Oil and Gas News Briefs Compiled by Larry Persily February 23, 2023

Wind and solar power overtook gas in Europe in 2022

(S&P Global; Feb. 21) - Russia's 2022 attack on Ukraine created an immediate need for U.S. oil and gas in Europe, but the loss of much of Russia's fossil fuels strengthened the development of renewable energy across the continent. "Europe has succeeded in disentangling itself — more rapidly than just about anyone could have anticipated — from what in retrospect had been dangerously excessive dependence on Russian gas," Raymond James & Associates energy analyst Pavel Molchanov said in an email.

"The Kremlin made a bet that, out of desperation to restore normal gas flows, European governments would be willing to throw Ukraine under the proverbial bus," Molchanov said. "The Kremlin's strategy failed" for reasons that included Europe's ability to import liquefied natural gas and the expansion of renewable power sources. While LNG from Qatar and the U.S. helped to quickly replace Russian energy, conservation and increased renewable power may wean Europe off Russian gas permanently, he said.

Combined wind and solar overtook natural gas in 2022, according to think tank Ember Energy, accounting for 22% of the bloc's electricity mix compared to 20% for gas. Molchanov expects this trend to continue, and so do other observers. "Europe has always been an importer of energy, so the energy transition offers an unparalleled opportunity for the EU to flip the switch and secure its energy sovereignty," Lars Nitter Havro, a clean-technology analyst at Rystad Energy, said in a February note to clients.

Energy crisis accelerates Europe's shift to low-carbon economy

(Bloomberg; Feb. 21) - It's been almost a year since Russia launched its war in Ukraine, triggering Europe's worst energy crisis in decades. But rather than collapse in the absence of a key supplier, the region has nearly eliminated its dependence on Russian fossil fuels. In the past year, Europe's spending on Russian coal, oil and natural gas has dropped from roughly \$1 billion a day to a fraction of that amount, and it's accelerating the shift to a low-carbon economy.

The European Union has long been a leader in going green. When the war sent natural gas and power prices soaring, that transition shifted into overdrive. Solar installations jumped by 40 gigawatts last year — a 35% increase from 2021 — as consumers sought to cut energy bills. Battery storage in the EU surged 79%, largely due to the residential sector. While wind power also increased, inflation and permitting and regulatory issues

continue to pose hurdles. Yet, "the energy crisis has focused political minds on resolving some of the issues around permitting," said Oliver Metcalfe, a BloombergNEF analyst.

Another change is lower demand. Industrial gas use fell 18% from 2021 levels, while residential heating demand fell 15%, according to BloombergNEF. An increasing number of homes also installed highly efficient heat pumps. Because of its long-term focus on renewables and lower-carbon energy, the EU's greenhouse gas emissions declined in 2022, though by less than 1%. Overall, the bloc's electricity from fossil fuels is set to drop by 43% this year, according to BNEF. And many of its incentives for clean energy haven't really kicked in yet.

War's affect on energy prices drives poorer nations to dirtier fuels

(ClimateWire; Feb. 21) - Europe was expecting to freeze when Russia invaded Ukraine. Instead, the war's shock waves left some poorer Asian nations in the dark. After a year of fighting, Europe's natural gas reserves are bulging and its leaders are moving forward with ambitious plans to green their economy. But it's starkly different thousands of miles away, where poor Asian countries are scrounging for fuel after liquefied natural gas cargoes were rerouted to wealthy, higher-paying European markets.

Some nations have resorted to burning more coal. Others have endured electric blackouts due to abrupt fuel shortages. One year into Russia's brutal war on Ukraine, deep fault lines are being exposed in the global energy system, while international climate efforts are facing new challenges. Emissions from fossil fuels approached an all-time high last year as countries scrambled for supplies of coal, gas and oil.

Those that can afford to pay rising prices are buying up energy resources — and preparing for climate change — while those that can't are slipping back into the grip of dirtier fuels — or going dark. "I think there will be greater gaps between countries," said Jane Nakano, a senior fellow at the Center for Strategic and International Studies. Decisions by developing countries going forward may come down to which fuel is affordable and available, said Sam Reynolds, an energy finance analyst at the Institute for Energy Economics and Financial Analysis. "LNG meets neither of those criteria."

Faced with soaring gas prices, India and Indonesia burned more coal. Bangladesh, which relies on LNG to meet 20% of its gas demand, experienced fuel shortages and blackouts. Across parts of Africa, rising prices for fuel and food compounded the impacts of climate change and COVID-19, depriving millions of people of electricity.

Uganda has no intention of stopping oil project in national park

(Wall Street Journal; Feb. 20) - A herd of elephants stomped through savannah grasslands to the sounds of bulldozers preparing oil wells that will soon start feeding a 900-mile pipeline in the wildlife and nature reserve of Uganda's Murchison Falls National Park. The \$10 billion project has become a flashpoint in the global battle against climate change, as some African governments with unexplored natural resources seek to resist a global push to limit investment in new fossil fuel projects.

Opponents say the pipeline flow, which needs to be heated to 122 degrees Fahrenheit to keep the waxy crude liquid, will produce substantial greenhouse gas emissions, while the wells will pump oil that the world should no longer use if it wants to limit global warming. But the governments of Uganda and Tanzania are arguing that they can't afford not to exploit their natural resources while the world still runs on fossil fuels.

"Nothing will stop this project," Uganda's President Yoweri Museveni said. "We shall not accept any pressure from anybody." TotalEnergies is building 10 well pads inside the park, Uganda's largest, where some of the world's largest populations of buffaloes, lions and giraffes live. Together with China's CNOOC and the governments of Uganda and Tanzania, the French company plans to build a pipeline to transport the oil to the coast.

Fitch Solutions estimates Uganda could earn as much as \$2 billion a year in royalties and taxes from the planned 230,000 barrels a day, a large bump to the \$4.5 billion it currently collects in domestic taxes. Though more than 12 banks and insurers that have helped finance other TotalEnergies projects have said they won't support it, the lead partner says it can raise the financing. South Africa's Standard Bank, the Industrial and Commercial Bank of China and Japan's Sumitomo Mitsui Bank are leading the loans.

Pakistan, Bangladesh cannot afford all the LNG they need

(Reuters; Feb. 20) - With a little over a month to go for peak shopping season during Ramadan, the head of Pakistan's retail industry body is shuttling between meetings, pressing officials to relax orders that forced malls to shut by 8.30 p.m. to save energy. More than 40% of annual retail sales occur in the 30 days of the holy month, and malls are packed between 8 p.m. and 10 p.m., Tariq Mehboob, also the CEO of Pakistani menswear franchise Royal Tag, said in a letter to the government. "Early closure could result in job losses for 3 million to 4 million people," Mehboob wrote.

Fear in the retail sector highlights how a shortage of imported gas has cut power output and hit the Pakistan's economy, just as it reels from soaring inflation and a falling currency. Bangladesh faces the same issues. Both are scrambling to avoid a repeat of last year's massive power cuts, but industry officials and analysts say the crisis is likely to worsen this year because of a sharp drop in imports of liquefied natural gas.

Pakistan and Bangladesh are heavily dependent on gas for power generation but have had to slash LNG imports after prices jumped on a surge in Europe's demand to replace

Russian supplies. "High spot LNG prices and dwindling domestic production will mean that Pakistan will continue facing issues with ramping up gas-fired power generation," said Poorna Rajendran, LNG consultant at FGE. "We expect power outages to worsen in 2023." Despite LNG prices having fallen from last year's record highs, the fuel is still expensive for South Asian buyers, making it hard for them to boost LNG imports.

India orders power plants that run on imported coal to boost output

(Reuters; Feb. 20) - India on Feb. 20 invoked an emergency law to force power plants that use imported coal to maximize output ahead of an expected record surge in power use this summer, according to a power ministry notice seen by Reuters. Many of India's power plants that use imported coal, including those owned by Adani Power and Tata Power in the state of Gujarat, have not operated at full capacity recently because they have found it difficult to compete with power generated from cheap domestic coal.

In the notice sent to all imported coal-based power plants, the ministry said it expects them to operate at full capacity and sell power to buyers on exchanges. India's power plants running on imported coal have a total capacity of 17 gigawatts. The directive comes into effect on March 16, giving plants the time to import coal ahead of the expected surge in consumption. It would remain valid till June 15. The emergency law has been invoked for the second time in as many years.

Russian crude oil and refined product exports to China set record

(Bloomberg; Feb. 20) - Russian exports of discounted crude and fuel oil to China have jumped to record levels as the reopening of the world's biggest energy importer gathers pace after the dismantling of zero-COVID policies. Overall crude and refined product flows into China last month were at the highest at any point since the invasion of Ukraine a year ago and surpassed a record set in April 2020, according to data intelligence firm Kpler. Exports of fuel oil surged to an all-time high.

The buying spree was likely underpinned by private refiners, but state-owned processors are now showing more interest in Russian crude after concerns around potential blowback from the U.S. and allies kept them on the sidelines. China is toe-to-toe with India as the biggest buyer of Russian crude after the war in Ukraine reshaped global energy flows. Moscow has had to offer discounts to entice a shrinking pool of customers, a move welcomed by Asian buyers trying to control inflation.

Russia's overall crude and fuel oil exports to China reached 1.66 million barrels a day last month, according to Kpler data. That's more than the record set in April 2020 when the Asian nation was emerging from its initial virus restrictions. The uptick in Chinese buying is evidence that the country's economic recovery is picking up, which should

help to buoy global prices. The International Energy Agency last week cited China for a boost in its demand forecast, while Iran sees Brent rising above \$100 a barrel this year.

Rates climb as tankers are pulled from market to move Russian fuels

(Bloomberg; Feb. 18) - A \$2.2 billion fleet of tankers has been assembled to keep Russian crude and fuels exports flowing. Now, as some freight rates surge, executives are starting to ponder if the ships will ever return to serving everyone else. The oftenolder ships, which showed up when vessels began changing hands to undisclosed buyers at exorbitant rates last year, have sliced off a chunk of the conventional fleet. Since sanctions took effect on Russian refined fuels earlier this month, vessels hauling oil products across the Atlantic have posted a fivefold increase in their daily earnings.

Estimating the size of the shadow fleet is almost impossible, with ownership details and most vessels' commitment to Russia — shrouded in secrecy. Commodity giant Trafigura estimated it could total 600 ships, of which 400 haul crude. Some shipowners put the figure slightly lower. Irrespective of whether they permanently leave the international market or just shy away from it, the result could be higher shipping costs.

"These ships will be dedicated to those shadow trades and de facto removed from the markets," said Gernot Ruppelt, chief commercial officer of Ardmore Shipping, which operates a fleet of fuel and chemicals tankers. As well as a fleet split into Russian and non-Russian trading, a European Union ban on almost all seaborne petroleum imports from Russia has meant that ships are having to sail longer distances. That's made the fleet less efficient, boosting demand for vessels and costs. Ships hauling refined fuels across the Atlantic are earning \$55,000 a day, up from \$10,000 earlier this month.

Asian spot buys increase as LNG prices lowest since August 2021

(S&P Global; Feb. 21) - Asian spot LNG buying is set to increase in the coming weeks as buyers expect prices to drop further after the Platts Japan-Korea Marker price slid below \$15 per million Btu recently — the lowest since August 2021. According to some market sources, prices could fall further to \$10 to \$13 on ample inventories and improving supplies with the imminent restart of the Freeport LNG terminal in Texas.

Buyers need to avail this window when spot LNG prices are weak, before prices surge again, another industry source said. "Although the JKM is falling, there is a possibility that the JKM might rebound from summer onward, as the competition between Asia and Europe will get fierce," he said. Spot purchasing interest has already improved in South Asia, with several major Indian importers issuing buy tenders.

"JKM prices dropping below \$15 is likely to draw out some interest among Asian buyers for spot cargoes," James Taverner, research and analysis senior director, Gas Power & Climate Solutions, at S&P Global, said. However, underlying demand is still weak in Northeast Asia with high storage levels and a sluggish return to growth, Taverner said. Some buyers in China, however, like the rest of Asia, are waiting on the sidelines, anticipating a further price drop before clinching spot buys.

U.S. natural gas futures continue dive below \$2 per million Btu

(Bloomberg; Feb. 22) – U.S. natural gas futures have fallen to levels not seen since pandemic-era lockdowns more than two years ago that strangled the economic activity underpinning energy demand. The combination of weaker-than-anticipated winter heating demand and an industrial outage at an LNG export plant that buried the domestic gas market in excess supplies has gutted prices for the furnace and power-plant fuel. It's a dramatic turnaround from just six months ago, when fears of impending shortages as the coldest time of year approached drove prices to a 14-year high.

The 80% plunge in benchmark U.S. gas futures since late August will cheer homeowners and manufacturers recently hammered by sky-high utility bills and input costs. But shale explorers like Chesapeake Energy are faced with a grim choice: Keep drilling new wells to expand output, further drenching the country in supplies, or idle rigs and risk losing workers in one of the tightest labor markets in history.

Gas for March delivery tumbled as much as 5.1% to \$1.967 per million Btu on the New York Mercantile Exchange on Feb. 22, the lowest intraday level since September 2020. In contrast, gas futures briefly topped \$10.25 during trading on Aug. 23. "The market has been hit with the worst-case scenario," said Bloomberg Intelligence analyst Vincent Piazza. "Hard to imagine how things get worse from here."

Mexico has big plans to export U.S. gas as LNG

(Natural Gas Intelligence; Feb. 21) - As the world's biggest consumer of U.S.-produced gas, Mexico has set its sights on using its geographic position to its advantage. By importing gas from the U.S. at the cheapest prices available in the world, Mexico has big plans to export the fuel across the planet in the form of LNG to supply markets in need, such as Europe or Asia. To date, developers have announced plans to develop eight liquefied natural gas export projects in Mexico with a capacity to produce some 50 million tonnes per year of LNG, about 6.5 billion cubic feet of gas per day.

If all the plans materialize, Mexico could become the world's fourth-largest LNG exporter, according to Bloomberg New Energy Finance. In early February, Mexico Pacific Ltd. (MPL) and ExxonMobil LNG Asia Pacific announced the signing of two 20-

year offtake agreements for MPL's Saguaro Energía LNG terminal proposed for Puerto Libertad in Mexico's Sonora state. Gas would be supplied from the Permian Basin, liquefied and shipped to consumers in the Asia-Pacific region.

But not all of the proposed projects will be developed because the country doesn't have sufficient infrastructure nor the available capacity in its pipelines to ship gas from the Permian to the Pacific coast, said Norberto Catalán, director of trading and origination at Énestas, an electricity and gas boutique trading shop in Mexico City. "What is offered here is that these projects can receive faster regulatory approval in Mexico than in the U.S.," Catalán said. "They are looking to apply the local regulation in Mexico ... without having to deal with the Federal Energy Regulatory Commission, for example."

Regulators approve partial restart at Freeport LNG in Texas

(Reuters; Feb. 21) - Freeport LNG, the second-largest U.S. liquefied natural gas exporter, said on Feb. 21 that federal regulators had approved a partial restart of commercial operations at its Texas plant after an outage that lasted more than eight months. A blast last June knocked the LNG export facility offline. Gas processing was halted as regulators reviewed operations and staffing. Inadequate operating and testing procedures, operator fatigue and other shortcomings led to the blast, a review found.

The Federal Energy Regulatory Commission approved the partial restart of two of the three gas-liquefaction units, two storage tanks and a single tanker berth, a filing showed on Feb. 21. Restart of the third unit and related facilities require additional permission, FERC said. It will be "several weeks" before the plant can reach full processing capacity of 2 billion cubic feet per day. A third storage tank and second tanker berth will not be available until May, Freeport LNG said in a statement.

The company, founded by billionaire Michael Smith, initially had pledged to resume partial operations last October, but that proved too optimistic as investigators sought more details on operations and staffing. Freeport LNG agreed to increase staffing by 30% to address operator and training shortcomings discovered by investigators.

Partners consider floating LNG plant to send Israeli gas to Europe

(Reuters; Feb. 21) - Partners in the Leviathan gas field in the eastern Mediterranean have approved nearly \$100 million of spending on preparation for expansion that includes a floating liquefied natural gas production terminal off the coast of Israel, the companies said on Feb. 21. Leviathan, a deep-sea field with 35 trillion cubic feet of gas, came online in 2019 and supplies Israel, Egypt and Jordan. The idea is to boost exports to include sizable volumes for Europe as it seeks to reduce reliance on Russian energy.

"The development plan ... will enable a significant increase in production" to almost 750 billion cubic feet per year, said Yigal Landau, CEO of Ratio Energies — more than twice current production. NewMed Energy, a partner with Ratio and Chevron in Leviathan, said the group will spend \$45 million to plan initial production expansion and a further \$51.5 million on preparations for the floating LNG terminal. The facility is expected to have an annual production capacity of about 4.6 million tonnes of LNG, NewMed said.

Last year Israel, Egypt and the European Union signed a memorandum of understanding for Israeli gas to be sent to Europe through LNG plants in Egypt. It will take about three years from a final investment decision before the additional Israeli gas begins flowing to Egyptian liquefaction plants and then into Europe, said an industry source familiar with the project.

Fissures develop over Net-Zero Banking Alliance lending restrictions

(Bloomberg; Feb. 21) - Inside the world's biggest climate-finance alliance, a number of green banks are reviewing their membership in objection to perceived concessions to Wall Street. The Net-Zero Banking Alliance, a sub-unit of the Glasgow Financial Alliance for Net Zero, faces a potential mutiny from some of the world's most climate-conscious lenders after it decided against imposing binding restrictions on fossil-fuel financing. Germany's GLS Bank has already walked out in protest; others say they may follow.

Compromises made by the alliance to keep Wall Street firms on board are "disappointing and discouraging," said Jeroen Rijpkema, chief executive officer of Triodos Bank, a green lender from the Netherlands. Gareth Griffiths, CEO of the U.K.'s Ecology Building Society, described as "frustrating" the fact that major NZBA members continue to finance new fossil-fuel exploration, which is "incompatible with net zero."

Triodos and Ecology said they will review their membership in the alliance and may walk away if the group doesn't tighten rules around funding of fossil fuels. The compromises relate to a decision last year by the alliance to loosen ties with Race to Zero, a U.N.backed group behind proposed restrictions that would have forced members to phase out financing of oil, gas and coal. Morgan Stanley, JPMorgan Chase and Bank of America threatened to leave NZBA if such limits were imposed, sources said. Part of their concern hinged on legal liability that binding terms represented, the people said.

Carbon capture and sequestration effectiveness questioned

(Gas Outlook commentary; Feb. 20) - The global rush to build new LNG export terminals in response to the war in Ukraine risks pushing climate targets out of reach. But developers of U.S. LNG projects and elsewhere are making lofty promises about deploying carbon capture and sequestration to offset some of the additional emissions.

The only problem is that CCS is technically complex, expensive, and does not really exist as a viable technology, at least not in the way promised by LNG exporters.

Nowhere is this more apparent than in Brownsville, Texas, on the Gulf Coast at the U.S.-Mexico border, where two proposed LNG projects are on the verge of changing the character of the coast, bringing pipelines and gas export terminals to an area that, unlike much of the rest of Texas and Louisiana, has thus far avoided such industries.

One project sponsor, NextDecade, is marketing Rio Grande LNG as a new climatefriendly gas export terminal. It has proposed a carbon capture and sequestration concept, to capture 90% of the emissions from its operations. But the track record for CCS is poor. A September 2022 analysis of CCS projects around the world by the Institute for Energy Economics and Financial Analysis found that most are failing, not capturing the CO2 as promised, or are suffering dramatic cost overruns.

"Despite generous funding and numerous incentives to push the technology in this sector...it has shown a disappointing track record of failures, with a majority of the proposed CCS/CCUS capacity failing at the implementation stage or getting suspended early," the IEEFA report concluded. Many projects encounter technical challenges."

Shell completes purchase of Europe's largest renewable gas producer

(World Oil; Feb. 20) - A wholly owned subsidiary of Shell has completed the acquisition of 100% of the shares of Nature Energy Biogas. In the deal, Shell has acquired the largest producer of renewable natural gas in Europe, its portfolio of operating plants, associated feedstock supply and infrastructure, its pipeline of growth projects and its inhouse expertise in the design, construction and operation of RNG plant technology.

Biogas is produced from organic matter, such as food or animal waste. The acquisition supports Shell's ambitions to build an integrated RNG value chain on a global scale and to profitably grow its low-carbon offerings to customers across multiple sectors, the company said in a prepared statement. Nature Energy is a cash-generative business, and the acquisition is expected to be accretive to Shell's earnings from completion and to deliver double-digit returns.

Nature Energy was founded in 1979 as a gas distributor. The company established its first biogas plant in Denmark in 2015 and now has 14 operating plants with associated infrastructure, feedstock arrangements and 2022 production of around 3,000 barrels of oil equivalent per day. The company also has a pipeline of about 30 potential projects in Europe and North America. RNG, also known as biomethane, is chemically identical to conventional gas and can be transported in existing transmission infrastructure.