# Oil and Gas News Briefs Compiled by Larry Persily August 30, 2018

### Cheniere close to starting 5<sup>th</sup> train at Sabine Pass, 1<sup>st</sup> train in Texas

(S&P Global Platts; Aug. 28) - Cheniere Energy wants approval from federal regulators by next week to begin flowing gas to its fifth liquefaction train at its Sabine Pass LNG export terminal, as it prepares to begin production on that unit and the first train at its Corpus Christi, Texas, facility before the end of the year. Cheniere wants to stay ahead of schedule on its construction plans and maintain its growth as several other U.S. developers are expected to start up their terminals in the months ahead and into 2019.

Cheniere is targeting first production at Sabine Pass Train 5 and Corpus Christi Train 1 for the fourth quarter, similar to when Kinder Morgan expects initial in-service at its Elba Island terminal in Georgia. Sempra said earlier this month it remains on track for all three trains at its Cameron LNG facility in Louisiana to produce in 2019. Freeport LNG in Texas also is expecting to start up in 2019. When all eight sanctioned trains at Sabine Pass and Corpus Christi are in operation, Cheniere will have the capacity to produce 36 million tonnes of LNG a year — about 10 percent of the world's total capacity.

In a filing Aug. 27, Cheniere asked the Federal Energy Regulatory Commission for feed gas and refrigerants authorization for the Sabine Pass unit by Sept. 6. It was recently granted feed gas authorization for the Corpus Christi unit. Platts Analytics assumes that initial feed gas deliveries begin four months before exports begin, and subsequent trains receive feed gas deliveries three months before exports begin. Cheniere exported its first Sabine Pass gas from Train 1 in February 2016.

### FERC approves start of commissioning at Freeport LNG

(LNG World News; Aug. 27) - The Federal Energy Regulatory Commission on Aug. 27 approved commissioning of the first liquefaction unit at the \$13 billion Freeport LNG export project under construction in Texas. The project, led by billionaire Michael Smith, is being built at the existing liquefied natural gas import terminal on Quintana Island near Freeport. The first three trains are expected to start up between Sept. 1, 2019, and May 1, 2020, after delays due to flooding from Hurricane Harvey.

Each of the three liquefaction trains are designed to produce 5 million tonnes per year. The project is also developing a fourth liquefaction train with similar output. Almost 14 million tonnes of the plant's capacity has been contracted to Osaka Gas, Japanese utility joint-venture JERA, BP, Toshiba, South Korea's SK E&S, and commodity trader

Trafigura. The Freeport import terminal started operations in 2008 but has been mostly unused since the U.S. shale gas production boom killed off the need for gas imports.

### Big 3 shale basins account for 50% of U.S. gas production

(Houston Chronicle; Aug. 28) - Three regions are driving the growth of U.S. natural gas production while the Gulf of Mexico claims a smaller share of the total. The Energy Department reported that the Appalachian Basin in the Northeast, the Permian Basin in West Texas, and the Haynesville Shale straddling Texas and Louisiana have grown to account for almost 50 percent of domestic production, up from 15 percent in 2007. The Gulf of Mexico accounts for 3 percent of U.S. production, down from 12 percent in 2007.

Producers have shown greater interest in offshore projects in recent months but new wells remain pricier to drill than those onshore. U.S. gas production has surged during the past decade alongside oil production, which topped 11 million barrels a day last month for the first time. Tapping gas-rich shale rock with hydraulic fracturing has unleashed a cheap and steady supply of gas that has fed a petrochemical boom along the Gulf Coast and boosted domestic exports to Mexico and overseas.

U.S. natural gas production in the past several months has approached 100 billion cubic feet a day, roughly 10 percent higher than the same period last year. The Appalachian Basin, which includes the Utica and Marcellus shale basins in Pennsylvania and Ohio, accounted for 29 percent of total production last month. The Permian, meanwhile, accounted for an estimated 11 percent.

# PetroChina says Qatar, Australia, Russia will replace U.S. LNG

(South China Morning Post; Aug. 29) - Kunlun Energy, the listed natural gas distribution flagship of oil and gas giant PetroChina, will be able to offset the impact of an import tariff imposed by China on U.S. liquefied natural gas through additional purchases from Qatar, Australia, and Russia, its chairman said Aug. 29. "We are not worried, as we have signed new gas procurement contracts ... some are spot-market deals, some medium- and longer-term contracts," Ling Xiao told reporters.

"Our existing suppliers in Qatar, Australia, and Russia are also interested in raising supply volumes to us ... we are also in talks to secure new long-term contracts to replace older, higher-priced ones," he said. In addition, PetroChina's completion next year of a long-distance pipeline will bring new supply from Russia's Far East to Kunlun, which this year has signed 11 agreements to distribute gas to markets along the line.

U.S. LNG suppliers are most likely to resell the gas originally destined for China to Europe, whose procurement from the Middle East and Russia will fall, making room for

China to buy from the latter, Ling said. He also said the trade war between Washington and Beijing could result in a slowdown in China's manufacturing sector, which would reduce its gas demand.

#### LNG carriers on their way to China before tariff may take effect

(Bloomberg; Aug. 27) - At least two tankers carrying U.S. liquefied natural gas are en route to China as an escalating trade fight between the two countries threatens to weigh down their cargoes with pricey tariffs. The Rioja Knutsen and Gaslog Greece recently left Cheniere Energy's LNG export terminal in Louisiana and have China pegged as their destination, according to vessel-tracking data from Bloomberg. Rioja Knutsen is due in Tianjin on Sept. 1, while Gaslog Greece is expected to reach China on Sept. 19.

Although no date has been set, China may impose a 25 percent tariff on U.S. LNG early next month in retaliation for U.S. duties on \$200 billion of Chinese goods, which could start as soon as Sept. 7. The tankers' journeys highlight how presidents Xi Jinping and Donald Trump are willing to suffer domestic pain in order not to back down in the trade fight. Trump risks cutting off U.S. LNG exports from the world's largest importer of the fuel, while Xi risks adding higher costs to his drive to clear smog by burning less coal.

Even before the tariffs go into effect, PetroChina, a unit of state-owned China National Petroleum Corp., has considered halting purchases of U.S. gas temporarily and increasing buying from other nations, Bloomberg reported earlier this month. ENN Group, a private gas distributor and burgeoning LNG importer, doesn't plan to buy any U.S. gas this winter because of the trade tensions, according to two traders familiar with ENN's plans. In addition to the two carriers hauling LNG from Louisiana to China, several others are heading toward Northeast Asia without a final destination flagged.

### Sinopec lost \$235 million on LNG imports in first half of 2018

(S&P Global Platts; Aug. 28) - China's state-owned Sinopec was hit with an import loss of 1.6 billion yuan (\$235 million) in the first half of 2018 because of difficulty in passing along higher long-term oil-linked LNG contract prices to gas consumers in the country, a senior company official said Aug. 27. As crude prices recover, so do oil-linked LNG contract prices. Platts estimates LNG under such contracts could have averaged about \$10.40 per million Btu in the first half of the year, up from \$7.70 a year earlier.

Sinopec imported 3.5 million tonnes of LNG in the first half of 2018, largely from oil-linked contracts it signed with Papua New Guinea LNG in 2009 and Australia Pacific LNG in 2011. "Term LNG prices were agreed when the oil price was high," Sinopec CFO Wang Dehua said during Sinopec's briefing. Losing money on gas imports is not unusual for China's oil and gas companies. China National Petroleum Corp., the parent

company of PetroChina, lost \$1.68 billion on gas imports in first half 2015. In the first nine months of 2017, PetroChina lost \$2.6 billion on imported LNG and pipeline gas.

Government price controls make it hard for importers to recover their costs. But Sinopec is not deterred. "We will expand our LNG terminal capacity to over 14 million tonnes per year in the future," said Sinopec Chair Dai Houliang. Currently, Sinopec has two LNG terminals with a combined capacity of nearly 6 million tonnes per year. Sinopec also is planning to boost its domestic gas production to 1.16 trillion cubic feet a year by 2020 (equivalent to 24 million tonnes of LNG), 20 percent above its 2018 production target.

#### China says gas supply must be ensured before more coal conversion

(Reuters; Aug. 28) - China will make sure it has enough natural gas before forcing more residents to stop using coal for heating this winter, state media said Aug. 29, to try to avoid a repeat of the shortages that hit parts of northern China last winter. To meet its tough air quality targets for 2017, China launched a campaign last October aimed at curbing industrial output, restricting traffic and cutting coal use in 28 northern cities known for their heavy smog.

But as authorities throughout the region rushed to convert coal-fired heating boilers to cleaner-burning but scarcer gas, some villages lacking supplies and infrastructure were left without heating during the freezing winter. Officials were subsequently accused of adopting an overzealous one-size-fits-all approach to battling smog, and the government promised to learn from its mistakes.

The Communist Party newspaper People's Daily cited China's Vice Minister of Finance Liu Wei as saying that future attempts to convert coal-fired boilers to gas must secure a "matching supply source" before proceeding. Cities must sign winter supply contracts before going ahead this year and must also strictly control the construction of new industrial gas-consuming projects and improve storage facilities, the paper said, citing a recent cross-ministerial meeting to prepare for the coming winter's anti-smog efforts.

# Cost for coal-fired power hits record high in South Korea

(Yonhap news agency; South Korea; Aug. 27) - The cost of coal-fired power in South Korea hit a record high this year, data showed Aug. 27, a cause for alarm in a country where coal is the biggest source of power generation. Records from the energy industry and the Electric Power Statistics Information System put the average coal-fired power generation cost at 52.64 won (US\$0.047) per kilowatt-hour, 10.5 percent higher than last year and a 50 percent boost from 2016 rates.

Industry officials attributed the rising cost to the supply drop from major producing countries like Australia. What was priced at \$57.50 per ton in 2015 now costs \$101.40, data showed. As of the first half of the year, 41 percent of South Korea's generated power came from coal, 28.8 percent from liquefied natural gas, and 21.5 percent from nuclear reactors.

The cost difference between coal-fired power and LNG has been narrowing, according to the data. "If you consider taxes and the environmental burden, coal is not a cheap source of energy," an industry official said. "We need a policy shift so that we can establish an appropriate portfolio using the four energy sources: coal, (nuclear) reactors, LNG, and renewables."

#### New Russian gas line to Europe coated in politics

(Bloomberg; Aug. 27) - A planned new gas pipeline into Europe from Russia is shaking up geopolitics. Nord Stream 2, as it's called, worries leaders in Eastern Europe, has stirred the ire of U.S. President Donald Trump and has put German Chancellor Angela Merkel on the hot seat. The planned 764-mile undersea pipeline that will carry gas from fields in Russia to the EU network at Germany's Baltic coast will double the capacity of an existing undersea route — the original Nord Stream — that opened in 2011.

Russia's Gazprom owns the project, with Shell and four other investors including Germany's Uniper and Wintershall providing half of the 9.5 billion euros (\$11 billion). A Swiss unit of Gazprom has received environmental and construction permits from Germany, Finland, and Sweden but has had trouble getting approvals from Denmark. (The pipeline would cross the economic zones of those four nations plus Russia.) The company may reroute the line away from Danish waters, eliminating the legal hurdle.

Dredging has started and the company plans to begin putting sections of pipe on the seabed in the next few weeks. It's due for completion late 2019, a target that looks "optimistic," said Bloomberg Intelligence analysts. The new line will allow Russia to bypass Ukraine, and will deny gas transit fees to Ukraine, Poland, and Slovakia on the original Nord Stream route. Trump has said Nord Stream 2 would make Europe "more susceptible to Moscow's coercion" and more dependent on Russian gas — at the same time as the growing U.S. liquefied natural gas industry wants to export to Europe.

# Venezuela will sell gas to Trinidad LNG plant

(Bloomberg; Aug. 26) - Trinidad and Tobago will continue to ship liquefied natural gas all over the world with a little help from Venezuela. President Nicolas Maduro and Trinidad and Tobago Prime Minister Keith Rowley signed a deal Aug. 25 where Trinidad will purchase gas from Venezuela's prolific Dragon Field, state-run energy company

Petroleos de Venezuela said in a tweet. Under the terms of the agreement, 150 million cubic feet of gas will be supplied every day for the LNG plant.

The deal has long been in the making and will throw a supply lifeline to Trinidad, which has seen its gas output decline in recent years. It's also good news for Shell and BP, each of which own stakes in the four liquefaction trains at the Atlantic LNG facility in Trinidad. The plant started operations in 1999. Trinidad is the world's seventh-largest exporter of LNG, according to the BP Statistical Review.

#### India launches online booking website for gas pipeline capacity

(Bloomberg; Aug. 28) - India's largest gas pipeline operator has invited users to book surplus network capacity online as the country prepares to create a distribution hub that sets benchmark prices. State-run GAIL India, which controls 70 percent of the nation's network, on Aug. 27 launched a website for online bookings of pipeline capacity to ship gas across the country. GAIL, with 7,084 miles of pipelines, is investing 250 billion rupees (\$3.6 billion) to add 3,000 miles, Chairman Bhuwan Chandra Tripathi said.

Greater sharing of infrastructure will allow quicker trading and movement of gas supplies and boost utilization of GAIL's pipelines. India, home to some of the world's most polluted cities, is seeking to cut emissions and its oil import bill by doubling the share of gas in the energy mix to 15 percent. "This is going to pave the foundation for the gas hub," Tripathi said. "The online booking allows transparent and hassle-free access ... and pushes the country toward a gas-based economy."

GAIL already has more than 100 customers using its pipeline network on an openaccess basis. Once the gas hub is operational, it will increase utilization of the company's pipelines, which are operating at half capacity, Tripathi said. The Petroleum and Natural Gas Regulatory Board, which has been tasked with setting up the gastrading exchange, expects the hub to be operational by December.

# Egypt attracts foreign investment by paying higher natural gas prices

(Wall Street Journal; Aug. 27) – Egypt is taking an unconventional approach toward becoming the Middle East's next big energy exporter: Its citizens are footing the bill. President Abdel Fattah Al Sisi's government has coaxed some big oil companies back to Egypt in part by paying foreign companies more for the natural gas they produce and by raising the price of electricity and gas for consumers. In June electricity prices rose 26 percent overnight while natural gas prices rose as much as 75 percent.

As a result Shell, BP, and Eni have invested billions of dollars in Egypt in recent years, including the Mediterranean's biggest gas field. Egypt hopes to be a net exporter of gas

by the end of 2018, after mostly halting LNG exports a few years ago. However, the country's large debts to oil companies, its budget deficit and its International Monetary Fund loan conditions have forced Egypt to raise energy prices for the public. Rising gas and electricity prices have contributed to resentment among ordinary Egyptians.

After decades of decline, the energy industry received a jolt in recent years with huge new gas discoveries. But the discoveries will not be enough to solve Egypt's financial problems, analysts said. The country is deeply in debt with the state owing 86 percent of its gross domestic product to lenders, according to the central bank. During the crisis the government diverted gas supplies to address the local shortage and, in the process, mostly shut down its LNG trade, which the country would like to restart.

#### U.S. at risk of winter price spike due to below-average gas storage

(Bloomberg opinion; Aug. 27) - With Labor Day looming it's time to start thinking about winter. That is, if you follow that battered, crushed, flayed corner of the U.S. energy market called natural gas. America is awash in the stuff. Production will jump 10 percent this year, according to the Department of Energy, hitting a record — just ahead of probably another record in 2019. Export terminals can't be built fast enough. Though for all the gas coming out of the ground, there's a surprising shortage of it in storage.

We're only a few months away from reminiscing about the heat instead of complaining about it, and the gas storage tank looks light. Stocks are 20 percent below the five-year seasonal average, something that's only happened in three other periods since the beginning of 1999. Ordinarily, this would light a fire under gas prices. But, something has put the market in a coma; futures have traded below \$3 per million Btu for most of the year. That something is associated gas, the stuff that gets produced alongside oil and which is spewing out of the Permian shale basin, among others.

Still, with storage having dropped below even the minimum level expected for August and winter not far off, it's striking that prices are so moribund. The market is implicitly taking the view that drillers can bring on enough new gas supply to fill the gap. It sets up a risky dynamic in the gas market this winter. Producers can respond quickly to higher prices, and there was about six months' worth of drilled but uncompleted wells in the Appalachian region at the end of July. But quick isn't the same as instantaneous. Throw in bottlenecks affecting production, and there's a risk of gas price spikes this winter.

# Warming temperatures, melting sea ice benefit Arctic shippers

(Bloomberg; Aug. 28) - A new trade route for energy supplies is opening up north of the Arctic Circle as some of the warmest temperatures on record shrink ice caps that used

to lock ships out of the area. This year is likely to rank among the top 10 for the amount of sea ice melting in the Arctic Ocean after heat waves across the northern hemisphere this summer. While alarming to environmentalists concerned about global warming, ship owners carrying liquefied natural gas and other goods see it as an opportunity.

Their cargoes have traversed the region for the first time this year without icebreakers, shaving days off shipping times. More navigable waters are a boost for Russia's effort to expand its reach in the gas market. It also helps trim shipping costs for LNG, benefiting buyers and traders of the fuel. But while shorter shipping journeys reduce emissions, environmentalists are concerned that the traffic will add to the black carbon — particles of pure carbon — settling in the snow from ship smokestacks. When that soot darkens the ice, it speeds up the warming process by absorbing more of the sun's energy.

Scientists are seeing a rapid change in the Arctic. The Bering Sea between Alaska and Russia lost about half its ice coverage during a two-week period in February, while the most northern weather station in Greenland recorded temperatures above freezing for 60 hours that month. The previous record was 16 hours. And it hit an unprecedented 86 degrees Fahrenheit north of the Arctic Circle on July 30 in Banak, Norway.