Oil and Gas News Briefs Compiled by Larry Persily January 21, 2019

PetroChina sells Yamal LNG spot cargoes in Europe

(Reuters; Jan. 16) - China's top oil and gas company PetroChina is selling spot liquefied natural gas cargoes from Russia's Yamal LNG plant into the European market, adding to a flood of volumes to the continent amid subdued Asian demand, trade sources said. PetroChina's increased presence in Europe is an example of how Asian energy companies are expanding their role as LNG traders, engaging in transactions globally.

The early start-up of Yamal LNG's second and third production trains in 2018 raised spot volumes from the Arctic gas project and helped PetroChina boost its European market presence, selling LNG from its 20 percent share of the project's spot volumes. PetroChina has offered cargoes mainly to northwest Europe this winter with buyers that include trading houses Vitol and Trafigura, as well as BP, two sources said.

Regular volumes from Yamal ensure a more stable presence in Europe for PetroChina, the publicly traded arm of China National Petroleum Corp. Last winter PetroChina also traded some spot volumes from Yamal LNG Train 1. However, a spike in Yamal output capacity at the end of 2018 to 16.5 million tonnes per year has allowed PetroChina to compete for high-profile buyers with Yamal LNG majority owner and operator Novatek and U.S. LNG producers. PetroChina has a 20-year deal for offtake from Yamal.

Asia-Pacific LNG borrowing will keep public finance lenders busy

(Reuters; Jan. 18) - The proposed expansion of Papua New Guinea's liquefied natural gas project is helping to boost activity in the Asia-Pacific project finance arena, where a slew of jumbo financings are set to emerge in the next 18 months. Stakeholders in the Papua New Guinea LNG project are in discussions with export credit agencies and commercial banks for up to US\$9.8 billion of debt to fund the next phase of the project, in what will be the region's biggest project financing since 2010.

Another major deal is also in the works as Australia Pacific LNG prepares to refinance US\$3 billion of its debt. Combined with other potential fundraisings from the oil and gas, renewable energy and infrastructure sectors, the LNG deals promise to keep public finance lenders busy in 2019 and beyond. Australia Pacific LNG is a partnership of ConocoPhillips, China's Sinopec, and Australia's Origin Energy. It started up in 2016.

The long-awaited expansion of the PNG project is estimated to cost US\$12 billion to \$14 billion and involves adding three gas liquefaction trains at the plant that started operations in 2014. The financing is expected to close in 2020. It would be the largest

resources-related borrowing in Oceania since March 2010, when the \$19 billion PNG LNG project raised US\$14 billion in initial funding from export credit agencies, 17 commercial banks and lead sponsor and operator ExxonMobil. Total also is a partner in the expansion, as is Santos of Australia and Oil Search based in Papua New Guinea.

FERC issues final EIS for Louisiana LNG project

(Reuters; Jan. 18) - Tellurian's proposed Driftwood liquefied natural gas project in Louisiana took a major step forward Jan. 18 as the Federal Energy Regulatory Commission issued its final environmental report on the project, bringing the company closer to making a final investment decision to start work. FERC now has 90 days to bring the project application to the commission for a vote on authorizing construction.

"Tellurian will then stand ready to make a final investment decision and begin construction in the first half of 2019 with the first LNG expected in 2023," Tellurian CEO Meg Gentle said in a statement. The project cost has been reported at around \$16 billion with up to 27.6 million tonnes of LNG output per year at full build-out. It would be constructed on the west bank of the Calcasieu River, south of Lake Charles, La.

In its final environmental impact statement, FERC staff concluded that the project "would result in adverse impacts on the environment; however, impacts on the environment would be reduced to less than significant levels" with avoidance and mitigation measures. Driftwood is one of several U.S. LNG projects under development seeking customers so they can start construction and enter service over the next decade. Tellurian has not announced any firm offtake deals for the Driftwood project.

South Korea passes Mexico as Cheniere's biggest LNG buyer

(S&P Global Platts; Jan. 17) - South Korea overtook Mexico last month as the biggest importer to date of liquefied natural gas produced at Cheniere Energy's Sabine Pass terminal in Louisiana, data compiled from S&P Global Platts Analytics' vessel-tracking tool cFlow showed. Since the first LNG cargo left the facility in February 2016, Mexico had been the biggest buyer, given its heavy reliance on U.S. gas to heat homes and run its electricity-generating plants. While Mexico continues to bring in LNG shipments, new infrastructure is being built in the country to take more U.S. gas via pipeline.

Asia, meanwhile, is a key market for Cheniere and the other U.S. LNG export terminal operator — Dominion Energy, in Maryland. As many as three more LNG export terminals are expected to start up this year along the Gulf and Atlantic coasts, with foundation shippers that will be taking more cargoes to Asia. In the interim Europe is picking up a good number of spot cargoes from the U.S. because of weak Asian prices.

As of Jan. 17, 102 cargoes had been delivered to South Korea from Sabine Pass, followed by Mexico with 98. China was third with 60 cargoes. South Korean was the world's third-largest LNG importer in 2018 with the U.S. supplying about 11 percent of the gas. Cheniere has been pursuing new offtake deals for its liquefaction facilities at Sabine Pass and its Corpus Christi, Texas, terminal that started up in December.

Multiple ship-to-ship transfers of Yamal LNG offshore Norway

(The Barents Observer; Norway; Jan. 17) - These are busy days in the waters of Honningsvåg and Hammerfest, two Norwegian towns along the coast of the Barents Sea. On Jan. 16, six liquefied natural gas carriers were engaged in ship-to-ship reloading in the Sarnes Fjord by Honningsvåg. It is the biggest operation of its kind conducted in the area since ship-to-ship LNG transfers started in late November 2018.

Three Arctic ice-class carriers loaded with LNG from the Yamal project in Russia's Siberia were offloading their gas to conventional LNG carriers, according to information from ship-tracking service MarineTraffic. The reloading activities are part of a deal between Russian gas producer and Yamal operator Novatek and Tschudi Group, a Norwegian logistics company. Ice-class ships shuttle to Honningsvåg where they reload to conventional carriers that deliver the gas in Rotterdam and other port terminals.

The six carriers in Honningsvåg were not alone. In the nearby waters in the Barents Sea were four more ships waiting for their turn to reload. The volumes of liquified natural gas now reloaded in Honningsvåg are significant. The agreement between Novatek and Tschudi includes 158 ship-to-ship operations by June this year — totaling several million tonnes of LNG. Transferring the gas from expensive ice-class carriers to less expensive conventional ships is intended to reduce shipping costs.

Papua New Guinea hasn't seen the revenues it expected from LNG

(Reuters; Jan. 16) - From her home near Papua New Guinea's capital city, Isabelle Dikana Iveiri overlooks a plant run by ExxonMobil to liquefy billions of dollars' worth of gas before it is shipped to Asian buyers. She can also see swaths of muddy shoreline, where mangroves have been felled for firewood by locals who don't have money to buy electricity or gas. The \$19 billion LNG project was supposed to be a game-changer for the South Pacific archipelago beset by poverty despite its wealth of natural resources.

But much of the promised riches — as taxes to the government, royalties to landowners and development levies to communities — have been well below forecasts, if at all, according to landowners, the World Bank and PNG government. "Our royalties are not going well; they are using our land but not paying us properly," Dikana Iveiri said referring to Exxon, which pays royalties, and the government, which distributes them.

Dikana Iveiri said she received just one payment in 2017. She was expecting about 10,000 kina (\$2,885) based on information from the government and community leaders, but received just 600 kina. The government admits it has made mistakes, blaming disputed land ownership claims for delayed cash distributions. Prime Minister Peter O'Neill, who was part of the government but not the leader in 2009, said the project proceeded without "proper clan vetting, proper identification of the land owners."

In addition, government budget papers show tax revenue flowing from PNG LNG has been well below expectations. In its 2012 budget, the government estimated it would receive \$22 billion over the project's life to 2040. In November the government slashed its forecast to \$11 billion. A 2017 World Bank analysis found the project partners had negotiated favorable methods for calculating their royalties owed to the government.

Dutch residents push for end to gas production over fear of quakes

(Reuters; Jan. 17) - Angry Dutch citizens on Jan. 17 asked their country's highest court to put an immediate end to natural gas production in the Groningen region due to the risk of earthquakes. Once Europe's largest gas field, decades of extraction have led to dozens of minor tremors every year, damaging thousands of homes and sparking unrest among locals and prompting authorities to impose caps on activity at Groningen.

"Seismic risks are still increasing, all we hear are promises of future improvements but nothing's really happening", resident and politician Nette Kruzenga said in court. An unusually severe magnitude 3.4 quake prompted the Dutch government last year to pledge to end production by 2030 and to lower it as quickly as possible in the coming years. Groningen is run by NAM, a 50-50 joint venture between Shell and ExxonMobil.

Output is set to drop to 685 billion cubic feet in the fiscal year that began in October, down from a 2013 peak of 1.9 trillion cubic feet. Output will be cut by another 75 percent in the next five years, the government has said. "Production has already been lowered to the lowest possible level," government lawyer Hans Besselink said in court Jan. 17. "Further reductions would lead to shortages ... in the Netherlands and abroad."

But many in the region still feel their concerns are being ignored, while numerous attempts to set up a compensation plan for damage and repairs have failed. The petitioners demand drilling be stopped immediately, or at least capped at 420 bcf per year, a level the Dutch gas regulator said would limit risks. The Netherlands depends on Groningen gas for a significant part of its energy supply and export obligations.

<u>Australian LNG producer expects expansion decisions in 2020</u>

(Reuters; Jan. 17) - Australia's Woodside Petroleum on Jan. 17 flagged higher-thanexpected investment spending for 2019 as it steps up early work on the two big natural gas developments that will drive its growth in the next decade. Australia's largest independent gas and oil producer plans to spend between \$1.6 billion and \$1.7 billion on projects in 2019, significantly higher than an estimate from UBS of \$1.2 billion.

Perth-based Woodside aims to lead the next phase of liquefied natural gas investments in Australia with its Scarborough and Browse projects and an expansion of the single-train Pluto LNG plant, aiming to make final investment decisions in 2020. Woodside is currently holding talks with its partner BHP Group over the tolling fee that will be charged for gas from Scarborough, an offshore field, to be processed at a new train at the Pluto LNG plant, before BHP signs off on early work for the project, Duhe said.

Browse is the biggest undeveloped offshore gas field off Western Australia. Woodside is looking to pipe Browse gas to the existing onshore North West Shelf LNG plant, where it owns a substantial stake.

Bangladesh drops 15-year LNG supply deal with Swiss energy trader

(Reuters; Jan. 18) - Bangladesh has scrapped its liquefied natural gas supply deal with Swiss energy trader AOT Energy. Bangladesh agreed in February 2018 to take 1.25 million tonnes per year for 15 years but never signed the deal with AOT, though it was close to being finalized. "The deal with AOT will not be signed," said Mohammad Quamruzzaman, managing director of Rupantarita Prakritik Gas Co., which is in charge of LNG supplies to the country. He did not give a reason for scrapping the agreement.

Since the preliminary deal, Bangladesh has installed its first LNG import terminal and received its first cargoes, while prices have seesawed. A government source said the country had taken on too many LNG projects without proper planning. Bangladesh has a deal with Qatar to supply 2.5 million tonnes per year, and a contract with Oman for 1 million tonnes per year that will kick in after Bangladesh starts up its second floating receiving, storage, and regasification unit in March this year. The nation of 160 million is expected to become a major LNG importer in Asia as domestic gas supplies fall.

Bangladesh has imported 0.7 million tonnes, or 12 cargoes, since its import facility began regular operations in September, according to Refinitiv Eikon data. All of the cargoes came from Qatar. Bangladesh pays Qatar 12.64 percent of the three-month average of Brent crude oil plus \$0.50 per million Btu. At \$60 oil that works out to about \$8 per million Btu for the LNG. It pays Oman 11.9 percent of the three-month Brent crude average plus \$0.40 per million Btu — a total of \$7.50 per million Btu.

East Timor parliament supports buyout of Shell, Conoco gas holdings

(Reuters; Jan. 17) - East Timor's president on Jan. 17 approved a decree allowing use of the country's petroleum fund for a \$650 million buyout of Shell and ConocoPhillips' holdings in the Greater Sunrise natural gas project, a proposal he had vetoed in December but which subsequently won overwhelming parliamentary backing. Under East Timor law, the president can veto a bill once, but must then ratify it if the bill wins a parliamentary vote of approval.

Purchases of the Shell and ConocoPhillips holdings would give East Timor a majority stake in the project, along with remaining partners Australia's Woodside Petroleum and Japan's Osaka Gas. In December President Francisco Guterres vetoed the decree, saying it could allow the petroleum fund to be misused and calling for the proposal to be revised. The decree removes a 20 percent cap on state participation in oil and gas projects and allows projects to bypass approvals by parliament in the future.

Discovered in 1974, the Greater Sunrise fields, which hold about 5.1 trillion cubic feet of gas, straddle the maritime border between Australia and East Timor. A dispute over the border had delayed the project's development. In addition, while the East Timor government wants the gas piped to an onshore liquefaction plant and LNG export terminal in the country, the other past and current partners believe it would be more economical to pipe the gas to an existing LNG plant in Australia.

Exxon shuts down 20-year-old offshore Nova Scotia gas production

(S&P Global Platts; Jan. 3) - The announcement by ExxonMobil that it had ceased production at its Sable Island Offshore Energy Project ended 20 years of gas production off the coast of Nova Scotia, although exploration efforts in the play continue. ExxonMobil said that as of Dec. 31 all production "was permanently shut down." It said well plugging and decommissioning activities would continue throughout 2019.

According to S&P Global Platts Analytics, raw gas output from Sable Island peaked in December 2001 after two years in operation, when daily receipts averaged 482 million cubic feet per day. Since then, production has been on a near-continuous decline. By the fourth quarter 2018, it had fallen to around 50 million cubic feet per day. Along with the shut-in of production from Encana's Deep Panuke platform in May 2018, the ExxonMobil announcement closes a chapter on offshore Nova Scotia gas production.

With Sable Island production sliding over the past several years, ExxonMobil in 2015 acknowledged the project was nearing the end of its productive life and announced decommissioning plans. Meanwhile, BP Canada is engaged in an offshore exploration project that might signal a resumption of gas production sometime in the future. The company's Scotian Basin Exploration Project includes seismic acquisition and drilling across four exploration licenses about 186 miles off the coast of Nova Scotia.

<u>Air-quality agency behind schedule on Tacoma LNG plant review</u>

(The News Tribune; Tacoma, WA; Jan. 18) – The Puget Sound Clean Air Agency has slowed down its timeline for finishing its review of comments on the draft supplemental environmental impact statement for Puget Sound Energy's \$310 million liquefied natural gas facility planned for the Port of Tacoma. The agency said Jan. 18 that its work is "ongoing and we do not anticipate completing it until March 29." The four-county agency had previously targeted Feb. 1 as its anticipated completion date.

It's been nearly a year since the agency called for the supplemental EIS for a greenhouse-gas emissions analysis and further review of impacts from the gas liquefaction and LNG storage facility. The supplemental review is to offer a full analysis of the project's life cycle of greenhouse-gas emissions, upstream and downstream.

The project, already under construction on the Tacoma Tideflats, would produce up to 250,000 gallons of LNG per day, storing it in an 8-million-gallon tank. The plant primarily would provide fuel to TOTE Maritime for its two Alaska ships, which will be converted to run on LNG, and provide LNG for area utilities to help meet peak winter demand. Environmentalists, some residents, and the Pullayup Tribe oppose the project.

Indigenous ownership could be beneficial for Canadian oil line

(Calgary Herald columnist; Jan. 16) - Would Indigenous ownership in the Trans Mountain oil pipeline expansion help build broader support and propel the embattled project over the finish line? That question should be seriously pondered as a growing number of First Nations express interest in buying a stake in the line that moves Alberta crude to the coast. But barriers to such an acquisition — such as the legal impasse surrounding the project and the effect of pending legislation — could stop the idea.

On the opening day of the Indigenous Energy Summit in Calgary on Jan. 16, First Nations' leaders, industry CEOs and provincial ministers discussed the merits and intricacies of indigenous groups buying a piece of the project. The Indian Resource Council of Canada, which represents First Nations that have oil and gas production, is looking at business models that might make sense. The group is hoping to develop a plan that could be taken to Ottawa in the run-up to the federal election later this year.

Indigenous ownership would be beneficial, allowing industry and government to broaden support for the development, while First Nations would become decision-makers in the boardroom on a critical piece of energy infrastructure. But several things need to happen soon for the concept to gain momentum. There is still a lot of work to do and questions to answer. It will require co-operation from all sides. Expanding the line is critical to the country. The ownership behind it can be just as important to its success.

Turning oil sands bitumen into solid pucks may cut shipping costs

(Calgary Herald; Jan. 18) - Plans to turn Alberta oil sands bitumen into solid pucks could save the province's oil producers US\$15 per barrel and make use of plastic that now goes to landfills. CN Rail and Wapahki Energy, which is owned by the Heart Lake First Nation in northern Alberta, hope to break ground on a \$50 million facility to turn 10,000 barrels of bitumen per day into CanaPux, a solid brick-like creation of CN that is easier to move on rail cars than oil and can be exported using existing West Coast coal ports.

Speaking Jan. 17 at the Indigenous Energy Summit on the Tsuu T'ina Nation reserve near Calgary, representatives from CN Rail and Wapahki said they would each invest \$16.7 million in the pilot project that would take two years to build. They are in talks to bring on an additional partner for the remaining cost. "We're solving market access issues for Canada," CN Rail senior manager of product development James Auld said of CanaPux — squares roughly the size of a yogurt container that smell like asphalt.

CN began developing CanaPux three years ago by blending bitumen with a small amount of plastic to make pucks, which can float in water given the lightness of the plastic. The pucks can be loaded onto railway hopper cars, which normally carry grain or coal, rather than tank cars, which carry oil or chlorine. As a result, one railway car could move 650 barrels of oil in puck form, compared with a tanker car that can carry 500 barrels of crude. Costs would also drop. Current heavy demand for tanker cars has driven up lease costs to \$3,500 per month, compared with \$350 for a hopper car.

Alberta's production cutback helps boost prices for Canadian oil

(Wall Street Journal; Jan. 17) - Canadian oil prices have surged to trade at the smallest discount to U.S. crude in a decade, marking an early success for provincial government efforts to reduce supply and boost prices. A key blend of Canadian crude has rallied as much as 41 percent since early December, when the government of oil-rich Alberta forced producers to cut output by nearly 9 percent in a bid to lift depressed prices.

The government directed the cuts after Canadian crude traded at a steep discount to U.S. oil, reaching a record difference of more than \$51 a barrel in October. By Jan. 18 that gap had narrowed to less than \$7, the lowest since March 2009, according to RBC Capital Markets. Western Canadian Select traded at \$41.83 a barrel on Jan. 17. Alberta's mandated curtailment — an extraordinary intervention in Canada, the fourth-largest oil producer in the world — was criticized by large oil producers in the province as an unwarranted interference in free markets.

The problem for Canadian producers is that insufficient pipeline capacity has plagued the industry. As oil inventories jumped, producers had few options to sell their crude, weighing on prices. Alberta Premier Rachel Notley cautioned the recent price increase

could be followed by a retreat in coming weeks. Her government has been lobbying the federal government to push through pipeline construction to take more oil out of Alberta.