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Long-term trade fight with China could delay U.S. LNG investments

(S&P Global Platts; Aug. 23) - If trade negotiations between the United States and China fail, American natural gas exporters could find themselves shipping fewer cargoes to a key market and watching a second wave of U.S. gas liquefaction terminals suffer delays, analysts caution. China's threat to impose a 25 percent tariff on U.S. LNG remains a cause for uncertainty for the American gas export industry.

Should negotiators fail to reach agreement, U.S. natural gas producers and exporters will be the next victims in the trade war, wrote Matthew Hong, director of power and gas research at Morningstar, on Aug. 22. "In the short term, U.S. producers and exporters may be shut out of the second-largest market for LNG," Hong said. "In the long term, a prolonged conflict could delay final investment decisions on second-wave LNG projects, forcing U.S. suppliers to miss out on what is expected to be a tighter market in 2020."

Several U.S. LNG export projects that have received federal approval await a final investment decision pending long-term sales contracts. But an aggressive U.S. trade stance increases the risk of delays, Hong wrote. "This trade dynamic suggests that additional tariffs by the Chinese on U.S. LNG will hurt the U.S. more than it hurts China and will naturally incentivize other LNG suppliers to fill this market," American Petroleum Institute Director for Tax Policy Stephen Comstock testified at an Aug. 21 hearing on tariffs held by the Office of the U.S. Trade Representative in Washington.

CNOOC plans to boost output to ease reliance on oil and gas imports

(South China Morning Post; Aug. 23) – China National Offshore Oil Corp., the country's dominant offshore oil and gas producer, plans to boost its output as part of a government initiative to lessen the country's reliance on imported energy sources, particularly as a trade war with the U.S., a major supplier, intensifies. The firm is targeting annual oil and gas output of 500 million barrels of oil equivalent in 2020, up 6.6 percent from last year, CNOOC said Aug. 23.

China's foreign oil dependency ratio could rise to almost 70 percent this year from 67 per cent last year and 64 percent in 2016 as rising demand cannot be met by domestic output, according to the China National Petroleum Corp. Research Institute of Economics and Technology. At the same time, natural gas import dependency — which rose to 39 percent last year from 29 percent in 2012 — will increase further this

year as consumption of the fuel to fight air pollution grows much faster than domestic output.

U.S. exports of crude oil to China surged 144.7 percent year-on-year in the first half to US\$4.37 billion, while those of liquefied natural gas jumped 210 percent to US\$351 million, according to the U.S. Census Bureau. The Chinese government has ordered state energy firms to increase output to help enhance national security, according to statements posted on the websites of CNOOC's parent China National Offshore Oilfield Corp. and PetroChina's parent China National Petroleum Corp. earlier this month.

U.S. could add even more duties to steel pipe imports

(S&P Global Platts; Aug. 22) - Adding to potential costs of steel import tariffs faced by U.S. pipeline developers, the U.S. Commerce Department has made preliminary determinations that exports of large-diameter welded pipe from Canada, China, Greece, India, South Korea, and Turkey have been sold at less than fair-market value in the U.S. The preliminary findings are part of a long judicial process that could lead to duties that are additive to the tariffs on imported steel imposed by the Trump administration.

U.S. pipeline developers have already complained that the 25 percent steel tariffs imposed under the Trade Expansion Act are driving up project costs and threaten to delay some future developments. For now, the additional preliminary dumping margins have been set at 24.38 percent for Canada, 132.63 percent for China, 22.51 percent for Greece, and 50.55 percent for India. Preliminary rates for South Korean producers were set in the range of 14.97 percent to 22.21 percent.

While the judicial process continues, cash deposits will be collected from importers of the products based on the preliminary rates. The pipe affected is larger than 16 inches in diameter and may be used to transport oil, gas, slurry, steam, or other fluids or gases.

Pipeline safety office will take on more work for LNG project reviews

(S&P Global Platts; Aug. 23) - The U.S. Pipeline and Hazardous Materials Safety Administration is taking an expanded role in reviewing LNG export projects, the agency told developers this month. Letters from PHMSA to developers shed light on one step the administration is taking to ease staffing constraints that may hamper reviews of liquefied natural gas export projects at the Federal Energy Regulatory Commission.

Fifteen projects, primarily on the Gulf Coast, are currently working their way through the FERC environmental review process. Industry officials, lawmakers and even some FERC commissioners have cited difficulties attracting enough expert staff at FERC to tackle the volume and scale of projects, even as developers competing in the global

market seek greater certainty about the timing. With a spotlight on that pace, FERC and PHMSA earlier this summer promised to better coordinate their work to shave off time.

Kenneth Lee, director of engineering and research at PHMSA, sent letters to developers Aug. 14 about the agency's new process. "Effective immediately, [PHMSA] will be responsible for evaluating a project's compliance with siting requirements," he wrote. The review will include thermal radiation protection, flammable vapor dispersion protection, ability to withstand wind forces, and siting requirements for the production, storage, and handling of LNG. PHMSA has previously provided feedback or evaluation of FERC's review of projects but will now take a more front-line role in those reviews.

Nova Scotia LNG developer merges with Alberta gas producer

(The Financial Post; Canada; Aug. 24) - The proponent of an LNG export terminal in Nova Scotia has struck a deal to merge with an Alberta natural gas producer. In a joint news release, Pieridae Energy CEO Alfred Sorensen said the merger with Ikkuma Resources is a key step getting to a final investment decision on Pieridae's proposed C\$10 billion Goldboro LNG project.

Pieridae has said that owning gas reserves is important to help meet the feedstock needs at Goldboro LNG, which plans to produce about 10 million tonnes of liquefied natural gas per year to ship mainly to European customers. Sorenson has said the project, which hopes to utilize loan guarantees from the German government, could be approved for construction in the next few months, pending permit approvals, contract agreements and new pipeline capacity to deliver gas to Nova Scotia.

Cameroon LNG operating at 100 percent after May start-up

(Reuters; Aug. 23) - Golar LNG said Aug. 23 its pioneering floating liquefied natural gas project in Cameroon had achieved 100 percent of commercial uptime, following commissioning earlier this year, and was due to offload its sixth cargo soon. The Hilli Episeyo FLNG is the first of its kind — an LNG-producing vessel converted from an aging tanker at a cost of \$1.2 billion. The start of commercial operations, after producing its first cargo in May, made Cameroon the 20th nation to export LNG.

The entire output of the project — 1.2 million tonnes a year — is under contract to Russia's Gazprom Marketing and Trading. Cameroon's first LNG cargo reportedly went to PetroChina. Golar provides the floating facility and services under a tolling agreement with Cameroon's state-run oil and gas company and Perenco, an independent oil and gas company based in London and Paris.

U.S. developer will build LNG import terminal near La Paz, Mexico

(Mexico Now; Aug. 20) - U.S. energy infrastructure developer New Fortress Energy announced it was awarded a contract for development, construction and operation of a small-volume liquefied natural gas import terminal at the port of Pichilingue in La Paz, Baja California Sur, Mexico. The Port Authority of Baja California Sur awarded the contract last month, the company said. The New York City and Miami-based company estimated the project investment at \$184 million, with possible start-up in 2020.

Fortress Energy developed, financed and currently operates a similarly sized LNG import terminal in Jamaica, serving a power plant and tanker truck-loading station. The new terminal will introduce a gas supply to Baja California Sur for the first time, New Fortress said. A much larger LNG import terminal, developed and operated by Sempra Energy, started operations in Mexico's Baja California in 2008, about 700 miles north of the New Fortress project site in the port of Pichilingue.

Lower Btu value of U.S. LNG will not dissuade Japan, sources say

(Interfax Global Energy; Aug. 21) - Japanese utilities will continue to increase their imports of liquefied natural gas from the United States despite worries that the low calorific content of the gas makes it relatively expensive compared with LNG from other sources. Concerns have been raised about the hidden costs associated with increasing the calorific value of U.S. LNG derived from shale gas, as well as volumes sourced from Eastern Australia derived from coal-bed methane.

However, sources at two of Japan's biggest utilities said the cost of correcting the low calorific factor was not significant. Power-plant turbines, industrial furnaces and household appliances in many Asian nations — especially in key markets such as Japan, South Korea and Taiwan — are set up to burn so-called "wet gas," which has a higher content of gas liquids that raise the heat, or Btu, content.

The average heat content of U.S. pipeline gas is about 1.02 million Btu per thousand cubic feet of gas. The average for gas burned by utilities in Japan and South is between 1.06 million to 1.13 million Btu. Buyers can add propane or other gas liquids to their LNG to raise the heating value to meet their needs.

LNG gains in popularity with maritime industry

(Wall Street Journal; Aug. 23) - The global shipping industry could become a new market for liquefied natural gas, due to a big change in maritime law that aims to curb air pollution. Major cruise lines and the world's biggest seagoing freight companies have ordered 125 LNG-powered vessels to go with 119 already in operation, according

to maritime consultancy DNV GL. New regulations coming in 2020 will cut the maximum amount of sulfur permitted in the oil used by ships from 3.5 percent to 0.5 percent.

While LNG use as a shipping fuel is still too small to affect prices, the projected uptake is supporting the outlook that LNG demand will continue to grow. The shipping industry currently takes about 5 million barrels a day of oil, and most of the maritime industry is expected to meet the new obligations by either switching to more expensive low-sulfur fuels or installing "scrubbers" that clean sulfur out of exhaust fumes. But the rule changes will make LNG a cost-competitive option.

Analysts say converting just 5 percent of the global fleet to run on LNG would create the world's fifth-largest LNG market. When Carnival's 1,106-foot AIDAnova launches later this year at its German shipyard, it will be the first cruise ship fully powered by LNG. Carnival, the world's largest cruise company, plans to take delivery of 11 LNG-powered vessels by 2025. Swiss-based MSC Cruises has ordered five, and Royal Caribbean has two on order. Siem Industries is building LNG-fueled car carriers for Volkswagen, while France's CMA has ordered nine new ultra-large LNG-powered container ships.

Florida railroad moves LNG to port

(Miami New Times; Aug. 22) - Most of Florida East Coast Railway's train tracks in Miami-Dade County pass through highly populated areas. According to public records that the watchdog news site Florida Bulldog dug up, the railroad has been transporting liquefied natural gas tank cars through Miami-Dade to PortMiami and Hialeah. The railroad's parent company, Fortress Investment Group, owns a subsidiary, New Fortress Energy, which operates a gas liquefaction plant in Hialeah. Among the customers to receive the LNG from Fortress is Jamaica, which burns the fuel for power generation.

According to Federal Railroad Administration records, the LNG tank cars are making 15-mile trips from Hialeah to PortMiami through areas with 9,500 people per square mile. The trip from Hialeah to Port Everglades in Broward County takes 28 miles. The federal government approved the railroad's LNG shipping plans in March 2017, documents show. This is reportedly the first time LNG has moved by rail in the United States. Environmentalists have long been skeptical of attempts to ship the fuel by rail.

LNG project in B.C. would help fund salmon habitat restoration

(CBC News; Canada; Aug. 23) - A financial deal between the Huu-ay-aht First Nations and a liquefied natural gas export project developer is allowing a decades-old salmon renewal plan to go ahead, according to Huu-ay-aht Chief Councillor Robert J. Dennis Sr. The Sarita and Pachena Watershed Renewal project aims to restore depleted

salmon spawning areas and juvenile salmon habitats in key waterways on Huu-ay-aht Nations' territory on the west coast of Vancouver Island.

The project is projected to cost \$150 million over the next 25 years and most of this funding will be provided by Steelhead LNG, a Vancouver-based energy company that plans to develop an LNG export facility on Huu-ay-aht lands, Dennis said. Bringing back the chinook salmon population to the watershed has been a priority for the Huu-ay-aht First Nations since the 1990s when elders called on the nations to take urgent action.

Decades of commercial fishing and logging stripped the watershed of chinook and the conditions salmon need to spawn, Dennis said. The Steelhead LNG funding agreement guarantees financial support for the watershed renewal, ensuring stability, he said. The LNG project, however, is still in its early stages. The proposed LNG terminal would need an undersea pipeline to deliver gas from the mainland. In addition, Fisheries and Oceans Canada has not conducted an environmental assessment of the project.

Canada's Supreme Court dismisses appeal against oil line

(The Canadian Press; Aug. 23) - The leader of an Indigenous group that hopes to own a stake in the Alberta-to-British Columbia Trans Mountain oil line is encouraged by the Supreme Court of Canada's dismissal of an appeal by the anti-project British Columbia city of Burnaby. Although many B.C. First Nations oppose the pipeline — and several are parties to a court challenge of Ottawa's project approval in 2016 — 43 First Nations have signed benefit agreements, said Cheam First Nation Chief Ernie Crey. "There is growing interest on the part of Indigenous people to take out a stake in the pipeline."

Canada's top court announced Aug. 23 it had dismissed the application from Burnaby, which had asked the court last spring to overturn a lower court decision that denied the city leave to appeal a ruling by the National Energy Board. That clears a significant hurdle for the project, which still faces a legal challenge from some First Nations groups. The Supreme Court's rejection of the Burnaby appeal was welcomed by the Alberta and federal governments but mourned by Burnaby and environmental groups.

The NEB ruling had allowed Kinder Morgan to bypass local laws on plan approvals and tree-cutting permits during construction in Burnaby for the pipeline expansion, which is to triple the amount of diluted bitumen and other oil products moving between the Edmonton area and the port. When the federal government agreed in May to buy the pipeline for C\$4.5 billion from Kinder Morgan Canada, it signaled that it didn't intend to own it for the long term and would sell it as soon as possible — but that a government takeover was needed to ensure the project could proceed over provincial objections.

Investors see opportunity in disposal of shale-drilling wastewater

(Wall Street Journal; Aug. 22) - Some investors see fortunes to be made in the hottest U.S. oil field — by speculating in water, not crude. Fledgling companies, many backed by private equity, are rushing to help drillers deal with the problem of what to do with the vast volumes of wastewater that is a byproduct of fracking wells. When producers blast water, sand, and chemicals to release oil and gas from shale rock, they not only unlock oil and gas but also massive quantities of briny water buried deep beneath the surface.

Drillers in the Permian in New Mexico and Texas currently generate more than 1,000 Olympic-size swimming pools full of this murky, salty water daily. Handling it amounts to up to 25 percent of a well's lease operating expense, analysts said. Sensing a chance for a big return, private-equity firms have invested over \$500 million in wastewater-disposal companies. The companies are building pipelines to transport the wastewater and dispose of it deep underground, hoping to displace the trucks that now do the job. Some have a longer-term plan of recycling the water to sell it back to drillers for reuse.

Finding a long-term solution is essential for Permian producers. Energy consultancy Wood Mackenzie has found that in some parts of the basin, wells produce 10 times as much water as they do hydrocarbons. For years drillers have relied on trucks to move the water, but moving about 125 barrels at a time is no longer feasible when a single well produces thousands of barrels a day. Rising water-management costs could add as much as \$6 to the cost of producing a barrel of oil, according to Wood Mackenzie.

Alberta offers incentives to attract petrochemical investment

(Reuters; Aug. 22) - Canada's gas-rich province of Alberta is looking to recreate the building boom spreading along the U.S. Gulf Coast, where inexpensive natural gas has generated billions of dollars in investment by petrochemical companies. That abundance of gas has generated \$194 billion since 2010 in announced capital investment to build or expand U.S. chemical plants that use gas to make plastics, fertilizer and fuel, according to the American Chemistry Council.

Alberta hopes to do the same thing, turning its gas prices — which are about one-third those at the U.S. Gulf Coast — into a competitive advantage to attract petrochemical companies. Such investment would provide a badly needed market for oil and gas from the landlocked province, where energy companies struggle to reach buyers farther away. Alberta in 2016 launched incentives to diversify its oil-based economy, offering royalty credits to developers. Alberta solicited bids for a second subsidy round in June.

Though cheaper gas is attractive, skeptics said Alberta's incentives fall short of those in the U.S. Gulf. The province also has the disadvantages of higher costs and inadequate infrastructure. Canada is the world's fifth-largest gas producer, but much of the gas it

used to sell into the northeastern U.S. has been displaced by expanding U.S. supplies. A competitive incentive program of up to a decade is needed to offset Alberta's higher capital costs, said Lori Kent, executive director of the Resource Diversification Council.

Iran can avoid sanctions by using own tankers to deliver oil to China

(Bloomberg; Aug. 24) - Iran's own fleet of tankers may provide a lifeline for its crude and condensate exports that will be slashed as U.S. sanctions against the Persian Gulf nation take hold. As Iran's customers give in to mounting U.S. pressure, shipments from the OPEC member may drop to under 1 million barrels a day by mid-2019, down from a daily 2.5 million this year, according to industry consultant FGE.

Still the Middle East nation's cargoes to China in the past few weeks show how changing vessel ownership and contract terms may help it sustain flows to buyers. Iran's oil sales have been falling since President Donald Trump in May pulled out of a 2015 deal that eased sanctions in exchange for curbs on the Islamic Republic's nuclear program. Its top buyers in Asia including South Korea and Japan may halt all imports, while India may cut purchases by half.

That leaves refiners in the south of China, which has rejected the U.S. request to halt purchases, as Iran's main buyers, FGE said. "Iran could easily transport the entirety of its exports using its own fleet," assuming exports are at a million barrels and China is its main destination after the sanctions take effect Nov. 4, FGE said in a note Aug. 23. The vital role played by Iran's fleet of crude carriers in deliveries is increasing as insurers and international shipping companies react to the impending renewal of sanctions.