# Oil and Gas News Briefs Compiled by Larry Persily July 23, 2018

# PetroChina signs 3-year deal for Papua New Guinea LNG

(Australian Financial Review; July 20) – PetroChina has signed a contract to purchase liquefied natural gas from the ExxonMobil-led Papua New Guinea LNG joint venture. The three-year agreement is for about 450,000 tonnes per year, starting this month. The actual price will depend on oil prices over the next three years. The deal takes the total contracted volume from PNG LNG to 7 million tonnes a year, of which 6.6 million tonnes are under long-term sales to Japan's JERA, Osaka Gas, Sinopec, and Taiwan's CPC.

The additional sales contract is made possible by the better-than-expected performance of the \$US19 billion project since it started up more than four years ago. Australia's Oil Search and Santos are partners with ExxonMobil in the project. The deal turns PetroChina from a regular buyer of one-off cargoes from PNG LNG into a firm customer and could pave the way for a larger, longer-term contract that would help underpin the proposed \$US12 billion expansion of LNG capacity in Papua New Guinea.

"There is now a realization that post-2020 China is going to be very short of gas, as domestic production is not growing as fast as they would like," said Tony Regan, a director of LNG consultancy DataFusion Associates in Singapore. "This might be a step toward a larger contract from the expansion of PNG LNG. This could be the getting-to-know-you deal." The volume that the partners originally committed under long-term deals was less than the plant's rated capacity, but PNG LNG has consistently produced beyond its nameplate capacity, providing supplies for spot and short-term sales.

#### LNG imports down 10% as Japan restarts more nuclear plants

(Reuters; July 19) – Japan's imports of liquefied natural gas in June fell to the lowest in more than two years as the country's utilities switched on more nuclear reactors that had been shut down in the wake of the Fukushima nuclear plant disaster in 2011. Japan has six reactors operating and three more have passed safety inspections and could be operating by October, allowing utilities to switch away from LNG.

Japan, the world's biggest importer of LNG, brought in 5.55 million tonnes of the fuel in June, down more than 10 percent from a year earlier, official data showed July 18. That was the lowest monthly import number since May 2016. Imports of thermal coal also fell in June, down 18.3 percent from a year earlier, and the lowest since May 2017, the data showed. The Fukushima disaster sparked the country's worst energy crisis in the

post-war period, forcing it to import huge amounts of LNG and driving prices to record highs.

All of the country's reactors were eventually shut down to be relicensed under new safety rules after the Fukushima disaster highlighted regulatory and operator failings. Nine out of 40 commercially operable units have been relicensed under the new rules. Still, nuclear power remains unpopular in the country and many hurdles remain to getting more units operating beyond the nine approved, analysts have said.

# China's purchases of U.S. LNG drop to one cargo the past 2 months

(Reuters; July 18) - As the trade war between China and the United States escalates, fewer vessels carrying U.S. liquefied natural gas have gone to China over the past two months. China, which purchased 14 percent of all U.S. LNG shipped between February 2016 and April 2018, has taken delivery from just one vessel that left the United States in May and none in June compared with 14 during the first four months of the year.

However, there are a number of reasons for the slowdown, including seasonal factors and rising Australian LNG production. An official with a Chinese state-run energy giant said the decline was seasonal. One vessel that left the United States in July is on its way to China, and there are three other tankers in the Pacific that left the United States in June or July without a destination listed and could still end up in China.

As the trade war between the two nations heated up, China threatened in June to put levies on U.S. energy exports, though it did not include LNG in that mix. China, which became the world's second biggest LNG importer in 2017, is buying more gas as the government tries to wean the country off dirty coal as part of its push to reduce pollution. The United States is expected to become the world's third biggest LNG exporter by capacity in 2019.

# China keeps trying to boost its shale gas production

(Bloomberg; July 20) - China's shale gas industry began as a long shot. Guo Xusheng, chief geologist at a unit of China Petroleum & Chemical Corp., persuaded his bosses in 2009 to give him about \$3 million to drill deeper than anyone before in southwestern China. For Sinopec, as the company is known, the U.S. shale boom convinced them that Guo's plan was worth a try. In 2012 Guo's team struck pay dirt, hitting a huge pocket that spewed 7 million cubic feet of gas a day. Six years later, China's quest to unlock shale on a scale as big as the United States is still looking like a long shot.

"U.S. shale reserves are like a plate, in relatively good shape and buried evenly close to the surface," Guo said. "For China's shale reserves, it's more like a plate that was

smashed on the ground, and then stomped on. We're trying to identify those scattered reserves and trying our best to get to the bigger ones." China's reserves also are deeper and harder to reach than those in North America. Western companies are wary of selling advanced fracking technology to China amid intellectual property concerns, though Sinopec now makes all its shale equipment in-house, slashing exploration drilling costs by 40 percent from 2010 levels, according to analysts at Wood Mackenzie.

China's optimism peaked in 2013 after the U.S. Department of Energy estimated it was sitting on the world's largest reserves of shale gas, almost double the United States. But the answer remains a long way off. Chinese explorers have failed to scale up shale drilling the way their counterparts in the U.S. did, and authorities started lowering their 2020 shale gas targets, most recently to 1 trillion cubic feet a year. Even that looks ambitious compared to output of 320 billion cubic feet last year.

# China could run short of meeting summer demand for power

(Bloomberg; July 19) - The world's largest electricity producer is warning it may run short this summer. Parts of China are at risk of shortages as the nation's distribution networks struggle to cope with soaring temperatures and the fastest power consumption growth in seven years, regulators warned in recent weeks. Sustained economic growth has propped up demand, while President Xi Jinping's clean-air drive is crimping efforts to boost coal output, stretching gas supplies and increasing reliance on renewables.

"As China entered the summer season, electricity demand for air conditioning and refrigeration has increased, leading to a rapid surge in daily power generation," said Yan Pengcheng, a spokesman for the National Development and Reform Commission. Power load, which is already close to last summer's high, is expected to "continue rising significantly, and shortages may occur in some areas during peak periods," he said.

The potential crunch echoes heating shortages parts of the country suffered last winter amid a campaign to switch coal boilers and heaters to gas. Last winter the government clamped down on industrial activity and placed restrictions on steel mills and aluminum smelters, among others. In the first half of the year power demand from agriculture, manufacturing, and service industries climbed 10, 7.6, and nearly 15 percent, respectively, according to the China Electricity Council. Residential use rose 13 percent.

#### Pipeline opponents expand fight to include LNG projects

(Houston Chronicle; July 20) - These days, hardly a month passes without a wellpublicized protest of an oil or gas pipeline project. Once among the quietest of energy infrastructure projects, they've become bullseyes for climate-change activists working to block the transportation of oil and natural gas as part of a broader effort to curtail fossil fuel production. Now, it appears export terminals for liquefied natural gas are emerging as targets of that very same movement during a critical time for an emerging industry.

Federal Energy Regulatory Commission chairman Kevin McIntyre announced on July 19 that his agency would collaborate with the Pipeline and Hazardous Materials Safety Administration to speed up the review of LNG project applications, which have faced delays in recent months. Environmentalists were quick to sound their alarm. "Fracked gas export terminals deserve more scrutiny, not less," Kelly Martin, director of the Sierra Club's "Beyond Dirty Fuels" campaign, said in a statement.

The opposition to LNG terminals comes amid a surge in U.S. gas production that has made the nation a major player in the market. That has fueled an uprising in the U.S. among environmentalists who have learned to leverage social media and targeted protests to rally opposition to energy projects. These tactics have become familiar to pipeline companies. Faced with unprecedented scrutiny, the industry is doubling down on efforts to win public support and prevent legal challenges that could force costly delays or even project abandonment. LNG operators will likely face similar challenges.

# Tribe asks city to re-examine safety of LNG plant under construction

(The News Tribune; Tacoma; July 19) - The Puyallup Tribe of Indians has asked the city of Tacoma to re-examine whether a \$310 million liquefied natural gas plant and storage facility — now under construction — is really safe. The tribe is armed with two reviews of Puget Sound Energy's own safety studies of the project: one from a U.S. Department of Energy-funded research facility and one from a 30-year veteran of the field. The plant would liquefy gas and store the LNG in an 8-million-gallon tank to meet peak demand.

The reports say the city's environmental analysis was not thorough enough and didn't consider a worst-case scenario — a catastrophic blast called a "boiling liquid expanding vapor explosion." The tribe wants a supplemental analysis of the plant's impact, said tribal Councilwoman Annette Bryan. "This isn't a philosophical belief we have," she said. "It is a technically valid concern about the potential impacts to the project that haven't been fully analyzed." Tacoma is at the southern end of Puget Sound from Seattle.

For one review, Sandia National Laboratories checked the project's studies under a program where federal agencies give tribes access to technical assistance for energy projects. Sandia Labs said that despite the amount of high-pressure piping at the plant, "no mention is made (in the studies) regarding a credible scenario" of damage or failure of those pipes or pressurized storage tanks when exposed to fire that could create a dangerous, rapidly expanding explosion. Tacoma is reviewing the tribe's request.

# Australian company drops out of proposed LNG project in Texas

(Bloomberg; July 19) - Woodside Petroleum is walking away from Sempra Energy's proposed Port Arthur LNG gas export development in Texas about three years after joining the project, citing lower expected returns than would justify its investment. "We've informed Sempra that we're not going to participate in Port Arthur," Peter Coleman, CEO of Australia-based Woodside, said July 19. "It got to a point where it got below our investment returns and we said we need to put our money somewhere else."

For Sempra, the decision to exit is probably not surprising. Chief Operating Officer Joseph Householder told analysts late last month during a call that Woodside was unlikely to invest in Port Arthur after Coleman questioned the economics of the project. The \$8 billion to \$9 billion export project has been slated to start up in 2023 with an annual capacity of 11 million tonnes, pending a final investment decision and permitting. Sempra said July 20 it is in talks with potential LNG customers and equity investors.

Woodside's focus remains on unlocking vast gas resources offshore Western Australia, including the \$20.5 billion Browse project. Its partners in the existing North West Shelf LNG export terminal agreed to terms for processing third-party gas, which opens the possibility to process gas from Browse, after about 18 months of negotiations, Coleman said. A preliminary tolling agreement is expected during the third quarter of this year. Woodside is the operator of the North West Shelf LNG terminal and the Browse project.

#### Small LNG terminal in Georgia delayed to third-quarter of this year

(Reuters; July 19) – Houston-based pipeline operator Kinder Morgan has delayed the start-up of its nearly \$2 billion Elba liquefied natural gas export terminal in Georgia by one calendar quarter to the fourth quarter of 2018. When completed, the plant will be able to produce about 2.5 million tonnes per year of LNG, equivalent to about 350 million cubic feet per day of natural gas.

The project is supported by a 20-year sales contract with a unit of Shell. The liquefaction plant is being added to the Elba Island LNG import terminal in the middle of the Savannah River, about five miles downstream from Savannah, GA. The import facility opened in 1976 but has been underutilized for years. When the LNG export operation starts up, it will become the third or fourth in the United States, depending whether Cheniere Energy's project in Corpus Christi, Texas, goes online first.

#### BP takes delivery of first of six new LNG carriers

(Marine Link; July 19) - BP Shipping has taken delivery of British Partner, the first of six new 173,400-cubic-meter-capacity liquefied natural gas carriers to be delivered this

year and next from Daewoo Shipbuilding and Marine Engineering in South Korea. BP, which launched a fleet rejuvenation program in 2016 that includes 32 new vessels for delivery over a three-year period, said the six vessels will increase its ability to deliver LNG in emerging markets, such as Pakistan, Bangladesh, and Jordan, in addition to established markets. Each ship can move 3.7 billion cubic feet of natural gas as LNG.

"BP is set to increase its LNG supply significantly over the next four years thanks, largely, to new projects in the U.S., and off the coast of Mozambique," said Oli Beavon, technical vice president for BP Shipping. "The new Partnership-class ships will give us the necessary capacity to transport those extra volumes around the world."

British Partner and the five other 968-foot-long ships ordered in October 2017 are bigger, more powerful and have a larger carrying capacity than the predecessor vessels they are replacing. Each of the vessels is fitted with a full reliquefication system to use compressed boil-off gas from cargo tanks as fuel. BP said the improvements will boost fuel efficiency by about 25 percent.

# South Korea to cut back on LNG imports as nuclear plants restart

(Reuters; July 20) - South Korean imports of liquefied natural gas are set to ease from record levels racked up in the first-half of the year, with the appetite from utilities fading as a raft of nuclear power stations come back online. The country's imports of LNG jumped nearly 16 percent year-on-year to a record 22.7 million tonnes in the first six months of 2018, according to customs data in mid-July, boosted by demand from power firms as around half the nation's 24 nuclear plants were shut for maintenance.

But with an average of only six reactors expected to be offline over the rest of the year, analysts say LNG cargoes into the world's No. 3 importer of the fuel are likely to decline. "Nuclear run rates will rise," said Yang Ji-hae, an analyst at Samsung Securities. South Korea mainly consumes gas for heating and cooking, although it has been pushing to use the fuel more in power generation as it looks to switch away from coal and nuclear.

#### Pipeline, power plant delays in Mexico impede U.S. natural gas sales

(Bloomberg; July 18) - A major Mexican gas pipeline opened this week after almost two years of delays. That's the good news for U.S. producers that are seeking an expanded market for natural gas siphoned from the pent-up Permian Basin. The bad news is the new line won't fill to capacity until construction is completed on the new power plants it's designed to serve. As such, the pipeline joins two others recently opened that carry minimal amounts of gas. Welcome to the stop-and-go world of Mexico power.

"It's just another example of where the pipelines are declared in service and there isn't demand," said Esteban Trejo, a Genscape analyst in Boulder, Colorado. TransCanada's \$1.2 billion, 348-mile line from El Encino to Topolobampo on the coast officially went into service July 16, about 700 days late. It's one of several set to start up this year in Mexico that have long been seen as a solution for Permian drillers struggling to get their gas more easily to market at a time when production is booming and pipelines are full.

It's an answer coming at an agonizingly slow pace. Together, nine pipelines have been delayed an average of 415 days beyond their originally scheduled completion dates. At the same time, the amount of gas flowing through the few pipelines that have been completed is far less than they are designed to carry. Mexico now imports an average of 4.2 billion cubic feet a day, or about 6.2 bcf a day short of what it could bring in even with just the existing infrastructure, according to Bloomberg NEF and Genscape data.

# U.S. oil output hits 11 million barrels a day for first time in history

(Reuters; July 18) - U.S. crude oil production last week hit 11 million barrels per day for the first time in the nation's history, the Energy Department said July 18, as the ongoing boom in shale production continues to drive output. The gains represent a rapid increase in output, as the data, if confirmed by monthly figures, puts the United States as the second largest producer of crude oil, just behind Russia which was producing 11.2 million barrels per day in early July, according to sources.

"This is kind of like the space race," said Sandy Fielden, director of commodities and energy research at Morningstar. The United States has added nearly 1 million barrels a day in production since November, thanks to rapid increases in shale drilling. "I don't think production is plateauing at 11. It's fully expected to grow beyond 11 — we won't be topping out there," said Scott Shelton, a broker at ICAP in Durham, North Carolina.

This report comes amidst worries that infrastructure bottlenecks, which make it difficult for producers to get their oil to market, could soon start curtailing output. Morgan Stanley analysts said recently that pipeline constraints could cap 2019 growth in west Texas. They said the Permian shale play has about 3.56 million barrels per day of pipeline capacity, about what is being produced there now.

#### **Opponents organize against oil line project in Minnesota**

(Wall Street Journal; July 17) - Weeks after Minnesota regulators approved the replacement of an oil line that crosses the state, Native American and environmental groups are starting to oppose the project with a similar playbook to the failed effort to stop the Dakota Access pipeline. Winona LaDuke, who lives 30 miles from the

pipeline's route on the Ojibwe tribe reservation, said three small protest camps have sprung up. To draw more protesters, she is planning a campaign that includes a concert with the Indigo Girls in Duluth later this month, followed by a ride on horseback along the route.

"All of us were at Standing Rock," the site of the Dakota Access protests, said LaDuke, a co-founder of Honor the Earth, a Native American environmental group. But the fight against the Enbridge pipeline known as Line 3 is different from the battle in North Dakota. The Line 3 project, which would carry crude from Alberta across Minnesota to a terminal in Wisconsin, is a replacement of a pipeline built in the 1960s. Enbridge said the existing line needs as many as 900 repairs over six years. It has reduced capacity on the line to 390,000 barrels a day, from 760,000 barrels a day, out of safety concerns.

Opponents are focused on stopping the replacement, but many want the existing line shut as well. At the end of June, Minnesota utility regulators approved the project, which will cost \$2.6 billion, the biggest investment in Enbridge's history. But the company still needs 29 state and federal permits before it can begin construction on the 337-mile pipeline across the state.

# B.C. city orders oil pipeline opponents to shut down protest camp

(Vancouver Sun; July 18) – Oil pipeline protesters camping on Burnaby Mountain about 10 miles east of downtown Vancouver said they are gearing up for a legal battle after being slapped with an eviction notice July 18 and given three days to leave. The city of Burnaby, B.C., ordered the occupants of the "Camp Cloud" protest site at Underhill Avenue and Shellmont Street to immediately remove all structures, trailers and vehicles, as well as put out fires, tear down a shower and leash their dogs.

Officials warned the protesters to cease their "unauthorized occupation and use" of city lands within 72 hours or face city action to remove the camp. The protest camp started last November with a single trailer parked at Kinder Morgan's Westridge Marine Terminal on Burrard Inlet, but was moved in December to the street outside the oil tank farm's gates where it has grown into dozens of tents, trailers and buildings, including a two-level wood structure.

The protesters oppose the contentious Trans Mountain oil pipeline expansion project, which would triple the capacity of an existing line from Alberta to the coastal export terminal and increase oil tanker traffic in Burrard Inlet. The federal government announced in May that it planned to buy the pipeline, expansion project and tank farm for C\$4.5 billion to ensure the project is completed. Kinder Morgan obtained a B.C. Supreme Court injunction in March to prevent protesters from interfering with its work.

# Analyst says LNG terminal will boost value of Canadian producers

(Bloomberg; July 19) - A liquefied natural gas export terminal in British Columbia will "refocus people on Canadian gas," giving a boost to stocks like Tourmaline Oil and ARC Resources, according to the manager of more than C\$500 million (US\$377 million) in assets for the Bank of Nova Scotia. The proposed C\$40 billion LNG Canada project led by Shell appears to be ramping up, although a final decision is not expected until later in the year. Scotiabank's Jennifer Stevenson expects the project to go ahead, prompting investors to re-evaluate struggling Canadian gas producers.

"That will make people look at Western Canadian gas economics in a new light because we have yet another place of egress," said Stevenson, portfolio manager at 1832 Asset Management, a unit of Scotiabank. Stevenson manages C\$319 million in energy funds and co-manages another C\$268 million in resource funds.

As to oil prices, Stevenson said she is "structurally positive" and sees West Texas Intermediate trading around \$70 despite short-term volatility prompted by President Donald Trump's threat to release crude from the nation's Strategic Petroleum Reserve. "There's always going to be volatility on short-term noise, but the underlying fundamentals of supply versus demand are really strong," she said.