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Analyst says 3 U.S. Gulf Coast LNG projects most likely to proceed

(Interfax Global Energy; July 30) - With the global LNG market now predicted to be short in as little as four years, attention is shifting to which of the second wave of U.S. export projects will start construction before 2020 — with only three looking likely. The U.S. already has two projects in operation; four more set to enter service by the end of 2019; and 13 projects in Alaska, Oregon, Texas, Louisiana, Mississippi, and Florida awaiting approval by the Federal Energy Regulatory Commission as of July 13.

Of the projects in this second wave, only Venture Global's Calcasieu Pass LNG (Louisiana), NextDecade's Rio Grande LNG (Texas) and Tellurian's Driftwood LNG (Louisiana) look likely to gain FERC approval by early 2019, Katie Bays, an energy analyst at Height Securities, predicted last week. The three are frontrunners because their ventures have progressed far enough in the FERC environmental review process for the developers to be able to make an investment decision within the next 12 months.

The companies shrugged off a slowdown in the global gas market in 2016 and 2017 to press on with the permitting process, while other projects have slowed or disengaged from it. "Project sponsors could not justify spending millions to continue in the FERC queue. On the other hand, savvier projects ... managed to stay active through the downturn, and now they stand to benefit for it," Bays wrote in a note. Only Venture Global has announced firm sales-and-purchase agreements. Portugal's Galp, Italy's Edison and Poland's PGNiG have lined up alongside BP and Shell to take LNG.

Economics of Yamal LNG and Northern Sea Route questioned

(Radio Free Asia; July 30) - On July 19, the special ice-class liquefied natural gas carrier Vladimir Rusanov docked at China's Rudong terminal in eastern Jiangsu province with its first shipment from Russia's Yamal LNG project to use the Arctic Northern Sea Route. The success of the US\$27 billion project depends on a fleet of 15 tankers, at \$320 million each, designed to smash through ice up to 6.9 feet thick.

It may take years to learn if the venture is a financial success. "I have often wondered about the return on capital of projects like Yamal, notwithstanding the real achievement of the first train coming in under budget and on time," said Edward Chow, senior fellow for energy and national security at the Center for Strategic and International Studies in Washington, D.C. "LNG projects are capital intensive but generate a lot of cash flow

over a long period of time. Profitability often depends on cost efficiency and whether the project comes on stream at the right time in a cyclical LNG market," Chow said.

Yamal relied on Chinese financing due in part to western sanctions after Russia's annexation of Crimea. Whether the venture is cost-effective for China remains to be seen. The time savings of the Northern Sea Route may not be as great as first thought. Platts reported the Rusanov sailed from Yamal on June 25, making the voyage to China in 24 days. The western winter route to China through the Mediterranean and the Suez Canal takes 32 days, according to the U.S. Energy Information Administration.

"The idea of building expensive ice-class tankers to ship LNG to Asia through the Northern Sea Route for part of the year always puzzled me as a commercial matter," Chow said. "Why not ship LNG to closer-by markets in Europe and swap for cargoes closer to Asian customers? ... Clearly, Russia and China have other than commercial reasons to want to develop transit through the Northern Sea Route. Again, the motivation appears to be more strategic than purely economic."

Japanese government, companies may help with Russian LNG project

(Nikkei Asian Review; July 31) – As Japan looks to diversify its supply sources of energy to guard against political risks, it is cooperating with Moscow on construction of a liquefied natural gas transfer hub in Russia's Far East. Trading house Marubeni and shipbuilder Mitsui O.S.K. Lines are among the Japanese companies considering participation in Russian gas producer Novatek's plan to complete an LNG transshipment terminal on Russia's Kamchatka Peninsula by 2023.

Tokyo also might provide aid through public financial institutions such as the Japan Bank for International Cooperation and Nippon Export and Investment Insurance. Marubeni is conducting feasibility studies on the project and looks to decide by 2019. Japanese LNG plant builders have shown interest as well. The Kamchatka hub is intended to reduce the cost of transporting gas from the Yamal LNG project in Siberia's far north and any subsequent liquefaction plant and export terminals built in the region.

Transporting the LNG by the direct Northern Sea Route to Asia requires costly icebreaking gas carriers. Transferring the cargo to conventional tankers at the Kamchatka station would cut expenses for shipments to China, Japan, and other Asian markets. Japan intends to have a range of LNG suppliers to prepare for geopolitical risks that could cut off certain sources.

Canadian agency will decide if tariffs apply to LNG components

(The Squamish Chief; BC; July 30) – Canada's Border Services Agency said July 26 it is evaluating what should or shouldn't be part of an anti-dumping tariff, a decision that could help the C\$1.6 billion Woodfibre LNG project planned for a former pulp mill site on the British Columbia coast about 30 miles north of Vancouver. The agency said it would look at whether liquefied natural gas production modules should be included as part of Canada's anti-dumping tariffs on fabricated industrial steel components.

Woodfibre — along with other LNG project developers in the province — has spoken out against the tariffs on steel components from China, South Korea, and Spain. The fees were slapped onto those goods after the Canadian International Trade Tribunal ruled in May 2017 that the countries were exporting products at below-normal prices to the detriment of the Canadian economy. The tariffs could reach up to 45.8 percent. The Border Services Agency is scheduled to finish its review by late November.

Woodfibre and others have argued there are not any Canadian manufacturers capable of building the modules required by the LNG sector. The Singapore-based owner of Woodfibre LNG has committed to construction but has not started substantial work at the site. The plant's capacity is planned for 2.1 million tonnes per year.

Pace of U.S. LNG efforts challenges Canadian East Coast proposals

(Bloomberg; July 27) - Having already lost the race to sell liquefied natural gas across the Pacific to energy-hungry Asia, Canada is now falling further behind in the race to sell LNG across the Atlantic as well. Earlier this week, the U.S. announced a tentative deal with the European Union to avert a full-blown trade war. Part of that detail-light agreement involved a European pledge to purchase more U.S. LNG, suggesting the two proposed LNG export facilities on Canada's East Coast are facing another challenge.

"The U.S. projects are up and running and more are coming, [while] Canada's eastern projects remain essentially theoretical," said Ed Kallio, principal at Eau Claire Energy Advisory. Calgary-based Pieridae Energy is furthest along with its Goldboro project in Nova Scotia. The roughly US\$7.5 billion plan to export up to 10 million tonnes of LNG per year is expected to face a final investment decision this year. Pieridae CEO Alfred Sorensen argues the U.S.-E.U. deal actually improves Goldboro's prospects.

"Anything that encourages the Europeans to buy more from North America is actually a good thing for us," Sorensen told BNN Bloomberg. "Last year, there was basically no interest." Pieridae already has half of its plant's capacity reserved for sale to German utility Uniper, and Sorensen said the company should be ready to announce a deal with another European utility in August. Yet Goldboro is not expected to start up before late 2022, while the U.S. has two LNG export plants running and four more being built.

Qatar held wide lead in 2017 as world's No. 1 LNG exporter

(The Peninsula; Qatar; July 30) - Qatar retained the crown of world's largest exporter of liquefied natural gas in 2017. The country shipped out 81 million tonnes last year, enabling it to remain the market leader with a 27.6 percent share of global trade, said the International Gas Union's 2018 World LNG Report. Qatar has held the top spot for more than a decade, after a building boom concluded in 2010 with completion of the country's 14th liquefaction train.

Qatar led its competitors by a wide margin. Australia was the second-largest exporter at 56.2 million tonnes and a 19.2 percent market share; Malaysia shipped 26.4 million tonnes with a share of 9 percent; Nigeria was in fourth place; followed by Indonesia and the U.S. Despite growing production in Australia and the U.S., Qatar's spot is expected to get stronger in the coming years. Qatar Petroleum in 2017 announced plans to boost its annual LNG production capacity by 30 percent — to 100 million tonnes.

Last year was a good time for LNG exporters. After steady growth in recent years, global trade increased sharply in 2017, rising by 35.2 million tonnes to reach a new record of 293.1 million tonnes. This marked the fourth consecutive year of incremental growth, and the second-largest annual increase ever, behind only 2010.

Chinese oil and gas company opens 9th LNG import terminal

(Xinhau, China's state-run news agency; Aug. 1) - China National Offshore Oil Corp. has launched its ninth liquefied natural gas terminal in Shenzhen in South China's Guangdong province to boost the country's supply of clean energy. The new terminal, in Dapeng New District, is expected to supply about 600 million cubic feet of gas a day to North China this winter, CNOOC said Aug. 1. The company already has started construction of its 10th import terminal.

The newest facility is equipped with four storage tanks, capable of holding about 12 billion cubic feet of natural gas as LNG. On an annual basis, the terminal is able to handle about 200 bcf of gas as LNG. CNOOC has built LNG import terminals in Guangdong, Fujian and Zhejiang provinces, with a total annual processing capacity of 1.6 trillion cubic feet of gas. According to an industry report, China is likely to become the world's largest importer of LNG and pipeline gas by 2019.

Trump's claim of LNG exports to Europe looks questionable

(Washington Post; July 30) - Europe is unlikely to veer from its current plans to build a small number of new plants for importing liquefied natural gas, energy experts said, casting doubts on President Trump's claims that he had secured commitments from the

European Union for construction of 9 to 11 new plants to boost U.S. LNG exports. While there are about a dozen proposals for new import terminals on the drawing boards, no more than three or four new plants will be built anytime soon, analysts said.

That's because the existing 24 LNG import facilities now operating in Europe are running at about a quarter of their capacity, said Thierry Bros, senior fellow at the Oxford Institute for Energy Studies. What's more, there are limited tools the European Union can use to speed up construction of new plants by private companies. "We have enough capacity. We may need a little bit more in some dedicated areas. Otherwise I don't see how we can need 11 (new plants), Bros said.

"The E.U. does not decide how many LNG terminals to build; those are commercially driven decisions," Jason Bordoff, director of the Center on Global Energy Policy at Columbia University, said in an email. U.S. LNG will also have to compete against three large gas pipeline projects — two from Russia and one from the Caspian Sea. LNG faces stiff competition from Russia, where the costs of production are very low.

Proposed Oregon LNG terminal wins court fight over dredging

(The Associated Press; July 27) - The Oregon Supreme Court has upheld a decision, opposed by environmentalists, by the state lands department to allow the dredging of the port of Coos Bay for a proposed deep-water marine terminal where ships could load liquefied natural gas. The environmental advocacy groups that went to court argued the permit was invalid because the state lands department had not considered the negative effects of the terminal, such as a fuel spill.

Those behind the proposed Jordan Cove Energy Project, a liquefied natural gas export terminal, said it would revitalize Coos Bay as a major port on the West Coast, create more 2,000 jobs during construction with about 180 permanent positions. Calgary-bases Pembina Pipeline is behind the Jordan Cove project, which is waiting on federal review and state permits, in addition to financing and firm customers. Gas would be transported to the terminal by the proposed 229-mile Pacific Connector Gas Pipeline.

The Oregon Supreme Court on July 26 unanimously ruled the state lands department was not required to consider negative effects of the dredging. Petitioners noted that the lands department considered positive effects, such as employment. The court said in a news release that it determined the governing statute expressly directed the department to consider "the economic cost to the public" if the project is not accomplished," but that "there was no parallel provision directing consideration of negative operational effects."

South Korea to boost tax on coal, lower tax on LNG

(Reuters; July 30) - South Korea plans to increase its tax on thermal coal while lowering the tax on liquefied natural gas to support the use of cleaner fuels for power generation, the finance ministry said July 30. The ministry said in a statement that it will increase the tax on thermal coal by 10 won to 46 won (\$0.0412) per kilogram (about 9 cents per pound), reflecting environmental costs of using the fossil fuel. Meanwhile, the government plans to lower the tax on LNG to 23 won per kilogram from 91.4 won.

Asia's fourth-largest economy, which imports almost all of its energy needs, has favored coal and nuclear power to generate cheaper electricity and to ensure stable power supply. South Korea now generates more than 70 percent of its power from coal and nuclear, while renewables account for 6 percent, but the country aims to gradually phase out coal and nuclear power.

Under the country's power supply plan, coal's share of power generation will fall to 36.1 percent in 2030 and nuclear to 23.9 percent, but those sectors will still make up more than half of the country's total power generation. The revised tax is expected to go into effect from April 1, 2019, should parliament approve the government plan.

Controversial \$3 billion Pennsylvania gas pipeline almost finished

(Lancaster Online; PA; July 29) - Four years after plans were first announced, construction of the controversial Atlantic Sunrise natural gas pipeline is nearly finished. In late August, gas from Marcellus Shale wells in northeastern Pennsylvania should start flowing through the nearly 300-mile, \$3 billion pipeline that traverses 10 Pennsylvania counties to link the gas fields into a wider distribution grid, said project developer Oklahoma-based Williams Partners.

In the 37-mile portion through western and southern sections of Lancaster County, the 42-inch-diameter pipeline has been welded together, buried and backfilled in all but a few sections. "It is wrapping up," said Christopher Stockton, spokesman for Williams Partners. "We are progressing with final cleanup and right-of-way restoration work." The pipeline work generated famous pushback by Roman Catholic nuns who built an outdoor chapel in the path of the pipeline. Environmental groups and local landowners also fought the pipeline, with protests sometimes disrupting construction.

Thirty landowners initially refused to sell easements for the project. In the end, five properties were seized by eminent domain, including land owned by the nuns in West Hempfield Township. Marcellus Shale gas production is expected to increase with the new line. Some of the gas — the percentage is hotly debated — will be sent overseas via the newly opened Cove Point liquefied natural gas export facility in Maryland.

Pipeline building boom underway to move Permian oil and gas

(Wall Street Journal; July 30) - Epic Midstream Holdings said last year it would build its first oil pipeline in America's most active oil field. It won't be finished until next year, but already Epic Midstream is considering making it bigger. The upstart company, backed by private equity, had been planning to build a line capable of carrying 440,000 barrels a day from West Texas to Corpus Christi on the Gulf Coast. Now it's considering enlarging it to 675,000 barrels a day, after interest picked up in recent months.

Bottlenecks have become a problem in the Permian Basin of Texas and New Mexico at the center of the shale boom. Drillers are pumping so much oil and gas that pipelines considered more than adequate a few years ago now are overwhelmed. Epic Midstream Holdings, Plains All American Pipeline, and Phillips 66 in a partnership with refiner Andeavor are building new oil lines aimed at refineries and exports in Corpus Christi that are set to add upward of 1.8 million barrels of combined capacity late next year. Meanwhile others, including Kinder Morgan, are planning to build new gas pipelines.

The projects aim eventually to alleviate the Permian's bottlenecks, which are causing some of the region's oil and gas to trade at steep discounts to U.S. benchmark prices. Producers selling oil in Midland have recently fetched about \$16 a barrel less than what sellers are getting in Oklahoma, according to RBC Capital Markets. Some analysts, though, say the new pipelines could face delays and increased costs, which could be get worse as a result of President Donald Trump's 25 percent tariffs on steel imports.

Constrained pipelines in Canada drive more oil to railroads

(The Financial Post; Canada; July 30) – Canadian shipments of oil via rail have hit a record high, and analysts expect shipments to go even higher amid a pipeline crunch. New data from the National Energy Board shows Canadian oil companies shipped an average of 198,788 barrels of oil per day on railway cars in May, the latest month for which data is available, marking a record high and a 42 percent increase over the 130,916 barrels per day shipped on rail in the same month a year earlier.

The rail increase has come as new pipelines have been delayed and operators are rationing space on pipelines as more oil is being produced in Western Canada than can fit into the country's pipe network. Canadian oil production in May was at 4.5 million barrels per day. The ramp-up is expected to continue. IHS Markit has estimated Canadian producers would ship between 200,000 and 300,000 barrels per day on railway cars this year. Last week a handful of major Canadian oil companies indicated that they were working to secure more rail terminal capacity amid the pipeline shortage.

Imperial Oil CEO Rich Kruger said one of his company's priorities was to send more oil by rail from the company's operations in Alberta to the U.S. Gulf Coast, which he

described as the highest-value market for heavy oil. In a March report, the International Energy Agency estimated that Canadian oil-by-rail exports would grow to an average of 250,000 barrels this year and reach 390,000 in 2019. Facilities have been built in Alberta and Saskatchewan to ramp up oil-by-rail shipments even further.

Oil industry falls short of reserve replacement after investment cuts

(Wall Street Journal; July 28) - Crude across the globe is being used up faster than it is being replaced, raising the prospect of even higher oil prices in the coming years. The world isn't running out of oil. Rather, energy companies and petro-states, burned by 2014's price collapse, are spending less on new projects, even though oil prices have more than doubled since 2016. That has sparked concerns among some industry watchers of a price spike that could hurt businesses and consumers.

The oil industry needs to add 33 billion barrels of new reserves every year to satisfy anticipated demand growth, particularly as developing countries consume more oil. This year, the increase is just 20 billion barrels, according to Rystad Energy. The industry's average decline rate — the pace at which output falls in a particular field or region without new investment — was 6.3 percent in 2016 and 5.7 percent last year, the Norway-based consultancy said. In the four years before the crash, it was 3.9 percent.

"The years of underinvestment are setting the scene for a supply crunch," said Virendra Chauhan, an analyst at consultancy Energy Aspects. Oil industry investments fell 25 percent in 2015 and 2016. "When you halve your capital expenditure, it's hard for this not to have an effect," said Martijn Rats, global oil strategist at Morgan Stanley. Strong demand for oil could falter, however, if the global economy slows. On the supply side, some large new projects have been commissioned, companies are driving down costs (allowing them to do more for less), and U.S. shale oil production is soaring.