Oil and Gas News Briefs Compiled by Larry Persily February 27, 2023

U.S. oil and gas exports into Europe are booming

(Wall Street Journal; Feb. 26) - A year of war in Ukraine is revitalizing U.S. oil exports as a source of financial influence and geopolitical power. As the West has shunned most Russian energy, record U.S. crude exports have helped fill the gap in Europe with the oil needed to produce gasoline, diesel and jet fuel. Since February 2022, when Russia invaded Ukraine, average monthly U.S. cargoes to the continent jumped 38% compared with the previous 12-month period, according to ship-tracking firm Kpler.

A fleet of tankers carried more crude to Germany, France and Italy — the European Union's largest economies — as well as to Spain, which alone boosted purchases by about 88% over the period. The pull of oil shipments from the U.S. Gulf Coast to Europe, which Kpler pegged at 1.53 million barrels a day in January, has in recent months made the continent a larger destination for U.S. crude than Asia.

The growth in exports marks the latest milestone in the revival of U.S. oil production after years of dwindling market clout. The shale boom in hydraulic fracturing and horizontal drilling has made the U.S. a major producer again. U.S. liquefied natural gas shipments to Europe more than doubled last year, according to the White House, cushioning the continent's households and manufacturers after Russia cut supplies.

"America is back in the most predominant position it has been in world energy since the 1950s," said Daniel Yergin, an energy historian and vice chairman of S&P Global. With oil, a widening price gap between European and U.S. crude has turned trans-Atlantic shipments into a lucrative proposition for oil traders and, increasingly, speculators.

Wood Mackenzie sees as much as \$100 billion investment in U.S. LNG

(Oil & Gas Journal; Feb. 23) - High prices and the demand for energy security will drive the U.S. to take over as the leading exporter of LNG in 2023 and potentially pave the way for \$100 billion in new projects to support long-term growth, according to Wood Mackenzie. In 2022, the U.S. was the third-largest exporter of LNG at 76.4 million tonnes per year. With the return to service of the Freeport plant in Texas, the U.S. will surpass Qatar and Australia this year to export a projected 89 million tonnes.

Wood Mackenzie predicts that based on the combination of projects already under construction and momentum of potential projects, annual U.S. LNG output capacity

could grow between 70 million and 190 million tonnes before the end of the decade, potentially more than doubling current exports, the global energy consultancy reported.

"Record-high prices and the need for energy security drove buyers, which included portfolio players and U.S. producers and infrastructure companies, to seek long-term U.S. LNG deals in 2022 and created huge contracting momentum for projects," said Giles Farrer, head of gas and LNG asset research for Wood Mackenzie. However, the potential for cost increases is challenging developers as they move forward, the report said. "Our benchmarking analysis indicates we have already seen inflation of over 20% on the U.S. Gulf Coast, compared to projects which were built in the past five years," said Sean Harrison, research analyst for gas and LNG at Wood Mackenzie.

Cheniere starts planning next LNG expansion at Louisiana terminal

(The Advocate; Baton Rouge; LA; Feb. 23) - Houston-based Cheniere Energy is laying the groundwork for an additional expansion at its Sabine Pass LNG terminal in Cameron Parish, Louisiana, that would push its annual liquefied natural gas export capacity to more than 54 million tonnes. Cheniere said Feb. 23 it has begun the prefiling process with the Federal Energy Regulatory Commission to build three new liquefaction trains at Sabine Pass LNG. The expansion will also include two LNG storage tanks.

Cheniere has hired Bechtel Energy to complete a front-end engineering and design study for the project. Assuming all goes well with the regulatory approval process, company officials hope construction will start by late 2025, with full operations in 2032, according to FERC filings. Cheniere has not made a final investment decision on the expansion, and a company spokesman said cost estimates are not firm because the project is still in development.

The expansion would continue the growth at Sabine Pass, which first began operations in 2016 and opened its sixth liquefaction train in early 2022. The six production trains have a peak capacity of 34.5 million tonnes annually. The three new trains would add an additional 19.5 million. Sabine Pass LNG is already the nation's top exporter of LNG by a considerable margin. Cheniere also operates a terminal in Corpus Christi, Texas, the nation's second-largest LNG operation at 18.3 million tonnes annually. The Texas site is also undergoing a \$5.5 billion expansion to boost capacity by 10 million tonnes annually.

Louisiana LNG developer wins 20-year deals with Chinese buyer

(Reuters; Feb. 24) - China Gas Holdings, one of China's largest independent gas distributors, has agreed to two 20-year liquefied natural gas purchase contracts with U.S. exporter Venture Global, adding to a flurry of deals signed between China and U.S. developers since 2021. China Gas Holdings, via its subsidiary China Gas Hongda

Energy Trading, would buy a total of 2 million tonnes per year from Venture Global under the two contracts, the Chinese company said in a statement.

Supply would begin in 2027, a company executive told Reuters. The LNG would come from two Venture Global projects in Louisiana: Plaquemines LNG and the CP2 LNG project. China Gas said it would receive 1 million tonnes of LNG annually from each project. Construction has started on the first phase at Plaquemines, with 13 million tonnes annual capacity. Start-up is planned for 2024. Construction could start later this year on CP2 LNG

Like most U.S. LNG export deals with China, the contract prices are linked to the U.S. benchmark Henry Hub gas market, the China Gas executive said. The terms allow flexibility to bring the fuel to China or trade in the global market. In 2021, Venture Global signed several large deals with firms in China. It signed a 20-year deal with state oil giant Sinopec to supply 4 million tonnes a year and agreed to provide 3.8 million tonnes a year to Unipec, a subsidiary of Sinopec. Also in 2021, Venture Global signed a 20-year deal to sell 2 million tonnes a year to a unit of China National Offshore Oil Corp.

U.S. natural gas prices continue freefall; drilling cutbacks expected

(Wall Street Journal; Feb. 23) – Natural gas prices have dropped more than 65% since mid-December and this week hit their lowest level since 2020's pandemic lockdown, leading producers to throttle back drilling in a dramatic turn in the market for the heating and power-generation fuel. Expensive natural gas was a major contributor to inflation over the past two years, pushing up the price of electricity and staying warm as well as manufacturing costs for fertilizer, steel, glass, aluminum, plastic and cardboard.

Now, producers are trying to avoid swamping the market while traders and analysts are calculating how low prices will need to fall to spur the right mix of curtailments and demand to balance the market. American consumers should benefit, especially once air-conditioning season starts. Lower prices would also bolster manufacturers' bottom lines, which have been eroded by rising input costs. Gas futures for March delivery ended Feb. 22 at \$2.174 per million Btu, down 53% from a year ago. In early trading, futures dipped below \$2, a threshold that has rarely been breached in the past 20 years.

The U.S. market currently is oversupplied by about 5 billion cubic feet a day. Without producers choking back output, U.S. inventories would swell beyond storage capacity before next winter, said Ryan Smith, vice president of consulting at energy-data firm East Daley Analytics. Analysts and energy executives say that producers must dial back output to buoy prices. They expect drilling activity to decline most sharply in the Haynesville Shale, where break-even production costs are higher than in Appalachia's Marcellus Shale, and in West Texas, where gas is an abundant byproduct of oil drilling.

Freeport LNG closure hard on global market, good for U.S. buyers

(S&P Global; Feb. 22) - Freeport's return to producing liquefied natural and exporting cargoes marked the end of the biggest outage in U.S. LNG export history which led to widespread market impacts and illustrated the importance of U.S. LNG in the global energy system. The unexpected shutdown of the Freeport terminal in Texas following a June 8 explosion had opposite effects on the global and U.S. gas markets, while demonstrating how significantly the U.S. connection with global markets has grown.

Internationally, the outage initially worsened supply constraints that sent sky-high spot prices even higher. In the U.S., the more than 2 billion cubic feet per day of feed gas that was not exported at Freeport helped reverse surging domestic prices and also helped enable storage inventories to refill ahead of winter. As Freeport now ramps up to full operations, its return stands to ease tightness in the global gas market, while cutting a U.S. supply overhang that is holding down domestic prices.

Globally, a major LNG plant getting knocked offline is not that unusual. But the U.S. market had never experienced such a prolonged outage of a major export terminal like Freeport, which represents one of the single largest sources of domestic demand. The outage was "a game changer" for the U.S. that will likely still be talked about a decade from now, said Phil Flynn, senior account executive at Price Futures Group. "Its timing really shook things up for a long period of time, and in a way it kind of helped save the U.S. market from being undersupplied," Flynn said in an interview.

U.S. power plant emissions fell last year amid switch from coal to gas

(Reuters; Feb. 24) - U.S. power plant emissions of pollutants that harm human health and warm the planet fell last year as the industry continued a switch from coal to natural gas, the Environmental Protection Agency said on Feb. 24. The reductions occurred — despite a 2% rise last year in electricity demand in the Lower 48 states — mostly due to the transition away from coal, which releases large amounts of pollution when burned.

The EPA said emissions of smog components nitrogen oxide and sulfur dioxide last year dropped 4% and 10%, respectively, compared with 2021. Emissions of mercury, a neurotoxin which can accumulate in the environment and make some kinds of fish unsafe to eat frequently, fell 3%. Emissions from power plants of the main greenhouse gas carbon dioxide fell 1% compared with 2021, the EPA said.

The EPA did not report emissions of the powerful greenhouse gas methane from the natural gas industry, an emissions source that environmentalists say is increasingly key as the U.S. is on track to become the world's largest exporter of liquefied natural gas.

Years of neglect will confront efforts to revive Venezuela oil industry

(Wall Street Journal; Feb. 22) - Across Venezuela's once-thriving oil industry, environmentalists say rusty pipelines and storage tanks routinely leak contaminants into the ground. Frequent spills stain the mangroves of national parks. Refinery explosions in recent years have sent black smoke billowing into the sky. And Venezuela's national oil company, PdVSA, unable to process the natural gas that is a byproduct of oil production, burns enough each day to supply the state of Georgia, population 11 million.

Following the Biden administration's decision last year to ease sanctions to allow Chevron to resume its Venezuela operations, U.S. and European oil companies have been lobbying the U.S. for clearance to pump oil amid market upheaval stemming from the war in Ukraine, people close to the companies say. But Venezuela's neglect and mismanagement reflect the challenges facing Western companies and investors looking to return to the country, which sits atop some of the world's largest oil and gas reserves.

The interest is deepening even as environmental and workplace advocates warn of hazards across Venezuela's decrepit energy industry, where regulatory oversight is lax, according to workers, analysts and environmental activists, even as President Nicolás Maduro's government is working to raise output. Morningstar Sustainalytics, which assesses environmental, social and governance risk for investors, ranks PdVSA as a "severe risk" because of its exposure to and management of environmental problems.

PdVSA burns about 2 billion cubic feet of gas daily, equal to about 2% of total U.S. gas production. Flaring quadrupled in the past decade, more than any other country studied by the World Bank's Global Gas Flaring Reduction Partnership.

China and India buying more oil, gas and coal from Russia

(Al Jazeera; Feb. 24) - Despite Western-led sanctions aimed at punishing Russia over its war in Ukraine, growing demand for Russian energy imports has helped keep the country's besieged economy afloat. China and India, Asia's biggest and third-biggest economies, respectively, have been the biggest buyers. China and India, both of which have declined to condemn Russia or impose sanctions, became the biggest buyers of Russian crude last year as Western countries restricted imports and imposed sanctions. China and India have been able to buy the oil at substantial discounts.

China's imports of Russian crude oil spiked up 8% in 2022 to an average 1.72 million barrels per day, according to Chinese customs data, making Russia the Asian giant's second-biggest supplier. Kpler, a commodities market analysis firm, has estimated that China will import 5.62 million barrels per day in February, as sanctions ramped up and Russia needed to find buyers for more of its oil. That beats the previous all-time high.

China's imports of Russian pipeline gas and liquefied natural gas in 2022 soared 2.6 times and 2.4 times, respectively, to \$3.98 billion and \$6.75 billion in value, respectively. Meanwhile, China's imports of Russian coal last year surged 20% to 68.06 million tonnes. India, which has emerged as a big customer of Russian oil, in January imported a record 1.4 million barrels per day — a more than 9% rise from December. India's imports of thermal coal in 2022 rose nearly 15% to 161.18 million tonnes.

Wealth manager expects Chinese demand could push oil to \$107

(Nikkei Asia; Feb. 25) - China's appetite for energy is roaring back as its economy recovers from a downturn caused by its draconian zero-COVID policy. Many pundits are worried that a surge in China's imports of crude oil and other energy resources could push those prices higher, fueling inflation worldwide. "Mobility data over the Lunar New Year holiday are already showing signs of a sharp pickup in travel (by Chinese)," said UBS Global Wealth Management in a report published earlier this month.

Given strong demand for gasoline and jet fuel in China, the world's leading wealth manager expects West Texas Intermediate crude futures to hit \$107 per barrel this year, lower than last year's high of \$130 but 40% higher than the current level. In the week through Jan. 27, Lunar New Year holiday travel in China reached 90% of pre-pandemic 2019. To meet robust demand for crude, Beijing in early January raised its import quota for 2023 by 20% from the previous year.

Global demand for oil is forecast to reach 101.9 million barrels per day in 2023 — up 2 million from 2022 and topping demand highs for the first time in three years, according to the International Energy Agency. In China, demand is expected to grow by 900,000 barrels per day. Many experts expect a sharp rise in oil prices and a deepening shortage toward the second half of the year. Goldman Sachs sees Brent crude futures gradually rising to \$100 by December and staying there in 2024.

Western sanctions on Russian oil and fuels 'so far ... has worked'

(Wall Street Journal; Feb. 23) - A Western oil gambit aimed at Russia appears to be working. In recent months, the Group of Seven rich nations imposed a price cap on the global sale of Russian crude and refined products, while the European Union banned most Russian oil imports. Both moves, working in concert, were aimed at curbing Moscow's energy revenue without choking off global supplies and sending prices soaring. Early data on Russian energy exports and pricing suggests the measures are keeping the oil flowing and global prices stable, while pinching Moscow's coffers.

"You can criticize overall Western sanctions quite easily," said Henning Gloystein, energy director at consulting firm Eurasia Group. "But the oil sanctions were aimed at

both capping Russian revenues and not disrupting the market. So far, that has worked." The price cap works by barring Western insurers, financiers and shippers that underpin much of the world's oil trade from handling seaborne Russian crude — unless it is sold below \$60 a barrel. The experimental sanction was the product of months of haggling between U.S. and European diplomats.

Much can still go wrong. Russian production may fall faster than the West intends, pressuring prices. So far, though, Russian crude exports are holding up. In January, they rose to 5.1 million barrels a day compared with December's 4.8 million, according to the International Energy Agency. The West more recently has imposed a similar set of price caps and Europe-wide embargo on Russian refined products. That mechanism, which hasn't been in place as long as the crude sanctions, could still dry up markets faster than Western officials desire, threatening global price swings for those fuels.

Location offshore Greece latest transfer site for Russian oil and fuels

(Bloomberg; Feb. 23) - Millions of barrels of Russian crude and fuels have been switched between tankers just a few miles off the coast of Greece, one of a series of workarounds that traders have used to overcome European Union sanctions against Moscow. At least 23 million barrels of Russian crude and additional volumes of refined fuels have been transferred from one tanker to another in the Bay of Lakonikos since the start of this year, according to tanker tracking by Bloomberg.

Greek authorities say their ability to intervene is limited because the activity is outside of a six-mile limit to the country's territorial waters. Traders and shipping companies have found multiple ways to ensure Russian oil can flow — this is just the latest example. There has been similar activity near Ceuta, a Spanish enclave in North Africa. A vast shadow fleet of tankers has also sprung up to help Russia overcome sanctions.

Once the cargoes are switched, the receiving tankers ferry the oil thousands of miles to buyers in Asia. Greece is the world's top oil tanker-owning nation. When the EU was negotiating a cap on Russian oil prices, Greece was among those pushing for higher thresholds. It was also among those pushing for weaker restrictions on transporting Russian oil when the relevant measures were being discussed.

The average age of the tankers involved in the crude transfers off Greece is 18 years. The oldest involved was built in 1997. That compares with a wider tanker fleet whose average age is about 12 years for the size of vessel most commonly used for hauling Russian crude. Ship-to-ship transfers are not inherently risky, but they do involve two vessels floating in the sea, pumping a potentially polluting cargo from one to the other.

Novatek LNG transshipment unit on monthslong voyage to Arctic

(High North News; Feb. 24) - A key piece for Novatek's Arctic LNG operation left the shipyard in South Korea on Feb. 22 and has begun its four-month journey to the Barents Sea, where it will anchor up and go to work near Russia's border with Norway. The 1,312-foot-long Saam floating storage and transshipment unit and its three escort tugs will reach their first main waypoint of Singapore in around three weeks.

The convoy has been traveling at a modest speed of around 4 to 5 knots, with around 12,000 nautical miles to go to the transshipment hub near Murmansk, Russia. The journey will take a minimum three to four months, making for an arrival at the beginning of the Northern Sea Route summer shipping season in June. With a gross weight of 247,540 tons, Saam is almost twice as large as the ice-capable Arc7 carriers carrying gas from Novatek's Yamal LNG export terminal to Europe and Asia.

Novatek placed its order for the Saam FSU almost three years ago. It and a sister unit will be part of offshore transshipment terminals where LNG from Yamal can be transferred from expensive-to-operate ice-capable LNG carriers to conventional carriers. This will optimize Novatek's logistics operation and provide cost savings. The second FSU is expected to take up position off the coast of the southern part of the Kamchatka Peninsula later in 2023 to serve Asian markets.

Germany could rank 4th in the world in LNG import capacity by 2030

(Argus Media; Feb. 22) - Germany plans to build 70.7 million tonnes peak annual LNG import capacity by 2030, economic ministry documents and planning applications by German energy firm RWE show. Germany is set to have the fourth-largest liquefied natural gas import capacity in the world by 2030, behind South Korea, China and Japan.

To rapidly add LNG imports, Germany is turning to floating storage and regasification units (FSRUs) to add capacity in the near term, some of which will be replaced by onshore terminals that are set to come on line in the second half of this decade. A total of 10 FSRUs are planned for Germany. Two terminals are already on line, with the third to come online by the end of February. An additional three more FSRUs are scheduled to come on line at state-operated terminals by the end of 2023.

Klaus Muller — president of German energy regulator Bnetza — has defended Germany's LNG expansion, which has been criticized as oversized by German environmental group DUH. Muller said security of supply is important. He also said that "we must think of our neighboring countries" that are landlocked and therefore cannot build domestic LNG import capacity, such as Austria, the Czech Republic, Hungary and Slovakia. This could enable Germany to serve as an LNG import hub for central Europe.