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Golden Pass could be first of several LNG decisions this year

(LNG World News; Feb. 8) - ExxonMobil and Qatar Petroleum's decision to proceed with construction of the Golden Pass liquefied natural gas export project in Texas kicks off what could be a record year for LNG final investment decisions. The go-ahead for Golden Pass comes as Anadarko and its partners in Mozambique have taken major steps toward FID in signing sales-and-purchase deals with China National Offshore Oil Corp., Shell, Tokyo Gas, and the U.K.'s Centrica, consultancy Wood Mackenzie said.

Qatar Petroleum and ExxonMobil said work at Golden Pass will begin in the first quarter of this year with start-up scheduled for 2024. "The \$10 billion liquefaction project, which will have capacity to produce around 16 million tonnes of LNG per year, is one of the few remaining brownfield LNG development opportunities in the U.S. Gulf Coast," said Alex Munton, of Wood Mackenzie. The 8-year-old Golden Pass import terminal already includes much of the costly infrastructure needed for an export project.

"On a dollars-per-tonne basis, it's still one of the lowest-cost opportunities for new largescale liquefaction capacity anywhere in the world," Munton said. By moving ahead the partners ensure they will be at the forefront of the second wave of U.S. LNG. "To delay any longer would simply create the space for other U.S. LNG projects. ... Golden Pass would miss out on the opportunity to press home the brownfield advantages it has over planned U.S. greenfield projects in terms of cost and schedule," Munton said.

In addition to the Anadarko-led LNG project in Mozambique, ExxonMobil said in its recent earnings report that its Rovuma LNG project in Mozambique is on target for a final investment decision this year. "Rovuma will share some plant and marine facilities with the adjacent Anadarko project," said Liam Kelleher, of Wood Mackenzie.

Mozambique LNG partner expects decision in March or April

(Reuters; Feb. 10) - A final investment decision for a massive offshore natural gas block in Mozambique is expected to be ready by March or April, the chairman of the country's national oil company said in New Delhi on Feb. 9. This is the first time any of the seven partners in the Anadarko-led venture has given a specific timeline for an investment plan for the block, east of Rovuma Basin and called Area 1. The plan calls for an onshore liquefaction plant, with initial capacity of 12.88 million tonnes of LNG per year. An FID could unlock one of the world's biggest recent gas discoveries, estimated at 75 trillion cubic feet. FID is a stage in funding when banks agree to extend lines of credit for a project and the partners commit to construction. National oil company of Mozambique Empresa Nacional de Hydrocarbonetos (ENH) holds 15 percent and U.S.-based Anadarko holds 26.5 percent and is the LNG project leader and operator of the block.

Indian companies — state-owned explorer Oil and Natural Gas Corp. through its overseas arm ONGC Videsh, along with Oil India and Bharat Petroleum Corp. — together hold the highest share with an overall 30 percent stake. Mozambique is strategic for India's imports of gas as it does not have the geopolitical challenges of the Middle East, ENH Chairman Omar Mitha said. Area 4, an adjoining discovery by Italy's Eni and ExxonMobil, will take FID on its own LNG development by July, Mitha said.

U.S. oil and LNG industries wait on trade talks with China

(S&P Global Platts; Feb. 8) - U.S. officials will return to China next week for the latest round of trade talks that could signal whether crude and liquefied natural gas flows will pick up between the two countries or remain mired in the dispute. The talks come just two weeks before the next potential round of tariff escalation. U.S. oil exports to China disappeared in August, according to U.S. Energy Information Administration data. The flows were a casualty of the trade war even though China didn't put a new tariff on oil.

Before exports dried up, the U.S. sent an average of 377,600 barrels of crude per day to China in the first seven months of 2018, according to EIA data. The all-time highest monthly average was 510,000 barrels per day in June. U.S. LNG shipments to China stopped in September when Beijing imposed a 10 percent tariff on the flows and threatened to increase the tariff to 25 percent in retaliation to Trump administration tariffs on \$200 billion in Chinese goods. U.S. LNG flows to China returned in October and November, but at much lower levels than earlier in the year.

The White House said Feb. 8 that deputy-level talks would start Feb. 11 in Beijing, followed by high-level talks Feb. 14-15 attended by U.S. Trade Representative Robert Lighthizer and Treasury Secretary Steven Mnuchin. The delegation includes Steven Winberg, the Department of Energy's assistant secretary for fossil energy; Ted McKinney, the Department of Agriculture's undersecretary for trade and foreign agricultural affairs; and other officials from four departments.

FERC extends review schedule for Corpus Christi LNG expansion

(S&P Global Platts; Feb. 8) – The Federal Energy Regulatory Commission has pushed back the environmental review schedule for Cheniere Energy's application to expand its

LNG terminal in Corpus Christi, Texas, while also extending the public comment period for several other projects. "It's a minor delay," said a Cheniere spokesman. The actions come as FERC's ability to stay on track with reviews is being watched by industry after FERC missed its Jan. 22 target date for deciding on the Calcasieu Pass LNG project, and as the federal government shutdown raised questions about regulatory delays.

Developers want to make investment decisions so they can start construction in time to fill global LNG demand by the mid-2020s. In a Feb. 7 notice, FERC extended by seven weeks its environmental assessment of the Corpus Christi expansion, which would add 11.45 million tonnes annual capacity to the plant that started up in December. FERC extended to June 27 from May 9 the federal authorization decision deadline that applies to agencies that cooperate with FERC. In addition to regulatory approvals, Cheniere has not announced offtake contracts needed to secure financing for the expansion.

Separately, FERC said the shutdown at some federal agencies prompted it to reopen the public comment period on environmental reviews for Gulf LNG, in Mississippi; Annova LNG, in Texas; and Eagle LNG, in Florida. While FERC and the Army Corps of Engineers were funded during the five-week shutdown, other agencies participating in the reviews faced furloughs, which delayed their ability to comment on the reviews.

Congressmen oppose Jones Act waiver for LNG to Puerto Rico

(Caribbean Business; Feb. 7) - The leadership of the U.S. House Committee on Transportation and Infrastructure is urging the Department of Homeland Security to reject Puerto Rico's request for a Jones Act waiver to bring liquefied natural gas to the island. Puerto Rico Gov. Ricardo Rossello requested a 10-year waiver to the Merchant Marine Act of 1920 — known as the Jones Act, which regulates commerce between American ports — to allow the delivery of U.S. LNG on foreign vessels. The Puerto Rico Electric Power Authority plans to increase the use of LNG to reduce its cost of energy.

However, Republicans and Democrats on the committee objected to the waiver in a letter Feb. 6. They said it was not justified, adding that such waivers are only granted when it is in the interest of national defense. "It is our belief that no valid national defense rationale exists to support this waiver request of the Jones Act for Puerto Rico, especially for a 10-year period."

The Jones Act requires that cargoes between U.S. ports must travel on ships owned and operated by Americans. There are no such LNG carriers. Under the law, U.S. LNG export terminals in Georgia, Maryland, and on the Gulf Coast cannot use foreignflagged LNG carriers to deliver the fuel to Puerto Rico unless a waiver is granted. U.S. maritime unions have historically opposed waivers of the Jones Act.

Big Oil learns to cut costs and make money even at low prices

(Bloomberg; Feb. 7) - The crude market had its worst quarter in four years but you wouldn't be able to tell by looking at Big Oil's stellar earnings numbers. The world's five largest publicly traded oil companies exceeded analyst expectations, in some cases obliterating them. The results lend credibility to what they've been saying: They have been disciplined, focusing on the lowest-cost barrels that can churn out profits even during market volatility. "People are waking up to the fact that these companies can operate with a low oil price," said Christyan Malek, an analyst at JPMorgan Chase.

The entire sector became bloated in the years leading up to 2014, as higher and higher crude prices made even ultra-expensive, over-engineered mega-projects look profitable. Investors punished that shortsighted view and have continually pressured companies to get lean. Majors are now focused on barrels that require lower operating and capital expenditures. At BP alone the company said it cut upstream costs by 45 percent. The result was the highest cash-generating quarter for the five largest oil majors since 2011, which will be used to buy back shares, cut debt, and start more high-quality projects.

In the old days, the only figure that really mattered to oil companies was the reserves number, and it could be career-ending for a chief executive officer to allow oil fields to deplete without replacing them with as many, or preferably more, new barrels. The view today is more mixed. "We're focusing on growing value and growing our cash flow," said Jessica Uhl, Shell's chief financial officer. Companies acknowledged they did go a bit too far in spending on projects that were ultimately not that profitable. Now they're focused on increasing their average return on capital.

Tanzania may want to renegotiate gas development contracts

(Bloomberg; Feb. 6) - Tanzania said it might renegotiate natural gas contracts if its review finds terms that were agreed to as far back as two decades ago are unfavorable to the East African nation. The assessment of 11 agreements started two months ago and is the latest in a series of measures by President John Magufuli's government to secure more revenue from the country's resources. Tanzania has 58 trillion cubic feet of gas reserves and companies are looking at LNG exports to turn that gas into profits.

The 2017 Natural Wealth and Resources Contracts Law allows the government to renegotiate or remove terms from agreements deemed by it to be "unconscionable." "Should we find they have questionable terms, then we will ask the investors to renegotiate them," Energy Secretary Hamisi Mwinyimvua said Feb. 4. Norway's Equinor, which has invested more than \$2 billion developing an offshore block, said its production-sharing agreement with Tanzania is still valid, according a spokesman.

The contracts review comes as companies including Equinor continue talks with the government to build a \$30 billion liquefied natural gas plant. "An LNG development is a

large project that requires large upfront investments," an Equinor spokesman said. "To ensure that all parties benefit from such a project, stable and predictable framework conditions for the more than 30-year lifetime of the plant are essential."

Report says renewables may cut into Germany's natural gas demand

(Bloomberg; Feb. 5) - The natural gas industry is eager for a jump in demand now that Germany has come up with a plan to end coal-fired power generation. But that might never happen, according to a report by one of the nation's largest energy companies. The study, which hasn't been made public, shows that gas demand in Germany, the Netherlands, Belgium, France, and the U.K. is expected to fall by as much as 16 percent by 2030 from 2016 levels. By then the cost of solar and battery systems will fall enough that renewables may be the most cost-effective way to generate new flows of electricity.

The report, seen by Bloomberg News, plays down the widely assumed theory that gas will benefit because it's the only other stable source of power to coal in Europe's biggest market as Germany also is shutting down its nuclear reactors. Instead, renewable technology costs are expected to fall further, boosting the use of wind and solar. As a result, gas demand growth for power plants as a result of coal closures will be limited.

"You can't expect to see a big increase in demand just because of the coal exit," said Harald Herzig, head of front office at Mainova, a utility in Frankfurt that wasn't involved in the study.

Chevron will tie worker bonuses, executive pay to limiting emissions

(Reuters; Feb. 7) - Chevron plans to set targets for greenhouse-gas emissions and tie executive compensation and rank-and-file bonuses to the reductions, the oil major said in its latest climate report released Feb. 7. The move is a first for a U.S. oil major and focuses on the company's oil fields. More investors have been pressuring Chevron and other big oil companies to reduce emissions that contribute to climate change.

Chevron said that by 2023, it will reduce its methane and flaring intensity by 25 percent to 30 percent from 2016 levels, and that the goal would be added to the scorecard used to determine incentive pay for about 45,000 employees. "It's about the mindset and the culture of the company," said Chevron Vice President Mark Nelson, noting that including most of its global workforce would "harness" ideas from all employees.

Among other oil companies, London-based BP and France's Total have set short-term targets on reducing carbon dioxide emissions from their own operations. Shell in December announced it would link executive compensation to reducing carbon dioxide

emissions starting in 2020. Exxon's latest climate report, published Feb. 5, includes a goal of reducing methane emissions from operations by 15 percent and flaring by 25 percent by 2020 compared with 2016 levels, as well as reducing greenhouse-gas intensity at its Canadian oil sands facilities by 10 percent by 2023.

Russian company seeks bids to design floating LNG power plant

(The Barents Observer; Norway; Feb. 6) - Central Design Bureau - Iceberg, a private company based in Russia, has announced a tender for a 50- to 60-megawatt floating power plant fueled by liquefied natural gas, the Russian business newspaper Kommersant reported. Iceberg designed Russia's only floating nuclear power plant, the Akademik Lomonosov.

While the Akademik Lomonosov is scheduled to be towed to the remote Arctic town of Pevek this summer, subsequent floating nuclear plants could face cheaper competition from floating LNG-fueled power plants. Under the tender, potential builders are asked to provide both construction costs and long-term maintenance costs. The tender requests a feasibility study, preliminary design and possible deployment of a floating power plant, Kommersant reported.

Russia is not the first country to build an LNG-fueled floating power plant. The Finnish company Wärtsilä has delivered a barge-mounted power plant to the Dominican Republic. Such floating power plants could serve remote mining or petroleum fields in Siberia or connect to a local electricity grid as the Akademik Lomonosov will do in Pevek on Russia's Far East northern coast.

Icebreaker loads up at Finland's largest LNG fueling terminal

(gCaptain; Feb. 5) - The world's first liquefied natural gas-powered icebreaker, Polaris, has fueled up for the first time in Tornio, Finland, home to the Nordic region's largest LNG fueling terminal. The icebreaker, which can run on diesel or LNG, joined the fleet of Finnish icebreaker operator Arctia in 2016. The ship operates under contract with the Finnish Transport Infrastructure Agency, which is responsible for icebreaking services and for making sure that Finland's harbors can be accessed throughout the year.

The bunkering operation occurred Feb. 2 in Röyttä Harbour. The Tornio LNG fueling terminal opened in 2018. It is the largest of two such bunkering terminals in the country. "Until now, the northernmost suitable terminal was located in Pori, which is way too far from Polaris' operating area in the far end of the Bothnian Bay," said Markus Karjalainen, head of the winter navigation unit of the transport agency. "Some LNG has been delivered by truck, but Polaris has had to rely mainly on diesel."

Pakistan and Russia will study possible gas pipeline from Iran

(Reuters; Feb. 7) - Pakistan has signed a provisional agreement with Russian energy giant Gazprom for a feasibility study for an offshore pipeline that would supply natural gas from gas-rich Iran to Pakistan and other South Asian nations. The memorandum of understanding is the latest in a series of energy-related agreements between Pakistan and Russia, former Cold War foes that have grown closer in recent years.

An offshore pipeline from Iran has long been discussed by Pakistani officials, but its viability has been questioned due to the delicate geopolitical situation in South Asia and the rivalry between nuclear-armed neighbors India and Pakistan. U.S. sanctions against Iran are also a hindrance for most pipeline projects in the region. The offshore line from Iran to Pakistan and India is estimated at \$10 billion, according to Pakistani media.

"(The agreement) provides for a joint feasibility study regarding gas supplies from the Middle East to South Asian countries," Gazprom said in a statement Feb. 6. Pakistan's Petroleum Ministry said it could take three to four years to complete the pipeline.

Australia concerned over loss of engineering work on LNG projects

(The West Australian; Feb. 6) – Much of the highly skilled engineering work that will be part of Woodside Petroleum's A\$44 billion spend on proposed liquefied natural gas projects in Australia is headed overseas, despite Premier Mark McGowan's task force working to make Perth an international hub for oil and gas expertise. U.S. company McDermott said Feb. 5 it would run the design of the offshore vessel for Woodside's Scarborough LNG project from the Netherlands, in a blow to local engineering jobs.

A McDermott spokesman said the work would be done "across the globe" when asked how much of the design would be performed in Australia, where industry is concerned that local companies would see little of up to \$900 million of engineering work required for Woodside's proposed \$15.4 billion Scarborough and \$28.7 billion Browse LNG projects. There are also concerns that design done overseas could result in lower local content during construction.

In addition, Houston-based KBR is producing the conceptual design for Browse's two offshore production units and U.S. company Bechtel is designing a liquefaction train to process gas from Scarborough. A Woodside spokeswoman said all contractors have to comply with the Australian Jobs Act and ensure that local companies have a fair opportunity to participate if they are competitive.

Hungary wants U.S. to push Exxon to develop Black Sea gas field

(Reuters; Feb. 7) - The United States could help Hungary diversify away from Russian energy by encouraging ExxonMobil to proceed with its long-stalled plans to develop the Domino-1 gas field in the Black Sea, Hungary's foreign minister said. Foreign Minister Peter Szijjarto asked U.S. Secretary of Energy Rick Perry on Feb. 6 to do what he could to encourage the start of production from Domino-1, which is controlled by Exxon and Romania's Petrom, a subsidiary of Austrian firm OMV.

Discovered in Romanian waters in 2012 with estimated reserves of 1.5 trillion to 3 trillion cubic feet, the companies have sought greater clarity from Romania before developing the field. Exxon said in January it was continuing to evaluate the project, pinning its final investment decision on factors including "competitive and stable fiscal terms for existing offshore concessions for the duration of the agreements." OMV Chief Executive Rainer Seele said the company is talking with the Romanian government about developing the gas field, which is expected to cost a billion euros (\$1.13 billion).

Szijjarto said it is in Hungary's strategic interest that the country have access to the gas, which Hungary could get via a pipeline Romania is building from the Black Sea. Importreliant Hungary gets most of its gas from Russia.

Croatia will go ahead with first LNG import terminal

(LNG World News; Feb. 5) – State-owned LNG Croatia has sanctioned construction of a floating liquefied natural gas import terminal on the Island of Krk. The final investment decision came after a binding open season in November 2018 to sign up users for the terminal, LNG Croatia said. Bids in the open season determined demand and potential revenues for the project.

LNG shipping giant Golar was picked for the project and will convert its Golar Viking LNG carrier to a receiving, storage and regasification vessel at a cost of about \$182 million. The carrier, built in 2005, is scheduled for retrofit and delivery to the port in the fall of 2020. Other costs will include onshore facilities. The project is backed by €101.4 million from the European Union as well as €100 million from the Croatian government.

South Africa's first deep-water find estimated at 1 billion barrels

(Bloomberg; Feb. 7) – South Africa's first deep-water discovery may prompt a rush of exploration as the country works to cut its reliance on imported fuels. The Brulpadda find is estimated at 1 billion barrels by its operator Total. That's a boon for a country that has always been short of oil and is running out of its scant domestic supply of gas.

Block 11B/12B, covering an area of 7,300 square miles, is operated by Total with a 45 percent working interest. Qatar Petroleum owns 25 percent, Canadian Natural Resources International holds 20 percent, and the remaining 10 percent is controlled by Main Street, a South African consortium. "It is really transformational," Andrew Latham, vice president of global exploration at consultant Wood MacKenzie, said Feb. 7. "This could be a discovery that kickstarts a bit of a gas strategy for South Africa."

The field of primarily gas condensate — a light, liquid hydrocarbon — was discovered about 110 miles off the country's southern coast in the Outeniqua Basin. The area, where ExxonMobil and Eni also hold stakes, may now draw further interest, especially since South Africa is due to introduce new legislation later this year aimed at spurring exploration. Total plans to acquire seismic data before drilling as many as four more exploration wells. But the operating environment is tough. "The region is quite difficult to operate," Total CEO Patrick Pouyanne said. "Huge waves, the weather isn't very easy."