pointing out that an oil-price in free fall could help quicken the development pace of OBOR. Many of the countries along the route are highly dependent on the trading of natural resources, now struggling amidst falling revenue. The current situation might make these countries more inclined to accept Chinese investment pitches, as well as to taking a share in China's US$ 40 billion Silk Road Infrastructure Fund. Last year alone, China signed more than 20 country-to-country energy cooperation deals to further facilitate OBOR, numbers provided by Chinese Foreign Minister Wang Yi on December 21st, 2015.

Russian discontent, an obstacle for the future development of OBOR?

A potential obstacle in the development of OBOR has been Russian discontent towards China's focus on Central Asia, traditionally an area of Russian dominance. Falling oil prices and the potential increase in independence from Russia which OBOR could provide are seen as incentives for further cooperation between Central Asia and China. In a report prepared by Mr. Zhuwei Wang in 2015, Chinese accession to the ECT is presented as a facilitator for "profitable, lasting relations between China and the hydrocarbon-producing states of Central-Asia", which are all members of the ECT. There are currently signs that the leadership in both Moscow and Beijing have opted for strategic cooperation amidst a strenuous relationship with the West, something that could bode well for OBOR. However, the longevity and future of such cooperation remains to be seen.

Another potential obstacle for OBOR has been the lack of security for Chinese investments in regards to political and commercial risks when building infrastructure in countries along the route. This issue is specifically dominant in the region from Pakistan through Central-Asia and the former Soviet member states. Although increased Chinese foreign investments over the last few decades have shown lower levels of risk-aversion than more established global player, it is discussed by observers if this could be a result of necessity, and not desire. Security and stability in a project of the magnitude of OBOR is not only desirable for China, but a necessity.

The New Silk Road, leading China to the ECT?

Among the over 65 countries bordering OBOR, so far 38 have signed bilateral investment treaties, some of which are limited to determine the amount of compensation in case of expropriation. This leaves at least 27 countries where Chinese investments could be exposed to a vast range of political and legal risks. Investments in the energy sector have a tendency to span over long time periods, making them particularly vulnerable for changes in legal framework and political situations- As discussed during the *Meeting of the EC Industry Advisory Panel* (IAP). Alongside offering a broad legal basis for the protection of these investments in the 54 Contracting parties to the ECT, the ECT also offers China collaborative opportunities with other regions, adopters of the IEC, including Africa, the Middle East and Latin America – markets with potential for further Chinese exports. When China signed the IEC last year, some observers viewed this as a first step towards ECT accession. This also taking into account increased cooperation between China and the ECT in recent years. Common ground between China and the ECT is to be found on issues regarding security of supply and demand, energy transportation and energy transit security, as well as the alleviation of energy poverty. So, what are potential obstacles facing Chinese accession?

China: have its cake and eat it too?

If something sounds too good to be true, it usually is. It is true that the ECT does not seek to determine the structure of national energy markets in member states, dictate national energy policies, obliging member states to open up their energy sector to foreign investors, and could be said to leave the member state in question free to determine the system of property ownership of its national energy resources. At the same time, accession to the ECT could mean the Chinese government has to face suits by foreign investors. With a new National Congress of the Communist Party set for 2017, a lead up to which President XI Jinping is expected to further consolidate power, changes opening up China further might not be viewed as the best solution. While some observers point out that the benefits of ECT accession outweighs the costs, there is a great deal of uncertainty as to how willing the Chinese are to accede to the ECT. Like an overexcited family member on the sidelines of a soccer match, China might opt to be a loud advisory to ECT. The interesting issue for the future will be if China takes the plunge and joins in.

Oil well in Qaidam Basin, Qinghai By John Hill - Own work, CC BY-SA 3.0

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Cheap Oil and Shipping Routes

–Henrik Vorloeper

One of the most interesting news stories of this week was published on the website "BBC Future", which tells us about the trading industry and its return to pre-industrial shipping routes, avoiding manmade waterways, like the Suez- and Panama Canal and detouring around continents. This is a new phenomenon to which the *Danish SeaIntel Maritime Analysis* has delivered the necessary statistical data. Between October 2015 and February 2016, 78 cargo vessels enroute the Indian and the Atlantic Ocean have avoided the passage through Suez Canal and favored the longer route around the southern African cape instead. The rising trend indicates that more and more shipping companies opt for the longer route in order to avoid "bottlenecks" with high transit fees. For example, the passage through Suez reduces the distance of a Sea journey for example from Rotterdam to Singapore by 3,500 nautical miles, which is about the distance between Moscow and Shanghai. There is a simple economic reason for this: the low oil price and the high transit fees imposed by the Egyptian authorities make shipping through the passage between the Mediterranean and the Red Sea unattractive for traders. According to OilPrice.com, vessels passing Suez pay an average of US$ 465,000 on transit fees at Suez, while the South African route saves an average of $235,000. Fuel for ships has fallen from $400 to $150 per metric ton in May 2015 (Singapore prices), as a result of low crude prices. This has made the southern route cheaper for traders.

This trend is bad news for Egypt. The Suez Canal is the major income source of foreign currency for the state, it would lose billions of income per year if this trend continues. According to the numbers provided by SeaIntel, Suez would have to half its transit fees in order to attract ships to return. At times of political turmoil, the weak government is even more dependent on income from this source. In order to maintain its favorable geographic location, Cairo just raised $8 bln to widen the canal. The new measurements would allow ships to reduce the transit time in Suez from 18 hours to 11 hours, an achievement that sounds bizarre, taking into consideration that shipping companies seemingly accept additional transit time with an average of one week, to go around Africa instead of through the Suez.

The question is whether low fuel prices will compensate for longer journeys. Not every ship and cargo have the same formula for the most economic shipping route, so some vessels might continue to rely on Suez and reduced transit times, or so hopes the Egyptian government. However, the market situation also does not speak to Egypt's fortune for several reasons. First, low fuel prices allow ships to increase the average speed, hence reducing the time difference between the two routes. Second, shippers still have potential to optimize the cargo, the size of the chartered vessel and the ports in which the cargo can be dropped. Third, cargo vessels, especially oil tankers want to stay longer at sea, as according to BBC, the current oil glut makes it more attractive for oil producers to store in any available storage capacity, including ship tanks, where it waits for higher prices in order to be sold. Cairo is hoping for high oil prices as well, as they will incentivize ships to return to the shorter route through the Suez Canal. Therefore, our assessment is that Egypt will eventually lower its passage fees, but not as dramatically as projected.

By Maersk Line - First WAFMAX in Angola 3, CC BY-SA 2.0

Solar Drones Create Their Own Grid In Remote Parts of The Developing World

–Glenda Pavon-Suriel

620 million people in Africa still don't have access to electricity according to the International Energy Agency. Many others around the world live in areas where the grid system is unreliable. In Africa, for example, investments in the electrical sector specifically are low, as are rates of electrification, compared to other developing regions. However, an increasing number of companies, particularly solar energy companies, are seeing this untapped market as a huge opportunity.

Setting up infrastructure for electricity in many remote areas is cost prohibitive and not likely in the near future according to German company Mobisol, which is developing a drone and solar panel system as a mini-grid in Rwanda and Tanzania. "People have been waiting 10 or 20 years for the grid and the grid is not going to come, because it's much too

expensive and it's too big an infrastructure for what people really need, " says Thomas Duveau, Mobisol's business development manager. Companies like Mobisol are bypassing the need for traditional electrical infrastructure, and meeting the energy demands of some African communities using renewable energy and various systems of mini-grids. One of Mobisol's unique features is that they have become the grid themselves. "We're the only company that can claim to substitute the grid," says Duveau.

Whereas electrical infrastructure projects can be expensive, due to decreasing costs of solar energy, mini-grid technologies like Mobisol's are affordable for developers and users alike. A Mobisol drone costs US$ 21 a month over the course of 36 months and customers can pay back the cost of their equipment and choose to own it at the end of the 36 months. A Mobisol drone user can also opt to become part of the drone network, offering their roof as a charging station for other drones and get credit on their bills to offset monthly repayment costs. The drones then become interconnected and form their own network or mini-grid. The solar drones are not only affordable, but they can be profitable for many families. The company claims that the drone system could eventually enable "families to become micro-entrepreneurs, for instance charging phones and laptops for other villagers, and setting up barber shops or small cinemas."

Renewable energy projects like Mobisol's present tremendous opportunities not only to bring electricity to remote areas, but also to demonstrate the potential of alternative energies like solar and wind energy. The implication is that the renewable energy industry will very likely be the future of some of the poorest areas of the world.

Leo Schiefermueller, managing director of TerraProjects, a renewable energy consulting firm, said: "We believe up to 120 million, about 20% the people in non-electrified regions in Africa, could be connected to mini-grids." So far Mobisol has signed up about 40,000 families, or 200,000 people.

USS America, Suez Canal, Public Domain

The Week in Review

More Gas Auctions from Gazprom

The Russian gas giant Gazprom has announced that they intend to hold more gas auctions to the Baltic States. A trial auction was conducted in September, in which over 1 bcm were sold for delivery to North-Western Europe from 3.2 bcm on offer. Gazprom called the event a success. Later in March, in the midst of tougher competition and regulations in the European market, Gazprom will offer 560 mcm to Lithuanian and Latvia at auction.

Pinchuk, D., 2016. Russia's Gazprom Aims for More Gas Auctions in Europe This Year. Reuters, 1 March.

Oil Spills Result of Dearth of Investment

Greenpeace claims that under the current low oil price, firms are reluctant to spend what is necessary to fix aging pipelines. A pipeline on Sahkalin Island ruptured spilling 1,000 barrels across the island near the village of Ekhabi. Rosneft claims that a subsidiary, RN-Sakhalinmorneftegaz. Rosneft responded to the spill in tandem with the federal environmental agency. While Greenpeace claims that the spill contaminated regional waters after migrating to an area river, Rosneft denied this. The head of energy projects at Greenpeace Russia, Vladimir Chuprov, claimed that Russian companies had no appetite for investments that were needed to keep pipelines both safe and operational.

Graeber, D., 2016. Greenpeace: Russia Has No Appetite to Control Oil Spills. UPI, 4 March.

Mexico Opens Up

Mexico is currently engaged in constitutional reform that has major implications for energy trade and integration on the North American continent. One of the reforms that have been implemented since 2014, includes allowing the entry of private companies into the market of oil and electricity. As a result of this opening to private participation, the country is expected to receive US$ 4-5 bln. The President Enrique Peña Nieto has also moved to create an open model of markets in oil, gas and electricity, in which the participation of public and private companies on equal terms is allowed.

Energy News, 2016. The Energy Union of North America to be Integrated by Canada, USA, and Mexico is Moving Forward. Energy News, 25 February.

Iran and South Korea Move Back to Cooperation

South Korea will extend its help to Iran as the Persian nation attempts modernize its water and electricity facilities. South Korea has the technical capabilities and human capital that is much needed in a nation that was starved of foreign technology as a result of sanctions. Private Korean companies are going to take part in the construction of electrical equipment, power plants, distribution networks, as well as renewable energy and hydroelectric plants. High ranking Korean officials had initially visited Iran in early August to signal its willingness to return to Iran's oil, gas, and petrochemical markets. Before the heavy sanctions regime began, South Korean companies participated in various engineering and manufacturing capacities in Iran.

EIN, 2016. Iran, South Korea Renewing Energy Cooperation. EIN, 1 March.

Low Oil Price Hits Revenue-Reliant African Countries

Low oil prices, increased inflation, and fickle investors have hurt African countries reliant on oil revenues to rectify their state finances. Niger, who depends on oil for 80% of its export revenues, can expect its current budget deficit to double to US$ 15 bln. Due to the increasing national debt, investors are asking for higher interest rates and new loans. The newly independent nation of South Sudan is set to pay transit charges to its northern neighbor that can run up to EUR 22.50. South Sudan's oil minister has stated that it risks stopping production altogether if Sudan's government does not agree to lower the tariffs for transportation. Angola is suffering from a lack of goods on the market to the point of implementing food rationing as a result of a 2/3 decrease in oil revenues since 2013. By implementing rationing, the government hopes to prevent the growth of a black market and a run on dry goods.

Fischer, H., 2016. Africa and the Price of Oil. DW, 2 March.

China Develops Green Certificates

China, the world's leading greenhouse gas producer, is making a move to promote cleaner energy by setting up a market for renewable energy certificates. China hopes to increase non-fossil fuels to 20% as a proportion of the country's energy mix by 2020 by allowing power suppliers to trade 'green certificates' that are representative of the proportion of non-hydro renewable energy they generate. Cheap prices of traditional power sources have hindered the development of China's globally dominant capacity of photovoltaic power, as they are given priority on the power transmission grid.

Chen, K., Rose, A., 2016. China Aims to Boost Renewable Energy with 'Green Certificates'. Reuters, 3 March.

ENSCO DS6 Drillship taking on fuel bunkers in Walvis Bay, Namibia during the transit to Angola and start of contract with BP. By CellsDeDells - Own work, CC BY-SA 3.0

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