Oil and Gas News Briefs Compiled by Larry Persily January 18, 2016

Wood Mackenzie expects half of U.S. LNG will go to Europe by 2020

(Bloomberg; Jan. 14) - Europe is set to be the key destination for liquefied natural gas supplies from the U.S. as prices have fallen in Asia, the world's biggest consumer of the fuel, according to global energy consultancy Wood Mackenzie. The U.S. is forecast to ship about 55 percent of its total LNG production, or 32 million metric tons a year, to Europe by 2020, according to Alex Munton, the Houston-based principal analyst for Americas LNG at Wood Mackenzie.

That's because Europe is so close, has ample import capacity and liquid markets, and now has prices nearer to those in Asia. The U.S. will ship its first tanker of LNG from the Sabine Pass plant in Louisiana this quarter, marking the start of a wave of export projects resulting from the shale gas boom. Atlantic basin producers are focusing on Europe as the premium that buyers such as Japan used to pay has mostly disappeared amid waning demand and new supply from Australia and Papua New Guinea.

"A significant amount of LNG will end up in Europe," Munton said. "The spread between European and Asian prices has disappeared, and based on the proximity to the Gulf Coast, Europe will become a more attractive market." LNG flows from nations surrounding the Atlantic Ocean to areas around the Pacific fell 16 percent to 82 million tons in 2015, Wood Mackenzie said, while European net imports of LNG increased 14 percent to 37 million tons. For Europe, U.S. gas will diversify its sources as the region is dependent on Russia for about a third of its gas, while domestic production is declining.

Platts reports LNG for February delivery to Asia falls below \$6

(Platts; Jan. 15) - The Platts Japan-Korea Marker for liquefied natural gas cargoes delivered in February fell to \$5.975 per million Btu Jan. 15 on weak demand across Asia and lower price expectations from sellers. It was the first time the price has settled below \$6 since May 24, 2010.

Adding to the Asia supply picture, the first liquefaction train has started production at the Australia Pacific LNG plant, one of three projects built in Queensland to produce, liquefy and export coal-seam gas.

The market appears so well supplied in the Asia region that news of a delay in the first cargo from Cheniere Energy's Sabine Pass LNG terminal in Louisiana to late February

or March was met with some relief. "I don't think the market is sad (with) this news," a Singapore-based trader said.

Low prices, market turmoil could cut into Russian gas sales to China

(Reuters; Jan. 15) - Russia is likely to scale back the volume of pipeline gas it plans to ship to China later this decade, sources close to energy giant Gazprom say, due to the dive in global energy prices and uncertainty hanging over the Chinese economy. The sources insist the hugely expensive pipeline project will go ahead on time. However, they acknowledge sales to China will initially be lower than envisaged when Moscow reached the \$400 billion deal with Beijing in May 2014. "We will start fulfilling the deal in 2019, but the volumes could be less that initially expected," a source at Gazprom said.

Meanwhile, China is in a buyer's market. Abundant gas supplies are now available from other sources, such as liquefied natural gas from Qatar and Australia and pipeline gas from Central Asia. Flows through the new Russian pipeline were due to start at about 500 million cubic feet per day, rising to 3.5 bcf per day under the 30-year deal. Gazprom had initially planned to invest \$55 billion in gas field exploration and development and pipeline construction to China's border.

The pricing mechanism for what China will pay has not been revealed, but sources and analysts say the oil breakeven price for the Russian gas exports to China is around \$80 per barrel, a level that is unlikely to be reached in the foreseeable future. Several sources have said Gazprom was hoping to sell gas to China for \$10 to \$11 per million Btu. By contrast, China is understood by analysts to be paying \$9 to Turkmenistan, the former Soviet republic in Central Asia that beat Gazprom to the Chinese market.

Qatar undercuts Shell on price to win contract to sell LNG to Pakistan

(Reuters; Jan. 15) - Pakistan State Oil has backed out of a nearly \$1 billion deal to buy liquefied natural gas from Shell after receiving a lower price from Qatar, two sources with knowledge of the matter said Jan. 15. The deal shows how top exporter Qatar is being forced to become more competitive in an oversupplied LNG market as it also closes in on a bigger 15-year deal to supply Pakistan with gas.

The setback to Shell may stir unease from its investors already worried about the impact of the downturn in the oil market on its \$48 billion acquisition of BG Group, which when finalized will turn it into the biggest LNG trader. Shareholders of both companies will later this month vote on the deal, which is expected to be completed by Feb. 15.

Pakistan was to buy 60 LNG cargoes from Shell after the oil major submitted the lowest price in a tender finalized late last year. But before officially awarding the cargoes,

Pakistani officials managed to clinch a more favorable deal with Qatargas even though it was not in the original tender, the sources said. Qatargas will supply the cargoes at a price of 13.37 percent of a barrel of oil, one of the sources said. Shell's offer was 13.8 percent of the price of a barrel of crude, per million Btu of LNG. At \$40 oil, the Qatar price is \$5.35 per million Btu. At \$60 oil, it's \$8. At \$80 oil, the LNG would cost \$10.70.

First LNG export cargo delayed at Cheniere's Louisiana terminal

(Houston Chronicle; Jan. 14) - Cheniere Energy said Jan. 14 that a technical matter has delayed the first export of liquefied natural gas from its Sabine Pass plant in Louisiana by about a month until late February or early March. The shipment had been expected to depart by the end of January. When it does leave the dock, it will be the first U.S. LNG exports from the Lower 48 states since an experimental cargo in 1959.

A one-month delay isn't likely to mean much for the company or the market, said Bob Ineson, a global LNG specialist at consulting group IHS. "It's not huge," he said. "When you look at the conditions in the global market, it's pretty well supplied." In a statement disclosing the delay, Cheniere attributed the holdup to "instrumentation issues" discovered during the final phases of plant commissioning. Engineering and construction firm Bechtel will handle the fix in the coming weeks, Cheniere said.

Cheniere's \$18 billion Sabine Pass project is designed to include up to six liquefaction trains, which supercool natural gas into a more easily transported liquid. If completed as planned, the facility will have the ability to process about 3.5 billion cubic feet of gas per day into LNG. The company began construction on the first two LNG trains in August 2012 and the second two in May 2013. The fifth, which has a slightly smaller capacity, broke ground last June, while the sixth awaits a final go-ahead from the company.

Gorgon LNG project on track for first shipment this year

(Reuters; Jan. 15) - Chevron said Jan. 15 it is on track to export the first cargo of liquefied natural gas from its Gorgon project in Australia early this year. Supplies from the \$54 billion (U.S.) project — the most expensive LNG project in the world — will come to market just as a raft of other Australian projects come online and as the United States is due to export its first cargo from abundant shale gas. Meanwhile, prices for the fuel in Asia have plummeted as slowing economic growth has dented demand growth.

Chevron said that in preparation for the project's start-up, it had begun to cool down the LNG storage and loading facilities at the plant on Barrow Island off western Australia. In order to cool down the equipment, which is necessary to liquefy the gas for shipment onboard tankers, an LNG cargo was shipped to the plant from Indonesia. The vessel

has been moored onsite for the past two weeks. Deliveries from Gorgon, with capacity to produce up to 15.6 million metric tons of LNG per year, will go mainly to Asia.

The commissioning of the plant is good news for Chevron following delays and billions of dollars in cost overruns. The project, which was sanctioned for construction more than six years ago, is close to \$20 billion over budget. Chevron operates the project and holds a 47.3 percent stake. ExxonMobil and Shell hold 25 percent each, while Japan's Osaka Gas, Tokyo Gas and Chubu Electric Power hold the remaining shares.

U.S. sanctions could delay Russian project to bring gas to Pakistan

(The Express Tribune; Pakistan; Jan. 14) - Pakistan's \$2 billion pipeline to deliver imported liquefied natural gas more than 600 miles from the coastal port city of Karachi to the inland city of Lahore, population 5 million, has hit a snag with the United States slapping a set of sanctions on the Russian firm designated to work on project. Earlier, Pakistan was unable to execute the Iran-Pakistan gas pipeline project because of sanctions slapped on Tehran by the U.S. and the European Union.

The Russian government signed a deal with the Pakistani administration in October 2015 to build the pipeline to move imported LNG to Lahore as the country looks to increase the supply of natural gas to ease shortages. "Now we have found out that the U.S. has imposed sanctions on RTGR [the Russian contractor], causing bottlenecks in executing the LNG pipeline project," a Pakistani official said.

Moscow had agreed to lend Islamabad \$2 billion for the project. In return, Islamabad would award the pipeline contract to a Russian contractor without taking competitive bids. The financing for the gas pipeline had come as a prelude to Russia's offer to sell LNG to Pakistan. Russia is the second-largest producer of natural gas in the world, and is seeking to diversify its export markets.

Oregon LNG developer goes back to court to fight Army Corps

(Daily Astorian; Astoria, OR; Jan. 15) - Oregon LNG refiled a legal complaint against the U.S. Army Corps of Engineers on Jan. 13 to secure property on Warrenton's Skipanon Peninsula, where the company wants to build a liquefied natural gas production and export facility. The Corps holds an easement to deposit dredging spoils at the site, and Oregon LNG has lost its previous legal challenges against the Army Corps.

Oregon LNG said the move is to "maintain its legal options." In a modified version of an earlier legal challenge, the company alleges that around 2002 the Army Corps "expressly and unequivocally" relinquished the easement to the property. The company claims that, from 2004 to 2009, the Army Corps knew of the company's intention to

develop the LNG facility, participated in the development process, but did not reassert its ownership claim on the property until 2009.

The government agency has held the easement since 1957 but hasn't used the site to deposit dredging spoils since 1992. Opponents have long battled against the LNG project near the mouth of the Columbia River and questioned the company's latest maneuver. "I mean, they've received two negative opinions from a magistrate judge, and one from (a federal district court) judge, and they're still pushing this dead-end issue," Dan Serres of Columbia Riverkeeper. "It doesn't make any sense."

B.C. court ruling a defeat for proposed oil sands pipeline

(The Canadian Press; Jan. 12) - An alliance of First Nations is celebrating a British Columbia Supreme Court ruling that it says could set back the proposed Northern Gateway oil sands pipeline by years and throw a wrench into another high-profile project review. The line would move Alberta crude to the coast for export. The case was brought by the Gitga'at First Nation and Coastal First Nations, which represents nine aboriginal communities along B.C.'s northern and central coast, including the Gitg'aat.

At the center of the challenge was an equivalency agreement in which British Columbia gave Canada's National Energy Board the power to review the controversial pipeline proposal. The court found the province "breached the honour of the Crown" by failing to consult with the Gitga'at and Coastal First Nations. That means the equivalency agreement is invalid and the province must make its own decision on Northern Gateway — after consulting with and accommodating First Nations along the route.

"We're now at the point where if Northern Gateway as a company wanted to move ahead, it would almost have to start over," said Art Sterritt, a member of the Gitga'at. Northern Gateway has had a federal permit in hand — with 209 conditions attached — since mid-2014, but has not committed to building the project. Instead, it has been looking to garner support from First Nations. The ruling is the latest setback for the pipeline to move 525,000 barrels of oil sands crude a day to Kitimat, B.C., for export.

Record-breaking tremor shakes Alberta oil and gas field

(The Canadian Press; Jan. 16) - A record-breaking earthquake this week in the middle of an Alberta oil field heavily subject to hydraulic fracking is one of a growing number of such events across the continent, scientists say. But while the amount of research on "induced seismic activity" is growing, the link between fracking and quaking is still a mystery. "If we look at tens of thousands of wells that have been stimulated with hydraulic fracking in Western Canada, less than half a percent are associated with induced earthquake activity," said David Eaton, a University of Calgary geophysicist.

A Jan. 12 earthquake measuring between 4.2 and 4.8 on the Richter scale shook pictures on the walls of homes in Fox Creek, a community in the center of the Duvernay oil and gas field. The quake was the latest — and largest — of hundreds of similar shakers around the community since 2013. Fracking involves pumping high-pressure fluids underground to create tiny cracks in rock and release gas and oil held inside. Scientists agree fracking or injecting wastewater into wells can cause earthquakes.

But many questions still have to be answered. Experts need to sort out when fracking is the cause of earthquakes and when they're caused by wastewater pumped into deep aquifers. "Wastewater disposal, at least in the U.S., has been the primary cause of earthquakes," said Arthur McGarr of the U.S. Geological Survey. "In Canada, it's not clear that things work the same way. That's still a debated question."

Oil and gas companies continue to delay investments

(Wall Street Journal; Jan. 15) - Oil companies delayed making decisions on 68 major projects worldwide last year, accounting for some 27 billion barrels of oil and equivalent natural gas volumes and bringing total 2015 deferred spending to \$380 billion industrywide, energy consultancy Wood Mackenzie said in a report Jan. 14. The delays come during an oil-market swoon that has continued for 18 months, with prices for Brent crude falling more than 70 percent since July 2014.

The delayed projects indicate a development slowdown that could lead to supply constraints — and rising oil prices — years down the road. In the second half of 2015, when oil prices began a descent to below \$40 a barrel, oil companies delayed decisions on 22 major projects worldwide, with some 7 billion barrels of oil and equivalent natural-gas volumes, Wood Mackenzie said.

The short-term price outlook is discouraging for new development, the company said. New oil and gas projects need an average oil price of \$62 to break even over their lifetimes. But Brent and the U.S. benchmark price in recent days have been close to half that, giving little incentive to invest in new production. "With oil prices dipping to new lows at the start of 2016 and capital allocation tightening, the list will continue to grow," the report said. Most of the delayed projects were expensive deep water developments.