Eastern promise

Russia's strategic shift to Asia will put the world's largest energy producer at the centre of the world's biggest energy market

RUSSIA'S shift east has long been in the making and its increasing engagement with China on a number of huge deals could see energy trade between the two neighboring countries quadruple by 2025.

Agreements for oil, coal and power supply have already been struck and while negotiations on a major gas contract have proved more difficult, a landmark deal was signed between China and Russia during president Vladimir Putin's visit to Shanghai in May.

The improved trade ties make sense. In contrast to Russia's established markets, which are stagnating in Europe, demand for energy in Asia is rapidly expanding. Russia's legacy oil production in the western Siberia heartlands, close to Europe, is maturing too. Yet on the opposite side of Russia, in eastern Siberia, huge untapped oil- and gas fields, right smack on north Asia's doorstep, are primed for development.

The $400 billion gas deal, signed between China National Petroleum Corporation (CNPC) and Gazprom, will directly link Russia's huge gasfields to Asia's booming market for the first time. Thousands of kilometres of new pipeline will be laid across Russia's east as part of the Power of Siberia project.

But the deal is part of a trend. Chinese, Japanese, as well as Indian companies, have all been eager to invest. And slowly Russia has warmed up to the realisation that these remote and technically tricky resources will need large sums of Asian capital to develop.

Open to offers

It's still unclear where the investment opportunities for Asian firms are, but Russia has shown an unprecedented willingness over the past year to allow Asian participation upstream, says Emily Stromquist, a specialist on Russian natural resources at Eurasia group.

Russia has been adjusting to the new realities of a lacklustre European gas market, as well as China's precipitous demand growth, for some time. But the recent Crimean crisis and deterioration of relations with the West make this pivot urgent and will only accelerate the process, Vitaliy Yermakov, Moscow-based research director at IHS Cera, told *Petroleum Economist.*

Historically there has been very limited energy trade with China as Russia focused West, while fears of China's rising influence have limited Russia's willingness to open East Siberia up to direct Chinese investment, says Paul McConnell, a Russia specialist at Wood Mackenzie. Instead, loans for long-term supply have characterized trade between the two countries.

But the recent offer of equity in Arctic and East Siberian acreage, as well as CNPC buying a 20% stake in Novatek's $27 billion Yamal liquefied natural gas (LNG) project, marks a significant breakthrough. Russia has also sounded out Japanese investors about the possibility of joining Yamal, while Indian national oil companies (NOCs) are sniffing around too.

Together, with upfront financing in return for guaranteed supplies, a model for increased cooperation appears to be emerging between China and Russia, says McConnell.

Rosneft, the world's largest-listed oil producer, has long been comfortable deploying capital from Chinese NOCs to push its frontier projects, but national champion Gazprom had until recently ruled out similar moves. The CNPC-Gazprom gas supply deal could change this.

As a result of the closer engagement with China, combined with a growing mutual dependency, Wood Mackenzie says energy trade could quadruple by 2025 to over 100 million tonnes of oil equivalent.

In terms of trade, Russia's oil sector is leading the way as East Siberia emerges as a major producing region. The East Siberia Pacific Ocean (Espo) pipeline, which has been underpinned with over $25 billion of Chinese loans, connects the oil-rich region with hungry Asian buyers. The export system, one of the most expensive Russian infrastructure projects ever undertaken, links oilfields in East Siberia with a port at Kozmino on the Pacific coast and includes a 70 km spur line to the Chinese frontier.

Crude, from Espo, is not only relatively close to target Asian markets, but it is low in sulfur, which means it is easy to extract kerosene and other middle distillates, making it an attractive alternative to longer haul Middle East and Indonesia crudes.

Espo's capacity varies at different points, but its output was over 700,000 barrels per day (b/d) to Kozmino plus China last year, data from Wood Mackenzie shows. Ultimately its capacity can be expanded to 1.6 million b/d with additional pump stations and debottlenecking. Pipeline operator Transneft is working on expanding Espo's capacity.

East Siberian oil production, including the Vankor hub that is connected to West Siberia, is projected to hit more than 1.2 b/d by 2017. Production can go east or west. Other West Siberia crude can be re-directed east.

East Siberian production will not necessarily match Espo throughput though. The Zapolyarnoye-Purpe line, which is being built, could feed extra volumes from Arctic Siberia to Espo, potentially further disconnecting East Siberia production from Espo throughput, says Wood Mackenzie.

Rosneft has used Espo to gain a strong foothold in the surging Chinese oil market. Igor Sechin, the company's president, struck a massive loans-for-oil deal last year that will see Russia more than double crude deliveries to China to more than 600,000 b/d in exchange for billions of dollars of pre-financing. But as Russian oil production is barely rising, extra crude flowing to eastern markets has forced a slowdown in exports elsewhere, notably Europe.

While progress has been made with the oil trade and access to upstream assets, gas exports from Russia to China have been almost 20 years in negotiation. But all deals take time, and significantly, Russia is probably the only big player that can easily add 40 billion to 70 billion cubic metres per year (cm/y) to China's import portfolio, says Yermakov.

As with the oil supplies, once contracts are nailed down, the projects, including the Power of Siberia gas pipeline supply deal between Gazprom and CNPC, will move ahead very quickly.

The pair signed an initial agreement in March 2013 for

38 billion cm/y of supply, with first delivery scheduled for 2018. This could be increased to 60 billion cm/y later.

With the agreement and gas sales contract recently ironed out Gazprom says it will invest $55 billion in a new pipeline to the Chinese border, and to develop the huge east Siberian gasfields that will feed it, Kovykta and Chayandinskoe. China will provide at least $20 billion of investment, though it's unclear on what terms.

Price has been the sticking point. It's believed the pair agreed to an oil-linked price arrangement that would allow the gas to arrive in eastern Chinese markets at around $12-13 per million British thermal units (Btu) or around $10/million Btu at the border point of Blagoveshchensk. The price is competitive against imports of LNG.

Price talks have been less difficult for Gazprom now that LNG prices are higher, while significant price reforms in China – aimed at pushing domestic prices towards LNG parity – have helped too.

Crimea crisis

But Moscow needed the deal more than ever as the West strives to isolate Russia in the wake of the Crimean crisis, says Keun-Wook Paik an expert on northeast Asia energy issues at the Oxford Institute for Energy Studies. To persuade Beijing to bite, it's very likely the upstream opening card could be included, in parallel with China's upfront payment without interest (the Espo crude pipeline loan was based on normal interest rate payments), Paik tells *Petroleum Economist.*

Indeed, the incentives were high on both sides given the huge volumes at stake. And the agreement could pave the way for even more gas export deals to Asia.

On top of the initial 38 billion cm/y of gas to China – or roughly one-fifth of Chinese gas demand last year – the deal will open the door for the supply of 22 billion cm/y to a planned LNG export terminal in Vladivostok that will feed Japan, South Korea and China.

Russia could penetrate the Asian market with nearly 87 billion cm/y of gas, if Sakhalin Island's untapped finds in the Far East are included, says Paik. And that's even before factoring in Novatek's huge Yamal LNG scheme – being built in the Arctic – that will export some 23 billion cm/y when its finished.

Unsurprisingly, the Japanese are throwing their weight behind the proposed expansion of Russian LNG exports in the Far East. Cargoes can be shipped to Japan in less than 24 hours, making the economics and flexibility of supply highly appealing.

As a result, Russia could significantly carve out the lucrative Japanese market – the biggest in the world – Paik tells *Petroleum Economist*.

Aside from offering smaller upstream stakes and slugs of LNG export ventures, Russia is encouraging much needed Asian investment in gas processing further downstream. Historically, Russia produced dry gas, which is low in liquids, but East Siberian gas is liquid rich – blessed with ethane, propane and helium etc.

To extract these high-value by-products entails significant investment and risk. But the Kremlin has made it an official goal to build a viable petrochemicals sector that will boost local industry. And Asian firms will be crucial to its success. Several Japanese trading houses are involved in plans to build petrochemical plants at Vladivostok. "We don't only hold high expectation for the technology held by Japanese companies. It is also important for us that they have sales channels (for natural resources and products) in the Asia-Pacific region," says a senior Gazprom official in the Far East.

Asian companies are comfortable with projects in the east targeting pacific markets. But most of the Asian investment will only be welcomed on the high-risk and high-cost projects, Ian Thom, a Russian upstream specialist at Wood Mackenzie, tells *Petroleum Economist.*

"There won't be a big opening up. It will be very slow and measured. But we will see a few strategic partnerships flourish as companies build up some trust". **DE** ●

Figure 1: Delivery and pricing options

Source: Bernstein Analysis, Petroleum Economist