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Work to start immediately after FERC approves Louisiana LNG project

(Bloomberg; Feb. 22) - Venture Global LNG said it will start construction immediately on its \$5 billion Calcasieu Pass liquefied natural gas export terminal in Louisiana after receiving Federal Energy Regulatory Commission authorization on Feb. 21. It's the first authorization by FERC in two years for a new LNG export facility. With the FERC order and 20-year offtake contracts in hand, "we plan to immediately commence construction activities," Venture Global co-CEOs Bob Pender and Mike Sabel said Feb. 22.

Speculation of partisan divisions at FERC were fueled when the project was dropped from the agenda at the agency's December meeting. The commission has been split 2-2 between Democrats and Republicans since Commissioner Kevin McIntyre died in January. "The agreement that we struck today to break the dam open on this tricky issue gives me reason for optimism that we'll be able to move expeditiously on these other applications," FERC Chairman Neil Chatterjee said Feb. 21.

The compromise was to calculate the project's greenhouse-gas emissions as a percentage of total U.S. emissions. FERC, however, did not judge whether those new emissions will pose a significant threat to worsening climate change. Commissioner Cheryl LaFleur, who has repeatedly called for more analysis of greenhouse-gas emissions in FERC's environmental reviews, said the approval shows that the agency can take action when it's willing to compromise.

Venture Global has 20-year contracts with companies including Shell and BP for 80 percent of the project's capacity. The facility is designed to produce about 10 million tonnes a year. The terminal will be built with factory-fabricated, mid-size liquefaction units — a contrast to the massive liquefaction trains that usually go into such projects.

Insurgents attack workers on Anadarko's Mozambique LNG project

(Reuters; Feb. 22) - Anadarko said one worker was killed and several others injured in two related attacks Feb. 21 near the construction site for its proposed liquefied natural gas project in northern Mozambique. Anadarko said Feb. 22 it was actively monitoring the situation and in close contact with government authorities. The U.S. energy firm said it would not comment further on the attacks until it had a "full picture" of the events.

The company is working to build a 17,000-acre gas liquefaction complex in the country's remote north to superchill gas pumped from the Golfinho/Atum fields in its Area 1

deepwater block 10 miles offshore. The block holds one of the world's biggest recent gas discoveries, estimated at 75 trillion cubic feet. Anadarko this month finalized five more deals with long-term buyers of LNG from the project and is nearing a final investment decision on the \$25 billion, 12.88-million-tonne-per-year development.

The company said last June it was closely monitoring the security situation after a spate of beheadings and attacks by suspected Islamist militants. Any such activity is a worry for the country's fledgling gas industry. The Feb. 21 attack was about 12 miles from the project site in northern Mozambique and involved a convoy in which six workers suffered non-life-threatening injuries, the company said. The second attack resulted in the death of a worker for a contractor building an airstrip for the Anadarko-led project.

The incident is "very significant" and may signal a shift in tactics by the insurgents, said Eric Morier-Genoud, a senior lecturer at Queen's University Belfast and an expert on Mozambique's history. "It is the first time an oil and gas company is attacked."

China is reluctant to sign long-term U.S. LNG contracts

(CNBC; Feb. 22) - The ongoing U.S.-China trade fight is putting a chill on cooperation between the two energy powerhouses and threatens to sideline billions in investment as China continues its tariffs on U.S. liquefied natural gas. The dispute has delayed at least one LNG terminal planned in Louisiana and threatens to delay others. In the long-run, analysts say it's inevitable for trade to resume between China and the U.S. — the U.S. is the world's top gas producer and China is the biggest growth market for LNG.

The dispute comes as developers are planning a second wave of U.S. LNG export terminals, mostly along the Gulf Coast. Greenlighting those projects usually requires lining up long-term customers. But despite its appetite for LNG, China has not signed many of those contracts with U.S. companies, and the tariffs continue to create uncertainty for developers aiming to line up Chinese buyers. "Clearly there is an issue for some projects if they are targeting the China market," said Alex Munton, of Wood Mackenzie. "It's going to be difficult in the current context for deals to be signed."

The reluctance of Chinese companies to commit to U.S. projects threatens to keep other buyers on the sidelines, said Katie Bays, head of energy and utilities at Height Capital Markets. "They're just the elephant in the room and until there's clarity on where China is going to source their natural gas ... then it's hard for other buyers to make decisions about which projects to attach themselves to," she said.

Russian petrochem producer looks at ventures in China, Saudi Arabia

(Bloomberg; Feb. 21) - Sibur Holding, Russia's largest petrochemical producer, is looking overseas for growth as a multibillion-dollar project in Siberia nears completion. Sibur is stepping up work on potential joint ventures in China and Saudi Arabia, CEO Dmitry Konov said in an interview in Moscow. The company is targeting Asia as its main growth market amid burgeoning demand, while a Middle Eastern plant would offer easy access to feedstock as well as to Asian buyers.

"Sibur has returned to considering the possibility of a joint venture with (China's) Sinopec, on which we signed an agreement back in 2014," Konov said, adding that work on the Chinese project may start this year. The company will also decide on a joint venture with Saudi Arabia by the end of 2019, he said. Sibur is boosting efforts to expand abroad as its current investment cycle concludes with the imminent start-up of a \$9 billion plastics plant in West Siberia.

In China, Sibur and Sinopec agreed five years ago to build a synthetic-rubber plant south of Shanghai. If the project goes ahead, it will likely start up in 2023-2025, Konov said. Sinopec, or China Petroleum & Chemical Corp. as it's officially known, agreed in 2014 to take a 74.9 percent share in the venture with Sibur holding the rest. The Chinese petrochemical company also has a 10 percent stake in Sibur itself. In Saudi Arabia, energy giant Saudi Aramco started talks with Sibur in 2017 on plans for a synthetic-rubber plant in the kingdom as part of its strategy to expand in petrochemicals.

Novatek plans \$2.8 billion spending on gas projects in 2019

(Reuters; Feb. 21) - Russian gas producer Novatek plans to double capital expenditure in 2019 to 185 billion rubles (US\$2.8 billion) on new fields, port facilities and other projects, executives said Feb. 21. Novatek, Russia's largest non-state-owned natural gas producer, launched its first liquefied natural gas project, Yamal LNG, in December 2017, which has given it a 5 percent share of the global market.

The company, controlled by CEO Leonid Mikhelson and businessman Gennady Timchenko, a friend of Russian President Vladimir Putin, plans to build its second LNG plant, Arctic LNG-2, with a start-up by 2023. Mikhelson said on a conference call that the final investment decision for Arctic LNG-2, in which France's Total has a 10 percent stake, is expected in the second half of 2019.

Novatek has been in talks with other potential partners in Arctic LNG-2, including companies from China, Japan, and South Korea. Mikhelson said the spending being planned for 2019 would include investments in the Severo-Russky block of gas fields and wharfs for the port of Murmansk.

India and China to lead global gas demand growth through 2040

(Gulf Times; Qatar; Feb. 21) - India and China will drive the global natural gas market through 2040, International Energy Forum secretary general Sun Xiansheng said. The two Asian countries will be the major consumers over the next two decades followed by Africa and the Middle East, he said while speaking at the Gas Exporting Countries Forum's monthly lecture in Qatar on Feb. 21.

India's demand for gas is estimated to grow at 4.9 percent a year through 2040, while that of China at 4.7 percent, Xiansheng said. Africa's demand will grow at an estimated 3.3 percent a year between now and 2040, while the Middle East grows at 2 percent during the same period, he said. The International Energy Forum, based in Saudi Arabia, is a nonprofit comprised of 72 member countries that account for about 90 percent of global oil and gas demand and production.

Energy research firm sees 2019 as big year for project sanctions

(Houston Chronicle; Feb. 22) - Global oil and gas project authorizations are expected to triple in 2019 as a bevy of international offshore and liquefied natural gas projects receive approvals to start construction, according to a new report. The Norwegian research firm Rystad Energy said the collective volumes of major projects receiving final investment decisions this year could swell past 46 billion barrels of oil equivalent.

Many of the projects are in the Middle East, Eastern Mediterranean, East Africa, Russia, Australia, Brazil, and Guyana, the report said. Rystad is focusing on multibillion-dollar projects and not counting U.S. shale growth. Saudi Arabia alone is expected to authorize several new projects. "We expect global FID volumes in 2019 to triple over last year, and 2019's megaproject awards could lead to billions of subcontracting dollars in the coming years," said Rystad Energy upstream research analyst Readul Islam.

There were just over 15 major project authorizations last year and there could be nearly 50 in 2019, Rystad said. The report said multiple long-delayed projects should finally get the go-ahead, including LNG export projects along the U.S. Gulf Coast and Anadarko's Mozambique LNG project in East Africa.

Taiwan moves away from coal and nuclear to gas power plants

(Nikkei Asian Review; Feb. 20) - Japanese trading house Marubeni has broken ground on a 130 billion yen (\$1.17 billion) gas power project in Taiwan with U.S. partner General Electric, riding the island's move away from coal and nuclear energy. The partners won the order from state-owned Taiwan Power Co. in mid-February. Two 1gigawatt combined-cycle gas power plants — among the largest in the world — will go online by 2022 in a coastal area of Taoyuan about 25 miles from Taipei.

Marubeni and GE offer a technology that employs waste heat to generate power efficiently with construction costs relatively low as well. As environmental awareness grows in Taiwan, older coal power plants are going out of service. The public has also grown wary of nuclear power after the 2011 Fukushima meltdown in Japan. And while Marubeni's rivals Mitsubishi Corp. and Mitsui & Co. are developing offshore wind power, there are fewer power plants capable of supplying electricity steadily.

The island's authorities aim to suspend all nuclear plants by 2025 and envision gas generating 50 percent of domestic power, up from 31 percent in 2017. Taiwan intends to build 1-gigawatt gas power plants at 10 sites, and will start the bidding process for five this year. Taiwan intends to fuel the plants with liquefied natural gas imported from the U.S. and Australia. To accommodate the influx, plans call for doubling the capacity of the island's LNG receiving terminals in 2027 from the current 18.5 million tonnes.

PetroChina and Shell at odds over gas pricing in Australia

(Reuters; Feb. 20) - Shell and PetroChina are at loggerheads over gas sales pricing at their Arrow Energy joint venture, holding up development of Australia's biggest undeveloped coal-seam gas resource, sources said. PetroChina is eager to develop Arrow's 5 trillion cubic feet of gas in the Surat Basin in Queensland to turn around loss-making Arrow Energy. It is at the mercy of venture partner Shell, however, as the Anglo-Dutch company is also majority owner of the biggest potential customer for Arrow's gas, Queensland Curtis LNG, a liquefied natural gas plant on an island off Queensland state.

"Shell may be thinking of using its operator role to protect its interests," said a Chinese oil industry executive. PetroChina's investment is "already bleeding and the firm wants to cut its losses," the executive said. Shell and PetroChina acquired the Surat resource in a US\$2.5 billion takeover of Arrow in 2010. They had expected a final investment decision on the Surat project in 2018 with first production around 2020 after the Arrow venture signed a 27-year deal in 2017 to supply Surat gas to Queensland Curtis LNG.

PetroChina, though, is unhappy with the pricing and technical plan for developing the gas. That's holding up final approvals, according to sources. Shell still hopes to secure approval in time to deliver the first gas in 2021, Shell Australia Chairman Zoe Yujnovich said Feb. 13. Queensland Curtis is one of three LNG export plants built in Queensland, all fed by coal-seam gas, and QCLNG and one of its rivals are struggling to operate at full capacity as coal-seam gas wells have been less productive than expected.

Asian spot-market LNG prices drop to \$6.20

(Reuters; Feb. 22) - Asian spot prices for liquefied natural gas dropped to new lows this week as sporadic spot-market demand failed to change the overall trend of oversupply in the market. Spot prices for April delivery to Northeast Asia are estimated at around \$6.20 per million Btu, down 10 cents from the previous week. The price is at the lowest level since September 2017, but it is unlikely to have reached its bottom yet.

"I think (when the price falls to) between \$5 to \$6 per million Btu, we should start to see some demand creation in Asia," a trader in Europe said, adding that it would start rebalancing the flow of cargoes between the Atlantic and Pacific basins.

Korea Gas diverts U.S. LNG to Europe

(Reuters; Feb. 22) - Korea Gas has redirected cargoes of liquefied natural gas from South Korea to northwest Europe this winter for the first time, industry sources told Reuters. Three KOGAS cargoes from a U.S. LNG offtake deal have been diverted to Britain and France since December in another sign of how weaker-than-expected Asian LNG demand has made Europe a top LNG destination this winter.

KOGAS began taking LNG from Cheniere Energy in 2017 under a 20-year deal for about 3.5 million tonnes per year from the export terminal in Sabine Pass, Louisiana. This is the first winter that KOGAS changed the destination to Europe. The tight spread between European gas and Asian LNG prices has made it more profitable to send Atlantic-produced LNG to Europe rather than to Asia with its higher shipping costs.

But the recent diversion of U.S. cargoes was prompted by a schedule conflict in South Korea's LNG terminals, an industry source said, rather than a decision taken for commercial profit. Gas stocks in South Korea, as well as other Asian markets, have been full this winter due to mild weather, prompting a wave of cargo cancellations and diversions from Asia to Europe.

Oregon LNG developer continues looking for long-term contracts

(S&P Global Platts; Feb. 22) – Calgary-based Pembina Pipeline said Feb. 22 it is still targeting the end of the month for securing sufficient binding offtake agreements to support construction of its proposed Jordan Cove LNG export terminal in Coos Bay, Oregon. The field of prospective new liquefaction facilities in the U.S. has become more crowded in the six years since Jordan Cove initially filed for Federal Energy Regulatory Commission approval, adding some urgency to Pembina's decision-making process.

Jordan Cove is on its second application after FERC rejected the first one in 2016 in part because of a failure to show enough buyer demand for the \$10 billion project. Pembina, which inherited the project when it acquired Calgary-based Veresen in 2017, has been aggressively pursuing long-term contracts with buyers and a plan to sell an equity stake in the project. Pembina has said it expects a final FERC decision on the second application in November.

In addition to working through the federal regulatory process and facing substantial local opposition to the 229-mile gas pipeline through Oregon, Pembina has been looking to reduce its financial risk amid volatile commodity prices and increased competition among North American U.S. developers. The midstream operator plans to sell as much as 60 percent of the equity in the terminal and pipeline projects to a partner or partners.

Quebec LNG project developers present environmental review

(CBC; Canada; Feb. 22) - The proponents of a C\$9 billion project to pipe natural gas to Quebec's Saguenay region, where it would be liquefied and exported to the Atlantic via the St. Lawrence River, said they are confident they can do it without harming the environment — including endangered beluga whales. Gazoduc, which proposes a 465-mile pipeline to connect with gas lines from Western Canada through northern Ontario, and GNL-Québec, which would build the liquefaction plant, presented its 1,100-page environmental impact study to the federal and provincial governments this week.

"At this point, we are focusing on determining the (pipeline) route," said Marie-Christine Demers, director of public affairs and community relations for Gazoduc. While that's still in discussion, she said, it's unclear what effects the project would have on municipalities and Indigenous communities. Stéphanie Fortin, director of communications for GNL-Quebec, said the company hopes to start work on the LNG plant in 2021 and be online by 2025 at 11 million tonnes of LNG per year — about three shiploads per week.

Fortin said the environmental impact study specifically addresses how the Saguenay project would limit harmful effects on the area's endangered beluga population. Fortin said the main mitigation measure would be to reduce the speed of LNG carriers that load up at the port to prevent collisions and to reduce underwater sound pollution.

Despite U.S. shale gas bounty, LNG imports persist in New England

(Bloomberg; Feb. 22) – A liquefied natural gas carrier is drifting in Massachusetts Bay, trying to capitalize on the two-month window when natural gas in this region can become the most expensive in the U.S., and sometimes the world. The vessel, owned by Excelerate Energy, periodically delivers LNG from Trinidad to Excelerate's Northeast Gateway, a deepwater port 13 miles offshore of Boston. The LNG is offloaded, warmed

back into a gaseous state, and sent via an underwater pipeline for delivery to power plants and other customers whenever a cold blast sends prices soaring.

Northeast Gateway is something of anomaly: It's importing gas as the U.S. is building new export terminals to send abundant shale gas to buyers as far away as Asia. But as pipeline projects in New England face public opposition and legal delays, not enough of the heating fuel can reach the region when demand spikes. The Northeast can't receive LNG from U.S. terminals because of a 1920 federal law that prohibits foreign-flagged vessels from moving cargoes between American ports. There are no U.S. LNG carriers.

Excelerate can boost gas flows to Boston and surrounding areas without building new pipelines or terminals. Early last month, Northeast Gateway started importing for the first time since 2016 by bringing in a cargo sourced from Russia. The terminal started up in 2008, just as the shale boom took off. While the facility had been idle for about two years until this winter, gas imports to New England have climbed as pipeline bottlenecks worsen and stockpiles remain below normal, sending prices sharply higher.

More Massachusetts towns hit by bans on new gas hookups

(Boston Herald; Feb. 20) - As proposals to build new gas pipelines meet opposition from community leaders and environmental activists across Massachusetts, gas companies have halted new hookups in several communities, citing a lack of pipeline capacity. Since late January, Holyoke Gas & Electric and Middleborough Gas and Electric have imposed moratoriums on new residential gas hookups, adding Holyoke, Southampton, and Middleborough to a list of about a dozen towns already under similar moratoriums.

"While inexpensive natural gas has never been more plentiful in the United States, there is insufficient pipeline capacity in our region to deliver additional load," HG&E wrote in its Jan. 28 announcement. "Recent proposals that would increase natural gas capacity in the region have been met with opposition, and the current pipeline constraints are causing significant adverse environmental and economic impacts on the region's ratepayers."

The HG&E moratorium is not the first in western Massachusetts. Berkshire Gas has had a hookup moratorium in eight Franklin and Hampshire County towns for about four years, and Columbia Gas has had a ban on new service in Northampton and Easthampton since 2014. The moratoriums come as New England continues to move toward greater reliance on gas and renewables. The region also faces a growing risk of energy demand outpacing supply, according to the organization that operates the region's power system.

Canadian regulator says oil pipeline benefits outweigh impacts

(Calgary Herald; Feb. 22) - Oil executives downplayed Canada's National Energy Board recommendation Feb. 22 to — once again — approve the Trans Mountain oil pipeline expansion as only a small step toward building a project that will continue to face challenges. The NEB announced the 590,000-barrel-per-day expansion project from Alberta to the British Columbia coast could have "significant adverse environmental effects" on the West Coast and marine wildlife — but is still in the national interest.

The NEB recommended the federal government, which bought Trans Mountain in 2018 for C\$4.5 billion from Kinder Morgan, proceed with the project subject to 156 conditions and 16 nonbinding recommendations. It's the second positive decision for the project from the NEB, which first approved the plan subject to 157 conditions in 2016. But a new review was ordered after the Federal Court of Appeals found in August 2018 that the first decision failed to consider the project's large increase in coastal tanker traffic.

Though Canada's energy sector considers the project critical because oil production currently outstrips available pipeline capacity, executives stopped short of celebrating the decision. "Until we get the oil flowing, we don't have a pipeline," Canadian Energy Pipelines Association CEO Chris Bloomer said. "It's a step, not a victory, but it is an important step," Alberta Premier Rachel Notley said, noting she expects opponents will appeal the NEB action. The next step in the process requires the federal government to consult with Indigenous groups and offer accommodations where possible.

B.C. budget includes \$100 million for gas pipeline communities

(Prince George Matters; BC; Feb. 20) - The British Columbia government's fiscal 2019-2020 budget, unveiled Feb. 19, includes \$100 million in grants to 26 governments near Kitimat and along the Coastal GasLink pipeline corridor to assist with current and future infrastructure needs. The Northern Capital and Planning Grants will go to four regional districts (Fraser Fort George, Bulkley Nechako, Kitimat Stikine, and North Coast) and their 22 municipalities along the pipeline route to the LNG Canada terminal in Kitimat.

"The rich resources and hard-working people of the Northwest have long contributed more than their fair share to the prosperity of our province," Premier John Horgan said in a statement. "Unfortunately, the benefits of success have been slow to flow back to the region, leaving communities with aging infrastructure that does not meet their needs or the needs of industry." Work has started on the Shell-led LNG Canada project, with TransCanada starting to set up construction camps for the 416-mile GasLink pipeline.

The 22 municipalities will receive a total of \$83.7 million. The four regional districts will receive \$16.3 million. The Northwest B.C. Resource Benefits Alliance has been pushing for the grant, which is similar to the Peace River Agreement that compensates

local governments in the Northeast for industrial development outside municipal boundaries.

Qatar wants to build up local support industries

(Reuters; Feb. 17) - Qatar Petroleum signed preliminary deals worth more than 9 billion Qatari riyals (\$2.47 billion) on Feb. 18 with international oil services firms Schlumberger and Baker Hughes to boost the local energy industry. Qatar, the world's top liquefied natural gas exporter and which is facing a trade boycott by some Arab states, wants to reduce its reliance on imported technology and services and lift domestic production.

"As part of our national duty to develop the industry in Qatar and to promote selfreliance, we saw the need to localize many of the supporting industries in the sector," QP Chief Executive Officer Saad al-Kaabi said at an event to sign memorandums of understanding with Schlumberger and Baker Hughes. The preliminary agreements cover investments in production facilities, training and development, Kaabi said.

Another oil services firm, McDermott, signed a joint-venture deal with Qatar's energy shipping and transport firm Naqilat to build maritime platforms for offshore and onshore structures, Kaabi said. Qatar aims to boost its annual LNG output by 43 percent by 2023-2024 to 110 million tonnes per year from 77 million tonnes. Qatar Petroleum is looking for partners for the expansion of its LNG capacity.