Oil and Gas News Briefs Compiled by Larry Persily May 30, 2019

North Dakota producers flared 20% of gas production in March

(The Associated Press; May 27) - North Dakota oil drillers are falling far short of the state's goals to limit burning natural gas at wellheads, five years after the state adopted rules to reduce the wasteful and environmentally harmful practice. The industry has spent billions of dollars on infrastructure but is at least two years from catching up, and regulators predict that increasing gas production will outstrip even that new capacity.

Environmentalists and a key Republican say the problem will persist as long as North Dakota doesn't take a tougher approach with the industry, which has largely avoided financial penalties. "We need to find an excess flared gas solution immediately," said Republican Rep. Vicky Steiner, whose hometown of Dickinson is in the heart of the state's oil patch. "It's a shame. I'd like to see us find a use for this."

Flaring is the practice of burning off gas produced as a byproduct of oil drilling. In 2014, when more than one-third of the gas was flared, the state began requiring companies to limit flaring to no more than 10 percent by 2020. The national average is less than 1 percent. Oil companies have struggled from the start. In March drillers produced a record 2.8 billion cubic feet of gas per day, but about 20 percent of it went up in flames.

About \$4 billion in gas processing plants and pipelines is scheduled to come online within the next two years. But Justin Kringstad, director of the North Dakota Pipeline Authority, said projections show that oil production and its associated gas in two years will outpace even that added capacity. North Dakota is the nation's No. 2 oil producer behind Texas. Building a gas processing plant typically takes about three years.

Companies have warned lawmakers and regulators that restricting oil output to curb flaring would hurt investment and the state's treasury, which increasingly relies on oil and gas revenue. Lawmakers have opted to accept flaring rather than cut back on production, Steiner said. North Dakota oil producers can flare gas for a year without paying taxes or royalties on it, and companies can ask state regulators for an extension because of the high costs of moving gas to market. Almost all extensions are granted.

Court to rule whether export pipelines are entitled to eminent domain

(Houston Chronicle; May 28) - With growing export volumes of U.S. natural gas, developers are rushing to build new pipelines to border crossings into Mexico and Canada and to serve liquefied natural gas terminals. But a growing number of environmentalists and landowners are fighting the projects at the Federal Energy

Regulatory Commission and in court, challenging the notion that pipelines carrying gas destined for export are entitled to the same privileges as lines serving U.S. customers.

Under federal law, pipeline developers can seize land for construction as long as the project is in "the public interest." The city of Oberlin, Ohio, is challenging in federal court FERC's 2017 approval of a 275-mile pipeline moving Appalachian gas to Michigan through their city, arguing in part that FERC erred because a substantial portion of the gas will be exported to Canada. "Taking gas and using it for export doesn't benefit American consumers in any way," said David Bookbinder, an attorney with the Niskanen Center, a libertarian think tank in Washington, who is following the case.

If the court finds in Oberlin's favor, FERC could be forced to define when a pipeline carrying gas for export is and is not in the public interest. With tens of thousands of miles of pipelines in development, such an outcome has implications for billions of dollars of investment. The question of whether export pipelines are entitled to eminent domain authority remains under debate with some conservative legal scholars making the case that the public good defined under federal law is not limited to the U.S. public.

Louisiana LNG project developer lines up private-equity investor

(Houston Chronicle; May 28) - Virginia-based Venture Global LNG has secured a \$1.3 billion equity investment from New York investment firm Stonepeak Infrastructure Partners for its liquefied natural gas export project in Cameron Parish, Louisiana — giving the project a major financial boost. Construction activities have started on the Calcasieu Pass project with over \$250 million spent on site preparation, engineering and equipment purchases and fabrication, Venture Global LNG said May 28.

Venture Global said Stonepeak, which has offices in Houston, brings experience in LNG and large-scale infrastructure projects. "Calcasieu Pass is already significantly advanced in both site construction and module manufacturing, owing to the \$855 million previously raised to date," said Venture Global Co-CEO Bob Pender. "We are finalizing the balance of our Calcasieu Pass financing with our consortium of project-finance lenders, and we look forward to providing LNG to our global customers ... in 2022."

The Calcasieu Pass project received the green light from the Federal Energy Regulatory Commission earlier this year. The terminal has 20-year sales agreements with several customers, including Shell and BP. The plant is designed for 10 million tonnes annual capacity. Venture Global said it will use mid-scale, modular, factoryfabricated liquefaction trains. Kiewit has the contract to design, engineer, construct, and commission the Calcasieu Pass facility.

Rio Grande LNG developer awards \$9.6 billion in contracts to Bechtel

(Houston Chronicle; May 28) – Houston-based NextDecade has awarded a pair of construction contracts worth nearly \$9.6 billion to San Francisco-based engineering and construction firm Bechtel. Under the deals announced May 28, Bechtel will provide engineering, procurement and construction services to build the first phase of NextDecade's proposed Rio Grande LNG terminal at the Port of Brownsville, Texas.

The contracts are contingent on the Federal Energy Regulatory Commission voting to authorize construction. A FERC decision is anticipated for the end of July. If the project secures a federal permit and reaches a positive final investment decision, Bechtel has pledged to have three liquefaction units, two storage tanks and two marine berths in operation by 2023. Under the contract, the three production units would be capable of making up to 17.61 million tonnes of LNG per year — at a capital cost of \$543 per ton.

Over the past four decades, Bechtel has built nearly a third of the world's LNG capacity. The contracts are the latest forward momentum for NextDecade, which recently landed a 20-year LNG sales contract with Shell and pledged to deepen nearly half of the Brownsville Ship Channel to 52 feet. But not everyone supports the effort. Rio Grande LNG and two similar export terminals proposed in Brownsville face stiff opposition from a coalition of shrimpers, fishermen, environmentalists, neighbors, and communities.

Freeport LNG wins export approval for expansion project

(S&P Global Platts; May 29) - Continuing its recent pattern of quick-turnaround approvals, the Department of Energy has approved 0.72 billion cubic feet a day of gas exports from an expansion at the Freeport LNG project in Texas to nations that lack free-trade agreements with the United States. The approval, covering a 20-year period, comes less than two weeks after the Federal Energy Regulatory Commission gave its nod May 16 for a fourth liquefaction train at the plant on Quintana Island, near Freeport.

It marks another step forward for an expansion project among the second wave of U.S. LNG developments seeking to capture a share of rising global LNG demand by the mid-2020s. With the order for Freeport's expansion, the Energy Department has authorized a total of 33 bcf a day of gas exports to non-free-trade countries, the department said in its order May 28. To reach its public-interest determination, it relied in part on its 2018 study that said the country would see net economic benefits from gas exports.

The addition of Train 4 at Freeport would add over 5 million tonnes a year of capacity to the terminal, raising the total export capacity to more than 20 million tonnes a year. The first train at Freeport is scheduled to begin commercial operations in the third quarter of this year, with the first three trains to be in production by mid-2020. The fourth liquefaction unit is slated to begin commercial operations in 2023.

LNG producers worry excess supply could affect profit margins

(S&P Global Platts; May 28) - The liquefied natural gas market could end up with excess supply in the next decade as companies race to build new LNG export projects before finalizing customers, senior executives said May 28 at an industry conference in Australia. The oversupply will result in lower prices and affect profit margins in a similar way to how the LNG market has been overwhelmed by excess supply from Australian and U.S. projects outpacing demand growth the past couple of years, they said.

The S&P Global Platts Japan-Korea Marker — the benchmark price for spot LNG in Northeast Asia — was assessed for July cargoes at \$4.497 per million Btu on May 24, as spot markets remained weak with a supply overhang from multiple projects ramping up production. "What we are seeing in the market is a number of projects going to final investment decision without having pre-sold all of their volumes," Peter Coleman, chief executive of Woodside Energy, told reporters at a press conference.

He said the trend is a concern because it signals that everybody expects the market to tighten in 2023-24, and companies are holding onto their volumes until the market tightens and they can get higher prices. "If too many projects do that, of course there will never be a tightening because everybody will be trying to get in at the same time," Coleman said. ConocoPhillips CEO Ryan Lance said it is a buyer's market, and buyers want shorter terms and favorable pricing to take advantage of spot-market swings.

No delay from political turmoil, says Papua New Guinea LNG partner

(S&P Global Platts; May 30) - No major delays are expected in the LNG expansion project in Papua New Guinea due to the country's leadership change, project partner Santos' CEO Kevin Gallagher told reporters May 30. Some observers had said the country's ongoing political turmoil could affect the multibillion-dollar project to more than double the country's LNG output to about 15 million tonnes per year, with analysts expecting a final investment decision could be pushed back by several months.

"I think we've just got to wait and see how that will settle down and let the process take its course," Gallagher said at an oil and gas conference in Australia. However, he said, "There's always a concern that it [the prime minister's resignation] could lead to a delay. But I wouldn't anticipate at this stage that there should be any major delay." James Marape took over as prime minister on May 30 after a vote in the Parliament, ending days of uncertainty after the resignation of the previous prime minister, Peter O'Neill.

O'Neill's resignation has the potential to delay the project although it still is likely to reach a final investment decision in 2020, Neil Beveridge, senior analyst at Bernstein Research, said earlier this week. "A change in government would lead to a change in key personnel responsible for negotiation," Beveridge said. Partners in the LNG

expansion effort include Australia's Santos, Total, ExxonMobil, Oil Search, and Papua New Guinea's Kumul Petroleum.

China imported a record volume of Australian LNG in April

(S&P Global Platts; May 27) - China imported a record high 2.79 million tonnes of LNG from Australia in April, up 61.3 percent year on year, latest customs data showed amid China's growing gas consumption, rising Australian LNG export capacity and trade tensions between China and the United States. "Chinese LNG imports are growing, and without a significant influx of U.S. LNG they are likely going to look to other sources of supply," said Jeff Moore, Asian LNG analytics manager at S&P Global Platts.

Over January-April, China imported 8.93 million tonnes of LNG from Australia, its biggest supplier, up 40.2 percent year on year, the customs data showed. Meanwhile, China's pipeline gas imports from Turkmenistan, its biggest pipeline gas supplier, fell 13.8 percent year on year to 2.07 million tonnes in April, but the volume was up slightly from March. Over the first four months of the year, Turkmenistan sent 8.61 million tonnes of gas to China, unchanged from a year earlier.

Overall, China imported a total 7.65 million tonnes of gas in April, up 12.7 percent from a year ago. Imports for the month comprised 4.54 million tonnes of LNG and 3.11 million tonnes of pipeline gas. Qatar also is a major LNG supplier to China.

Analyst says Australia gas projects could cut costs by collaborating

(The West Australian; May 27) - As Asian gas demand soars, Australian LNG players wanting to develop new gas fields will need to collaborate to compete against cheaper projects overseas, according to an independent research analyst. The analysis points to difficulties for two Woodside projects — the US\$11 billion Scarborough project to supply gas to a new LNG train at the 7-year-old Pluto LNG plant and the US\$20.5 billion Browse project to supply more gas for the 30-year-old North West Shelf LNG plant.

Wood Mackenzie Asia-Pacific research director Angus Rodger said global LNG demand is rising, with an additional 65 million tonnes a year needed by 2025. But, he cautioned, LNG tends to be cyclical with periods of underinvestment and then "everyone jumps into the window at the same time." More LNG capacity than ever in a single year could be sanctioned this year, he said, with similar numbers in 2020. When many projects go ahead at the same time, "it gets really really ugly, really really fast."

Typically so-called brownfield projects, such as Scarborough and Browse, which develop new gas but use existing infrastructure, are cheaper than greenfield projects that require everything to be built. But technical and gas-quality challenges make some

Australian brownfield projects more expensive than overseas greenfield projects, the Singapore-based analyst said. Qatar, which is adding 32 million tonnes a year of capacity, is one of the cheapest places to build a new LNG train. Australian projects could cut costs to be more competitive if they shared infrastructure, Rodger said.

China wants to lower coal prices to help power producers

(Bloomberg; May 28) - China is seeking to lower domestic coal prices to aid power producers, proposing that miners bring the benchmark grade to below 600 yuan (\$87) a ton, according to sources. China's National Development & Reform Commission made the proposal to coal producers after six major utilities sought the government's help to reduce their fuel costs in order to cut power prices, the sources said. China plans to cut electricity prices for industrial and commercial users by 10 percent this year.

A final decision has not been made on the coal pricing, according to the sources. The step isn't unusual. China is the world's largest user and producer of coal and has previously sought to balance the needs of its power generators with those of miners by securing a price range of about 500 to 570 yuan. Domestic coal prices have risen this year, spurred by mine inspections and import restrictions that crimped supply.

This latest move signals coal-fired power generators are under pressure from high fuel costs and the government's plan to cut electricity rates. They're also being challenged by a growing share of clean energy. China's thermal generation slipped in April for the first time since late 2017, while solar and wind power output surged to records.

Tanzania energy minister says LNG construction will start in 2022

(Reuters; May 28) - Tanzania expects a consortium of international oil companies to start building a long-delayed liquefied natural gas project in 2022, its energy minister said May 28. Construction of an onshore LNG export terminal near offshore gas discoveries in deep water south of the East African country has been held up for years by regulatory delays. The government said in March it planned to conclude talks in September with a group of oil and gas companies led by Norway's Equinor.

Equinor, alongside Shell, ExxonMobil, London-based Ophir Energy and Singaporebased Pavilion Energy, are looking to build the onshore LNG plant in Lindi region. "Construction of this project is expected to start in 2022 and will be concluded in 2028," Energy Minister Medard Kalemani said in a budget presentation to Parliament. The \$30 billion gas development project would be designed to produce 10 million tonnes of LNG per year. Tanzania's offshore reserves are estimated at 57 trillion cubic feet. The oil companies will develop the project in partnership with state-run Tanzania Petroleum Development Corp. Kalemani said the government launched a new round of talks in April with each company to speed up the pace. "We instructed the government negotiation team to hold separate talks with each individual investor, instead of the previous arrangement of holding joint talks with all the investors," he said. "We expect these talks to be completed within seven months." The talks are aimed at negotiating a host government agreement — a crucial step toward a final investment decision.

Chevron starts drilling for additional gas to feed Gorgon LNG

(The West Australian; May 27) - Chevron on May 27 kicked off a multibillion-dollar addition to its \$US54 billion Gorgon LNG project in West Australia's northwest region with the start of a second-stage offshore drilling campaign to feed the facility's three liquefaction trains. Stage 2 will expand the existing subsea gas-gathering network for the Chevron-led joint venture terminal on Barrow Island with seven new wells planned for the Gorgon field and four in the Jansz-Io field.

Wells in the Gorgon field will be drilled by a mobile offshore drilling unit. Drilling at Jansz-Io will start later in the campaign using a specialized drill ship. Chevron said the campaign would include system upgrades on Barrow Island and the offshore installation of 11 vertical subsea production trees, more than 30 miles of production pipelines, almost 20 miles of control umbilicals and 2,840 tonnes of subsea structures.

Chevron Australia managing director Al Williams said the additional drilling would maintain long-term gas supply to the liquefied natural gas plant and export terminal, which has an annual capacity of 15.6 million tonnes. Gorgon is a joint venture between Chevron (47.3 percent), ExxonMobil (25 percent), Shell (25 percent), Osaka Gas (1.25 percent), Tokyo Gas (1 percent), and Japanese joint-venture JERA (0.417 percent).

Citing lower costs, China will phase out subsidies for wind power

(Reuters; May 24) - China will end government subsidies for new onshore wind power projects at the start of 2021, with renewable projects set to compete on an equal footing with coal- and gas-fired electricity, the country's state planning agency said May 24. The move is a milestone for the renewable energy sector, which has traditionally relied on subsidies and other preferential policies to encourage developers to build new plants.

China has been promoting what is known as "grid price parity" with traditional sources of power such as coal. The National Development and Reform Commission said tariffs paid to onshore wind projects will be cut to as low as 0.29 yuan (\$0.0420) per kilowatt hour in 2020, while grid price parity will apply to all new projects as of Jan. 1, 2021. It

said the tariff adjustments beginning this year are designed to ensure wind power can reach the same price level as coal-fired power, while also promoting fair competition.

China has been scaling back its subsidies for wind and solar projects after a rapid fall in equipment and construction costs, as well as a huge subsidy payment backlog for existing projects. China launched a series of subsidy-free wind and solar projects in January, noting that solar construction costs in China fell 45 percent from 2012 to 2017, while wind project costs dropped 20 percent over the same period.

Japan's utilities not worried of LNG supply during nuclear closures

(S&P Global Platts; May 24) - A string of potential closures of Japanese nuclear reactors starting in March 2020 is unlikely to trigger a tightening of LNG supply for the country's utilities, industry officials and analysts said. Japanese utilities would shift to natural gas-fired generation in the event of reactor closures, Satoru Katsuno, chairman of Japan's Federation of Electric Power Companies, said at a press conference May 17. "We're not concerned much" about LNG supply LNG, he said.

Katsuno and analysts said that power companies' long-term purchase contracts with LNG suppliers and their spot-market procurement of gas, as well as development of new LNG sources in Australia, will help the utilities obtain a stable supply. Meanwhile, power demand in Japan is likely to remain stagnant, the analysts added. The country's Nuclear Regulation Authority said in April that it will order Japanese power companies to shut down their reactors if they miss the deadlines for completing safety facilities.

The agency made the decision after three utilities — Kyushu Electric, Kansai Electric, and Shikoku Electric — told regulators last month that completion of the safety facilities for their 10 reactors will likely be delayed up to two and a half years after the deadlines. An LNG trader at a Japanese power company said that unless all the reactors are shut at the same time, demand for LNG as an alternate to nuclear power is unlikely to surge. Besides, he said the global LNG market is oversupplied, making it easy to buy the fuel.

Judge declares Queensland gas royalty determination invalid

(Australian Financial Review; May 24) - The Australia Pacific LNG project has won a landmark legal challenge against the Queensland state government over the amount of royalties it pays on the coal-seam gas that is delivered to its \$25 billion LNG export facility in Gladstone. In a Supreme Court decision May 24, the judge declared invalid the royalty formula used for the APLNG project since 2015, directing the government to come up with a new way to set royalties.

It is a blow for the cash-strapped state government, which already had been receiving lower royalties from the LNG industry in the early years of production due to the plunge in oil prices. The LNG export projects sell their gas at prices linked to a barrel of crude. The judgment will be watched closely by the two other big LNG projects in Queensland. Lawyers for APLNG — a consortium of Australia's Origin, ConocoPhillips, and China's Sinopec — had asked the court to throw out the royalty determination.

APLNG has long believed it got a worse deal than the Shell-operated Queensland Curtis project, which started LNG exports a year earlier. Given the confidentiality around royalty determinations, APLNG does not know exactly how much its rivals are paying. Under Queensland's system, royalties are payable at 10 percent of the wellhead value — the amount that could reasonably be expected if the gas were sold on a commercial basis — less deductible costs, such as operation and capital costs.

Construction starts on third LNG import terminal in the Philippines

(ABS/CBN News; The Philippines; May 28) - First Gen Corp. and its partner Tokyo Gas on May 27 broke ground on their \$1 billion liquefied natural gas import terminal in Batangas City, the Philippines. The project is "construction ready" following significant pre-development work, the development team said. It's one of three of LNG import terminals being built in the Philippines. The other two are Energy World's hub in Pagbilao, and Phoenix Petroleum Philippines and China National Offshore Oil Corp.'s joint US\$2 billion LNG hub project, also in Batangas.

The First Gen-led project will provide gas to meet domestic demand as the country's only producing field, Malampaya, is in decline and could run out by 2024, according to estimates. "Our power needs are still growing, but also the needs of the world. Because of climate change, it also means we have to go to cleaner fuels and we think natural gas is really the way to go," said Federico Lopez, CEO of Philippines power generating company First Gen.

Alberta regulator restricts fracking near dam after 4.4 quake

(The Canadian Press; May 27) - The Alberta Energy Regulator is moving to restrict oil field fracking activity near the Brazeau Reservoir in east-central Alberta as a precaution following a 4.4-magnitude earthquake in the area in March. The agency said hydraulic fracturing operations targeting the Duvernay underground formation or deeper are prohibited within five kilometers (3.2 miles) of the Brazeau dam infrastructure.

Hydraulic fracturing, or fracking — where water, sand and chemicals are injected under high pressure to break up tight rock and free trapped oil and gas — is also banned for shallower operations within three kilometers. Drillers that frack within five kilometers of

the dam must report any seismic events greater than 1.0 magnitude and operations must cease if an event of 2.5 magnitude or greater is detected, the regulator said.

The epicenter of the quake in March was estimated to be about 20 miles northwest of Rocky Mountain House but it was not immediately linked to fracking activity. No damage was initially reported. A 4.6-magnitude quake a week earlier was felt in Red Deer and Sylvan Lake in central Alberta and prompted the regulator to order producer Vesta Energy to suspend fracking at its well site, report all previous seismic activity and file a plan to eliminate or reduce future seismic activity from fracking.

U.S. oil stockpiles up, prices fall 13% since late April

(Wall Street Journal; May 29) - U.S. oil stockpiles are climbing at their fastest pace since 2016, fueling fresh volatility in the market as fears of excess supply gather momentum. Rising inventories have powered a 13 percent drop in oil since prices hit a nearly six-month high in late April, with analysts wary that increased production from OPEC and its allies could cause another glut. Those worries have oil prices teetering. A further drop could hurt energy companies and crude-producing nations, analysts said.

U.S. crude stockpiles have risen 8 percent in the first 4½ months of the year, according to government data. That pace would be the quickest growth rate in three years if it holds through the end of May. The last time inventories climbed at this pace, in early 2016, oil dipped below \$27 a barrel, hitting its lowest level in more than a decade as U.S. production and anxiety about the world economy both surged.

Few analysts expect a similar price drop this year, but many remain cautious after oil tumbled from a multiyear high of \$76 into the low \$40s in the fourth quarter of last year. U.S. crude closed May 28 at \$59.14 a barrel. The notoriously volatile stockpile readings also have come with analysts unsure about supply from Iran, Venezuela, and Libya, as well as the effects of higher tariffs on oil demand amid the U.S.-China trade fight.