

# Oil and Gas News Briefs

## Compiled by Larry Persily

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#### **Global LNG trade grew 10% last year; Qatar No. 1, Australia No. 2**

(Platts; June 13) - Global LNG trade grew 10.3 percent in 2017 to 13.89 trillion cubic feet of gas, about 290 million tonnes of LNG, the fastest growth since 2010, BP said in its latest annual statistical review published June 13. Strong production growth — aided by start-up of new liquefaction trains in Australia and the U.S. — was met by strong demand growth from China, which accounted for almost half of the global expansion. China's LNG imports totaled 38.7 million tonnes last year, up 47 percent from 2016.

Qatar remained the main global LNG supplier, with exports of 76 million tonnes, while the U.S. saw its exports grow to 12.8 million tonnes, quadruple its 2016 volume as Cheniere Energy expanded the capacity at its Sabine Pass, La., terminal. Australia also saw its exports rise strongly to almost 56 million tonnes last year, making it the world's second biggest LNG supplier. Projects currently under construction in the United States, Australia, and elsewhere will add an additional 102 million tonnes of annual LNG production capacity by 2022, according to the U.S. Energy Information Administration.

BP chief economist Spencer Dale said that while market observers had predicted an LNG supply glut, given the wave of new supply projects that came online in the past few years, the result instead has been periods of unsustainably low prices rather than a build-up of idle capacity. "There has in fact been an LNG glut of sorts in recent years, but this has resulted in periods of unsustainably low prices rather than idle LNG capacity," Dale said.

#### **Qatar says it'll be ready with new LNG supply to meet demand in 2024**

(Platts; June 11) - The global LNG market is not currently oversupplied and is expected to tighten beyond 2024, Qatar's Oil Minister Mohammed al-Sada said June 11. That post-2024 expectation coincides with Qatar's timeline to add 23 million tonnes per year of LNG export capacity. Sada said there could be a small LNG supply surplus in the early 2020s, but the market would remain effectively balanced until 2024. "There is no LNG supply glut."

"There may be a surplus of only 10 million tonnes per year of LNG in the early 2020s, [but] in a 350-million-tonnes-per-year LNG market, this means that the market is practically in balance," he said. Qatar currently supplies about a quarter of the world's LNG. "[Qatar] intends to remain the global leader in LNG supplies in the future as well,"

Sada said, with its planned 30 percent increase to 100 million tonnes per year "to be fully operational by 2024."

### **Cheniere wants to start commissioning at Corpus Christi LNG**

(LNG World News; June 13) – Cheniere has filed a request with the Federal Regulatory Energy Commission to introduce fuel gas into the first liquefaction train at its Corpus Christi LNG project so that it can start commissioning of the terminal on the Texas coast. The first stage includes two liquefaction trains, two storage tanks and two loading jetties. Cheniere recently gave the go-ahead to start construction of a third train in the project's second stage of development, at a reported cost of \$2.5 billion.

Each of the three trains will provide production capacity of 4.5 million tonnes of LNG per year. Trains 1 and 2 are scheduled to go into service next year. Cheniere also is considering a third stage of development at Corpus Christi, which would include a third storage tank and a series of several smaller, modular liquefaction units. Depending on market demand, a full Stage 3 build-out of additional liquefaction units could boost the project's total capacity to 23 million tonnes per year.

Houston-based Cheniere's first LNG terminal, in Sabine Pass, La., started shipping cargoes more than two years ago and now has four liquefaction trains in production, with a fifth unit under construction. In total, the five LNG trains will provide almost 23 million tonnes of annual capacity.

### **Energy Department study points to economic benefits of LNG exports**

(Platts; June 12) - The U.S. Department of Energy is embracing the idea in a study released June 12 that liquefied natural gas exports will provide broad economic benefits over the next two decades, because even if domestic gas prices rise they are starting low and will remain affordable. The conclusion reflects the effect on prices from the abundance of U.S. shale gas. New technology has allowed producers to unlock vast resources in the Appalachian Basin and, more recently, the Permian Basin.

Although rising LNG exports likely will drive up domestic gas prices, the report said, there would be benefits of "higher overall economic performance in terms of gross domestic product, household income and consumer welfare." The latest study, which is the fifth time the department has done this analysis, said the most likely case — which has a probability of 47 percent — calls for U.S. benchmark gas prices to range from \$5 to \$6.50 per million Btu in 2040.

There is a 22 percent probability that prices will range from \$3 to \$4 in 2040, and a 3 percent chance of prices at \$10 to \$13, the study said. The study said the likely range

of LNG exports in 2040 will be 8.7 billion to 30.7 billion cubic feet of gas per day. The range is so broad because of uncertainty in the market, as some U.S. LNG developers have delayed final investment decisions while they struggle to secure firm long-term contracts with buyers. Some lawmakers and manufacturers have argued that a jump in LNG exports would strain supply and drive up prices, hurting consumers.

## **Exports could help provide market for Northeast shale gas**

(Platts; June 11) - Natural gas pipeline capacity additions in the U.S. Northeast production area have yet to spur the production growth the market was expecting, making it difficult to fill the infrastructure during certain periods, according to S&P Global Platts Analytics. The perspective, offered during the first day of a gas conference in Boston, comes as industry leaders analyze Appalachian Basin supply, demand and pricing fundamentals heading into the next decade.

Total Northeast gas production reached 27.3 billion cubic feet per day on several days toward the end of December. Since then, pipelines have added 3 bcf a day of new capacity in the shale region. But despite the additional pipeline capacity, total Northeast gas production averaged 27.2 bcf a day in May and is averaging 27.3 bcf a day thus far in June, data compiled by Platts Analytics show. Rather than spurring production growth, additional pipeline capacity has reshuffled the gas among existing lines.

One issue is whether liquefied natural gas export growth will encourage Marcellus and Utica shale producers to drill more. The growth of LNG exports could help, depending how many terminals are completed. "A big increase is coming. The question is how much more is out there and how much more is needed," said Meera Bagati, manager of market analysis for NextEra Energy Resources. Some LNG developers have delayed final investment decisions as they struggle to win firm long-term contracts with buyers.

## **Mozambique LNG partner warns project must avoid overruns**

(Financial Times; London; June 10) - Mozambique is ready to fill a looming gap in global supplies of liquefied natural gas but must avoid the cost overruns that have plagued Australian LNG projects, said the chief executive of Galp, a Portuguese gas distribution company with a 10 percent stake in the Coral South offshore gas project in Mozambique. Carlos Gomes da Silva said the "next decade should be the Mozambique decade," as the east African country is set to start producing its first LNG in 2022.

Galp and partners Eni of Italy and Korea Gas last year gave the go-ahead for the \$8 billion development plan for the offshore gas field and floating liquefaction terminal with the capacity to make 3.4 million tonnes of LNG per year. Coral is part of the wider Mamba gas complex, which Eni is planning to develop in phases with ExxonMobil,

including a much larger onshore liquefaction terminal. “Coral puts Mozambique on the map, but Mamba will be the anchor,” Gomes da Silva said.

Mozambique is seen as the next big frontier for LNG development after a wave of new production from Australia. “We have to make Mozambique different to Australia,” said Gomes da Silva, referring to the multiyear delays that left projects such as Chevron’s Gorgon and Wheatstone LNG terminals billions of dollars over budget. “We have to be competitive with [LNG from] the Middle East, North Africa and the United States,” he said. “We’re in a good position but we have to execute it well.”

### **Terrorist attacks prompt U.S. warning about Mozambique**

(Reuters; June 11) - The U.S. embassy in Mozambique said Americans should consider leaving a northeastern district close to a major gas field as imminent attacks are likely after suspected Islamist militants beheaded 10 people and killed seven others since May. Any sign of militant activity is a concern for the country’s fledgling gas industry. The area around the town of Palma near the Tanzanian border where the attacks took place is close to one of the world’s biggest untapped offshore gas fields.

More than \$30 billion is expected to be invested in Mozambique’s gas sector to build capacity to produce 20 million tonnes per year of LNG, with the first exports to start by 2022. In addition to an \$8 billion offshore project led by Italy’s Eni, Anadarko Petroleum is seeking to raise \$14 billion to \$15 billion from banks and export credit agencies for the first phase of its huge onshore liquefied natural gas terminal, sources said in May.

“We take very seriously any potential threat to the safety of our employees and we continue to closely monitor the situation in the Palma area,” Anadarko said in an email. Mozambique has little history of militant activity and police are reluctant to ascribe the attacks to Islamists. The gas could enable the country to become a major LNG exporter and attain middle-income status. Currently it is one of the world’s poorest countries.

### **Cameroon in line for its second floating LNG project**

(All Africa; June 11) - The government of Cameroon and the privately owned British company New African Global Energy (New Age) have reached an initial agreement, paving the way for development of the Etinde field and a liquefied natural gas export project offshore Limbe in the southwest. Etinde would be the second Cameroon LNG project, after a first-of-its-kind floating LNG plant off the coast of Kribi went fully operational this year.

New Age and the government signed the gas convention June 8. The agreement confirms and codifies Cameroon’s commitment to the project. Construction of the

floating liquefaction vessel will begin next year in shipyards in China with work expected to take four years. The project's production capacity is planned for 1.3 million tonnes per year of LNG and about 4,000 barrels a day of condensate. No cost estimate was provided by the partners.

## **Floating liquefaction units gain in popularity**

(LNG World Shipping; June 13) - The transfer of a cool-down cargo to Shell's 1,600-foot-long floating LNG production vessel Prelude and the dispatch of a second cargo from the FLNG Hilli Episeyo offshore Cameroon in recent days signal that the era of offshore liquefaction has taken hold. The pair join the Petronas-operated PFLNG Satu, which loaded its first cargo from the Kanowit gas field off the coast of Malaysia in March 2017, as the pioneering trio of FLNG vessels.

Several more floating production projects are either under development or at a relatively advanced preparation stage in Mozambique, a second unit for Malaysia, and one possibly stationed in Iranian waters. Floating liquefaction units avoid the need for undersea gas pipelines to an onshore liquefaction plant. And because FLNG vessels are constructed at specialized facilities, the labor cost and permitting issues associated with the construction of shore terminals can be avoided.

The Hilli Episeyo in Cameroon started out life as a 1975-built LNG carrier. Following four decades of work shuttling LNG cargoes, Golar sent the Moss spherical tank vessel to the Keppel yard in Singapore in 2015 for conversion to its new role. Hilli Episeyo has made Cameroon the world's 20th LNG exporting country. Shell expects its Prelude project to start production offshore Australia later this year. It's the largest of the floating liquefaction facilities to date, with capacity to make 3.6 million tonnes of LNG per year.

## **China moving ahead with plan to merge pipelines into one company**

(Bloomberg; June 11) - China's push to eradicate smog by using more natural gas is set to get a boost as it pushes ahead with a plan to merge under one company a national pipeline network that would unify transport and investment decisions. Regulators are aiming to announce a decision before winter to combine oil and gas pipeline assets owned by its three state energy giants, worth as much as 500 billion yuan (\$78 billion), under a new national operator, according to sources with knowledge of the matter.

The move, under discussion since at least 2014, would reinforce President Xi Jinping's commitment to overhaul state-owned enterprises and streamline industrial capacity. It would also be a boost for efforts to use more gas instead of coal to cut pollution. The pipeline overhaul is among measures to ensure open access to the assets operated mainly by state-owned giants — China National Petroleum Corp., China Petrochemical

Corp., and China National Offshore Oil Corp. That could improve supply efficiency to meet booming demand and help ease gas supply crunches.

“If you look at every liberalized gas market, there is a clear separation of pipeline ownership and gas supply,” said Sanford C. Bernstein & Co. analyst Neil Beveridge. Under the current system, independent producers may find it hard to buy space at an affordable rate on a pipeline owned by their upstream competitors, said Lu Wang, a Bloomberg Intelligence analyst in Hong Kong. For consumers, they’re stuck buying from the company that hooked the pipeline up to them, she said. If pipeline assets could be separated from the majors, then “all gas will be treated equal,” Wang said.

### **China delivered 19 million tonnes of LNG by truck last year**

(LNG World Shipping; June 12) - The average utilization rate of China’s 17 LNG receiving terminals reached a healthy 66 percent in 2017, as LNG imports surged to 37.9 million tonnes, a 48 percent jump over 2016. But the regasification volume at those terminals was about 10 million tonnes less than the import volume because much of the country’s imported LNG was loaded into insulated tanks and trucked to the final customer. China is making up for its comparative lack of gas pipeline and storage infrastructure by utilizing a fleet of 10,000 LNG road tankers and 40-foot portable tanks.

The fleet expanded by about 20 percent in 2017, keeping ahead of the country’s overall demand for gas which rose by 15 percent year-on-year in 2017. China’s road tanker and 40-foot-tank fleet lifted about 19 million tonnes of LNG last year. Some 9 million tonnes were produced at China’s small-scale domestic liquefaction plants. The other 10 million tonnes were imports, regasified at the final user. The growth is not expected to slow anytime soon. Wood Mackenzie expects the LNG tanker fleet to continue growing.

A major market is LNG as a transport fuel. Government policy to reduce pollution has encouraged the use of LNG to power heavy-goods vehicles and larger municipal and commercial vehicles. Approximately 96,000 LNG-powered vehicles were manufactured in China in 2017, a leap of almost 400 percent on the previous year’s 19,600 vehicles.

### **Agency predicts record U.S. gas production in 2018 at 81 bcf a day**

(Platts; June 12) - The U.S. Energy Information Administration on June 12 estimated record dry natural gas production of 81 billion cubic feet per day in 2018, which could help pave the way for LNG exports to reach 3 bcf a day in 2018 and 5 bcf in 2019. U.S. LNG exports averaged just under 2 bcf a day in 2017. "Assuming the forecast holds, U.S. exports of LNG will more than double over a 24-month period," the agency said.

In addition, EIA's June outlook increased the forecast for dry gas production this year, agency administrator Linda Capuano said. "We now expect production to increase by more than 10 percent from 2017, reaching a record 81 bcf a day in 2018," she said. The EIA expects U.S. natural gas benchmark prices to move slowly from \$2.84 per million Btu this quarter to about \$3.10 in 2019.

Regarding gas storage, EIA said the coldest April in the past 21 years resulted in a delayed start to this year's summer refill season. "Working natural gas stocks as of June 1 were [1.817 trillion cubic feet], 31 percent lower than the year-ago level and 22 percent lower than the five-year (2013-17) average for that time of year," the EIA said.

### **More exports could help relieve Permian oil and gas glut**

(OilPrice.com; June 13) - The bottlenecks in the Permian have created a widening chasm between prices for oil from the region versus other U.S. production. Oil output continues to soar in West Texas, despite the fact that the region's pipeline takeaway capacity is tapped out. The discount has surpassed \$10 per barrel. "We see further potential downside risks," Bank of America Merrill Lynch said in a note.

The crude bottleneck could be temporary, however, with a series of new pipelines set to come online next year. That could narrow the discount and perhaps even eliminate it. Bank of America Merrill Lynch goes further, arguing the push to export more U.S. crude could open up a premium for Permian oil. "Beyond 2019, excess Permian takeaway capacity could ... pull barrels directly to the U.S. Gulf Coast for export," the bank said.

But as the oil bottleneck looks set to be resolved in the next 12 to 18 months, there is still the matter of finding an escape route for all of the gas produced in the Permian. Gas production has skyrocketed in tandem with oil — up more than 60 percent over the past decade. Just as with oil, producers are struggling to find capacity on the region's gas pipelines. Much of the gas will probably need to be exported, said Bill Ordemann, executive vice president at Enterprise Products Partners.

### **Spending on renewables exceeds coal, gas and nuclear**

(Wall Street Journal; June 11) - Global spending on renewable energy is outpacing investment in electricity from coal, natural gas, and nuclear power plants, driven by falling costs of producing wind and solar power. More than half of the power-generating capacity added around the world in recent years has been in renewable sources such as wind and solar, according to the International Energy Agency.

In 2016, the latest year available, \$297 billion was invested in renewables — more than twice the \$143 billion spent on new nuclear, coal, gas, and fuel oil power plants, the IEA

said. The Paris-based organization expects renewables will comprise 56 percent of net generating capacity added through 2025. Once supported overwhelmingly by cash incentives, tax credits, and other government incentives, wind- and solar-generation costs have fallen consistently for a decade, making renewable-power more competitive.

Renewables have fallen so far that “wind and solar now represent the lowest-cost option for generating electricity,” said Francis O’Sullivan, the Massachusetts Institute of Technology’s Energy Initiative research director. “It is just easier to get renewables built,” said Tony Clark, a former member of the Federal Energy Regulatory Commission. “There is that much less opposition to it.” Last year, the percentage of electricity from renewable sources reached 12.1 percent, more than double that of a decade earlier. These figures don’t include electricity from large hydroelectric dams.

### **Saudi Arabia floats ideas with OPEC for oil production increase**

(Bloomberg; June 13) - Saudi Arabia has floated several plans for boosting oil output to its fellow OPEC members as the kingdom seeks ways to narrow differences with Russia and the rest of the cartel, according to people briefed on the discussions. The ideas, discussed informally ahead of next week’s meeting in Vienna, comes as Riyadh tries to rally support for a production increase in the face of staunch opposition from Iran, Venezuela, and Iraq, and pressure from Washington to boost output.

Russia, the leading member of a group of countries allied with OPEC, has proposed a deal that would put an additional 1 million barrels a day into the market as quickly as producers could ramp up production, according to a person familiar with the country’s thinking. Often oil ministers float ideas informally to gauge support, only to change tack as negotiations progress. It’s unclear whether Riyadh would press ahead with any of the plans it has suggested when ministers meet next week.

Saudi Arabia is mulling different scenarios to raise production over the coming months by between 500,000 barrels and 1 million barrels a day. Saudi Arabia and several other OPEC members, including the United Arab Emirates and Kuwait, and non-OPEC nation Oman, would prefer a gradual production boost to avoid upsetting the oil market. Saudi Arabia last month signaled it was ready to boost output in the second half of the year to ease consumer anxiety about higher prices.

### **Work continues on another U.S. gas pipeline to Mexico**

(Reuters; June 13) - Canadian energy company Enbridge said it started construction of the offshore border crossing section of its US\$1.6 billion Valley Crossing gas pipeline between Texas and Mexico, according to a federal filing made available June 13. The 170-mile Valley Crossing project is designed to carry up to 2.6 billion cubic feet per day



of gas from Texas to help Mexico meet its growing power needs as generators there shift away from fuel oil and more expensive imported liquefied natural gas.

The project has been under construction since April 2017, according to the Enbridge website. In May Enbridge said it had “substantially completed” the onshore part of the pipe and was working on the offshore part to meet a fourth quarter 2018 in-service date. Valley Crossing will connect in the Gulf of Mexico to the Sur de Texas-Tuxpan pipeline under construction by a joint venture between units of TransCanada and Sempra Energy. Once complete, it will be the biggest gas pipeline between the two countries.

There are already about 20 pipelines that can move gas from the United States to Mexico, with a total capacity of almost 11 bcf a day, according to U.S. energy data. Analysts have said, however, that constraints on the Mexican side of the border have so far limited a big increase in U.S. pipeline exports. Since the start of the year, U.S. exports to Mexico have averaged 4 bcf a day.