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Qatar/Exxon almost ready for decision on LNG project in Texas

(Interfax Global Energy; Oct. 8) - Qatar Petroleum, together with its partner ExxonMobil, is ready to take a final investment decision on the Golden Pass LNG export terminal in Texas in the next few months, Saad al-Kaabi, QP's president and chief executive, told journalists on the sidelines of the Oil & Money conference in London on Oct. 9. The project is expected to be operational by 2025 and will give Qatar Petroleum new access to Europe, Latin America, and other markets, al-Kaabi said.

QP is the majority shareholder in the project. ExxonMobil is the only other partner in the export venture, Golden Pass Products, which would add liquefaction and export to the Golden Pass LNG import terminal that opened in 2010. ConocoPhillips is a partner in the import terminal but not the export project. Golden Pass Products plans to eventually build up to three liquefaction trains, each at 5.2 million tonnes per year capacity.

Al-Kaabi said he did not expect any impact on Golden Pass as the result of the current U.S.-China trade war, stating that the project's 25-year-plus lifespan makes it sustainable in the long term. China has slapped a 10 percent tariff on U.S. LNG imports as part of the ongoing trade war between Washington and Beijing. If approved for construction, Golden Pass Products would be the fifth LNG export terminal on the U.S. Gulf Coast, with smaller projects in Maryland and Georgia.

Qatar will take FID next year on LNG expansion project

(S&P Global Platts; Oct. 9) - The head of Qatar Petroleum, Saad al-Kaabi, on Oct. 9 warned there would be a significant shortage of liquefied natural gas on global markets sooner than expected as he reaffirmed the company's plans to reach a final investment decision on its domestic LNG expansion project by end-2019. Speaking at the Oil & Money conference in London, al-Kaabi also said Qatar Petroleum would be able to reach a final investment decision on the project without binding LNG sales agreements.

Qatar Petroleum revealed in 2017 plans to raise the country's LNG production capacity from 77 million tonnes per year to 100 million with construction of three new megatrains. Last month it committed to a fourth train, bringing its planned capacity to 110 million tonnes. First LNG production from the new trains is due online by the end of 2023. Industry officials expect the LNG market to tighten significantly in the period after 2021 due to a lack of FIDs for new production projects globally over the past few years.

Al-Kaabi said tenders for the expansion's front-end engineering and design contract have already been released and the process would end in March, followed by the release of an engineering, procurement, and construction tender. A decision on the structure of the project's financing has not yet been decided, but Qatar Petroleum may choose to finance the expansion entirely through its own balance sheet. "We will finance it all from our own financing if we need to, we do not need outside investment," he said.

Big oil sees big future in natural gas

(Wall Street Journal; Oct. 9) - Big oil companies are betting on natural gas as the fuel of the future — and working hard to ensure new projects deliver profits for the future. Shell last week announced a liquefied natural gas project in Canada, while ExxonMobil and its partners are expected to approve a large LNG project in Mozambique in 2019. That is a similar timeline to Russia's \$20 billion Arctic LNG-2 project, which is partowned by France's Total. By 2025 both Shell and BP will be producing more gas than oil.

Natural gas projects historically have delivered lower returns than big oil projects, leading companies and shareholders to prioritize oil developments. That's something the companies are working hard to change. Still, according to U.K.-based consultancy Wood Mackenzie, the weighted average internal rate of return for liquefied natural gas projects currently in the pipeline is about 13 percent. That compares with 20 percent for deep-water projects and 51 percent for unconventional oil developments like shale.

"The problem for oil companies is that gas is much more difficult to make profitable," said Eirik Wærness, chief economist at Norwegian oil company Equinor, formerly known as Statoil. Yet big oil has little choice but to double down on gas. Governments, including China and many in Europe, want to reduce pollution by burning cleaner fuels for transport and electricity. A new gas power plant emits around half the carbon dioxide emitted by a new coal or fuel-oil plant. Rising global demand also makes a compelling case for gas investment. Oil demand is expected to rise by just 0.5 percent a year out to 2040, according to Wood Mackenzie. Gas consumption is expected to rise faster.

Bechtel gets job to add liquefaction train at Australia project

(The West Australian; Oct. 8) - Woodside has chosen Bechtel to build a second liquefaction train at the Pluto LNG plant in Australia as part of its \$US11 billion (A\$15.5 billion) Scarborough gas development project. Woodside announced Oct. 8 that the privately owned U.S. construction company was its preferred contractor for the proposed expansion of the LNG plant on the Burrup Peninsula.

Woodside said it would work closely with Bechtel to refine the concept and costs in preparation for awarding the front-end engineering and design contract in the first quarter of 2019. The FEED contract will include the option for Bechtel to construct the train, subject to a positive final investment decision planned for 2020. "Expanding Pluto LNG will provide the necessary infrastructure to commercialize Western Australian gas resources for years to come," said Woodside CEO Peter Coleman.

Woodside is planning to start the second train in 2024 with a targeted capacity of between 4 million and 5 million tonnes of LNG a year. The train will be supplied by the 7.3 trillion cubic feet of gas at Scarborough. Woodside owns a 90 percent stake in Pluto, which went online in 2012. Kansai Electric and Tokyo Gas each own 5 percent. Bechtel has built eight LNG trains in Australia in recent years.

No shortage of LNG supply options for China

(Nikkei Asian Review; Oct. 9) - The U.S. and China seemed like a good match, at least in terms of liquefied natural gas supply and demand. Beijing was determined to clean up its smoggy air by shifting away from coal, and America had LNG to sell. Then the trade war broke out. The tariff battle has touched off a domino effect in the energy industry, with major geopolitical implications far beyond the world's two biggest economies.

China became the second-largest importer of LNG last year, after Japan. The U.S. supplied just under 10 percent of China's total purchases, and the ratio was expected to rise further. But the escalating trade war — including China's decision to impose a 10 percent tariff on U.S. LNG — has sparked nervousness. Beijing has other gas supply options. It is deepening ties with Russia and Iran. China National Petroleum Corp. (CNPC) and Russian gas producer Novatek have discussed LNG projects in the Arctic.

Yet another key project is the Power of Siberia pipeline for transporting gas from Russia to China. Construction was delayed from the original plan, as China was counting on LNG from the U.S., but the momentum appears to be picking up again. As for Iran, CNPC has taken over French oil giant Total's rights to part of the development of the South Pars gas field in the Persian Gulf. The field is one of the world's largest. Beijing's next move could be to procure gas from Iran and Turkmenistan through a pipeline.

Qatargas announced Sept. 10 that it had sealed a contract to provide PetroChina with 3.4 million tons of LNG annually for 22 years, and Australia and Canada are also eyeing opportunities in the Chinese market. None of this bodes well for the U.S. energy industry. The trade war could undermine U.S. competitiveness and boost projects in places like Canada, Russia, and Qatar, according to Samuel Phillips of Barclays.

China's tariff on U.S. LNG threatens to raise prices, redirect trade

(CNBC; Oct. 8) - Beijing's import tariffs on U.S. liquefied natural gas threaten to raise prices for buyers throughout Asia and deal a self-inflicted wound to China's state-owned energy companies. The import tax on American LNG essentially removes U.S. suppliers from consideration at trading desks across China's growing LNG market. There are plenty of supplies elsewhere in the world, but in closing the door to U.S. LNG, China is throwing a wrench into the market and giving sellers an opportunity to raise prices.

The trade dispute promises to redirect LNG trade routes and reverberate throughout the market. It also comes ahead of winter, when demand is highest and LNG customers are vulnerable to price spikes. Chinese buyers have already moved to limit the impact by purchasing most of the LNG they'll need to meet demand this winter, according to Wood Mackenzie. "The impact will depend on how short the market runs this winter and the extent to which China needs to buy additional LNG, which will partly be determined by weather," said Giles Farrer, research director for gas and LNG at Wood Mackenzie.

Analysts say Chinese buyers will try to swap cargoes as much as possible to avoid the tariffs on U.S. LNG. If they can't find other cargoes, they'll be stuck paying the 10 percent duty. But China may have to pay a premium in any case, Farrer said. Since China artificially raised prices on U.S. LNG by 10 percent, suppliers in Australia, Qatar, and Southeast Asia can get away with charging Chinese buyers just below the cost of LNG from the United States, including the tariff. That markup would tack another \$4 million to \$5 million to each LNG cargo for Chinese buyers, Wood Mackenzie said.

China's largest gas field boosts production

(Reuters; Oct. 8) - China's Changqing oil and gas field, operated by state energy giant PetroChina, is expected to produce record amount of natural gas this year, exceeding 1.34 trillion cubic feet, as more wells are brought online, its parent company China National Petroleum Corp. said Oct. 8. Changqing, in northern China, is the largest gas producer in the country, with nearly 11,000 wells in production by late September after more than 100 new wells were added, CNPC said on its website.

At 1.34 tcf for the year — an average of 3.67 billion cubic feet per day — the output at Changqing supplies about a quarter of China's total gas production. State oil and gas firms have been stepping up domestic production as well as imports to be prepared for another winter of strong demand growth for the cleaner-burning fuel.

China's demand could bring big changes for Canada's gas industry

(The Globe and Mail; Canada; Oct. 7) – When China decides it needs a lot of something, the fortunes of entire industries can change. Chinese demand now has the potential to transform a commodity that Canada is increasingly well positioned to supply — natural gas. With abundant shale gas deposits, "Canada shares many of the same advantages benefitting the U.S. LNG market, but has the additional benefit of being just a skip and a jump from China," Bank of Montreal analysts said in a recent report.

Although the first shipment from the recently sanctioned LNG Canada project in Kitimat, B.C., is not expected for five years, China by that time is likely to be the world's largest LNG buyer. The country's breakneck economic and urban expansion relied heavily on coal for home heating, industry and power generation, all of which thickened the skies over China's largest cities. In 2007 the World Bank estimated that air pollution was causing up to 400,000 premature deaths a year in China. Shifting from coal to gas is crucial for meeting the government's targets for reducing air pollution.

"A modest change in China's appetite for commodities can still cause very real shifts in global supply/demand balances, as history has shown," said Colin Hamilton, a global commodities analyst at the Bank of Montreal. Looking through to 2025, Western Canada's Montney shale gas production may be available at a break-even cost below \$2 per thousand cubic feet, the bank said. While the average cost of U.S. shale is even lower, a voyage from the U.S. Gulf Coast to China takes twice as long as from the British Columbia coast. The U.S.-China trade war is another factor in Canada's favor.

Kitimat residents look forward to economic boost from LNG Canada

(The Globe and Mail; Canada; Oct. 6) - The northern B.C. community of Kitimat is bracing for boom times after this week's decision by LNG Canada to construct an energy megaproject. Residents say construction of the C\$31 billion liquefied natural gas project over the next five years will rejuvenate the area's economy, with the export terminal providing high-paying, long-term jobs. "We've been through many ups and downs," said Nicole Audette, a long-time resident who works at a second-hand store.

She knows Kitimat Mayor Phil Germuth because she takes her car into his auto service shop for maintenance. Germuth said the District of Kitimat will benefit from LNG Canada being added to the industrial tax base. "There will be a boom, no doubt," the mayor said. Crystal Smith, Haisla Nation chief councillor, was equally positive. "We've been so focused on LNG Canada that if this project were to go away, I couldn't even gather myself to be able to think in that manner."

Phyllis Bereza, who has lived in the district for 40 years, sees a better future. "LNG means that for younger families, their children will be able to get a job here and not have to travel away. I think that's important." Hundreds of people will start pouring into

Kitimat in early 2019, with 4,500 workers expected at the peak of LNG Canada's construction in 2021. With Kitimat's population hovering around 8,000, the goal is to set up work camps to accommodate the bulk of the influx of construction staff.

Kitimat celebrates LNG project and economic hope

(The Globe and Mail; Canada; Oct. 6) - It's a new beginning for the residents of Kitimat, British Columbia. After LNG Canada said it would go forward with its C\$31 billion project in the coastal community, more than 1,000 people gathered to celebrate the impending economic boom times. The Oct. 6 festivities, just days after the Shell-led consortium gave the go-ahead to start construction, will continue at various events this week and reflects enthusiasm for LNG, in sharp contrast to the opposition in B.C. to oil exports.

Kitimat residents Metro, 83, and Phyllis Bereza, 76, who have lived in the district for 40 years, showed up for a slice of cake at one event and said they came to participate in the historic moment. "LNG means that for younger families, their children will be able to get a job here and not have to travel away," Bereza said. Residents said it's still painful to recall the exodus of families over the years. In 2006 methanol maker Methanex shuttered its plant, leaving 130 people without jobs. And in 2010 the Eurocan pulp and paper mill closed, putting 535 people out of work. Fewer than 8,000 people live in Kitimat.

While those in Kitimat and Canada's energy industry are thrilled, environmentalists cautioned that the project's emissions of greenhouse gases will be a setback in the fight against global warming. Opposition to energy projects have cancelled or delayed several other proposals in the province. The now-defunct Northern Gateway project would have carried production from Alberta's oil sands to a marine terminal in Kitimat, and Trans Mountain ran into a series of delays as it struggled with plans to nearly triple its oil pipeline capacity from Edmonton to the Vancouver suburb of Burnaby.

Toho Gas signs 15-year contract to take supply from LNG Canada

(Reuters; Oct. 9) - Japan's Toho Gas said it has signed a basic agreement with a wholly owned subsidiary of Mitsubishi to buy up to four liquefied natural gas cargoes totaling about 300,000 tonnes per year from the newly sanctioned LNG Canada project over 15 years starting 2024/2025. Toho Gas will buy the gas with destination flexibility, allowing it to take delivery or redirect or resell it on the market. The contract amount works out to almost 14.5 billion cubic feet of gas per year.

LNG Canada project leader Shell — with partners Mitsubishi, PetroChina, Korea Gas and Petronas — gave the green light for the C\$31 billion development in Kitimat, British

Columbia last week. Shell said work will start immediately, with first gas before 2025. Each partner will market its own share of the plant's output. Mitsubishi holds a 15 percent stake of the initial production capacity of 13 million tonnes per year.

Panama Canal sets record with 4 LNG carriers in one day

(San Antonio Business Journal; Oct. 3) - The Panama Canal has set a record for the number of liquefied natural gas carriers using the Central American waterway in one day. Four LNG tankers moved through the canal on Oct. 1, surpassing the mark set in April of three LNG tankers moving through the recently expanded waterway in a day. The four transiting carriers Oct. 1 had loaded up or were traveling to pick up a cargo at Cheniere Energy's Sabine Pass terminal in Louisiana.

The Panama Canal Authority opened the expanded waterway to LNG carriers in June 2016 with several restrictions that were lifted on Oct. 1. Canal officials previously allowed one reservation per day for LNG carriers, with transits restricted to daytime hours. Although two LNG ships were later allowed to travel in the same direction, they were still prohibited from nighttime transit and from navigating the canal's Gatun Lake at the same time. Many in the gas industry were concerned that the canal's rules would create bottlenecks and delays for LNG terminals being built along the U.S. Gulf Coast.

"The transit of these four LNG ships in just one day demonstrates the Panama Canal's commitment to maximizing the efficiency, flexibility, and reliability of its service to all customers," said Panama Canal Administrator Jorge Quijano.

Shell sees future in natural gas — and renewables

(Reuters; Oct. 9) - Energy companies are betting demand for natural gas will rise at a breakneck pace for decades, undermining warnings that tackling climate change would require a rapid switch to renewable energy. Top oil companies including Shell, BP, and Total are adapting with growing urgency to the need to develop cleaner energy sources, investing more in solar and wind power, electric vehicle technology and forestation.

Still, they see oil, and especially natural gas, the least polluting fossil fuel, playing a major role throughout the decades of transition and beyond as demand for electricity and plastics grows. "Shell's core business is, and will be for the foreseeable future, very much in oil and gas and particularly in natural gas," Shell CEO Ben van Beurden said in a speech at the Oil & Money conference. Shell expects global gas demand to 2035 to grow annually by 2 percent, twice the pace of overall energy demand, he said.

Shell is investing more than any other of its peers in clean energy, spending \$1 billion to \$2 billion a year on renewables and low-carbon energy. That compares with a total

annual spending budget of \$25 billion to \$30 billion. The investments "might even make people think we have gone soft on the future of oil and gas. If they did think that they would be wrong," van Beurden said.

Analysts predict LNG oversupply delayed to 2019-2020

(Australian Financial Review; Oct. 5) – The global LNG oversupply feared for this year has been delayed rather than eliminated and is likely to hit the market by late 2019 or early 2020, bringing with it softer prices that may hit Australia's export revenues. Macquarie Securities and energy pricing specialist S&P Global Platts are forecasting oversupply will hit the LNG market over the next two years as huge new volumes come online, mostly from Australia and the U.S.

The oversupply expected this year was headed off by slower start-ups at new Australian and U.S. export projects, unexpected production outages such as the earthquake-driven Papua New Guinea LNG shutdown, and unexpectedly strong Chinese demand that beat all forecasts. The dynamics have led to unexpectedly strong LNG spot prices through the 2018 Northern Hemisphere summer. North Asia prices hit US\$12 per million Btu in mid-September, up 71 percent from a year earlier.

"It's not that the supply glut didn't show up but that it has been slightly delayed," S&P Global Platts manager of Asian LNG analytics Jeff Moore said Oct. 5. "It is still coming." This year to date some 20 million tonnes a year of new LNG export output has come online, with another 50 million tonnes a year of capacity to start up in the next 14 to 15 months, according to the firm. Macquarie analyst Andrew Hodge said the oversupply will come as U.S. projects that missed their start-up this year will get into gear for 2019.

South Korea may cut import tariff on LNG to help consumers

(S&P Global Platts; Oct. 8) - South Korea's Ministry of Trade, Industry and Energy has urged cutting the country's tariff on imported liquefied natural gas to zero next year from the current 2 to 3 percent rate to ease consumers' financial burden and boost consumption of the cleaner fuel, a ministry official said Oct. 8. The ministry also urged a similar cut in the import tax for liquefied petroleum gas to zero in 2019 from 2 percent this year, the official said.

South Korea currently levies a 3 percent tariff on LNG imported during the peak winter season from October to March, and 2 percent during the rest of the year. LNG is used for heating and power generation in South Korea. "The ministry has requested the finance ministry to lower imports tariffs on LNG and LPG to help ease consumers' costs," the official said.

South Korea raised retail natural gas prices for households and industry by an average of 4.2 percent in July and 3.1 percent in May to reflect higher LNG import prices linked to crude oil prices. Domestic natural gas prices are expected to increase further amid rising crude oil prices. President Moon Jae-in has been pushing for an increase in LNG consumption to reduce coal-based and nuclear power generation.

Exxon boosts exploration spending in Mozambique

(Bloomberg; Oct. 8) - Companies exploring for oil and gas in Mozambique will spend at least \$900 million, boosting the nation's hopes of becoming a major exporter, Mineral Resources Minister Max Tonela said. Empresa Nacional de Hidrocarbonetos, the stateowned oil company, will have stakes of 15 to 30 percent in the projects, Tonela said Oct. 8 at a ceremony where the hydrocarbons regulator signed an exploration agreement for oil and gas with ExxonMobil.

The offshore concessions are part of the Southeast African nation's fifth licensing round, which Exxon and its partner Rosneft won in 2015. The companies will spend "hundreds of millions" of dollars on exploration, Jos Evens, Exxon's country head, told reporters in the capital, Maputo, after signing the contracts. The company is analyzing seismic data and will start a "drilling campaign in the coming few years," he said. Mozambique is thought to have enough gas to become the world's fourth-largest exporter of the fuel.

The country hopes companies will start producing in 2022, providing much-needed revenue for a government that has been in default on its commercial external debt since 2016. The country also will probably sign agreements with South Africa's Sasol and Italy's Eni later this month, Tonela said. Exxon is already developing a mid-size liquefied natural gas project together with Eni, and plans to reach a final investment decision on the much larger onshore Rovuma LNG project by the middle of next year, Evens said. Anadarko Petroleum, based in Woodlands, Texas, also plans to make a final decision on its own Mozambique gas project next year, which will be similar in size to Exxon's.

Gazprom, Shell move into pre-FEED for Baltic LNG

(Kallanish Energy; Oct. 8) - Russian gas giant Gazprom and Shell have signed a framework agreement on the joint-design concept for the proposed Baltic LNG project. The liquefaction plant in the port of Ust-Luga, in Russia's Leningrad region, would have capacity to produce 10 million tonnes of LNG per year, targeting markets in the Atlantic region, Middle East, and South Asia. Gazprom could make an investment decision next year, with production start-up as soon as 2023.

The plant also could serve small-scale liquefied natural gas markets in the Baltic and North seas. The pre-FEED (front-end engineering and design) joint development agreement was signed last week during the Eighth St. Petersburg International Gas Forum and marks the "next stage" in the project's development.

Separately, Gazprom and Japan's Mitsui last month signed a memorandum of understanding on the Baltic LNG project. The agreement was signed by Gazprom CEO Alexei Miller and Mitsui Chairman Masami lijima during the Eastern Economic Forum in Vladivostok, Russia. Miller said there is potential for more cooperation between the countries in LNG production. Mitsui holds a 12.5 percent stake in the Gazprom-led Sakhalin-2 LNG project in Russia's Far East.

Environmental report says Tacoma LNG plant should use B.C. gas

(The News Tribune; Tacoma, WA; Oct. 8) - A long-awaited draft environmental report for the \$310 million liquefied natural gas project on the Tacoma Tideflats was released Oct. 8, stating that overall greenhouse gas emissions in the area would be reduced by the gas liquefaction and LNG storage terminal so long as the plant gets all its feed gas from British Columbia. That detail is so important that the review recommended the source of gas be a "required condition" for the air permit needed to build the emissions and production parts at the plant, which is planned to help meet utility demand peaks.

The Puget Sound Clean Air Agency in January ordered the supplemental environmental review to study the life cycle of greenhouse gas emissions caused by the plant. The review was needed before Puget Sound Energy could get an air permit for the project. The plant, under construction on the waterfront, would hold up to 8 million gallons of LNG for gas customers and maritime users, including TOTE Maritime Alaska vessels.

The primary conclusion of the 212-page report was that using LNG would result in an overall drop in emissions compared with not building the plant and using dirtier maritime petroleum fuels. That conclusion, the report said, is valid only if "the sole source of gas supply to the facility is from British Columbia." The draft noted the province has adopted "comprehensive drilling and production regulations" to cut methane emissions, leaving emissions from U.S. gas production "as five times higher than those for Canada." The plant has faced opposition from activists, environmentalists, and the Puyallup Tribe.

U.K. explorer says political opposition will not stop its plan to frack

(Bloomberg; Oct. 10) - The head of the company set to drill Britain's first fracking well in a decade shrugs off the risk that protesters and government's main opposition will shut down his project before it can start. Francis Egan, CEO of Cuadrilla Resources, is

poised to begin hydraulic fracturing within days at a well in northwest England. No matter what's decided by courts or politicians weighing the issues, Egan said the U.K.'s growing needs for natural gas will remain a prominent factor in the debate.

While the ruling Conservative Party has backed fracking, the Labor Party opposition said it will ban it if it takes power. And Labor's ascent is increasingly possible given the fragile majority the government is maintaining ahead of votes on Britain's plan to leave the European Union. "Brexit or no Brexit, having reasonable homegrown production of your energy is a good thing," Egan said. "Governments come and governments go. But energy demand isn't going anywhere and gas supply is continuing to decrease."

The U.K. shale industry was stopped in its tracks in 2011 after fracking by Cuadrilla caused minor earthquakes at its northwest England site. The drilling is a magnet for angry protests amid claims that it will irreparably harm the environment and keep the nation wedded to polluting fossil fuels. Proponents say that Britain's untapped shale gas reserves could make the country's domestic energy supply secure for years to come.