

# Oil and Gas News Briefs

## Compiled by Larry Persily

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#### **Buyers, sellers, banks have to adjust to new LNG market conditions**

(Reuters' columnist; April 11) - Buyers of liquefied natural gas have grown "fat and lazy" on expectations of a supply surplus and now risk a shortage in the early years the next decade. It's no surprise that this was the view of an LNG export project developer, shared at this week's LNG Asia Pacific Congress in Singapore. There is an emerging risk that LNG supply may be insufficient by the middle of the next decade, largely because buyers have been on strike.

The doubling of global LNG production capacity 2015-2020, created by a wave of new projects mainly in Australia and the U.S., led to a sea-change in buyer behavior. No longer were Asia's buyers willing to sign long-term, oil-price-linked, destination-restricted contracts. Instead, they wanted short-term or even spot deals, with prices linked to other gas benchmarks. The long-term contracts that were a feature of the market helped underpin the financing needed to develop new capacity. But that shift in the market was accompanied by a sharp drop in investment decisions for new ventures.

LNG buyers have for the past few years been comfortable with the view of a supply surplus, but now risk a rush for deals just like patrons at a pub jostle at the bar as last drinks are called. The most likely way to resolve the differences between buyers and sellers is for LNG producers to accept that they may have to partner more with their customers and accept shorter-term, flexible, smaller contracts. And buyers have to realize they need to start committing to deals to boost future supply. Financiers, such as banks and development agencies, will have to adjust their thinking as the old world of major buyers committing to multi-year deals to underpin a new LNG plant is gone.

#### **Chevron gives go-ahead to develop more gas for Gorgon LNG**

(Reuters; April 14) – Chevron will proceed with the second stage of developing gas reserves for its giant Gorgon liquefied natural gas export plant off the northwest coast of Western Australia, the company said April 14. Chevron and its joint-venture partners plan to sink 11 new wells in the Gorgon and Jansz-lo fields and build offshore pipelines and subsea structures to pipe the gas to the nearby 15.6-million-tonne-a-year LNG plant on Barrow Island. The A\$54 billion Gorgon project came on stream in March 2016.

Chevron declined to put a cost on stage two of the feed-gas project. Others have estimated the cost at as much as \$5 billion. Drilling should start next year, and the full expansion could take about four years, a source said. Seven new wells will be drilled

thousands of feet below sea level in the Gorgon field while four will be sunk in the Jansz-Io field about 45 miles farther out to sea.

The second stage is part of the original Gorgon development plan that includes expansion of the subsea gas network required to maintain long-term supply to the Barrow Island plant. Chevron is the Gorgon project operator and holds a controlling 47.3 percent, while ExxonMobil and Shell each have a 25 percent stake. The remaining stakes are held by Osaka Gas, Tokyo Gas and Japanese utility joint-venture JERA.

### **Tanzania looks for consultant to help negotiate deal for LNG project**

(Reuters; April 13) - Tanzania has invited bids for consultancy services to help the government conclude negotiations with international oil companies on a deal for construction of a proposed liquefied natural gas plant. Tanzania boasts estimated recoverable gas reserves of more than 57 trillion cubic feet of gas. Construction of an LNG export project, however, has been held up by regulatory delays.

BG Group, which was acquired by Shell in 2016, alongside Statoil, ExxonMobil and the U.K.'s Ophir Energy, plan to build a \$30 billion onshore LNG terminal. The firms plan to develop the project in partnership with state-run Tanzania Petroleum Development Corp., which said it wants a consultant to help develop a commercial, legal and technical framework for the LNG project.

Tanzania's national oil company said the adviser is expected to complete the work in two years. A host-government agreement is seen as a crucial step toward reaching a final investment decision for the long-delayed project, which has been held back by a bureaucratic land acquisition process and the protracted approval of a new legal and regulatory framework for the African nation's nascent hydrocarbon industry. Industry players said a final investment decision will not be made for at least four years and possibly longer. It would take another five years after the decision to build the plant.

### **China far below average for gas storage; works to expand capacity**

(Reuters; April 12) - China, the world's No. 3 gas consumer, is speeding up expanding its much-needed underground natural gas storage facilities to cope with winter supply crunches when demand surges to heat homes. Gas supplied from underground storage hit a record 261 billion cubic feet during last winter's severe supply squeeze, compared to an average of 140 billion to 210 billion during the previous few winters.

China now operates 25 facilities with total working volume of about 410 bcf of gas, more than double its capacity in 2015. The maximum daily extraction rate tops 3.1 bcf. But at 410 bcf, it makes up less than 5 percent of the total gas consumed each year in

China, well below the 20 percent for top consuming nations such as the United States and Russia. As a comparison, one single storage run by Russian gas giant Gazprom has working capacity of 6 bcf per day, larger than China's total combined facilities.

Most of China's facilities were built using tapped gas wells or producing wells. Only a few use salt caverns, which require higher building costs and longer construction periods. Building of one salt-cavern project, Jintan in east China's Jiangsu province, is still in progress after construction began in 2005. Gas storage facilities in the United States and Europe are mostly independently run in a fully liberalized market that reflects price spreads between low and high seasons that give storage investors good returns. China's market is state-controlled, with fixed premiums for winter pricing.

### **Thailand looks to boost coal in power-generation mix**

(Reuters; April 12) - Thailand is expected to increase the share of electricity generated by coal to diversify its fuel mix for power generation, the country's energy minister said. "The share of coal in our power generation mix is very low at slightly less than 20 percent," Energy Minister Siri Jirapongphan said on the sidelines of an energy forum on April 11. "We need to diversify the sources of fuel for our power generation."

Thailand relies mainly on gas to generate power, but its domestic gas supply is falling behind consumption, requiring the country to import more piped gas from Myanmar and liquefied natural gas. The Electricity Generating Authority of Thailand's plan to build coal-fired power plants in the southern Thailand tourist destinations of Songkhla and Krabi has been delayed for years with opposition from villagers and environmentalists.

"We need to conduct a more global strategic environmental assessment to identify a more suitable location to build a coal-fired power plant," Siri said, adding that a decision on the locations could be made toward the end of this year. Thailand has promoted renewable energy aggressively over the past 10 years; its share of electricity generation from renewables has reached about 12 percent. "But that achievement came at an expense as we're paying a high rate for electricity from renewable resources," Siri said.

### **Gas discoveries give boost to expansion at Papua New Guinea LNG**

(Platts; April 12) - A huge increase in upstream gas resources will support a plan to almost double capacity at the Papua New Guinea liquefied natural gas export facility, project partner Oil Search said April 12. New discoveries, combined with the Elk-Antelope fields, total 11 trillion cubic feet of certified gross undeveloped gas resource available to support development of an additional 8 million tonnes a year of LNG capacity at the plant, Oil Search Managing Director Peter Botten said.

The new discoveries "will greatly assist marketing activities," Botten said. "The increase in the estimated resource size of the P'nyang field helps illustrate the tremendous growth opportunities for our operations in Papua New Guinea," said Liam Mallon, president of ExxonMobil Development. "The increase supports a potential significant expansion of operations in the country," a company statement read. The partners have not made a final investment decision to expand the LNG plant.

Oil Search holds a 29 percent interest, along with operator ExxonMobil (33.2 percent), Santos (13.5 percent), Kumul Petroleum Holdings (16.8 percent), JX Nippon Oil & Gas Exploration (4.7 percent) and Papua New Guinea's government-owned Mineral Resources Development (2.8 percent). The \$19 billion LNG project started production in 2014, and late last year was producing at an annualized rate of about 8.5 million tonnes.

### **Papua New Guinea LNG plant restarts production**

(Reuters; April 12) – ExxonMobil has resumed output at its Papua New Guinea liquefied natural gas project two weeks ahead of schedule after it was shut down in the wake of a deadly earthquake in February, its Australian partners said April 13. Production was halted after a 7.5 magnitude earthquake hit Papua New Guinea's energy-rich interior Feb. 26, causing landslides, damaging buildings, and killing 100 people.

Australia's Oil Search and Santos said they had been advised that one train at the LNG plant near Port Moresby has restarted operations and the second train is expected to resume as gas production ramps up. ExxonMobil was able to restart production earlier than expected because damage to hundreds of miles of pipelines that run through the mountains between gas output facilities and the LNG terminal was much less than initially feared, a source involved with the project told Reuters.

### **Maryland LNG terminal ships first cargo under long-term contract**

(Reuters; April 16) - The first contractual liquefied natural gas cargo from Dominion Energy's Cove Point LNG export plant in Maryland left the dock April 16, Thomson Reuters Eikon ship tracking data showed. After four years of construction, the \$4 billion liquefaction plant has now moved from testing to commercial operations. The cargo is expected to act as a drag on spot LNG prices as it coincides with resumption of exports from Papua New Guinea LNG, which had been shut following a powerful earthquake.

Dominion had sold Cove Point's capacity under 20-year contracts to a subsidiary of GAIL (India) and to ST Cove Point, a joint venture of Japanese trading company Sumitomo and Tokyo Gas. The destination of the first contractual cargo April 16 was not announced. The terminal's single liquefaction train is capable of producing 5.25

million tonnes of LNG per year. Cove Point is the second LNG export plant in the Lower 48 states after Cheniere Energy's Sabine Pass, La., terminal, which opened in 2016.

### **Gulf Coast hopeful looks to raise equity in exchange for future LNG**

(Wall Street Journal; April 14) - U.S. companies are scrambling to figure out how to sell more natural gas abroad. Meg Gentle thinks she has the answer. To ship liquefied natural gas, companies are constructing terminals where they can superchill gas and load it onto tankers. Houston-based Tellurian, where Gentle is chief executive, is one of them. But she is taking it a step further by building out the ability to produce gas as well.

To fund Tellurian's plans, which are expected to cost \$24 billion and include an LNG terminal in Louisiana, Gentle must persuade buyers to purchase equity interests in exchange for low-cost gas in the future. It's an experimental model in an evolving global market. At 43, Gentle is a two-decade veteran of the gas industry. She helped build the Sabine Pass, La., export terminal while at Cheniere Energy, the first of its kind in the U.S. But she is in uncharted waters building a company from scratch, in a market that is just beginning to take off. Stock investors aren't giving her the benefit of the doubt.

Shares of Tellurian have fallen 40 percent since it became a publicly traded company in February 2017. The stock has fallen about 10 percent this year, putting the market value at about \$2 billion. Analysts said the declines reflect doubts about the feasibility of the business, as well as a dim outlook on the energy sector. Meanwhile, the project's timeline has been pushed back one year, to start construction in 2019 and operations in 2023, as Tellurian waits on regulatory approval and courts international partners. Gentle also is scoping out gas fields which the company would buy to supply its LNG plant.

### **Small LNG hopeful in Texas says it has eight non-binding deals**

(Reuters; April 11) - Texas LNG has signed eight non-binding deals with potential overseas buyers of liquefied natural gas, the company's chief executive said April 11. They include five in China, two in Southeast Asia and one in Europe, said Vivek Chandra, CEO of Houston-based Texas LNG, declining to name the companies citing confidentiality reasons. The Chinese customers are a mix of large provincials, independent companies, and small local governments, he said speaking on the sidelines of the LNG Asia Pacific Congress in Singapore.

"In Southeast Asia, one is with one of the state national gas companies and the other one is more of an entrepreneurial project of developing an integrated gas-to-power

scheme,” Chandra said. Texas LNG would be built in Brownsville with a capacity of up to 4 million tonnes per year. The company, which still needs Federal Energy Regulatory Commission authorization, said it expects to make a final investment decision next year. Production from the first liquefaction unit could start in 2023, the company said. Texas LNG’s business plan is to charge a tolling fee to liquefy gas for customers.

## **Australia expects its LNG to sell at around \$8 through 2021**

(Platts; April 9) - The Australian government has revised up its forecast of the country's LNG export price for the current and next fiscal years, while trimming its expectations for export volumes. In a report released by the Department of Industry, Innovation and Science on April 9, Australia is now expecting its liquefied natural gas exports to average \$7.80 per million Btu in fiscal 2017-2018 (July-June), up from \$7.30 in the October-December report. It lifted its 2018-2019 forecast by \$1 to \$8.20.

For the first time in a year, the report also gave forecasts looking further out than a year ahead. It is expecting the \$8.20 price to be maintained in fiscal 2019-2020 and 2020-2021 before easing back to \$8 and \$7.90 the next two fiscal years. Australia, which is expected to overtake Qatar as the world's largest LNG exporter in 2019 with 88 million tonnes of annual capacity, is not immune from supply side-competition, the report said.

"While Australian LNG exports are projected to increase, the capacity utilization of Australian LNG projects is expected to edge down as supply-side competition increases over the next few years," the report said. It pointed to the major expansion of global capacity underway, with about half of all new capacity to come from the U.S. "By the end of 2019, all six U.S. LNG projects are expected to have commenced operations, bringing the combined nameplate capacity of U.S. LNG projects to 67 million tonnes per year." Russia is also expected to see capacity additions over the next few years.

## **CNOOC will auction LNG cargoes on Shanghai Exchange**

(Reuters; April 11) - China National Offshore Oil Corp. (CNOOC) will next week auction one or two cargoes of liquefied natural gas for delivery later in the year on the Shanghai Petroleum and Gas Exchange, the state-controlled company’s first such deal. The move comes as China looks to increase the availability of cleaner fuels and give factories that use gas a chance to lock in prices ahead of the winter heating season as the government aims to wean the nation off coal to reduce air pollution.

Gas shortages this winter caused chaos, cutting off supplies to industry and causing big spikes in prices. The pre-sale of the cargoes will be held on the exchange April 18 for delivery in July and November. An official at CNOOC said it is the first time the company has agreed to a forward sale of LNG on the exchange. Trading volumes on

the Shanghai Exchange, which was launched in early 2015, were pretty thin in the first two years but picked up late last year ahead of the severe gas crunch this past winter.

### **Demand from utilities puts pressure on U.S. natural gas stockpile**

(Reuters; April 9) - U.S. natural gas prices could rise in 2018 after utilities pulled the second biggest amount of gas from storage on record over the winter. That left total stockpiles about 20 percent below usual at the end of the heating season on March 31 and will require companies to add 16 percent more gas than usual into storage this summer just to get inventories back to normal levels before next winter.

Some analysts think the market is putting too much faith in rising production to refill inventories and is not worried enough about a projected increase in domestic demand and exports. The U.S. benchmark price for gas has averaged less than \$3 per million Btu since 2015 versus more than \$5 over the prior 10 years, and is expected to remain below \$3 through at least 2024 based on current futures trading.

U.S. utilities likely pulled 2.463 trillion cubic feet of gas from inventories in the winter, according to a poll of analysts, the most since the Polar Vortex of 2013-2014 and the second highest on record. If prices stay down over the summer, that would promote even more coal-to-gas switching and boost gas demand. Electric companies can switch between gas and coal depending which is cheaper. If the amount of gas in storage on Nov. 1, 2018, is below normal, a cold winter could cut inventories to below 1 tcf by the end of March 2019. That would be the smallest amount in storage since March 2014.

### **Debate ensues over directive for U.S. gas line decisions in 2 years**

(Bloomberg; April 11) - A push to shorten the Federal Energy Regulatory Commission environmental review timelines for gas pipelines could limit public and environmentalist involvement in the process, some energy specialists said. The FERC chairman signed the memorandum of understanding April 9, along with 11 other federal agencies. The memorandum, under the president's One Federal Decision policy, aims to limit federal environmental reviews of infrastructure projects to two years by setting timetables.

Some analysts and attorneys said speeding up the reviews could cut out public participation. For example, said Joel Eisen, who teaches energy law at the University of Richmond School of Law, FERC may just give the minimum amount of time for public comment at a particular stage of a project review, instead of providing more time to accommodate all perspectives. "This really appears to put a thumb on the speed and efficiency," said Susan Tierney, a senior adviser with the Analysis Group who was the Energy Department's assistant secretary for policy under the Clinton administration.

The memorandum reiterates FERC's obligations as the lead federal agency in charge of environmental reviews for interstate gas pipelines. It directs agencies to complete their reviews within two years "to the extent consistent with applicable law." It is directed against inertia, lack of communication and "foot-dragging" between agencies, said James Lucier, a managing director at Capital Alpha Partners, a policy research firm.

### **B.C. premier was told he could not legally block oil pipeline**

(Bloomberg; April 13) - British Columbia Premier John Horgan, who has vowed to use every possible means to thwart a Kinder Morgan oil pipeline expansion through his province to the coast, was told by legal advisers last year before taking office that blocking the project would be against the law. That hasn't stopped the 58-year-old former pulp mill worker from digging in to stop the C\$7.4 billion Trans Mountain project, sparking a national uproar and rebukes from Alberta and the federal government.

Kinder Morgan threatened over the weekend to walk away from the project that was approved by Canadian Prime Minister Justin Trudeau in 2016. That prospect has catapulted the contentious expansion into a symbol of fragile national unity as critics call B.C.'s obstruction of a federally sanctioned project an assault on the rule of law. "Failure is not an option," Canadian Finance Minister Bill Morneau said April 12. He said the federal government is in talks with Kinder Morgan to ensure the project is built.

Horgan's Environment Minister George Heyman said in a debate in the provincial legislature this week that during the transition before the new government took office in July, "it became clear, through listening to legal advice, that we did not have the authority to stop a project that had been approved by the federal government." Horgan has yet to publicly acknowledge that one of his campaign pledges is legally untenable. The expansion would move an additional 590,000 barrels a day of crude from Alberta's oil sands to a terminal near Vancouver.

### **First Nation chief criticizes environmentalists for pipeline opposition**

(Vancouver Sun; April 13) - Cancellation of the Trans Mountain oil pipeline expansion would cost B.C. First Nations hundreds of millions of dollars in benefits, job training, and employment and business opportunities, said Cheam Chief Ernie Crey, who has emerged as a leading voice for the First Nations that stand to benefit from the project. Crey has called out environmentalists for "red-washing" their fight against the C\$7.4 billion expansion of the pipeline between Edmonton, Alberta, and Burnaby, B.C.

"We have a vigorous environmental movement in B.C. and they have learned that they can use aboriginal communities to advance their agenda," he said. The Cheam are among 43 First Nations that have mutual benefit agreements with Trans Mountain —

reportedly worth more than \$300 million — that offer skills training for employment, business and procurement opportunities and improvements to local infrastructure. Primary contractors and First Nations can also jointly bid on pipeline work.

“Our young councilors negotiated with Kinder Morgan (pipeline owner) for two years to get that agreement for the Cheam,” Crey said. “This is no payoff, we negotiated hard.” B.C. Premier John Horgan, who is working to block the project on environmental concerns, could do real financial harm to First Nations in B.C. by frustrating the project, Crey said. He is a co-chair of the indigenous advisory and monitoring committee, a 13-member group funded by \$64 million in federal funds to monitor pipeline construction.

### **Oil companies use supercomputers to find more oil**

(Wall Street Journal; April 10) - Xukai Shen, a geophysicist working at BP, had a hunch he could solve a riddle that had vexed the company: Whether a lot of oil was hidden beneath a salt dome 7,000 feet underwater in the Gulf of Mexico. So, he asked to use the company’s supercomputer exclusively for two weeks to check it out. Using an algorithm, the 33-year-old with a Stanford Ph. D. harnessed the computer’s massive power last year to produce a clearer seismic image of what lay beneath.

The result: a potentially massive find. With a clearer picture of the area, BP estimated 200 million barrels of crude lay hidden in the Atlantis oil field, a region the company had been plumbing for decades. BP is now in love with beefy computer power — and it’s far from the only one in the oil patch. Italy’s Eni has built a computing facility the size of a soccer field outside of Milan, crediting its help in all of its most recent oil and gas finds. France’s Total recently upgraded its supercomputer, nearly tripling its computing power.

While big oil companies were early adapters of supercomputers, some have poured hundreds of millions into upgrades, and now possess some of the most powerful commercially owned computers on the planet. BP is in the middle of a five-year, \$100 million investment in its Houston supercomputer. It’s built a 15,000-square-foot room in a 3-story, flood-proof building to house the titan, which currently takes up about 50 percent of the space and has the computing power of about 50,000 iPhone 7s.

### **Nations vote to limit emissions from seaborne shipping industry**

(Bloomberg; April 13) - Most of the world’s nations agreed to a historic deal April 13 that for the first time will limit emissions from the global shipping industry. After a week of negotiations at a London meeting of the International Maritime Organization, a United Nations body, envoys from 173 countries agreed to cut emissions by at least 50 percent by 2050 from 2008 levels. Saudi Arabia and the U.S. both objected.

The accord is a significant step in the fight against global warming. Shipping, the only industry not included in the 2015 Paris climate agreement, would rank as the sixth-largest greenhouse-gas emitter if it were a country, according to the World Bank. If left unchecked, that share could account for 15 percent of global carbon emissions by 2050, a five-fold increase from today. Onboard emission-control equipment and cleaner fuels, such as liquefied natural gas, are among the options to meet the tighter standards.

Vessels typically burn heavy fuel oil, one of the cheapest but also among the dirtiest fossil fuels. The industry wasn't included in the Paris agreement because each country presented an individual plan to reduce its own emissions, while the seas were left out. The new agreement commits to pursuing emission cuts consistent with the Paris accord. Oil-producing nations including Saudi Arabia have expressed concern about the impact of the measures on their fuel supply business, while some countries have said controls could penalize those that are far from the world's main consumer hubs.