

Oil and Gas News Briefs

Compiled by Larry Persily

July 12, 2018

Nigeria LNG signs engineering contracts for \$12 billion expansion

(Bloomberg; July 11) - Nigeria is taking the first steps to expand its liquefied natural gas production capacity by a third, outlining a \$12 billion program to help it keep up with the world's top producers. Nigeria LNG, a venture of the state-owned oil company and three oil majors, has signed engineering and design contracts to expand the country's six-train liquefaction facility, which shipped its first LNG in 1999. Contractors for the expansion include Italy's Saipem, U.K.-based TechnipFMC, and Japan's Chiyoda. A final investment decision could be taken late this year.

The plan would boost annual production capacity to 30 million tonnes by 2024 from 22 million tonnes. Total, a Nigeria LNG shareholder, last week said the expansion is "very important" as the market is "booming again." Qatar, Australia, and the U.S. will probably account for 60 percent of global LNG supply by 2023, according to the International Energy Agency. Nigeria, which supplied 7 percent of the world's LNG last year, doesn't want to miss out. Nigeria supplied 24 countries with LNG in 2017, up from 21 in 2016.

Keeping up will require a huge investment. Train 7 will cost as much as \$6.5 billion to build, with an additional \$5 billion to be spent on wells and pipelines needed to supply the plant. Nigeria LNG on July 11 signed several front-end engineering and design contracts. The work will take about eight months, Guido D'Aloisio, managing director of Saipem Contracting Nigeria, told reporters at an event in London.

Wind and solar starting to compete on price with natural gas

(Bloomberg; July 9) - The natural gas industry is on a mission to prove it can keep up with the green energy industry, whose price reductions are starting to become a competitive threat to fossil fuels. Gas and oil producers have slashed overhead by a third since 2014 and are finding deeper reductions harder to come by, according to energy consultants Wood Mackenzie. That's spurring them to rewrite supply contracts, build mobile liquefied natural gas terminals and take more steps like fixing leaky pipes.

Keeping gas affordable is a crucial ingredient of the world's effort to shift toward less-polluting forms of energy. Gas costs have to fall as cheaper wind turbines and solar panels push utilities to scale back their most-expensive traditional power plants. "A lot of these LNG projects are huge. You need to make them cheaper," said Jens Okland,

vice president of marketing, midstream and processing at Norway's Equinor, formally known as Statoil. Gas had plenty of competition even before the rise of renewables.

To compete with coal in Asia, gas imports need to land there at \$4 to \$6 per million Btu — about half the cost of reported contracts. In Germany, solar and onshore wind power are already comparable to gas based on the value of electricity generated over their lifetime, Bloomberg New Energy Finance data show. Cost expectations are already influencing energy policy as governments decide how to balance supply needs against what voters are willing to pay. Companies are trying to bring down some expenses by focusing on better-value gas projects, according to Sanford C. Bernstein analysts.

Chinese tariffs would be a major setback for U.S. LNG exports

(Bloomberg columnist; July 10) - In placing retaliatory tariffs on certain goods and products, America's trade partners have signaled how well they understand politics. By targeting products from regions supportive of President Donald Trump, they clearly hope to generate pressure to lift U.S. tariffs or even create broader political problems for the president. But China is sending much more interesting — and complex — messages with its indication that it may place retaliatory tariffs on U.S. energy exports.

Since the 1990s, China has made it a priority to secure adequate energy imports to fuel its economic growth. Acquiring this energy was, and to some extent still is, a major driver of China's foreign policy. The fact that China now feels comfortable creating obstacles to the acquisition of some energy from abroad suggests several things. First, and most obviously, China has assessed that tariffs on this energy trade will cause the U.S. more pain than they will cause China. This is likely an accurate evaluation.

In imposing tariffs on energy trade, China could not only deprive the U.S. of a lucrative trade, but also have lasting effects on the development of American LNG — something the Chinese likely correctly assess matters a great deal to Trump. The U.S. is now at a point when investment decisions must be made to build new LNG export facilities if U.S. exports are going to grow in the coming years. Given that China is the fastest-growing market, tariffs that make U.S. LNG uncompetitive could complicate life for the industry.

The Chinese may have decided they are not comfortable relying on the U.S. as a source of one of their most strategically important commodities. Just six weeks ago, the Brookings Institution predicted that a burgeoning trade in gas between China and the U.S. could be a lubricant to bilateral relations. It certainly seems like a long shot today.

Trump, China both order tariffs on trade that does not exist

(Bloomberg; July 11) - Natural gas, the cleanest and fastest-growing fossil fuel, has found itself in perhaps the oddest corner of the multibillion-dollar trade war between the world's two biggest economies. When the U.S. added duties to \$34 billion of Chinese goods last month, China retaliated with its own tariff list that included piped natural gas from the U.S. And when President Donald Trump added \$200 billion worth of items to the possible U.S. tariff list on July 10, he included liquefied natural gas from China.

Of course, neither trade flow exists. China is the world's second-biggest importer of LNG and doesn't have any liquefaction plants capable of exporting the fuel. And, unless someone built a 6,200-mile subsea pipeline that everyone was hitherto unaware of, the U.S. doesn't export any piped gas to China. Gas isn't the only item that's being sucked incongruously into the trade dispute. For example, the U.S. included live trout in the most recent list of tariffs, even though the fish apparently hasn't been shipped alive from China to the U.S. since at least 1992, according to U.S. Census Bureau trade data.

Imports from China of radios and tape players for cars are also on Trump's list, yet they haven't been imported from there since 2006, according to the bureau. And the U.S. is adding tariffs to electrical energy from China — though the lack of trans-Pacific power lines would probably be the more obvious barrier to trade.

Trade war escalation could hurt U.S. oil prices

(Nikkei Asian Review; July 8) - After the U.S. levied duties on \$34 billion worth of Chinese imports on July 6, China countered with a 25 percent tariff on a like total of U.S. goods. For Washington's second round of tariffs totaling \$16 billion, Beijing has yet to decide how to retaliate, but is considering crude oil. China is the second largest market for U.S. crude, behind Canada. In the first three months of 2018, China's imports of U.S. crude doubled from a year earlier to 350,000 barrels per day.

Still, the U.S. provides only about 3.5 percent of China's oil imports, while China takes about 20 percent of U.S. crude exports. Beijing's tariffs could put the brakes on U.S. oil exports at a time when the U.S. is trying to expand them. "While China could secure the crude from alternative sources ... the U.S. would find it hard to find an alternative market that is as big as China," according U.K.-based research company Wood Mackenzie.

Many experts predict China would switch to Angola and Middle Eastern countries for medium crude and Nigeria for light crude. Russia can also pump up oil exports to China. The impact of the trade war is "neutral" to the global market because China can easily import crude from other countries, said Tsuyoshi Ueno, a senior economist at NLI Research Institute. But it would push down West Texas Intermediate crude prices, the key oil benchmark, by creating a glut in the U.S. market, Ueno said.

[Yamal LNG carrier reaches Bering Strait](#)

(Maritime Executive; July 6) - The ice-breaking LNG carrier Vladimir Rusanov, jointly owned by Japan's Mitsui O.S.K. Lines and China's Cosco Shipping, has successfully arrived in the Bering Strait that separates Russia from Alaska. The voyage marks a first for the Yamal LNG project's direct delivery to East Asia. The carrier loaded LNG from Yamal at the port of Sabetta in the Arctic on June 25. It reached the Bering Strait July 6 heading south and is expected to reach Jiangsu Rudong port in China later this month.

The vessel, built by South Korea's Daewoo Shipbuilding & Marine Engineering, is the first of three vessels for the Mitsui/Cosco venture. Yamal LNG started production in December, and the Vladimir Rusanov started hauling LNG at the end of March when it moved Yamal cargoes westward to Europe. Now, with the arrival of the Arctic summer, the ship was able to navigate eastward along the Northern Sea Route to Asia via the Bering Strait without icebreaker support.

Construction of the second and third LNG carriers under the Mitsui/Cosco contract is underway, and the ships are expected to be delivered at the end of September 2018 and September 2019, respectively. The carriers are 981 feet long, 164 feet wide, can carry more than 3 billion cubic feet of natural gas as LNG, has an icebreaker bow structure, and can break through ice up to seven-feet thick backing up with its stern.

[Yamal's ice-breaking LNG carriers cost \\$320 million each](#)

(Bloomberg; July 9) - Until factories open on the moon or Mars, there's no less hospitable a workplace than Yamal LNG, a \$27 billion Russian liquefied natural gas plant that started operations in December, 375 miles north of the Arctic Circle. In the winter, when there's no sun for more than two months, temperatures reach minus 13 on land and minus 58 in the blinding fog out at sea. But there's a lot of fossil fuel in this wasteland — 44 trillion cubic feet of gas, the equivalent of almost 8 billion barrels of oil.

Conventional LNG carriers can't handle the ice in the Arctic's Kara Sea — even though it's slowly but surely melting because of global warming. It would be extremely costly and time-consuming to provide ice-breaking ships as escorts for all the tankers. That's why an international collaboration of ship designers, engineers, builders and owners is creating a minimum of 15 1,000-foot-long, \$320 million LNG carriers to break the ice.

"The vessel has to be able to perform her tasks in extremely harsh conditions," said Mika Hovilainen, an icebreaker specialist at Aker Arctic Technology, the Helsinki firm that designed the ships. The ships are the widest gas carriers ever built, at about 164 feet. Fully loaded, the 15 will be able to carry 16.5 million tonnes of LNG a year. They will travel west to Europe in the winter and east to Asia in the summer, breaking through ice up to 7 feet thick. The ships each are propelled by three 15-megawatt, gas-powered generators — any one of the carriers could power as many as 35,000 U.S. homes.

New gas pipeline a source of controversy in Europe

(Bloomberg; July 8) - Europe's relations with Russia are at their lowest point in decades. At the same time, the Continent is buying more Russian gas than ever. Europe had vowed to free itself from the Russian stranglehold on its energy supply after gas shipments headed west were twice disrupted. Now a plan to double Russian gas shipments to Germany, the biggest buyer, through a new pipeline is dividing European leaders and becoming a growing worry for the United States.

There are fears the new line will enhance Russian President Vladimir Putin's ability to use gas to squeeze critics and reward allies. Europe last year purchased record volumes of gas, worth \$38 billion, from Russia's Gazprom, in part to make up for depleted fields in the U.K. and the Netherlands. Natural gas provides about 22 percent of Europe's energy mix; about a third of that comes from Russia.

Construction of the Nord Stream 2 pipeline under the Baltic Sea to Germany will begin this year, led by Gazprom and partly financed by European energy companies. Poland, Slovakia, and other countries with existing pipelines are opposed, warning that the plan will tighten Russia's hold over the region by giving it the capacity to bypass countries at will, including Ukraine. With its vast Siberian fields, Russia has the world's largest gas reserves, and has urged Europe to keep diplomatic disputes and energy trade separate.

Norway looks to expand carbon dioxide storage capacity

(JWN Energy; July 6) - Norway's Ministry of Petroleum and Energy for the first time is making available acreage on the Norwegian continental shelf for possible subsea reservoir injection and storage of carbon dioxide. The application deadline is Sept. 7, and lease awards are expected in the fourth quarter of 2018. The announcement is a follow-up on the government's ambition for full-scale CO₂ storage in Norway, State Secretary Ingvil Smines Tybring-Gjedde said in a statement.

The government is looking for a cost-effective solution for full-scale CO₂ handling and storage. The potential storage area in this week's announcement is southwest of the Troll field in the North Sea. Norway, which seeks to transport and store CO₂ from other European countries in the long term, already has longstanding offshore sequestration projects underway at the Sleipner and Snøhvit oil and gas facilities.

In operation since 1996, the Sleipner CO₂ storage facility was the first in the world to inject the gas into a dedicated geological storage setting. As of mid-2017, Sleipner had sequestered more than 17 million tonnes of carbon dioxide. Snøhvit, which sources its CO₂ from Norway's only liquefied natural gas export facility, has accepted more than four million tonnes of CO₂ since start-up in 2008, according to the Global CCS Institute.

BP reportedly the front-runner to buy BHP's U.S. oil and gas assets

(Bloomberg; July 8) - BP has emerged as the front-runner to buy BHP Billiton's onshore oil and gas operations in the United States, according to a person familiar with the matter. The London-based oil major has made the highest offer for the assets, which BHP prefers selling in a single package, said the person, who asked not to be identified because the matter isn't public. A deal hasn't been completed and it could be weeks before an agreement is reached, the person said.

The Australian mining conglomerate, based in Melbourne, received initial offers about two months ago from BP, Chevron, and Shell, among others, people familiar with the matter said in June. Those bids valued BHP's U.S. unit at as much as \$9 billion. BHP announced plans to sell the business about a year ago under pressure from activist investor Elliott Management, which had described the company's foray into U.S. oil and gas exploration as an enormous financial bust.

The assets up for grabs include about 800,000 net acres in four U.S. shale basins, including the Permian Basin, one of the most productive oil fields in the world. BP is among the few oil majors that lack a substantial presence in the Permian, where ExxonMobil and others have aggressively expanded through acquisitions. Reuters reported earlier that BP was the lead bidder after making an offer of over \$10 billion.

Gas forecast to command near-record share of U.S. power market

(U.S. Energy Information Administration; July 11) – The U.S. Energy Information's July 2018 Short-Term Energy Outlook predicts natural gas-fired power plants will supply 37 percent of U.S. electricity generation this summer (June through August), near the record-high gas-fired generation share in summer 2016. EIA forecasts the share of generation from coal-fired power plants will drop slightly to 30 percent this summer, continuing a multi-year trend of lower coal-fired electricity generation.

The share of electricity supplied by gas-fired power plants has increased over the past decade, while the share supplied by coal has fallen, primarily as a result of sustained low gas prices, increases in gas-fired capacity, and retirements of coal-fired plants. Over the three-year period from 2015 to 2017, the cost of gas delivered to power plants averaged \$3.16 per million Btu, compared with \$7.69 between 2006 and 2008.

The combination of relatively low gas prices, environmental regulations, and supportive renewable energy policies has led the industry to build new gas-fired and renewable capacity and to retire coal-fired power plants. The EIA reported that power plant operators added 5.4 gigawatts of new gas-fired generating capacity during the first four months of 2018, with an additional 15 GW scheduled to come online through the end of the year. This addition would be the largest increase in natural gas capacity since 2004.

Alberta LNG producer considers storage depot in Whitehorse

(CBC News; Canada; July 9) - An Alberta natural gas company said it is considering building a liquefied natural gas storage depot in Whitehorse, Yukon Territory. Calgary-based Ferus Natural Gas Fuels has an LNG production plant in Grande Prairie, Alberta, which it uses to serve Yukon Energy's two back-up electrical generators in Whitehorse, and for Inuvik, Northwest Territories, as well.

Blaire Lancaster, vice president of business development and corporate affairs, said Ferus is bullish about opportunities in communities that currently use diesel fuel. "We're working with the town of Inuvik, and there's more opportunity there," she said, explaining that could include increasing supply in Whitehorse. Ferus also is looking at how remote communities and mines could benefit from LNG. "There's a lot of opportunity in the North — in the Yukon, Northwest Territories, and Alaska."

Lancaster said the Alberta plant produces about 50,000 gallons of LNG a day — equal to more than 4 million cubic feet of gas. When expanded next year, it will produce an additional 100,000 gallons a day. Ferus trucks its LNG up the Alaska Highway, and with such a long supply chain — almost 1,700 miles to Inuvik — it makes sense to have a storage depot in Whitehorse, Lancaster said. Last winter, Ferus delivered an average of two truckloads of LNG per week to Yukon Energy's turbines in Whitehorse.

Low charter rates drive shipowners to scrap oil tankers

(Wall Street Journal; July 8) - Dire freight rates are pushing shipowners to scrap a record number of their biggest oil tankers this year, making it a bumper period for recycling yards in South Asia. Very large crude carriers, or VLCCs, move much of the world's oil across the oceans. But there are far too many in operation in a shrinking market. Major oil producing countries have curbed production in recent years, and the U.S. is importing less crude as it increasingly covers its needs with domestic oil.

The overcapacity is good business for ship-breaking yards in India, Pakistan, and Bangladesh, which pay as much as \$20 million for each VLCC sent to be taken apart for scrap. The industry is worth up to \$5 billion a year, and tankers are among its top earners. Industry executives say the current global fleet of 720 VLCCs is about 20 percent bigger than needed to serve oil markets and that it will take until 2020 for VLCC supply to match demand, provided there are no orders for new ships.

Some 50 VLCCs are up for recycling this year, up from 15 in 2017. Spot freight rates for those ships are hovering below \$6,000 a day, according to brokers, in a business where \$25,000 is generally considered a break-even rate. "This year has been appalling for VLCC owners," said Peter Sand, chief analyst for Bimco, an association of shipping industry executives. "There's been significant fleet growth while demand is

low, and it doesn't look like it's going to get better until 2020, so you scrap to cut the bleeding.”

Oil and gas industry turns to automation, technology

(Wall Street Journal; July 10) - After 20 years in the oil-and-gas industry, Eric Neece was used to booms and busts. He wasn't surprised when he was laid off by GE Oil & Gas in Conroe, Texas, in 2015 after oil prices plummeted. He figured his job would return when prices crept back up. He was almost right. The work came back. But his job as a well logger — measuring well conditions thousands of feet underground — was gone. Those duties are increasingly overseen remotely and handled by automation.

“Our industry has had a lot of people making \$150,000 out in the field,” said Kathryn Humphrey, who spent two decades at BP before retiring from the company's digital oil field program in 2013. Those days are going away, she said. Automated systems can now send commands to underground tools that capture data on a well's geologic formations, flow rate and other variables. Teams of specialists in remote centers are replacing laborers on the ground, who in the past made the adjustments manually.

When prices fell 75 percent in 2014-2016, companies were forced to modernize to squeeze out profits. Many found they could use technology to do the work better and cheaper, with less staff. The industry has invested billions of dollars on “digital oil fields,” embracing artificial intelligence, automation, and other technologies. “We've gotten very lean in our business,” said Shawn Holzhauser, a vice president in BP's U.S. operations.

At Devon Energy's WellCon center — short for well construction — in Oklahoma City, a small team of engineers and scientists monitor every well the company is drilling and fracking across the U.S. Roughly a dozen people monitor 21 active rigs. Devon estimates its drilling and construction costs per well are down 40 percent since 2014.

Financial market will offer U.S. LNG futures

(Reuters; July 10) - CME Group said on July 10 it will develop the first physically deliverable U.S. liquefied natural gas futures contract as growing worldwide demand has made the United States a key LNG exporter. CME said the contract will take delivery at Cheniere Energy's Sabine Pass LNG export terminal in Louisiana. It could not say when it will launch the new product or provide details other than that it will trade on the CME's New York Mercantile Exchange like its Henry Hub natural gas futures.

Overall world LNG consumption rose to a record 39 billion cubic feet per day of natural gas in 2017 (almost 297 million tonnes of LNG) from 29.1 bcf a day in 2010 and is

expected to keep growing by about 3 percent a year through 2050, according to U.S. Energy Department data. While the LNG trade on exchanges like the CME is still small, experts believe volumes will increase rapidly in the near future as the United States becomes one of the world's biggest LNG exporters.

Total U.S. LNG export capacity is expected to rise to 10.1 bcf a day of gas in 2020 from 3.8 bcf now, making the country the third-biggest LNG exporter in the world by capacity. "We have spoken to the market and they have expressed a desire to have a physically delivered LNG contract that can help them manage price risks," said Peter Keavey, global head of energy at CME. Sabine Pass was the first terminal in the Lower 48 states to produce and deliver LNG for export to the world.