Oil and Gas News Briefs Compiled by Larry Persily March 27, 2017

Qatar could be most exposed as LNG buyers push for better deals

(Sydney Morning Herald; March 25) - The world's biggest liquefied natural gas buyers — all in Asia — are clubbing together to secure more-flexible supply contracts in a move that shifts power to importers from producers as the global LNG oversupply grows. Reworking existing deals is feasible, sources said, but may hit hardest at the world's biggest producer, Qatar, as many of its supply deals with Japan start to expire from around 2023, industry sources said.

A senior Qatar Petroleum official hinted that buyers — emboldened by temporarily oversupplied LNG markets to demand better terms — may regret their actions when the cycle turns. "Right now the market is oversupplied, but if we went into a period of a tighter market, how would these buyers organizations hold up? That is an important question," the official said. "If there is a market crunch and gas tightens, it could recreate incentives for buyers to lock in long-term contracts."

The LNG market is undergoing huge changes as the biggest-ever flood of new supply is hitting the market, with volumes coming mainly from Australia and the U.S. In the highest-profile move of late by buyers, Japan's Jera Co., Korea Gas and China National Offshore Oil Co. in mid-March signed a memorandum of understanding to exchange information and "cooperate in the joint procurement of LNG." All three companies will have excess supplies in the next few years, said sources at major LNG producers.

Lower prices in Asia may push U.S. LNG to Europe this spring

(Bloomberg; March 23) - The heart of Europe's gas market may finally get help from the U.S. shale boom as fuel is poised to cross the Atlantic to replenish depleted inventories after the coldest January in seven years. Northwest Europe, one of the biggest trading regions for the fuel, hasn't yet attracted any liquefied natural gas cargoes from the U.S., which the shale boom has turned into the world's biggest gas producer. So far, LNG sellers have favored South America and Asia markets where prices have been higher.

But that may be about to change with spring weather poised to dampen demand and with prices in the biggest consuming region of Japan and South Korea moving closer to those in the U.K. and the Netherlands. Supplies from the U.S. may arrive in the coming months to help replenish European stocks at their lowest level since 2013, according to Houston-based Cheniere Energy, which is expanding its LNG export plant in Louisiana.

"U.S. gas will find an obvious home in Europe once most other markets are filled up," said Trevor Sikorski, head of natural gas and carbon at Energy Aspects in London. As Asian demand subsides with milder weather, regional prices will move closer to parity with European rates, according to Energy Aspects. Asian LNG prices may slide to below \$5 per million Btu after May, according to Citibank. That's the price of summer gas in the U.K. on the ICE Futures Europe in London.

New futures market will be based on U.S. LNG exports

(The Australian; March 24) - A major U.S. exchange is moving forward with plans for derivatives that could revolutionize liquefied natural gas trading, making it a more international market commodity, like crude oil. By May, global gas will have a futures contract based on U.S. LNG exports, according to Intercontinental Exchange and S&P Global Platts. The two companies are launching the effort as soaring LNG supplies raise the interest of suppliers and traders eager to lock-in prices or bet on them.

ICE futures will be based on Platts' spot-price assessment for liquefied natural gas coming from the Gulf Coast, where a wave of export terminals is opening up, fed by the shale-gas boom. The U.S. has long had a heavily traded futures market based on the gulf region's Henry Hub benchmark for gas prices. But the LNG contract will incorporate the additional costs for liquefying and shipping gas to some of the world's priciest markets, a better assessment for value, said Chris Pedersen, a Platts LNG analyst.

LNG has mainly been sold through years-long contracts priced off oil. But so much new supply is coming on worldwide, from the U.S. to Australia, that it's likely to be more than long-term consumers can take, forcing them to resell contracted cargoes. Spot-market activity has surged and many traders are eager for derivatives to deal gas globally. The hope for ICE and Platts is that this contract becomes an international benchmark like Brent and West Texas Intermediate are for oil.

Thailand a growth market for LNG sales

(Bloomberg; March 23) - Thailand has a message for embattled global LNG sellers: It's going on a shopping spree. Southeast Asia's second-largest economy is signing new contracts for liquefied natural gas purchases and expanding its terminals to boost imports to replace flagging domestic gas production. Thailand will boost LNG imports by more than 70 percent this year, according to Wuttikorn Stithit, executive vice president for natural gas supply and trading at the state-controlled energy giant PTT.

LNG producers worldwide are expected to expand output by about 23 million tons this year, even as spot prices in Asia have fallen more than 60 percent the past three years and demand from traditional buyers in Japan and South Korea stagnates. PTT, which

will boost Thailand's imports to 5 million tons this year from 2.9 million in 2016, is also considering investing in upstream projects as a way to maintain the security of supply. "This is a good time to buy more LNG," Wuttikorn said March 16.

For years, Thailand's growing economy was fueled by rising gas production in the southern Gulf of Thailand. Now output there is dropping. Production in January was 12 percent below peak output in November 2012. To bridge the gap, PTT buys pipeline gas imports from Myanmar and in 2011 opened its first LNG import terminal near Rayong southeast of Bangkok. Industry consultant FGE in Singapore sees Thailand's LNG imports rising to about 7.4 million tons a year by 2020 and 11.5 million by 2025.

Protests continue against gas line, LNG plant in Oregon

(Mail Tribune; Medford, OR; March 23) - Close to 200 protesters voiced their opposition to a 232-mile natural gas pipeline that would run underneath Southern Oregon land and waterways to a proposed liquefaction plant and export terminal in the coastal city of Coos Bay, OR. Despite the large opposition turnout at the March 23 rally in Medford, Jordan Cove LNG Chief Executive Officer Betsy Spomer said she believes many locals support the Pacific Connector Pipeline project.

She said she drew her conclusion from internal surveys and the fact that Medford's Jackson County voted for President Donald Trump "because people wanted jobs." The Federal Energy Regulatory Commission denied the pipeline and LNG terminal this time last year and reaffirmed its denial in December, saying it found little evidence to support a need for the pipeline and any public benefits were outweighed by negative impacts to landowners on its route. Jordan Cove LNG is trying again with an application at FERC.

There have been more than 59 pipeline reroutes in the latest draft of the company's proposal, and Spomer said Jordan Cove has been flexible with landowners about the routing. Among the protesters in Medford were property owners including Bob Barker of Shady Cove, whose property is a proposed drill site where the pipe would run under the Rogue River. "This is very disappointing that we have to go through this a third time," Barker said. "If I go to court and I win it's done, they don't get a second chance."

Haynesville Shale gas has several market advantages

(Forbes; March 25) - As an aging, dry, but nowhere near dead, natural gas titan in Northwest Louisiana and Eastern Texas, the Haynesville is the country's third largest shale play, now yielding about 6.3 billion cubic feet of gas per day and potentially holding nearly 500 trillion cubic feet. With only a few oil-directed rigs, the Haynesville accounts for less than 1 percent of U.S. shale oil production, but the gas numbers are much bigger — 13 percent of U.S. shale gas production.

In recent years, the Haynesville was nudged out of the market a bit in favor of lower-cost supply in the Marcellus and Utica shales, and associated gas from oil production, the latter accounting for 20 to 25 percent of total U.S. gas output. But pipeline bottlenecks in the critical Northeast that hold down prices and shut in some production are breathing new life into the Haynesville. Rig counts are up since mid-November.

The Haynesville has some advantages over other U.S. gas plays. Located near several major pipelines, there's no transportation bottleneck like there is in the Marcellus/Utica region. Public-opinion wise, producers in Texas and Louisiana have an edge because oil and gas production is ingrained in the culture, as opposed to Ohio and Pennsylvania, where major development is relatively new. Export pipelines to Mexico and demand for U.S. Gulf Coast LNG plants are all geographically advantageous to the Haynesville.

Demand for fracking sand doubles the price since last year

(Wall Street Journal; March 23) - The market for sand — a key ingredient in fracking — is surging once again as U.S. oil production rebounds, and the rising price of the tiny grains threatens to cut into energy companies' profits. Drillers have rushed back into the oil patch, and they are using more sand to help supersize their wells. Sand props open underground fissures, which allows oil and gas to escape to the surface. But the millions of pounds of sand being poured down wells is pushing up sand prices.

The tightening market has already sent prices marching toward \$40 a ton or more, up from \$15 to \$20 a ton in the second half of 2016. Increasing orders are also raising demand for railcars and trucks to transport sand from mines in states like Wisconsin to shale fields in Texas and Oklahoma. Some predict that demand may outstrip supply by next year. Tudor, Pickering, Holt & Co. estimates the sector will need 120 million tons of sand next year, more than double the demand in 2014 at the height of the drilling boom.

In the quest for efficiencies of scale, producers have been drilling megawells, which run underground for more than a mile horizontally, and blasting more sand down them to unleash more fossil fuels. Frack sand use in the Delaware, one of the hottest parts of the Permian Basin in West Texas, has more than tripled since the start of 2012. By the end of 2016, producers put an average 1,919 pounds per foot down wells that measured 5,500 feet, according to Drillinginfo data. Fracking a West Texas well in some sweet spots now takes 10 million pounds of sand, requiring 200 truckloads.

Calgary company proposes LNG plant to serve northern mines

(Platts; March 20) - Ferus is in the early stages of developing a natural gas liquefaction plant in British Columbia to supply mining companies in the Yukon and Northwest

Territories to replace diesel for operations and power generation, a spokeswoman said March 20. "Our proposed Fort Nelson LNG facility consists of two phases of 300,000 gallons per day each, with a targeted final investment decision in 12 to 18 months," the spokeswoman, Blaire Lancaster, said in an e-mail. Full development of 600,000 gallons of LNG per day would consume almost 50 million cubic feet of gas a day.

Calgary-based Ferus has not yet started the regulatory process to build the facility, but the first phase is targeted for start-up in 2020. The second phase is due for start-up in 2022, Lancaster said. The LNG will have a delivered price of just over \$15 Canadian per million Btu (under \$12 U.S.), half the price of diesel fuel, she said. Ferus will deliver the LNG in trucks or railcars. The company did not disclose a cost for the new plant.

In neighboring Alberta, where Ferus owns and operates a 50,000-gallon-per-day LNG plant at Elmworth, an expansion is planned for start-up in 2018, Lancaster said. Output from the Elmworth facility is currently supplied to the oil and gas industry in Western Canada to displace diesel in drilling rigs and fracking operations, and power generation in Yukon and the Northwest Territories. The proposed Fort Nelson plant is almost 300 miles northwest of Elmworth, much closer to northern mine sites and communities.

Company looks to recover and sell flare gas in Saskatchewan

(Saskatoon Star Phoenix; Saskatchewan; March 20) - Don Fraser is an expert in capturing and conserving the gas that burbles up from the oil wells dotting vast swaths of Saskatchewan and Alberta — valuable fumes that would otherwise be burned off, or simply released into the atmosphere. New regulations and a guaranteed customer mean his next project could be setting up shop at some of Saskatchewan's oil wells.

"The economics were tough, let's put it that way," Fraser said of his previous experience in Alberta with CanGas Solutions. "(But) the bigger thing was that, at the time, there was no regulatory environment forcing the producer to conserve the gas." CanGas specialized in "flare-gas capture" projects, on-site facilities designed to recover and ultimately sell methane and other vapors the petroleum industry calls associated gas. CanGas was sold last year and is now part of Plum Gas Solutions.

But major changes are coming in Saskatchewan, Fraser said. In November 2015, the provincial government introduced new rules limiting wellhead gas flaring and venting. The regulations are intended to reduce greenhouse gas emissions while creating economic benefits. Earlier this year, SaskEnergy — the Crown corporation responsible for distributing gas across the province — pledged to buy liquefied or compressed gas from companies that capture and truck it to wherever it is needed.

Oil companies bid \$275 million for federal Gulf of Mexico leases

(Reuters; March 23) - Shell, Chevron and ExxonMobil signaled the oil industry's return to the Gulf of Mexico's deep waters with high bids in a government auction up 76 percent over a year ago. The auction of offshore oil and gas parcels received nearly \$275 million in high bids, compared with \$156.4 million a year ago. The year-ago auction drew the fourth-lowest total bids for leases in the central gulf.

The oil industry had moved away from deep-water projects as oil prices fell and regulatory scrutiny increased following the Deepwater Horizon disaster in April 2010, the largest accidental marine oil spill. Shell and Chevron each had 20 high bids, and Shell's \$55.8 million total was the largest among the 26 companies submitting offers. Norway's Statoil was the second-largest total bidder with \$44.5 million, followed by Hess, Chevron and Exxon.

The highest bid on a single block this year, from Shell, was for \$24 million, almost twice last year's \$13.6 million top offer. Among other top bidders, Exxon submitted 19 high bids totaling nearly \$22 million, and Anadarko had 16 high bids totaling nearly \$19 million. The winners will be disclosed following a 90-day review. Interest in deep-water projects is heating up with more favorable costs for drilling rigs and services. Shell has cut its well costs by at least 50 percent and reduced logistics costs by 75 percent.

Algeria plans major investment to boost oil production

(Bloomberg; March 22) - Algeria's state-run oil producer plans to boost output by 14 percent by 2019 and invest billions of dollars in exploration. Sonatrach Group expects to spend \$9 billion from 2017 to 2021 in its search for new deposits of oil and gas, said Farid Djettou, head of the company's associations division, which is responsible for foreign contracts. In addition, it will drill an average of 100 wells a year during that time and invest more than \$50 billion across its entire operation, Djettou said.

Algeria is Africa's biggest gas producer and a member of OPEC, and Sonatrach's exports generate more than half of the government's budget revenue. Yet the country's oil output has declined since August 2008 as foreign investment sagged, and its monthly oil production of 1.04 million barrels a day so far this year is the lowest since 2002, according to data compiled by Bloomberg. Its 2015 natural gas exports totaled almost 1.5 trillion cubic feet, about 60 percent by pipeline and 40 percent as LNG.

TransCanada still needs OK from Nebraska for Keystone XL pipeline

(Bloomberg; March 24) - TransCanada said there's more "work to do" before it can start construction of the \$8 billion Keystone XL pipeline. The controversial project, which would help bring up to 830,000 barrels a day from Canada's oil sands to the U.S. Gulf

Coast, was approved by President Donald Trump's administration March 24. Other permissions, including from states along the way and the U.S. Interior Department, are still required.

Foes including environmentalists and landowners have vowed to continue fighting the pipeline, first proposed more than eight years ago. If built, Keystone XL will run from Canada through Montana, South Dakota and Nebraska, connecting to pipes traveling to Gulf Coast refineries. Asked by Trump when construction would begin, TransCanada Chief Executive Officer Russ Girling said there remains "work to do in Nebraska" first.

The federal thumbs-up was expected, but the challenges remaining for the project are significant, said Christi Tezak, managing director of research at ClearView Energy Partners in Washington. "We expect environmental groups and landowners to try to slow down or halt necessary proceedings for TransCanada to begin construction in each state," she said. TransCanada has reapplied for approval in Nebraska, where the project is now before the state Public Service Commission.

LNG terminal, SpaceX launch site can be safe neighbors, report says

(San Antonio Business Journal; March 23) - A new report filed with the Federal Energy Regulatory Commission says that a SpaceX launchpad at Boca Chica Beach and a proposed liquefied natural gas export terminal at the Port of Brownsville can safely be neighbors on the Texas coast. Rio Grande LNG filed an 87-page report with FERC on March 21, addressing the agency's concerns about the proposed facility's proximity to a SpaceX launchpad currently under construction five miles away at Boca Chica Beach.

With SpaceX planning at least 11 rocket launches a year from the Gulf of Mexico site, the report analyzed what would happen if an accident occurred at liftoff or during the early part of a launch. In the event of a launchpad accident, the blast radius is not expected to exceed 4,800 feet, meaning that there is zero chance of debris or vapors reaching Rio Grande LNG's facility on the Brownsville Ship Channel, the report said.

On days with favorable wind conditions for launches, the report says there is less than a 1 in 100 million chance of debris from a launch accident reaching any part of the LNG plant. Under the worst-case scenario, the odds of debris hitting the terminal remain below 1 in a million for an early flight accident where winds are heading inland at more than 30 miles per hour. FERC officials asked LNG project proponents last fall to analyze how their facilities would be affected during different rocket launch accident scenarios.