Oil and Gas News Briefs Compiled by Larry Persily July 29, 2019

Papua New Guinea determined to change LNG deal

(Bloomberg; July 25) - Papua New Guinea's petroleum minister said he has completed his review of the April agreement with Total and will recommend changes, creating a potential hurdle for the \$13 billion multi-company effort to double the nation's exports of liquefied natural gas. The potential changes cover regulatory and commercial terms and need approval from the National Executive Council before going to the venture partners, which include Total, ExxonMobil, and Oil Search, Minister Kerenga Kua said July 25.

Kua said he will send his findings to the policy-making council as soon as July 29 and expects a revised deal with the companies within six weeks. "All issues are capable of discussion and compromise," he said. "Even though we may have our wish list and they may have their wish list, finding the middle ground where all of us benefit is an important principle," Kua said. Total CEO Patrick Pouyanne, however, sees it differently. "We are confident that it's in the best interest of Papua New Guinea to respect the agreement that has been signed" by the previous prime minister, Pouyanne said July 25.

LNG exports have developed into a political flash point for the country as the 5-year-old Exxon-led project has been criticized as not benefiting the domestic economy as much as expected. Prime Minister James Marape swept to power in May amid a wave of criticism of his predecessor's gas deal with Total, which Marape asked Kua to review. That review has delayed plans to double exports with the two interlinked projects — the new development, led by Total, and expansion of the Exxon-managed project. Talks on the Exxon-led expansion will not begin until the deal with Total is revised, Kua said.

<u>'Second wave' of LNG projects under way, but overruns an issue</u>

(Houston Chronicle; July 26) - The long-anticipated "second wave" of liquefied natural gas projects is here as several final investment decisions are made and construction contracts awarded, executives and analysts said. With construction of export terminals sanctioned during the first wave nearing completion, a second round of large LNG export projects is planned from the Texas Gulf Coast to Africa to the Arctic Circle.

A joint venture between ExxonMobil and Qatar made a final investment decision in February on the \$10 billion Golden Pass LNG terminal in Texas. Anadarko reached a final investment in June for its \$20 billion Mozambique LNG project. Earlier this week,

Russian natural gas producer Novatek awarded a \$7.6 billion construction contract to build the Arctic LNG-2 export terminal on the Gydan Peninsula of Siberia.

A report from global energy research firm Wood Mackenzie estimates the LNG industry will invest more than \$200 billion in projects 2019-2025. But challenges remain. Among them are cost overruns. The industry is notorious for running behind schedule and over budget. Just 10 percent of LNG projects have been completed under budget, while 60 percent have suffered delays. "Many projects jostling for final investment decision right now have low headline costs, but in light of the historical reality of LNG construction some project delays are likely," said Liam Kelleher, senior analyst at Wood Mackenzie.

New York, Pennsylvania chose different futures in gas

(Forbes contributor; July 25) - Two neighboring Northeast states, each with immense amounts of Marcellus Shale natural gas deposits, will provide the test case on how the country uses energy in the next decade. Pennsylvania, home to the lion's share of the Marcellus heritage, welcomed the gas industry. In less than a decade, Pennsylvania has risen from a non-entity in energy production to the nation's second-largest producer of gas. Just by itself, Pennsylvania alone is a world power in energy generation.

New York has chosen the opposite path. While not as blessed as Pennsylvania in its shale bounty, New York possesses large amounts of shale gas that could be tapped, were the state willing to do so. Most decidedly, it is not. Starting with Gov. David Paterson in 2010 and continuing with Gov. Andrew Cuomo in 2014, there has been a gubernatorial moratorium in New York against hydraulic fracturing for gas. Recently, Cuomo upped the ante, utilizing a relatively little-known provision in the federal Clean Water Act to prevent construction of interstate oil and gas pipelines in New York.

New Yorkers are beginning to worry about how they will keep the lights on. Government policies have bankrupted state operations for companies like Norse Energy that had originally bet on New York shale, prevented family farmers from earning sorely needed cash from their land, and caused downstate New York's two largest utilities, Consolidated Edison and National Grid, to declare moratoria on future gas hookups for new customers. The next few years will tell us which state made the right choice.

Study shows how opponents stirred up opposition to Oregon LNG

(The Astorian; Oregon; July 26) - A case study on the fight over LNG in Clatsop County in northwestern Oregon details how activists went beyond environmental concerns and used the potential threat to tourism and fears about earthquakes and tsunamis to help build public opposition. Two liquefied natural gas projects — at Bradwood Landing east

of Astoria and on the Skipanon Peninsula in Warrenton — dominated political debate on the North Coast for more than a decade.

The project at Bradwood Landing sputtered after the developer, NorthernStar Natural Gas, filed for bankruptcy in 2010. Oregon LNG withdrew its \$6 billion export terminal and pipeline project in Warrenton in 2016 after financing and regulatory obstacles. The study, prepared by researchers at Oregon State University, the University of Alaska, University of Delaware, and State University of New York, looked at how anti-LNG activists helped turn public opinion against the projects. The study was funded in part by Oregon Sea Grant and published in January by the University of California Press.

"LNG opponents gained early momentum over supporters by countering economic arguments in support of the proposed facilities. By framing LNG as a threat to the future of Clatsop County's budding tourist economy, opponents seemed more in tune with the existing local community than LNG supporters, who envisioned a return to an industrial past," the study concluded. "Opponents then capitalized on larger national and regional concerns — specifically related to terrorism and later to the potential impacts of future earthquakes and tsunamis — to align concerns about LNG to salient public issues."

Osaka Gas buys U.S. shale gas developer for \$610 million

(Reuters; July 29) - Osaka Gas said on July 29 it will buy U.S. shale gas developer Sabine Oil & Gas for \$610 million, as the Japanese company aims to expand its overseas business in search of future growth. The deal marks the first acquisition of a U.S. shale gas developer by a Japanese company, according to Osaka Gas. Sabine owns 175,000 net acres in East Texas with about 1,200 wells that produce about 210 million cubic feet of gas per day.

In July 2018, Osaka Gas bought a 35 percent stake in the eastern half of the asset being developed by Sabine. Osaka Gas decided to buy the whole company after Sabine notified the Japanese company that it was putting itself on the market since the wells were producing more volume than expected and generating stable cash flow, a company spokesman said. The deal is subject to approvals by local authorities and is expected to close by the end of this year, the Osaka Gas spokesman said.

Through the purchase, Osaka Gas aims to enhance shale gas development operation, one of its three core U.S. businesses which also include the Freeport LNG export project and independent power producer projects. Under its long-term business strategy, Osaka Gas plans to boost its earnings from overseas to account for one-third of its total recurring profit in the business year to March 2031, up from 9 percent in the year ended March this year.

U.S. natural gas futures fall to lowest summer price since 1999

(Wall Street Journal; July 26) - Some of the country's largest natural gas producers are tearing up their drilling plans, responding as prices for the fuel have fallen to their lowest summer level in two decades. Natural gas prices typically move higher in the heat of the summer, as demand from electricity plants surges to power air conditioners. This month's heat wave in the Eastern U.S. has generated record consumption at power plants, yet natural gas prices have continued to slide due to bountiful supplies.

Gas futures for August delivery traded down 3.3 percent to \$2.169 per million Btu on July 26 — the lowest July price since 1999. Producers in Appalachia, the country's most prolific gas-producing region, have been particularly hard hit by the downturn. Their biggest problem isn't a lack of consumption. Exports to Mexico and overseas are at all-time highs. Demand is also on the rise from electricity producers that are increasingly shifting away from coal, and industrial users such as Gulf Coast chemical makers.

Rather, Appalachian producers, and to a lesser extent those drilling in the Haynesville Shale that straddles the Louisiana-Texas border, must contend with gas spewing from the Permian Basin in West Texas. Producers there are unleashing vast volumes of gas as a byproduct of record drilling for crude. At times this year gas has been so plentiful in West Texas that the price has turned negative — producers have to pay pipeline operators more to deliver gas to market than the fuel fetches once it reaches buyers.

Energy board says gas line to LNG Canada plant not a federal issue

(Reuters; July 26) - TC Energy's proposed Coastal GasLink pipeline to supply the LNG Canada project in Kitimat, British Columbia, is not subject to federal regulation, Canada's National Energy Board said July 26. The decision means the 416-mile gas pipeline will not have to submit a new application for approval and cuts the risk of extra regulatory scrutiny delaying construction. Coastal GasLink will run from Dawson Creek in northeastern B.C. to the proposed C\$40 billion coastal liquefied natural gas terminal.

Shell and its partners last year approved LNG Canada, to the relief of many in Canada's beleaguered oil and gas industry. The sector has struggled to advance new projects in recent years because of opposition from environmentalists and indigenous groups as well as regulatory delays. The NEB received an application last year from environmental consultant Michael Sawyer who argued British Columbia did not have jurisdiction to approve the pipeline because it will link to the grid in Alberta and cross the border.

In Canada, interprovincial pipelines fall under federal regulation. But in its decision, the NEB said Coastal GasLink does not fall within its jurisdiction because it "does not form a part" of the gas transmission system in Alberta and "is not vital or integral to it or any

other federally regulated pipeline." Wood Mackenzie analyst Dulles Wang said the ruling was good news for the pipeline company and LNG Canada. LNG Canada is expected to start producing liquefied natural gas by 2023, Wang said.

Australian territory lifts ban on fracking; drilling to resume

(Australian Associated Press; July 23) – Australia-based oil and gas company Santos has vowed to move ahead quickly with gas exploration in the resource-rich McArthur Basin in Australia's Northern Territory after gaining environmental approval. The company's environment management plan has been approved by the territorial government for drilling two wells within its basin permit area, east of Daly Waters.

It's the first drilling to be approved since the government lifted its moratorium on hydraulic fracturing following an independent scientific inquiry. Santos Managing Director Kevin Gallagher said the go-ahead was an important milestone for resuming onshore shale gas exploration. "We drilled Tanumbirini 1 in 2014 and liked what we saw, so we are delighted to be in a position to resume exploration drilling," he said.

"Local communities desperately need the jobs, small business opportunities, and investment the onshore natural gas industry will bring," Gallagher said. Northern Territory Environment Minister Eva Lawler said the plan was approved following a public consultation process. She said the government implemented a robust, clear, and transparent set of rules and guidelines on how the environment must be protected after lifting the moratorium on fracking.

Wisconsin tribe sues to shut down Enbridge pipeline

(Milwaukee Sentinel Journal; July 23) - The Bad River band of Lake Superior Chippewa filed a lawsuit against Enbridge on July 23, aimed at forcing the Calgary-based company to shut down a key pipeline that crosses tribal lands in northern Wisconsin. The pipeline transports oil and natural gas liquids from Canada to Michigan, including a controversial section that runs along the bed of the Straits of Mackinac between Lake Michigan and Lake Huron. The company is seeking to build a tunnel beneath the straits for a new pipeline but is facing opposition from officials in Michigan.

The lawsuit in U.S. District Court in western Wisconsin centers on the potential for an accident involving the 66-year-old pipeline, and on right-of-way easements between the tribe and Enbridge that expired in 2013. According to court filing, the company's buried pipeline crosses about 12 miles of reservation lands. Tribal officials say that they no longer want Enbridge to operate the line on tribal lands and fear a rupture would pose environmental damage to the Bad River and other waters that flow into Lake Superior.

The lawsuit is the latest question mark hanging over the pipeline, known as Line 5. Michigan's attorney general filed a lawsuit in state court last month that would shut down the pipeline across the Straits of Mackinac. An Enbridge pipeline spill in 2010 on the Kalamazoo River in Michigan took years and more than \$1 billion to clean up.

FERC approves commercial operations at Cameron LNG

(Reuters; July 26) – The Federal Energy Regulatory Commission on July 26 approved Sempra Energy's request to commence commercial service of the first liquefaction train at its \$10 billion Cameron liquefied natural gas export terminal in Louisiana. The plant exported its first cargo in May, making it the fourth big LNG export terminal operating in the United States. In total, the facility has exported four cargoes under its commissioning phase, according to data firm Refinitiv.

There are three liquefaction trains at Cameron. The first started producing LNG in mid-May. Sempra has said it expects Cameron 2 and 3 will enter service in the first and second quarters of 2020. Cameron is designed to produce about 12 million tonnes per year of LNG, or roughly 1.7 billion cubic feet per day of gas. When the United States sent out its first LNG cargo from Cheniere Energy's Sabine Pass export terminal in Louisiana in February 2016, the country was not exporting any of the fuel.

Since then, the U.S. has become the world's fourth biggest LNG exporter, behind Qatar, Australia, and Malaysia, and is on track to overtake Malaysia and become the third biggest in 2019. By the mid-2020s, analysts expect the United States will become the biggest LNG exporter in the world. Cameron is owned by affiliates of Sempra, Total, Mitsui, and Japan LNG Investment, a company jointly owned by Mitsubishi and Nippon Yusen Kabushiki Kaisha (NYK Line). Sempra owns 50.2 percent of Cameron.

South Africa will consider first LNG import terminal

(Reuters; July 25) - State-owned freight logistics firm Transnet plans to launch a tender next year for South Africa's first terminal to import liquefied natural gas at Richards Bay port, with first gas expected to land in 2024, a senior official said July 25. South Africa is pushing to diversify its energy sources away from coal, which supplies more than 90 percent of its electricity, and to boost capacity as power shortages have limited growth.

Transnet, which operates gas pipelines, railway lines, and ports in South Africa, will lead the project after the World Bank's International Finance Corp. pledged \$2 million to help finalize the design, finance, construction, and operation plans. "We are hoping second quarter or third quarter 2020 for the request for quotations," which is part of the tender process, said Jabulani Sithole, a Transnet oil and gas business manager.

"Based on the work we have done we believe that we are able to land the gas in South Africa by 2024," Sithole told Reuters. He said it is vital to secure new gas supplies as Sasol, which pipes the bulk of South Africa's gas needs from Mozambique, has said it would face supply constraints from 2023 due to maturing fields. A pre-feasibility study will determine costs of the LNG import terminal project, Sithole said. The import terminal could be an onshore or floating near-shore facility. "We are looking at all options."

Argentina picks U.S. company to deliver LNG cargoes

(Houston Chronicle; July 25) – Texas-based Excelerate Energy has entered into a preliminary LNG cargo deal with Argentina's YPF — the world's newest exporter of the fuel. A final agreement is expected to be executed in the coming days. Under the preliminary deal, YPF will use an LNG carrier owned by Excelerate to deliver liquefied natural gas to customers around the world starting in September.

Belgium-based shipping giant Exmar completed and commissioned YPF's offshore Tango floating liquefied natural gas plant in Argentina's Bahia Blanca in May. Using an underwater pipeline, the offshore LNG plant was built to receive gas from the Vaca Muerta shale play, liquefy it and ship it aboard carriers around the world. "We continue progressing in our ambition ... to export surpluses during those months of low local (gas) consumption," YPF Executive Vice President Marcos Browne said in a statement.

Under the deal with YPF, Excelerate's carrier Excalibur will be one of two ships used to deliver LNG from Tango. Excelerate also owns one-third of the world's fleet of floating storage and regasification ships, which can be used as LNG import terminals.

China will take stake in \$3.5 billion Uganda oil export pipeline

(Reuters; July 26) - China National Offshore Oil Corp. aims to take a stake in an oil pipeline being developed to export Ugandan crude, the firm said July 26. Uganda discovered crude oil about 13 years ago but commercial production has been delayed partly because of a lack of infrastructure, such as an export pipeline. The 900-mile East African Crude Oil Pipeline (EACOP), costing \$3.5 billion, will pass through neighboring Tanzania to the Indian Ocean port of Tanga.

"CNOOC shall participate in the EACOP project," Aminah Bukenya, spokeswoman for the firm's Ugandan unit, told Reuters, adding that the level of its equity stake would be determined by the joint-venture partners. CNOOC jointly holds rights to Uganda's oil fields with France's Total and Britain's Tullow. About two-thirds of the pipeline's cost will be financed by debt. A Ugandan unit of South Africa's Standard Bank Group and Japan's Sumitomo Mitsui Banking Corp are jointly helping to raise the credit. Ugandan officials said the government is now aiming to have commercial oil production start in 2022. Government geologists estimate Uganda's oil reserves in the Albertine rift basin near the border with Democratic Republic of Congo at 6 billion barrels.