Oil and Gas News Briefs Compiled by Larry Persily April 15, 2019

Texas producer says gas flaring 'a black eye for the Permian'

(Bloomberg; April 11) - America's hottest oil patch is producing so much natural gas that by the end of last year producers were burning off more than enough of the fuel to meet residential demand across all of Texas. The flaring has likely only intensified since then. The controversial but common practice has oil and gas drillers burn off gas that can't be easily or efficiently captured and sold. It releases carbon dioxide and is lighting up the skies of West Texas and New Mexico as the Permian Basin is in a production boom.

Oil wells there produce gas as a byproduct, and because gas pipeline infrastructure hasn't kept pace with the expansion energy companies must sometimes choose between gas flaring and slowing oil production. "It's a black eye for the Permian Basin," Pioneer Natural Resources CEO Scott Sheffield said April 10 at an energy conference at Columbia University in New York. "The state, the pipeline companies, and the producers — we all need to come together to figure out a way to stop the flaring."

The amount of gas flared in the Permian rose about 85 percent last year to reach an average of 553 million cubic feet a day in the fourth quarter, according to data from Oslo-based consultant Rystad Energy. Local gas prices hovering near zero will remain "under stress" until more pipelines come online, Moody's Investors Service said in a note April 11. More pipeline capacity is expected come online in the next year or so, likely reducing, but not eliminating, the need to flare. The U.S. moved past Nigeria into fourth place in gas flaring in recent years, according to World Bank data for 2017.

Reuters: Shell left LNG project because of new partner's ties to Putin

(Reuters; April 11) - Shell pulled out of a project to build a Russian liquefied natural gas plant partly because Gazprom suddenly added another partner with links to an ally of President Vladimir Putin, according to five sources. After three years work on the Baltic Coast LNG export project, Shell discovered that Gazprom was bringing in a company linked to Arkady Rotenberg, who is on a U.S. sanctions blacklist.

The sudden change in the line-up of partners was one of the key factors contributing to Shell's announcement April 10 that it was pulling out of the project, according to three sources close to Shell and two other sources familiar with the project. According to two sources close to Shell, Gazprom did not consult with Shell about bringing in the firm, which is called RusGazDobycha, but instead presented it with the plan as a fait

accompli. With RusGazDobycha's arrival also came changes to the configuration of the project itself, which Shell did not feel comfortable with, all of the sources said.

It became untenable for Shell to stay in the project "and that was clear from the moment that Gazprom announced it was going to build the plant together with RusGazDobycha," said one of the sources. The sudden shift in the project underlines the unpredictability of doing business in Russia. One of the problems for Shell was that Rotenberg, a long-standing friend of Putin and his former judo training partner, is under sanctions and that created sanctions risks for Shell too. For Shell, partnering with a Rotenberg-linked firm was tantamount to "digging yourself your own sanctions grave," said a source.

Chevron buys Anadarko for \$33 billion

(Bloomberg; April 12) - Chevron has agreed to buy Anadarko Petroleum in a \$33 billion wager on the Permian shale oil region and liquefied natural gas. Chevron is making a double bet on what many consider the future of Big Oil over the next decade. The deal adds acreage and production in the prolific Permian Basin of West Texas and southeast New Mexico and also increases Chevron's exposure to LNG at a time when natural gas is viewed as the most-favored transition fuel in the fight against climate change.

It puts Chevron neck-and-neck with the oil and gas production of ExxonMobil and Shell, both of which have dominated Big Oil over the past decade. Measured by cash flow, Chevron said it would have generated a combined \$36.5 billion with Anadarko last year, slightly ahead of Exxon's \$36 billion. Chevron said the deal will give the combined company a 75-mile-wide corridor across the Permian's Delaware Basin.

It's the biggest move yet for Michael Wirth, 58, the chemical engineer who became Chevron CEO 15 months ago. He has quickly shaken up Chevron by announcing an aggressive Permian expansion plan. Speculation has long focused on Anadarko as a takeover target for the world's largest oil companies, offering a suite of assets including a Mozambique LNG export project that is close to a final investment decision this year.

Chevron said the combined entity would have had daily output of 3.596 million barrels equivalent of oil last year, compared with Shell's 3.666 million. Exxon reported average production last year of 3.833 million. The deal is expected to close in the second half of the year, subject to Anadarko shareholder approval and regulatory approvals.

Chevron takeover of Anadarko creates a larger LNG competitor

(Australian Financial Review; April 15) - Life for prospective LNG projects just got even tougher with Chevron's takeover of Anadarko Petroleum creating a hefty competitor that brings Chevron's two huge projects in Western Australia and Anadarko's emerging

position in Mozambique into a single portfolio, analysts said. While the rationale for the mega-deal is primarily linked to the companies' shale positions in the onshore U.S., the LNG combination is also expected to be powerful with Chevron highlighting to investors the low-cost, vast footprint of Anadarko and the attractive growth option in Mozambique.

"Chevron entering Mozambique with its existing LNG footprint makes the project an even more formidable competitor for those seeking to sanction greenfield LNG developments over the coming few years," RBC Capital Markets analyst Ben Wilson told clients. Australian-listed companies aiming for final investment decisions on LNG projects in the next two years include Woodside, which looks to sanction the Browse and Scarborough projects in Western Australia, Santos with its Barossa gas project to supply the Darwin LNG plant, and Oil Search with its expansion in Papua New Guinea.

The stiffening in the competitive environment for LNG comes as spot prices for the fuel in Asia trade near a three-year low, posing challenges for new ventures looking to sign long-term sales deals at prices high enough to underpin multibillion-dollar investments. Chevron's Australian portfolio includes a stake in the Woodside-run North West Shelf venture as well as about 47 percent of Gorgon and 64.14 percent of Wheatstone.

Columnist says coal-linked LNG contract makes sense for Tokyo Gas

(Reuters' columnist; April 10) - The linking of a liquefied natural gas contract to coal prices is a long-overdue step, but it's unlikely to represent a major shift in the fast-evolving market for LNG. In a move believed to be the first of its kind, Shell signed a long-term supply deal with Tokyo Gas last week that partly uses coal-linked indexation for the pricing. The deal can be seen as part of Tokyo Gas' efforts to diversify its supply sources and the price risks associated with having contracts linked solely to crude oil.

The LNG industry was built on long-term contracts that were linked to the price of crude oil, but the rapid growth of the industry has undercut that model. It made sense to underpin development costs for new export LNG projects with oil-linked contracts that could last for more than two decades, giving project developers the certainty needed to raise large amounts of capital and providing buyers with security of supply. Crude also made more sense than coal, given that 40 years ago the crude futures market was significantly more advanced — and still is — than the market for trading thermal coal.

The Tokyo Gas deal makes sense in that LNG and coal are effectively competing fuels in Japan — and by linking the price the utility can hedge against competitors using coal-fired generation. While this makes sense in Japan, it may not have too much relevance in other countries in the region with the possible exception of South Korea, where LNG also competes against coal. Rather, spot pricing or short-term deals linked to LNG or natural gas indexes are likely to hold more appeal, as these offer sufficient flexibility and don't require strong knowledge of the workings of another market, such as coal.

BP plans exit from shale gas drilling in southwestern China

(Reuters; April 11) - BP plans to exit from two production-sharing contracts for projects drilling for shale gas in the southwestern Chinese province of Sichuan, three sources with knowledge of the matter said this week. BP is the last of the international oil majors, including Shell, ExxonMobil, ConocoPhillips, and ENI, to quit exploring for shale gas in China because of poor drilling results. Its departure leaves the sector firmly in the hands of domestic companies.

In March 2016, BP agreed with China National Petroleum Corp. to explore and produce natural gas from shale rock formations in the Neijiang-Dazu block in Sichuan, its first such contract in China. It inked a second production-sharing contract for the Rongchangbei block later in 2016. China National Petroleum was the operator in both deals. BP no longer wants to proceed with the Sichuan projects after drilling eight to 10 wells with disappointing results, two of the three sources said.

One of the wells that was drilled to a depth of 14,300 feet in the Neijiang-Dazu block produced about 350,000 cubic feet a day of gas during test production, a fraction of the output from a typical CNPC shale well in the same geological zone, IHS Markit said in a research note. China is only just beginning to develop its vast shale gas resources with production last year providing only 6 percent of the country's total gas output. The country's geology makes gas extraction difficult and a challenging operation.

U.S. natural gas prices increasingly connected to Asia

(Wall Street Journal; April 11) - The rise of the U.S. as a major exporter of liquefied natural gas has helped balance the domestic market amid surging production. It has also connected the price of gas in Louisiana to the weather in China — a development that is adding pressure on already low U.S. prices. The U.S. gas market, long isolated from global trade, had relied on domestic supply and demand to set prices. Now so much gas is going overseas that forecasting prices is becoming more complex.

There are smog-battling policy makers in Beijing to consider, as well as nuclear power plant maintenance schedules in Japan, Chilean weather forecasts and gas inventories in the Netherlands to monitor. "Our supply and demand balances are increasingly linked to what's going on in other places in the world," said Barclays analyst Samuel Phillips. "That quite simply was not the case five years ago, or even really a couple years ago."

Lately a sharp drop in Asian and European LNG prices is reverberating back to the U.S. The Japan-Korea Marker, a widely used Asian LNG benchmark, has fallen below \$5 per million Btu in recent weeks, down from more than \$10 before winter. Asian prices have plunged in response to a warmer-than-expected winter in China and nearby importers,

leaving gas that was stockpiled in the fall being available for spring. At less than \$5, the Asia price is right around the cost of U.S. gas plus processing and shipping expenses.

In Asia, U.S. LNG exports are "basically out of the money," said Jordan McNiven, an analyst with investment bank Tudor, Pickering, Holt. "They're saying, don't send us any more LNG, we're good." This could weigh on already depressed U.S. prices this year.

FERC issues final EIS for small-volume Florida LNG plant

(S&P Global Platts; April 12) - Eagle LNG Partners' small-scale project in Florida to liquefy natural gas for use as marine fuel and for export to the Caribbean and other markets took another step forward April 12 as U.S. regulators issued a positive final environmental review for the proposal.

The project, at about 1 million tonnes annual capacity, is at the other end of the midand large-scale LNG export terminals operating on the U.S. Gulf and East coasts. In its final environmental impact statement, the Federal Energy Regulatory Commission concluded that while the Eagle LNG project in Jacksonville would result in some limited adverse environmental impacts, they would not be significant with implementation of mitigation measures the developer proposed and the agency recommended.

Among the "principal reasons" for that conclusion was that the terminal would be in an area currently zoned for industrial use along a ship channel. The smallest of the 12 or so LNG export projects with pending applications before FERC would cater to a niche market. The terminal would liquefy natural gas, store the LNG on site, and then load it onto trucks, containers or oceangoing vessels for use in the marine bunkering trade and for export. The company, a joint venture of Ferus Natural Gas Fuels and GE Ventures, intends to serve domestic and international markets.

Freeport LNG moving ahead, regardless of Toshiba's problems

(S&P Global Platts; April 15) – The decision by China's ENN Ecological Holdings to cancel its agreement to acquire Toshiba's U.S. LNG business is at the very least a distraction for Freeport LNG, the liquefied natural gas export project south of Houston that holds a 20-year contract to supply Toshiba with 2.2 million tonnes of LNG per year starting in 2020. The Toshiba volume is about one-seventh of the plant's capacity.

Freeport LNG, which is nearing the end of construction and expects to start shipping LNG later this year, is already considering an expansion project to add a fourth liquefaction train. "It is not affecting us. They are continuing to stand behind their obligations," Freeport spokeswoman Heather Browne said of Toshiba.

The complicated transaction called for Toshiba to pay about \$800 million to ENN to take over the Japanese company's LNG offtake obligation to Freeport. Toshiba said it wanted to focus on its core businesses and distance itself from volatile energy markets. Uncertainties about future LNG prices and a lack of synergies with its other businesses forced Toshiba's decision in November 2018 to dump its U.S. LNG business.

Oregon wants more information on gas pipeline route dredging

(Jefferson Public Radio; Oregon; April 12) - The state of Oregon has told the Jordan Cove liquefied natural gas project that the state needs a lot more information before it could approve a key permit. The company is navigating state and federal permitting processes for the 229-mile, 36-inch-diameter pipeline through the state and LNG export terminal on the coast in Coos Bay. One permit is for dredging about 400 waterways and wetlands along the pipeline route from Klamath County to Coos Bay.

The Oregon Department of State Lands is asking for answers to dozens of questions it said the company has not adequately addressed. It said many substantive questions were raised during a recent 60-day comment period on the permit, ranging from concerns about public health and safety to whether the company adequately considered less-damaging alternatives.

Jordan Cove LNG's Paul Vogel said the requests are simply a part of the normal permit process. The developer, a unit of Calgary-based Pembina Pipeline, has until May 6 to provide the information, but the company is allowed to ask for more time if needed. A final decision on the permit is expected in September. In a separate regulatory action, the Federal Energy Regulatory Commission on March 29 issued its draft environmental impact statement for the project. Comments on the draft EIS are due by July 5.

LNG could provide 80% of Jamaica's power generation in 4 years

(The Gleaner; Jamaica; April 12) - Jamaica's transition to cleaner liquefied natural gas, now at nearly 25 percent of generated power for the national grid, will move to 80 percent in four years. It will result in one private supplier, Florida-based New Fortress Energy, replacing the fuel from state-controlled Petrojam's oil refinery as the main supplier of energy to power utility Jamaica Public Service Co. and private projects.

"New Fortress is a single supplier, and if they run into problems, we could have issues," conceded JPS President Emanuel DaRosa when asked whether the concentration of power in the hands of one supplier made the electricity provider liable to shocks. "Having said that, our Old Harbour power plant is a dual plant, so while the main power source is natural gas, it can use diesel as a backup. So should there be a problem, we can run diesel."

LNG will supply roughly 65 percent of the island's energy by next year, and New Fortress will supply all of that capacity, according to the JPS president. By 2030 LNG is likely to move to 80 percent of the energy mix with renewables accounting for 11 to 13 percent. DaRosa said the paradigm shift signaled the island's increasing reliance on LNG and the reduction in purchases from Petrojam oil refinery, which he estimates will drop by some 75 percent.

U.S. sends its first cargo of liquefied petroleum gas to India

(Bloomberg; April 8) - Less than two months after the first long-term contract for U.S. crude to be sent to India, American supply is making further inroads into Saudi Arabia's stronghold in the Asian nation. India — where oil demand is growing faster than anywhere else in the world — is set to get its debut shipment of cooking fuel from the U.S. this week. The liquefied petroleum gas cargo is expected to arrive at Ennore on the nation's east coast April 11, according to shipping data and intelligence firm Kpler.

At least three more tankers are headed to India from the U.S., the first cases of "direct LPG shipments on this route," Kpler said in an emailed report April 5. About 95 percent of the South Asian country's LPG imports come from the Middle East, mostly Saudi Arabia and Qatar. The shipments open up a new market for U.S. LPG (propane and butane) as America's trade war with China has almost stopped exports to that country.

Meanwhile, India is scouting for new supplies to meet soaring demand as cargoes from the Middle East shrink as a consequence of the deal between OPEC members and their allies to reduce crude production. The scramble for shipments has boosted premiums for the fuel. "We see the U.S. taking the incremental market share from Saudi Arabia," said Thomas Olney, a Singapore-based analyst at industry consultant FGE.

First Nations' coalition looks to buy into oil sands pipeline

(Oil & Gas Journal; April 8) - An indigenous coalition is forming in Canada with the aim of buying a controlling interest from the federal government in the Trans Mountain oil pipeline and expansion project between Alberta and an export terminal on the British Columbia coast. The Globe and Mail newspaper reported that the group, Project Reconciliation, has invited all First Nations in Saskatchewan, Alberta, and British Columbia to participate.

First Nation groups near the British Columbia coast were active in opposition to Kinder Morgan's plan to almost triple the capacity of the Trans Mountain system to 890,000 barrels per day, largely through construction of 715 miles of new 36-inch pipeline along the existing line. Although the National Energy Board and British Columbia government approved the project, several municipalities in the province strongly opposed it. The

debate has strained British Columbia's relations with Alberta, which supports the pipeline expansion and the export opportunity it would provide for Alberta oil producers.

With the project stalemated and interprovincial conflict intense, the federal government bought the Trans Mountain system and expansion project from Kinder Morgan last year, intending to manage the expansion to completion and then sell the operation. Delbert Wapass, leader of Project Reconciliation and former chief of the Thunderchild First Nation in Saskatchewan, told the Globe and Mail the aim is to secure C\$6.8 billion in bank financing to fund purchase of a 51 percent stake in Trans Mountain. Following a court order last year, the National Energy Board is reviewing its approval of the project.

Australian producer wants to develop local market for trucked LNG

(Reuters; April 12) - Woodside Petroleum said April 12 its Pluto liquefied natural gas project has opened a new LNG truck-loading facility as it looks to develop the domestic LNG market for remote power generation and transport fuels. The facility, located in Karratha, Western Australia, will initially be able to deliver seven LNG truck loadings a day, with each one transporting the equivalent of more than 21,000 gallons of diesel, Woodside said.

Capacity can be doubled by moving to 24-hour operations, and further expanded if needed to meet market demand, the company said. The Australian oil and gas company's initial focus will be to supply trucked LNG to mining operations and communities in Western Australia for power generation and also to supply coastal marine vessels. In the longer term, LNG from the truck-loading facility could support the transition toward cleaner fuel for trucks and trains in the region's heavy-transport sector, Woodside said.