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Reuters reports Sinopec to take 2 million tonnes a year from Cheniere

(Reuters; March 6) - China Petroleum and Chemical Corp. (Sinopec) plans to sign a 20year liquefied natural gas supply agreement with Cheniere Energy once China and the United States end their trade dispute, two sources with knowledge of the matter said March 6. Cheniere and Sinopec reached a consensus in late 2018 on commercial terms after months of negotiations, but the signing of the deal was held back by the ongoing trade friction between the world's top two economies, one of the sources told Reuters.

"Without the trade spat, the deal should have been signed some time ago," the source said. Sinopec intends to buy close to 2 million tonnes of LNG a year from Cheniere starting 2023, the sources added. Cheniere may start some deliveries before 2023, said one source. Based on the delivered cost of U.S. LNG into China in January at \$8.30 per million Btu, as reported by Chinese customs, the 20-year deal would amount to roughly \$16 billion. Cheniere operates LNG export terminals in Louisiana and Texas. The Wall Street Journal reported March 3 that as part of a trade deal with the United States, China would buy \$18 billion worth of gas from Cheniere.

Sinopec, a latecomer to China's LNG scene compared to rivals China National Offshore Oil Corp. (CNOOC) and PetroChina, has said it wants to more than double its receiving capacity over the next six years to 41 million tonnes annually. In February 2018, before the trade war started, PetroChina's parent company signed a 20-year deal with Cheniere to buy 1.2 million tonnes of LNG a year through 2043.

Cheniere expected to add capacity at Sabine Pass to supply China

(Wall Street Journal; March 4) - Cheniere Energy's expected \$18 billion deal to supply natural gas to China signals the company's growing bet on the country and China's emergence as a top market for U.S. gas exporters. In a move that would be announced as part of a broader U.S.-China trade deal, China's state-owned China Petroleum & Chemical, known as Sinopec, will agree to a long-term contract to buy about \$18 billion of liquefied natural gas from Cheniere, The Wall Street Journal reported March 3.

The deal would be the third long-term supply agreement Cheniere has signed in the country. Cheniere signed the first-ever long-term supply contracts to China in February of last year, agreeing to send 1.2 million tonnes of LNG a year to China National Petroleum Corp. through 2043. But Cheniere's bet on China hasn't been without risk.

China hit U.S. LNG with 10 percent tariffs as part of a trade fight, and it has been buying the product mainly from U.S. competitors — Qatar, Australia, and Malaysia.

Cheniere's contract with CNPC is still in place, but the state-owned company has had to swap much of the U.S. gas for supplies from other countries to be shipped to China to avoid China's tariff on U.S. LNG. The tariffs also have held up Cheniere's negotiations with other potential buyers in China. The company's deal with Sinopec would have been done months ago if not for the trade spat, said people familiar with the negotiations.

As part of the expected deal with Sinopec, Cheniere could take financing from Chinese state banks, sources said, a sign the company is willing to deepen ties there. The deal with Sinopec is expected to help greenlight Cheniere's sixth liquefaction train at its plant in Sabine Pass, Louisiana. Trains typically cost about \$3 billion to construct, according to analysts, and Cheniere could use Chinese financing to fund some of that project.

Anadarko sticks with plan for Mozambique LNG decision by June

(Bloomberg; March 6) - Anadarko Petroleum said it's sticking to its plan to decide on a \$20-billion-plus liquefied natural gas development in Mozambique by the end of June, after the government boosted security following attacks last month near the project site. The Feb. 21 raid, in which an Anadarko contractor was beheaded, was one of multiple attacks in the area that day, sources said. Further incidents may threaten the company's plans to build an onshore LNG plant in Mozambique's Cabo Delgado province, where the government has been battling suspected Islamic insurgents since 2017.

"The government is providing additional security resources in the area," Anadarko said in a statement on its website March 5. "Given this response and other ongoing security measures, we expect to continue moving the project toward FID according to our current schedule." Anadarko has previously said it will make a final investment decision on the project in the first half of this year.

The company said that in addition to the fatality, six people were wounded in the attack. "The evidence to date indicates both the convoy and a car belonging to a contractor encountered an existing event, which did not directly target our contract personnel, nor the LNG project," it said. An Anadarko-led partnership has been signing up customers, lining up financing and working toward developing an LNG export terminal to monetize large gas reserves discovered offshore the East Africa nation.

Novatek targets Japan for investment in Arctic LNG-2

(Nikkei Asian Review; March 4) - Russia's push for Japanese participation in an Arctic gas project comes as the world's largest natural gas exporter, faced with the rise of the U.S. as a rival in Europe, looks to Asia to diversify its customers. Russia's Yamal LNG started up in 2017 and its operator, Novatek, has asked Mitsubishi and Mitsui to participate in a second LNG venture. Japan's government sees it as an opportunity toward progress on a long-running territorial dispute with Moscow over a set of islands.

Russia is a relative latecomer to the liquefied natural gas business, as most of its gas exports travel to Europe by pipeline. Before the Yamal project, its only LNG plant was Sakhalin-2 in the Far East, which started up in 2009 and includes Mitsubishi and Mitsui as partners. Tokyo is pressing Mitsubishi and Mitsui to make a decision on Novatek's Arctic LNG-2, but doing so may prove difficult. While the trading houses understand the project's significance as a new supply source, U.S. LNG is also starting to arrive in Asia.

Mitsui and Mitsubishi must decide whether Arctic LNG-2 can be competitive. They also have to consider expanding Sakhalin-2 as a potentially quicker alternative. Complicating matters is Russia's relationship with Saudi Arabia, which is looking to build a "global gas" business, Energy Minister Khalid al-Falih told The Financial Times. Arctic LNG-2 is a potential candidate for that effort, and al-Falih has indicated that the Saudis are interested in buying a 30 percent interest from Novatek. "If Russia and Saudi Arabia take the lead on the project, Japan will be overshadowed," a Japanese source warned.

Total signs binding contract to take 10% stake in Arctic LNG-2

(S&P Global Platts; March 5) - Russia's top LNG producer Novatek signed a binding agreement to sell a 10 percent stake in its Arctic LNG-2 project to French giant Total, the companies said March 5. The companies also agreed that Total will have the opportunity to acquire a 10 to 15 percent direct interest in all of Novatek's future LNG projects on the Yamal and Gydan peninsulas in the Russian Arctic. Total already holds a 19.4 percent stake in Novatek and holds a 20 percent stake in the Novatek-led \$27 billion Yamal LNG project, which started exports in December 2017.

"Arctic LNG-2 fits into our strategy of growing our LNG portfolio through competitive developments based on giant, low-cost resources primarily destined for the fast-growing Asian markets," said Total's CEO Patrick Pouyanne. Arctic LNG-2 is planned for 19.8 million tonnes per year capacity, about 10 percent larger than Yamal. Feed gas will be from the Utrenneye field, which has about 70 trillion cubic feet of gas under the Russian classification system, according to Novatek.

Arctic LNG-2's financial structure is expected to be split 70 percent equity, 30 percent debt. The Russian government is set to provide \$2 billion in funding. About 40 percent

of the ownership will be farmed out, with Novatek to hold 60 percent. Saudi Aramco and China National Petroleum Corp. have expressed interests. No long-term offtake contracts have been signed, and Novatek expects a significant amount of the LNG will be sold on a short-term basis. A final investment decision is planned for later this year.

Japan's nuclear restarts cut into demand for LNG

(Houston Chronicle; March 4) – Liquefied natural gas imports into Japan are expected to drop 10 percent this year, as the country rebuilds its nuclear sector following the 2011 meltdown at the Fukushima power plant, according to a new report from the U.S. Department of Energy. Last year Japan restarted five nuclear plants, with six more receiving initial authority to resume operations after the country shut down all its reactors in the aftermath of the Fukushima disaster.

"As those reactors return to full operation, the resulting increase in nuclear generation is likely to displace generation from fossil sources, in particular natural gas," the Energy Information Administration report said. "Electricity generation produced by gas-fired plants in Japan has been declining from its peak in 2014." In recent years, Japan has been importing 11 billion cubic feet of gas per day as LNG, primarily from Australia, Malaysia, and Qatar.

In 2019, the first full year of operation, EIA estimates that restarted nuclear reactors will further displace Japan's LNG imports by about 5 million tonnes per year. That's equivalent to 10 percent of Japan's power-sector gas consumption. Japan's long-term energy policy calls for the nuclear share of electricity generation to reach 20 to 22 percent by 2030, which would require up to 30 reactors to be in operation. Out of the remaining fleet of 35 operable reactors, nine are currently operating, six have received initial approval, 12 are under review, and eight have yet to file a restart application.

Asian buyers 'remain reluctant to sign long-term contracts'

(S&P Global Platts; March 4) - A prolonged period of low LNG prices is keeping Asian buyers from committing to offtake agreements to meet future gas demand, which means that many new investment-starved gas projects may not see the light of day. Buyers are procrastinating because an oversupplied market has alleviated concerns of shortages, and the ongoing trade war has dulled investor appetite among buyers in China.

Traditional projects need committed buyers for their gas before they can proceed to a final investment decision. As buyers remain on the fence, LNG projects are starting to fall behind schedule and some risk being cancelled. The exceptions are some big-ticket

projects backed by deep pockets, such as expansion of Qatar's capacity by the middle of next decade and the ExxonMobil/Qatar-backed Golden Pass LNG project in Texas.

"We expect several FIDs to be taken in 2019 ... this is a race with clear frontrunners," S&P Global Platts Analytics said in its 2019 outlook. "LNG buyers remain reluctant to sign long-term contracts, and hence project developers that are able to finance a project without firm offtake agreements seem to be in the driving seat." Projects with strong business models are more likely to push forward, like LNG Canada, a Shell-led project in British Columbia, where equity owners include Asian national oil companies.

Depressed prices are a major reason for the lack of urgency among buyers. The Platts LNG Japan-Korea Marker for April was assessed at \$6.025 per million Btu on March 1, the lowest in 18 months. "It's really hard to sell your umbrella when it's sunny outside," Texas LNG's chief executive Vivek Chandra said at the LNGgc conference in Singapore last week. Texas LNG is awaiting FID for its 4-million-tonne-per-year export terminal.

China may merge nation's gas pipelines into new company

(Bloomberg; March 4) - Chinese President Xi Jinping has a plan to help meet the country's growing energy needs and clear its dirty air: Spin off the tens of thousands of miles of pipelines held by three state-owned oil and gas giants and merge the networks into a new company. The resulting "China Pipelines Corp." would aim to attract private investors to help expand the \$74 billion, 40,000-mile network and ease supply crunches in some parts of the country.

Such an overhaul, announced at the National People's Congress on March 5, would radically reshape China's energy sector, although it leaves central planning power in a single, albeit different, pair of hands. Almost all developed markets separate oil and gas production from transport to promote a level playing field and encourage new entrants into the market. An independent company also would be more likely, in theory, to decide on new routes based on national need rather than what serves an individual producer.

China has moved millions of homes and businesses from coal to cleaner-burning gas as part of Xi's pledge to protect the environment. But the transition has been hampered by a lack of infrastructure. Gas supplies still run short, especially in winter when demand peaks. China National Petroleum Corp., which operates about three-fourths of the gas pipeline network, has capped supplies, so some cities have turned to trucking in LNG. Sometimes factories are forced to close to keep people from shivering at home.

China unlikely to meet winter air quality targets

(Reuters; March 4) - Air pollution in 39 smog-prone northern Chinese cities soared in February, making it increasingly unlikely they will meet their annual winter air quality targets, Reuters analysis of official data showed. China is heading into the sixth year of its "war on pollution" at it tries to reverse damage from more than three decades of untrammeled economic growth and allay public disquiet about the state of the country's air, soil, and water. Part of that war is switching from coal to cleaner-burning natural gas.

In his annual government work report delivered to parliament on March 5, Premier Li Keqiang vowed that China would continue to "strengthen pollution prevention and control" this year. However, the country has struggled to meet its targets in recent months, especially in the 39 cities in the key northern pollution control zones of Beijing-Tianjin-Hebei and the Fenwei Plain. Average concentrations of hazardous airborne particles known as PM2.5 rose 40 percent in February to hit 108 micrograms per cubic meter in the region, analysis of official data showed.

China's official PM2.5 standard is 35 micrograms. The World Health Organization recommends an annual average of no more than 10 micrograms. China's Ministry of Ecology and Environment blamed "unfavorable" weather for the decline in air quality in February. The Environment Ministry, however, has been at pains to stress that China will not relent in efforts to curb pollution even as the economy slows, and warned local governments not to blame economic problems on environmental controls.

FERC may have found compromise for LNG project reviews

(Pipeline Law; March 4) - The Federal Energy Regulatory Commission last week made some headway in how it evaluates greenhouse-gas emissions from natural gas projects. In recent pipeline certification proceedings, the two Democrats on the commission have been critical of how FERC addresses a project's potential GHG emissions and climate-change impacts. With only four active commissioners, this dispute has made it difficult to obtain the majority needed for FERC approval.

In last week's order, however, the two Republicans were joined by Commissioner Cheryl LaFleur, a vocal critic of the commission's past approach, in authorizing a new liquefied natural gas export terminal and gas pipeline in Louisiana. The commissioners were able to persuade LaFleur to issue a concurring opinion by expanding FERC's environmental analysis of GHG emissions. This suggests that FERC's commissioners may have found some common ground that could serve as a model for future projects.

According to FERC's analysis, the project would emit nearly 4 million tons of GHGs a year, potentially increasing U.S. carbon dioxide emissions by 0.07 percent. The analysis acknowledged that construction and operation of the project would contribute

incrementally to climate change but concluded that FERC could not determine whether it would be significant. While LaFleur said she appreciated disclosure of the emissions volumes and the comparison to national levels, she criticized the commission for not making a significance determination and expressed hope that FERC may do so in the future.

Louisiana LNG project receives export authorization

(S&P Global Platts; March 5) - Venture Global LNG's proposed Calcasieu Pass export terminal received Department of Energy approval March 5 to ship cargoes to countries with which the U.S. does not have free-trade agreements. The milestone marks the final federal authorization the Louisiana project needs to move forward. While the developer has a contractor, long-term offtake agreements covering the bulk of its 10 million tonnes of capacity and plenty of momentum, it has not yet publicly announced a positive final investment decision, which generally comes before full construction begins.

Financing to pay the billions of dollars in costs also has not been disclosed. The company has been the most active among several developers of second-wave U.S. projects in securing commercial agreements for the LNG it plans to produce, and it has said previously that it wanted to be able to make an FID and begin construction as soon as possible so it can be running by the early 2020s to help meet the forecast global demand during that timeframe. The project has been reported to cost around \$5 billion.

When the Federal Energy Regulatory Commission last month approved Venture Global's certificate for Calcasieu Pass LNG in Cameron Parish, the developer said it planned to "immediately commence construction activities" in coordination with regulatory agencies. The company's statement following the March 5 authorization to export up to 1.7 billion cubic feet of gas per day to non-free trade countries said only that it was looking to "commence site work imminently." Venture Global has 20-year contracts with companies including Shell and BP for 80 percent of the project's capacity.

Mexico likely to continue dependence on U.S. natural gas

(OilPrice.com; March 5) - Mexico will continue to need U.S. natural gas over the next decade, despite efforts by the new Mexican government to reduce dependence on U.S. gas imports, data and analytics company GlobalData said March 5. Currently, U.S. pipeline gas, mainly from Texas, looks like a much more convenient option for Mexico than grappling with possible shortfalls of gas supply, according to GlobalData.

"Without a comprehensive strategy that considers development of large gas resources, both onshore and offshore, it will be difficult to reduce the volume of imports demanded

for power generation and industrial use," the firm said. The government's approach to resource development would make it difficult for the country to reduce its dependence, because state-owned Pemex has the dominant position over much of Mexico's gas reserves but lacks the capital to work by itself on capital-intensive gas projects.

Mexico is looking for ways to reduce its overwhelming dependence on U.S. natural gas imports, which currently cover more than 50 percent of the country's demand. "In the short and mid-term, Mexico's natural gas production decline could be alleviated by developing key upstream projects, but this is unlikely given the current strategy led by the Mexican government," GlobalData said. At the same time, U.S. gas exports to Mexico have been growing, thanks to expansion of cross-border pipeline capacity and easy availability of liquefied natural gas exports supplies from Gulf Coast terminals.

Australian official warns high gas prices threaten manufacturers

(Reuters; March 5) - Australia's gas prices are so high they could force the shutdown of some manufacturing on the East Coast, the nation's competition watchdog said March 5, urging producers to step up output and offer reasonable prices. The warning comes three years after the Australian Competition and Consumer Commission warned prices were rising amid uncertainty over domestic gas supply due to the start-up of liquefied natural gas exports from Queensland, cuts in exploration spending, and drilling bans.

"Many Australian manufacturers are under extreme pressure to remain internationally competitive," Australian Competition and Consumer Commission Chairman Rod Sims told a gas conference in Sydney. "The high cost of gas, and the high cost of electricity, is making it extremely hard for these businesses and poses an imminent threat." Gas prices offered to manufacturers are two to three times higher than they were before LNG exports began pulling gas out of the domestic market.

Businesses and manufacturers dependent on gas have told the watchdog they are increasingly likely to move from the East Coast or shut operations, Sims said. The Australian government succeeded two years ago in pressuring the three East Coast LNG exporters to boost local gas supply. But Sims said producers now need to "provide immediate price relief" to manufacturers. States also need to do more to encourage new gas development by lifting bans on new drilling. Meanwhile, high prices and prospects of a supply gap have attracted five proposals to import LNG into southeastern Australia.

Australia may be overreacting to need for LNG imports

(Reuters; March 3) - Australia is on the verge of becoming the biggest exporter of liquefied natural gas, with dozens of tankers a week carrying fuel to North Asia. It could

also soon be importing LNG as domestic supply sources in its southern states run out. Five LNG import projects are vying to start up between 2021 and 2022, possibly forcing gas users in New South Wales, South Australia, Tasmania, and Victoria into more direct competition with Asian buyers for gas from Queensland state in northeastern Australia.

Those states represent a yearly market equivalent to 7.8 million tonnes of LNG, worth about \$3 billion — about one mid-size LNG project. Piping gas from Queensland in northeastern Australia to southern markets is expensive, making LNG imports potentially viable. But if final investment decisions on the import terminals are delayed into 2020, the case for LNG imports will weaken as pipeline tariff reforms are likely to lessen the expense of moving domestic gas, Credit Suisse analyst Saul Kavonic said.

"Based on the five proposals to date, Australia appears to be planning to overbuild LNG import capacity in response to an overbuild of export capacity," Kavonic said. Others agree. "We definitely would see a rationale for one terminal to give another source of gas into the East Coast market," said Nicholas Browne, Asia gas and LNG director at consultancy Wood Mackenzie. "We think one terminal would be sufficient until the mid to late 2020s." In addition, import developers need to be wary of government moves to divert gas from export to the domestic market and of new fields supplying local demand.

Exxon, Chevron both plan for 1 million barrels a day in the Permian

(Midland Reporter-Telegram; Texas; March 5) - The nation's two largest oil companies said March 5 they plan to significantly hike their activity in the Permian Basin, spending even more money while others cut back in the West Texas and New Mexico area. Both ExxonMobil and Chevron said they will each pump close to 1 million barrels of oil equivalent a day from the Permian by 2024. That's nearly triple Chevron's current output and about quadruple for Exxon. Both already rank near the top of Permian producers.

The two giants are advantaged because of their scale with large acreage positions, greater access to pipelines and guaranteed crude sales to their own refineries along the Texas Gulf Coast. Lower oil prices since last fall have caused many independent oil and gas companies to cut back on their spending, although most Permian players still forecast production hikes. Overall, the Permian pumps about 4 million barrels of oil a day, one-third of the nation's record output.

Exxon said its Permian output can still prove profitable with oil prices at \$35 a barrel. Most companies struggle to turn a profit with oil below \$50. Exxon has 48 rigs working in the Permian — about 10 percent of the region's total, according to General Electric's Baker Hughes — and expects to increase the number of drilling rigs to 55 by year-end. It also has 30 sites under construction to handle oil and gas processing and water handling, and between 4,000 and 5,000 workers on its acreage on any given day, said Staale Gjervik, the newly named president of Exxon's shale arm XTO Energy.

Japanese firm buys stake in Eagle Ford play in Texas

(Hydrocarbons Technology; March 4) - Japanese firm Inpex has entered a deal for its debut in the U.S. tight-oil development and production business. Inpex Americas has signed an agreement to purchase multiple development and production assets in the Eagle Ford play in Texas from GulfTex Energy. Most of the assets are in Karnes County, a highly productive area within the Eagle Ford shale play. The deal gives Inpex about 13,000 acres with a net production of 7,600 barrels of oil equivalent per day.

Inpex will assume operation of some of the assets. Through the acquisition, Inpex intends to gain knowledge and insights on tight oil production in the U.S. The company said the transaction is in line with its pursuit of "sustainable growth of oil and natural gas exploration and production activities." Inpex holds interests in 70 projects across more than 20 countries. The firm operates the Ichthys liquefied natural gas project offshore Western Australia, the first Japanese-led LNG development in the world.

Pipeline delay will likely put more Canadian oil in rail cars

(Calgary Herald; March 4) - Alberta's government may not have been keen to extend its forced oil production cuts beyond the end of this year, but analysts say the unexpected delay of Enbridge's Line 3 pipeline expansion may force its hand. The year-long delay for the Alberta-to-Wisconsin line is expected to prolong pressure on the province's oil patch by delaying new projects, deterring investors and causing oil-by-rail shipments to skyrocket above 500,000 barrels per day next year, obliterating previous rail records.

Enbridge said last weekend that the \$7.6 billion, 370,000-barrel-per-day Line 3 pipeline project would not be moving Western Canadian oil to the U.S. Midwest until mid- to late-2020, about a year later than expected. In the face of the delay, the province will have more trains moving oil out of the province, thanks in part to a \$3.7 billion commitment by the government to move 120,000 barrels per day out of Alberta by the middle of 2020.

To prevent "a replay of last year's blowout sale on Canadian crude" — when it sold at a steep discount to U.S. oil — the Alberta government will likely need to extend its curtailment order through 2020 or companies will need to exert more "production discipline," Scotiabank economist Rory Johnston said. "We expect that at full, uncurtailed production capacity, the call on oil-by-rail services in Western Canada will surpass 500,000 to 600,000 barrels per day by mid-2020 before Line 3 can enter service." Canada's oil-by-rail hit a record high 330,402 barrels a day in December.