

OIL AND GAS NEWS BRIEFS FROM LARRY PERSILY

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Yamal LNG financing stalls over sanctions, loan terms

(Reuters; Oct. 19) - Efforts to secure financing for Russia's Yamal LNG project have stalled, with the owners baulking at costly Chinese loans and Western sanctions hampering alternatives, two Russian banking sources said, warning the search could drag into next year. The quest to bankroll the \$27 billion project ahead of a planned 2017 launch is seen as a test of Russia's ability to secure foreign loans at a time when its access to capital markets is limited by sanctions over its involvement in Ukraine.

The lead Russian company in the project — Novatek, Russia's largest private gas producer — is under U.S. sanctions, making it harder to find cash for the Arctic project. Novatek has a 50.1 percent stake in what will be Russia's second LNG plant. France's Total and China National Petroleum Corp. hold 20 percent each. Last month, Novatek agreed to sell a 9.9 percent stake to the China Silk Road Fund.

Novatek had expected to raise \$20 billion from Chinese banks, with the first funds expected by the end of 2014. But two Russian sources, who declined to be named, said they saw little movement on a deal. One of the sources said Yamal LNG was not happy with earlier offers from the banks and had been forced to relaunch the bidding process. "Chinese money is expensive, so Novatek and Total would like European banks to take on the larger share of financing, which is complicated by sanctions," the source said. "The delay ... also raises concerns about the project's timing and possible increased equity investment in the project," Goldman Sachs said in a research note Oct. 19.

Japanese utilities plan to reduce long-term LNG contract volumes

(Reuters; Oct. 21) - Jera, a Japanese joint venture that is set to become the world's biggest buyer of liquefied natural gas next year, plans to significantly cut the volumes it purchases on long-term contracts, the company's president told the Reuters Global Commodities Summit. Jera, set up by Tokyo Electric Power and Chubu Electric Power to handle fuel procurement with a possibility of taking over thermal power stations, has more than 10 million metric tons of LNG on long-term contracts that expire around 2020.

But the company will not automatically renew those contracts, President Yuji Kakimi said. That puts more question marks over planned LNG projects, which rely on long-term contracts to obtain financing. Jera, which buys around 80 percent of its gas on long-term contracts, will only contract for new volumes to cover the absolute minimum of fuel needed, using the most optimistic scenarios for rebooting its nuclear power plants and the take-up for renewable energy being promoted by the government.

Jera's additional requirements for gas will be met with mid-term and short-term contracts or spot purchases, Kakimi said. Jera will surpass Korea Gas as the world's single biggest buyer of LNG with annual purchases of around 40 million tons once it fully integrates the partners' existing

contracts next summer. Kakimi said Jera's annual purchases of gas are expected to decline in line with government forecasts, implying the company will buy about 28 million tons a year by 2030. Jera also aims to broaden its sources of coal to lower its reliance on high-quality Australian coal in order to cut costs.

BP strikes deal to sell LNG to Chinese power plant operator

(Bloomberg; Oct. 21) - BP has agreed to supply liquefied natural gas to China Huadian Corp. in a deal worth as much as \$10 billion over two decades. The company will supply as much as 1 million metric tons of LNG a year (about 48 billion cubic feet of gas) to the Beijing-based company that operates power stations, according to a BP statement. BP and China National Petroleum Corp., China's biggest oil producer, also agreed to jointly explore and produce shale gas in the Sichuan basin, according to a separate statement.

The agreements are part of a host of deals signed during Chinese President Xi Jinping's visit this week to London. The partnership with CNPC "not only strengthens the relationship between the U.K. and China's largest energy companies, it further cements the relationship between China and the U.K. as global business partners," BP's Chief Executive Officer Bob Dudley said in the statement.

The LNG supply agreement with China Huadian builds on BP's agreement with China National Offshore Oil Corp. last year to supply 1.5 million tons a year of LNG for two decades starting 2019 — a deal valued at \$20 billion at the time. BP supplies LNG from several countries including the Tangguh project in Indonesia, in which it has a 37 percent holding. Pricing terms of the latest deal were not disclosed, nor the source of the LNG cargoes for China Huadian Corp.

Anadarko waiting on Mozambique government for LNG decision

(Reuters; Oct. 21) - U.S. energy company Anadarko is pushing ahead with its planned \$20 billion Mozambique liquefied natural gas export project and will make a final investment decision once the government approves its development plan. "We're working full out to achieve a final investment decision as soon as possible," Anadarko's country manager John Peffer told Reuters, without committing to a timeline.

There has been uncertainty over when Anadarko would make its final call on the planned LNG project in Mozambique. Other oil and gas companies have deferred large development projects following a sharp fall in oil prices. There was speculation earlier this year that Anadarko might sell assets in Mozambique. Peffer said the investment decision was dependent on the government approving its development plan, which Anadarko will submit very soon. He said pulling out of the project was "not an option."

Once the plan is submitted, the government has (by law) nine months to respond, potentially adding to costs. Anadarko aims to ship its first LNG cargo from Mozambique by the end of the decade, Peffer said, delayed from the original 2018 date. But industry sources close to the project said 2020 was unrealistic. "Even if it went without a hitch, five years is probably not enough to finish this level of infrastructure," a source said. Peffer said Anadarko has non-binding agreements with Asian buyers for LNG sales.

Japanese electric utility signs 20-year deal for U.S. LNG

(Platts; Oct. 19) - Japan's Tohoku Electric said Oct. 19 it has signed a 20-year agreement with France's Engie to buy 270,000 metric tons per year of U.S. LNG (about 13 billion cubic feet of gas, about four cargoes per year) that includes provisions giving it the flexibility to alter delivery destinations and resell volumes to third-parties. The companies had inked a sales and purchase heads of agreement in May 2014.

The cargoes will be loaded from Sempra's Cameron LNG project under construction at Hackberry, La. Deliveries are scheduled to start in 2018. The LNG will be linked to U.S. Henry Hub pricing, the utility said, without providing specifics. The deal reflects growing demand for contract flexibility from Japanese utilities facing increasing competition in domestic power and gas markets ahead of full deregulation. The potential restart of nuclear plants has also made it difficult to project future LNG demand in Japan.

Engie holds a 16.6 percent stake in Cameron LNG; Japanese trader Mitsui 16.6 percent; and Japan LNG Investment, a joint venture between Mitsubishi and shipping company Nippon Yusen Kaisha Line, 16.6 percent. Sempra Energy owns 50.2 percent. Tohoku Electric in April 2014 signed a separate heads of agreement with Diamond Gas International, a wholly owned subsidiary of Mitsubishi, to buy 300,000 tons of LNG per year from the Cameron project for 16 years starting in 2022.

Gazprom has options for dealing with U.S. LNG competition

(Argus; Oct. 19) - The first liquefied natural gas export project in the Lower 48 states is close to start-up, and it's pointing its tankers to Europe, Gazprom's largest and most important market. In Paris last week, Cheniere Energy CEO Charif Souki said the plant, under construction at Sabine Pass, La., could deliver LNG to Europe at \$4.50 per million Btu, based on current low prices for U.S. gas. This is close to the breakeven cost for Gazprom sales to Europe, said Societe General European gas analyst Thierry Bros.

How will Gazprom react? Gazprom's sales to Europe and Turkey — excluding the Baltic states — accounted for 30.2 percent of the total volume of gas consumed in Europe. "Our key objectives in the European market are to maintain our market-leading position ... and increase the efficiency of our marketing activities," Gazprom said this month. Gazprom could hope for higher U.S. gas prices to push up the cost of competing LNG to Europe. Or Russia could drop the price of its gas to Europe and increase supplies.

Gazprom could ask the government to lower the taxes it has to pay. One of the benefits of being a state-run firm is your lobbying clout. It could also try to ride out the glut. Gazprom's supplies to Europe are on take-or-pay contracts, so a certain amount of Russian gas will go to Europe regardless. And less pipeline maintenance could reduce Gazprom's European delivered costs to around \$3 per million Btu.

Korea Gas doesn't rule out more investment in Australia LNG

(Sydney Morning Herald; Oct. 20) - Korea Gas Corp., the world's biggest importer of liquefied natural gas, has voiced tentative interest in participating in Woodside Petroleum's proposed Browse floating project, defying market doubts that the West Australian venture will be able to attract customers. Joe Kang, director of the energy resources research division at KOGAS, said "depending on the market" the company could be interested in buying LNG from the proposed project.

Taking an equity stake was also possible, he said, despite a tightening up in Korean government spending. "It is about time" KOGAS resumes considering equity stakes in LNG projects after the recent slowdown, Kang said on the sidelines of last week's event marking the start-up at the Gladstone LNG project in Australia's Queensland state, in which KOGAS has a stake. The first cargo from Gladstone was shipped to the KOGAS terminal in Incheon, making it the third LNG project in Australia to deliver to Korea.

Woodside, lead proponent of the proposed \$40 billion-plus Browse project, is targeting South Korea and Japan for sales agreements for its share of LNG from the project. It needs to sign up customer agreements in order to make a final investment decision on the project, which it is targeting for the second half of 2016. Previous attempts to sign up customers for Browse have fallen flat.

Opponents battle proposed LNG export plant in Georgia

(Savannah Morning News; Georgia; Oct. 16) - As Kinder Morgan continues its efforts to expand its LNG facility on the Savannah River in Georgia, Sierra Club members have been digging into what the changes at the Elba Island plant would mean for residents. Among their findings: During construction, the \$1.5 billion project would require more than 10,000 truck deliveries per month for the first six months, tapering down over the rest of the estimated two years of building.

"What it's going to mean in terms of construction for two years is a lot, a lot of truck traffic," Stacey Kronquest, a member of the executive committee of the Coastal Group of the Georgia Sierra Club, told an audience of about 30 people Oct. 15 at the First Presbyterian Church in Ardsley Park. Once built, the plant will require frequent deliveries of chemical refrigerants to run the gas liquefaction process. Other trucks will take away the chemical by-products of the process.

The facility currently imports and stores liquefied natural gas on a private island in the Savannah River about five miles downstream from downtown Savannah. With domestic shale gas booming, LNG imports are down to only a handful of shipments this year. The planned addition of 10 modular liquefaction units would allow the facility to liquefy gas that arrives by pipeline, making it practical to ship out by tanker. The Federal Energy Regulatory Commission will issue its environmental assessment next year.

Shell-led LNG project in B.C. commits \$1 million for job training

(Globe and Mail; Canada; Oct. 15) – A proposed liquefied natural gas project in Kitimat is creating a fund for skills training to spur B.C. residents to vie for jobs promised in the province's nascent LNG industry. LNG Canada, a joint venture led by Shell, is investing \$1 million in the trades training fund, while an additional \$500,000 will come from the Canada-B.C. job grant program. The project owners have yet to commit to construction, and are still working through permits, marketing and financing decisions.

While the funding is modest in the context of huge industry demand for skills training, the announcement is being touted by the B.C. government as an example of how the province is gearing up for what it expects will be an economic bonanza in exporting LNG to Asia.

"We also recognize that there will be a role for immigration — permanent pathways for people to be involved," B.C. Jobs Minister Shirley Bond said Oct. 15 at an international LNG conference in Vancouver. "At peak times, it may well be that there is a requirement for workers to be here on a temporary basis, but that will only be if and when needed, and after British Columbians have been considered."

FERC predicts smaller price spread for gas to Northeast market

(Natural Gas Intelligence Daily; Oct. 19) – New natural gas pipeline capacity out of the Appalachian Basin is helping alleviate bottlenecks from the prolific region and will continue to force production and market prices there and in Mid-Atlantic and Northeast market areas ever closer, according to the Federal Energy Regulatory Commission's Office of Enforcement.

Pipeline capacity expansions are helping to erode peak winter spreads between the low price paid in the Marcellus Shale region and the high price in the Northeast, the office said in a Winter Energy Market Assessment released last week. Analysis by FERC staff concluded that the spread could be more than halved this winter compared to last year as additional pipeline capacity makes it easier to move gas.

The January-February spread, which soared to \$10.93 per million Btu in 2014 and \$12.76 in winter 2015, isn't likely to come close to those heights in the foreseeable future, according to FERC's analysis. The agency is projecting a spread of \$4.53 in the coming winter, \$2.12 in 2017 and \$1.39 in 2018. Price divergence during particularly constrained periods is still expected, FERC said, but it "will likely become a less frequent occurrence over time."

Oklahoma regulators shut down disposal wells in area of quakes

(EnergyWire; Oct. 20) - Oklahoma oil and gas regulators dealing with a dramatic increase in earthquakes near the oil pipeline and storage hub of Cushing have shut down three more drilling wastewater disposal wells. Another well was shut down by the company that owns it after regulators said they were concerned it was drilled too deep. And the operators of seven other wells were told in a letter released Oct. 19 that they must reduce the volume of drilling waste that they inject deep underground.

The Oklahoma Corporation Commission said it also told the operators of 13 other wells in the area that they may need to change operations in the future. The commission is directing wells within 3 miles of the recent earthquakes to shut in. Wells 3 to 6 miles away have to reduce volumes 25 percent. Wells 6 to 10 miles away are on notice. OCC began restricting wells near Cushing a month ago, soon after a magnitude 4.1 quake hit northwest of the city. But the quakes have continued, including a 4.5 tremor Oct. 10.

Scientists say favorably aligned faults and production methods that create uniquely large volumes of wastewater appear to have combined to create unprecedented swarms of man-made earthquakes in Oklahoma. The Cushing area has been shaken by 43 quakes of magnitude 2.5 or higher since

Sept. 1, according to U.S. Geological Survey data. The state has had more than 700 earthquakes of magnitude 3 or greater this year, an increase over the 585 last year.

Trudeau victory in Canada could kill oil sands pipeline project

(Vancouver Sun; Oct. 20) – Canada’s Liberal Party win for Justin Trudeau likely spells the demise of Enbridge’s proposal to build the Northern Gateway oil pipeline through northern B.C. Trudeau said during the election campaign that he opposed the project, telling The Vancouver Sun “the Great Bear Rainforest is not a place for an oil pipeline.” He also pledged a moratorium on oil tankers on the north coast, which would effectively kill the \$7.9 billion project to move Alberta oil sands production to the coast for export.

But don’t count out Kinder Morgan’s \$5.4 billion Trans Mountain oil pipeline expansion in southern B.C., which would increase tanker traffic in the inlet in front of Vancouver. During the campaign, Trudeau said Vancouver and its surrounding waters have a long industrial past and that it’s important for Canada to transport its resources to market. But that project could be delayed as the Liberals work out a promised reinvigoration of the environmental assessment system watered down by the Conservatives.

B.C.’s liquefied natural gas export plans — which include proposed pipelines and LNG terminals on the coast — don’t appear to face any obstacles from a new Liberal government in Ottawa other than a promise to more vigorously engage First Nations. Trudeau, Canada’s prime minister-designate, has said he is open to LNG tankers on the north coast of B.C.