# Oil and Gas News Briefs Compiled by Larry Persily December 6, 2018

#### **Expansions could pressure other LNG projects in coming years**

(Interfax Global Energy; Dec. 3) - The ability of some LNG export projects to expand their capacity is narrowing the window for other projects to reach final investment decisions. The huge resource bases underpinning projects such as Russia's Arctic LNG-2 and the onshore plants in Mozambique could see those ventures expand their capacities over many years. Building additional trains at the plants would be relatively cheap, pressuring other liquefied natural gas ventures trying to sign up customers.

Projects worldwide totaling more than 100 million tonnes of annual capacity have completed front-end engineering and design and are now competing to take FIDs, intending to fill a shortfall of LNG that could amount to an estimated 30 million to 65 million tonnes by 2025. Novatek's Arctic LNG-2 is one of those that plans to take FID next year and will have an initial capacity of 19.8 million tonnes across three trains. Novatek board member Mark Gyetvay told delegates at the CWC World LNG Summit in Lisbon last week that the plant could be expanded by two trains as demand requires.

The two Mozambique projects could add a combined 29 million tonnes of capacity by 2025 if they take FID next year, and both have plans to expand to as much as 50 million tonnes each over the longer term. All this concerns U.S. LNG developers — if they cannot secure FID soon, the supply gap will be filled and they'll struggle to find buyers.

Expansion is an option in the U.S., too. Cheniere Energy will have 40 million tonnes of capacity when it finishes work at Sabine Pass, Louisiana, and Corpus Christi, Texas, and the company could expand even further, said Eric Bensaude, managing director for commercial operations and asset optimization. Sempra plans to bring all three trains at its Hackberry, Louisiana, terminal online next year, and has secured customers to underpin two more trains, Sempra LNG President Octavio Simoes said in Lisbon.

### More U.S. LNG coming online in 2019; still more decisions pending

(Wall Street Journal; Dec. 2) - With global demand for liquefied natural gas accelerating, 2019 is shaping up to be a pivotal year for U.S. LNG exporters. Several developers will soon decide whether to move ahead with multibillion-dollar projects to ship the bounty of American shale overseas. There are three operating LNG terminals: Dominion Energy's Cove Point in Maryland and Cheniere Energy's plants in Louisiana and Texas. Three more will open in 2019, and analysts say more are needed to meet global demand.

There are about 25 proposed U.S. export projects, 13 of which could have regulatory approval within the next year. While not all will be built, the world needs several to satisfy demand. The U.S. could ultimately account for 20 to 30 percent of global LNG supply, analysts say. U.S. exporters, however, are competing for customers with suppliers in Canada, Qatar, Russia, Australia, and elsewhere, though U.S. developers believe the country's vast gas reserves and relatively low prices make them competitive.

"Customers are starting to think there will be a production shortfall by 2021 or 2022, and that has ramped up contracting activity," says Michael Sabel, co-CEO of Venture Global LNG, which expects to make a decision on its \$4.5 billion Louisiana project in January. At least two other Gulf Coast LNG projects are expected to make investment decisions in 2019, including an ExxonMobil-Qatar venture in Texas. "Over the last 12 to 18 months the global market has really tightened up," says Kristy Kramer, of consulting firm Wood Mackenzie. "We expect 2019 to be a record year globally" for LNG consumption.

#### Overseas buyers of U.S. LNG look to trim their commitments

(Reuters; Dec. 4) - Several large liquefied natural gas players have tried to offload their obligation to buy cargoes from U.S. projects, shedding excess commitments made years ago in the rush for new supplies. The sale of multi-year "strips" of LNG cargoes represents portfolio adjustments by buyers rather than a backlash against U.S. gas, several Asian and European traders said. But it was a reminder that the market can absorb only so much U.S. LNG, even as developers look at building more projects.

Australia's Woodside Petroleum, GAIL (India) and Indonesia's Pertamina have all recently marketed cargoes they are obliged to buy from Cheniere Energy's Corpus Christi, Texas, or Dominion Energy's Cove Point, Maryland, terminals starting in 2019, traders said. These long-term promises to buy are what typically underpin the financing and final investment decisions on export terminals. Plants such as Cheniere's Sabine Pass, Louisiana, the largest U.S. export facility, had attracted a host of eager buyers with cheap LNG on flexible terms. But market conditions are somewhat different now.

"Many U.S. offtakers overcommitted the first few years but it should be okay in the long term," one veteran LNG trader said. Indonesia's Pertamina, for example, committed to 1.52 million tonnes per year for 20 years from Cheniere. But with Indonesia's gas demand growth now at little more than 1 percent, the country will not need imports until 2027, the government has said. India's state-owned GAIL had signed up for 5.8 million tonnes per year of U.S. LNG, but shipping logistics proved problematic because of the 20-plus days it takes to reach India from Dominion's terminal on Chesapeake Bay.

### U.S. LNG projects need 'tangible progress' in trade talks, analyst says

(Reuters; Dec. 3) - Companies proposing new U.S. liquefied natural gas export terminals expressed optimism Dec. 3 that the agreement between the United States and China temporarily halting the imposition of higher tariffs could help advance their projects. The decision "is a positive sign that the development of U.S. LNG projects will not be detoured in the immediate term by any further trade conflicts," said Micah Hirschfield, spokesman for Liquefied Natural Gas Ltd., one of more than a dozen companies proposing new U.S.-based LNG export terminals.

The U.S. is the world's fastest-growing LNG exporter and China is the fastest-growing importer. China bought about 15 percent of U.S. LNG exports in 2017, worth about \$447 million. So far in 2018, China was on track to buy just 10 percent of U.S. LNG. Executives and analysts said that advancing more LNG projects to construction would require a formal U.S.-China trade agreement conducive to long-term sales contracts.

"The market needs something more concrete than a 90-day reprieve of hostilities to confidently commit time and capital for projects that take several years to bring online," said Matt Hong, director of research, power and gas at Morningstar. While a pledge by China to increase purchases of U.S. energy products may lead to a short-term sales boost, the need for long-term purchase commitments has not gone away. "Investors are now looking for a tangible progress in trade talks and not just political gestures," said Abhishek Kumar, a senior energy analyst at Interfax Energy's Global Gas Analytics.

### LNG developers say they need more certainty in U.S.-China trade

(Wall Street Journal; Dec. 4) - Easing of trade tensions between the U.S. and China could unlock new American liquefied natural gas projects that stalled this year while seeking customers, but industry sources said they need more confidence that warmer relations will endure before they can move forward. The trade standoff between the world's two largest economies has hindered new deals. And while trade talks continue, China will maintain the 10 percent tariff it imposed on U.S. LNG in September.

Companies looking to export U.S. LNG see a possible trade truce as a step forward but not enough to secure new contracts. "We expect that some of the discussions with Chinese counterparts ... will only become more concrete and focused to reaching binding agreements once there is confidence that U.S.-China trade tensions have eased over the long term," said Vivek Chandra, CEO of Texas LNG, which is hoping to make a final investment decision by early 2020 on its project in Brownsville, Texas.

"In order for Chinese buyers and investors to begin signing long-term commitments with Texas LNG and other projects, they will want to see some certainty ... in terms of tariffs and tensions between the two countries," Chandra said. Some projects already have

announced delays due to the trade dispute. In October Liquefied Natural Gas Ltd. said it was delaying a decision on its proposed Magnolia project in Louisiana due to the trade issues causing headwinds for signing deals with Chinese customers.

With more than 100 million tonnes of U.S. LNG projects due to reach final investment decision next year, China is a key customer. Banks financing LNG projects prefer to have most of the production pre-sold on long-term contracts to ensure payback.

#### Shell says production will start this month at Prelude LNG

(Reuters; Dec. 4) - Shell expects production at its Prelude floating liquefied natural gas facility to start at the end of the year, a spokeswoman told Reuters on Dec. 4. Prelude — which will produce natural gas offshore northern Australia, liquefy and store it until carriers come by to load the cargo for delivery — is designed for an annual LNG production capacity of 3.6 million tonnes. It also will produce an average of 45,000 barrels a day of condensate and liquefied petroleum gas at full operation.

Shell decided to go ahead with the project in 2011. After long delays it introduced gas to the 1,600-foot-long Prelude FLNG for the first time earlier this year as part of the cooling process before start-up. Before a liquefaction plant goes into commercial operation, a cargo is typically imported to cool down its production train. Shell owns 67.5 percent of Prelude. Japan's Inpex, Taiwan's CPC, and Korea Gas hold the rest.

Shell has not disclosed the final cost for the project. Industry analysts have estimated the cost at between \$12 billion and \$20 billion. Prelude doesn't have its own propulsion system and was towed to its work site, though it does have a system of thrusters to maintain position over the seabed wells. The massive unit was built in a South Korea shipyard. The floating operation will be anchored 125 miles from the nearest land.

### Papua New Guinea makes tax plans for LNG expansion

(Australian Financial Review; Dec. 3) - Papua New Guinea Prime Minister Peter O'Neill said 10 percent of the gas will be reserved for domestic use and the tax structure for the US\$12 billion LNG export expansion project will be engineered to ensure a flow of revenues to the government even when commodity prices sink to a low point in the cycle. O'Neill shared some of the key terms behind the memorandum of understanding between the government and the Total-led Papua LNG venture announced last month.

The timetable for the project has slipped, however, with the partners now set to start initial engineering and design work in the June quarter of 2019 after the delayed gas agreement setting out fiscal terms and other conditions is expected in March. Jean-Marc Moiray, managing director of Total's PNG operations, said the French energy

giant hopes now to give a final go-ahead for the project "before the end of 2020," and for production start-up by the end of 2024 — a year later than earlier predictions.

"PNG has got to get at the front of the line" to capture the market opportunity and avoid cost escalation, said Andrew Barry, managing director of ExxonMobil PNG, a major partner in the expansion. The project would add three liquefaction trains, at 2.7 million tonnes annual output each, roughly doubling capacity at the Exxon-led \$19 billion PNG LNG plant that opened in 2014. Two of the trains will process gas from the Total-led Papua venture that owns the Elk and Antelope fields, with the third to be supplied by fields within the PNG LNG project plus the P'nyang field farther to the west.

Along with supplying domestic gas needs, the project will have to allow access to its pipelines from stranded gas fields held by other companies, the petroleum minister said.

#### Pakistan says Qatari LNG too costly, may want to renegotiate contract

(Dawn; Pakistan; Dec. 1) - Building on its criticism of liquefied natural gas import contracts and deals for receiving terminals, the Pakistani government on Nov. 30 said it was considering renegotiating a 15-year LNG contract with Qatar. The ruling party, which took office this past summer, has criticized contracts signed by the previous government for Qatari LNG at a price equivalent to 13.39 percent of the international benchmark per-barrel oil price and for two private-sector terminals to regasify the fuel.

"The price of LNG imported from Qatar is the most expensive," Petroleum Minister Ghulam Sarwar Khan said, adding that gas via proposed pipelines from Turkmenistan and Iran would be cheaper. At \$60 oil, LNG imports to Pakistan would be about \$8 per million Btu. At \$70 oil, the cost would be \$9.37. In addition, the 15-year term with Qatar is too long, Khan said, adding that he also objects to a provision preventing disclosure of the contract terms for three years after the deal expires.

Khan said the government is looking into both the cost and non-disclosure terms of the contract, and that issue could land in the International Court of Arbitration. "I am bound under the contract to keep its specifics secret," he said. The minister said the petroleum division also has reservations over the agreements for the import terminals. Some of the contracts are in court and, therefore, he said he would not prejudice the issue.

## Qatar will quit OPEC, focus on natural gas

(Reuters; Dec. 3) - Qatar said it will quit OPEC in January to focus on natural gas, taking a swipe at Saudi Arabia, the de facto leader of the oil exporting group which is trying to show unity in tackling the recent oil price slide. Qatar, one of OPEC's smallest

oil producers but the world's biggest liquefied natural gas exporter, is embroiled in a political row with OPEC members Saudi Arabia and the United Arab Emirates.

The surprise decision to exit OPEC, which has 15 members including Qatar, was not driven by politics and did not name Saudi Arabia, said Qatari Minister of State for Energy Affairs Saad al-Kaabi. But he added: "We are not saying we are going to get out of the oil business, but it is controlled by an organization managed by a country." Qatar will attend an OPEC meeting scheduled for Dec. 6 and 7 in Vienna and will abide by its commitments, al-Kaabi said, adding that Doha would focus more on its gas potential.

It was not practical "to put efforts and resources and time in an organization that we are a very small player in and I don't have a say in what happens," al-Kaabi said. OPEC members Saudi Arabia and the United Arab Emirates, along with Bahrain and Egypt, have imposed a political and economic boycott on Qatar since June 2017, accusing it of supporting terrorism, which Doha denies. Qatar's oil output is just 600,000 barrels a day, compared with Saudi Arabia's 11 million. But Doha is the largest player in the global LNG market with production capacity of 77 million tonnes per year.

#### Norway's Equinor ready to start talks for Tanzania LNG project

(Reuters; Dec. 4) - Norway's Equinor is ready to start talks with Tanzania on developing a liquefied natural gas project based on an offshore discovery, the company said Dec. 4. Tanzanian President John Magufuli has asked his government to start negotiations on a commercial and fiscal framework for the LNG project, Equinor, a majority state-owned company formerly known as Statoil, said. "Equinor will now proceed with our partner ExxonMobil with negotiations for a host government agreement," Equinor said.

A company spokesman said it was too early to say how long talks with the government could take and how much the project would cost. Tanzania said in 2014 that a planned LNG export project could cost up to \$30 billion. Shell, which operates deepwater Blocks 1 and 4, adjacent to Equinor's Block 2, previously sought to develop the project in partnership with Equinor and ExxonMobil. Shell declined to say whether it would join Equinor and ExxonMobil or would pursue separate talks with the government.

Shell estimates its two blocks hold about 16 trillion cubic feet of recoverable gas, similar to the volumes in Equinor's Block 2. Reuters reported in June that ExxonMobil was seeking to sell its 25 percent stake in Block 2 as it was focusing on an even bigger project in neighboring Mozambique.

#### Oil and gas export terminals fuel debate on Texas coast

(The Texas Tribune; Nov. 29) - People flock to Port Aransas, Texas, to fish. Others come to this beach town near Corpus Christi to kayak, parasail or admire the hundreds of bird species on the barrier island. It's also a perfect location, from one point of view, to build crude oil export terminals, part of a historic buildout of oil and gas infrastructure in the United States. Texas is at the epicenter of the frenzy. More than 80 projects are in the works or planned on the state's Gulf Coast, from Port Arthur to Brownsville, according to a Center for Public Integrity and Texas Tribune review of corporate plans.

Companies have been laying enough pipeline in Texas in the past several years to stretch from the Atlantic to the Pacific three times over. Oil and gas production in the U.S. has skyrocketed, particularly in the Permian Basin, most of which underlies West Texas. Congress set off a mad dash when it lifted decades-old federal restrictions on crude exports in 2015. Companies want to get oil and gas from West Texas to the Gulf Coast and, from there, abroad. The first liquefied natural gas export project in Texas is close to loading its initial cargo at the terminal in Corpus Christi.

The boom has set up a clash over the future of the tourism-focused area. "You're going to see more development, more industry, more jobs," said Eddie Martinez, the port of Corpus Christi's business development representative. But there are other considerations. "Everyone I speak to says they're against this," said Neesy Tompkins, who moved to Port Aransas in 1978 after falling in love with its natural beauty. "What they're proposing is an environmental disaster," said John Donovan, who helped form the Port Aransas Conservancy that is pressing back on the oil terminal proposals.

### FERC questions cumulative impacts of 3 LNG projects in Brownsville

(S&P Global Platts; Dec. 4) - One of the three LNG export projects proposed for Brownsville, Texas, is in the process of securing enough firm supply of gas to serve its terminal as it seeks to build commercial support to reach an investment decision, it said Dec. 4. The progress by Exelon-backed Annova LNG comes as it, along with developers NextDecade and Texas LNG, face challenges from regulators and environmental groups to building all three terminals in a similar timeframe at the port.

None has announced a final investment decision or any binding long-term agreements with buyers of their liquefaction capacity, though new pipelines offer hope the terminals will have access to cheap feed gas, aiding talks with offtakers. The three Brownsville projects are among more than a dozen proposals for new U.S. LNG export terminals targeting start-up by the mid-2020s. The port in Brownsville, along the Gulf of Mexico, is underutilized, making the three projects important to the region's growth prospects.

In preliminary environmental reviews, the Federal Energy Regulatory Commission has said that having three LNG export terminals built within a similar timeframe would have

cumulative impacts on shoreline erosion and habitat loss of certain protected species. It has not said, however, how that conclusion might ultimately affect its decisions on the three multibillion-dollar projects. NextDecade said that while three large LNG projects would change the visual landscape, it believes "the cumulative impact is not significant."

#### U.S. natural gas prices up 50% since early October

(Houston Chronicle; Dec. 2) - With oil prices plummeting since early October, natural gas has quietly spiked by more than 50 percent during the same period to its highest sustained level in four years. While consumers are now paying less to fill their vehicles at the pump, they'll likely pay more for their heating and utility bills this winter. The big culprit is the nation's much lower stockpile of natural gas running into rising demand, especially with colder-than-expected temperatures thus far heading into the winter.

The result likely means utility bills this winter perhaps 10 percent above last year. They could spike even more if extreme temperatures take hold, said Mike Bradley, managing director at the energy investment firm Tudor, Pickering, Holt & Co. The U.S. benchmark for natural gas spiked from just above \$3 per million Btu in the beginning of October to \$4.65 per million Nov. 29. While the country is producing record volumes of oil and gas, the demand for gas is rising on a variety of fronts and helping to push up prices.

The power industry is relying on gas more than ever for electricity generation, the petrochemical sector is consuming more gas and natural gas liquids for feedstock, record gas volumes are being piped to Mexico, and the nation's burgeoning liquefied natural gas export industry is taking off along the Gulf Coast and shipping gas around the world. These factors have all helped push natural gas storage supplies almost 20 percent below their five-year average, the U.S. Energy Department said Nov. 29.

### LNG prices weaken with lower winter demand surge in China

(Reuters' columnist; Dec. 3) - The northern winter usually leads to a demand and price peak for several commodities in Asia, but this year is bucking the trend for liquefied natural gas, coal, and iron ore. There doesn't appear to be one single driving narrative causing the break with the usual seasonal patterns, but rather a variety of unrelated or loosely related factors are at work with China as a common thread. LNG provides the starkest example with spot prices weakening at a time when they usually strengthen.

LNG dropped to \$9.80 per million Btu in the week to Nov. 30, the weakest since late July. The winter price surge hasn't happened largely because China, the world's second-biggest LNG importer and a major driver of winter demand, is not experiencing the same surge it did last winter when its demand for LNG soared as the country moved sharply to cut back on coal for residential heating amid efforts to reduce air pollution.

However, this winter China appears to have prepared more thoroughly, building up natural gas inventories and being more cautious in the amount of coal-to-gas switching undertaken. A milder-than-usual winter so far in North Asia also has limited demand for spot cargoes from major buyers such as Japan and South Korea.

#### South Korea dominates global LNG shipbuilding

(Energywire; Nov. 27) - Docked about an hour's drive from South Korea's second largest city, Busan, the newly built liquefied natural gas carrier British Mentor is impossible to miss at the Daewoo Shipbuilding and Marine Engineering platform on Geoje Island. Nearly 26,000 workers assemble some of the world's largest vessels at the world's largest shipyard, which is capable of building about 50 vessels a year.

Geoje Island now finds itself at the center of a geopolitical storm, as Beijing, Seoul, and Tokyo battle over which nation's shipyards will benefit from the world's fastest growing energy trade — LNG. So far, the Koreans are well in the lead. Beijing has mulled protectionist measures to help its shipbuilders expand a market toehold against Korea's dominance. Japan's shipyards are barely competitive against the Koreans in LNG carrier building, prompting Tokyo to file a trade complaint while it ponders its next move.

The Geoje hub isn't so much a shipyard these days as it is an LNG ship assembly line. Four carriers are being put up now in the massive dry dock dominating a corner of the shipyard, while workers are already beginning the pieces of new hulls that will be moved in as soon as the four vessels are floated. Seven others are getting finishing touches.

South Korea's major shipyards — dominated by Daewoo, Hyundai, and Samsung — have won about 80 percent of recent orders for new LNG carriers, and Korea is coming under attack by its competitors. Tokyo is suing Seoul at the World Trade Organization, alleging that Korean subsidies to its shipyards explain its dominance in new LNG carrier builds. China's shipyards have been clawing away at Korea's market share, but it's been a struggle. Beijing came under fire from trading partners when it floated a law that would have required LNG delivered to China be shipped aboard Chinese-built carriers.

### Poland will build new pipeline for Norwegian gas

(Reuters; Nov. 30) - The Polish and Danish natural gas grid operators have taken a final investment decision to build a gas pipeline linking Poland to Norwegian gas fields via Danish territory and the Baltic Sea, Poland's state-owned Gaz-System said Nov. 30. The 560-mile line, known as the Baltic Pipe, is intended to reduce Poland's reliance on Russian gas. The new pipeline is expected to be ready in 2022 when Poland's long-term deal with Russian gas supplier Gazprom expires.

"Construction of the section under the Baltic Sea will start in spring 2020," said Piotr Naimski, the Polish government official responsible for power and gas infrastructure. The pipeline capacity will be 350 billion cubic feet of gas per year, with almost all of it booked by Poland's state-run gas firm PGNiG.

The Baltic Pipe, at about 1.6 billion to 2.1 billion euros (\$1.8 billion to \$2.4 billion), will run from the north of Poland through Swedish waters in the Baltic Sea and Danish territory, where it will be linked to a North Sea pipeline from Norway. Norway supplies about a quarter of Europe's gas and is the second largest supplier after Russia. Most of its goes moves via a network of offshore lines to Britain, Germany, France, and Belgium.

#### LNG charter rates start to fall back, but still higher than last year

(Reuters; Dec. 4) - High spot-charter rates for liquefied natural gas carriers are easing as more ships becoming available, which could help increase LNG trade if Asian demand rises in coming months. Charter rates are a key component of spot LNG trade. Day rates have remained high for most of this year, hitting \$195,000 last month. Not many spot Atlantic cargoes have traveled east in recent months due to inflated charter rates, with some companies having to arrange cargo swaps to reduce shipping costs.

But as more vessels become available for spot charters, rates dropped to around \$160,000 per day at the end of November, shipbrokers told Reuters. One source said the spot rate for a modern vessel reached \$140,000 per day on Dec. 4. However, rates are still higher than last year between the months of December and March, when they were mostly below \$100,000 per day.

### Saudi energy minister says oil production numbers unresolved

(Bloomberg; Dec. 4) - Three days after Russian President Vladimir Putin and Saudi Crown Prince Mohammed bin Salman sent crude prices surging with an agreement to extend cooperation on oil production, the kingdom's top energy official made clear that terms of a deal are unresolved. Saudi Energy Minister Khalid Al-Falih said he sees an oversupplied market but cautioned that all members of the OPEC+ group, including allies such as Russia and Kazakhstan, need to come together for a cut to go ahead.

Moscow backs output curbs "in principle," but it's "premature" to say what they will agree to when they meet this week, Al-Falih said. He also walked back previous statements about the size of any supply reduction, saying the group is likely to cut but still needs to "figure out what needs to be done and by how much." The Saudis and Russians are pumping near-record amounts in excess of 11 million barrels a day each.

"We need to get together and listen to our colleagues, hear about their views on supply and demand and their projections of their own countries' production," Al-Falih. "The next road to cross is whether all countries are willing to come on board and contribute to that cut." OPEC, Russia, and other allies meet in Vienna later this week to decide production policy for 2019. There is consensus the OPEC+ group needs to rein in production to prevent global inventories growing next year, but no agreement on the details.