

Oil and Gas News Briefs

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[U.S. shale growth slows down as best Permian wells play out](#)

(Wall Street Journal; March 8) - The boom in oil production that over the past decade made the U.S. the world's largest producer is waning, suggesting the shale boom is nearing its peak. Frackers are hitting fewer big gushers in the busiest oil patch, the Permian Basin, the latest sign they have drained their list of good wells. The biggest and best wells are producing less oil, according to a review by The Wall Street Journal.

Recent results out of the Permian, spread across West Texas and New Mexico, are mimicking the onset of production plateaus at other, more mature U.S. shale plays. At an industry conference this week in Houston, executives cited the stagnation in shale, saying it signals a return to more dependence on foreign energy and challenging times ahead for major U.S. companies after most of them posted record earnings last year.

Oil production from the best 10% of wells drilled in the Delaware portion of the Permian was 15% lower last year, on average, than top 2017 wells, according to data from analytics firm FLOW Partners. Meanwhile, the average well put out 6% less oil than the prior year, according to an analysis of data from analytics firm Novi Labs.

The atrophy of once-booming sweet spots has big implications for the global oil market, which years ago could count on rapidly growing U.S. production to blunt the effects of supply disruptions and rising demand. Without exploration or technological advances, the industry's constraints are expected to push companies to tap lower-quality wells that would require higher oil prices to attract investment, industry executives say.

[Guyana wants to sell its natural gas before energy transition](#)

(Reuters; March 6) - Guyana, the South American country that is home to the world's largest oil discoveries in a decade, next wants to develop its mostly untapped natural gas reserves, Vice President Bharrat Jagdeo said on March 5. The nation aims to diversify its oil sector and secure new sources of revenue before the energy transition to renewables reduces demand for fossil fuels, Jagdeo said. The country's oil output has grown to more than 360,000 barrels a day, with plans to reach 1.6 million by 2030.

In just a few years, Guyana has emerged as an oil powerhouse with more than 11 billion barrels of recoverable oil and gas found by a consortium led by ExxonMobil. Exxon's gas production at the massive Stabroek block is not being used by Guyana or sold abroad. Exxon currently reinjects the gas to maintain the pressure of producing oil wells.

But Jagdeo told Reuters the government sees gas as providing a way for transforming the nation of about 800,000 people. "We believe gas must be monetized," he said.

The government expects to receive this year a plan it had requested from Exxon for developing the company's gas discoveries, Jagdeo said. The country also is discussing with technicians and consultants a national strategy to supply gas to industries ranging from petrochemicals to exportable liquefied natural gas, he said. He declined to identify which LNG developers had approached the government.

China shows renewed interest in coal amid focus on energy security

(Reuters; March 5) - China's state planner underlined a greater role for coal in its power supply on March 5, saying it would be used to improve the reliability and security of its energy system. Soaring global energy prices following Russia's invasion of Ukraine and domestic supply disruptions have prompted China to boost its focus on energy security in recent years. The world's second-biggest economy burned coal for 56.2% of its electricity last year, according to the National Bureau of Statistics, but has significantly boosted its use of gas and renewable energy in recent years to lower carbon emissions.

Fluctuating output from renewable plants, however, has led policymakers to lean on reliable and easily dispatchable coal power to shore up the country's baseload supply. Last year, scorching summer temperatures and a drought in China's southwest caused hydropower output to dwindle, leading to power outages. "We will strengthen the basic supporting role of coal (and) take orderly steps to increase advanced coal production while ensuring safety," said the National Development and Reform Commission.

China approved construction of 106 gigawatts of coal-fired power capacity last year, four times higher than a year earlier and the highest since 2015, driven by energy security considerations. About 50 gigawatts of that went into construction. "The energy security narrative is still going strong," said Greenpeace China policy adviser Li Shuo.

India struggles to keep up with demand for coal-fired power

(Reuters; March 7) - India's power generators and coal mines are being stretched to the limit to meet surging demand for power stemming from a fast-growing economy and rapid electrification. Total electricity consumption increased 12% in January 2023 compared with January 2022, according to Grid-India's National Load Dispatch Centre. Coal units increased generation 18% compared with a year earlier, in part to offset reduced output from expensive natural gas-fired units.

But domestic mines and the rail network are struggling to keep pace with the strong demand from power producers for fuel. Mine production and coal trains dispatched to

power plants both increased last year by 12%, which was impressive but still below generators' requirements. India's railways loaded an average of 271 coal trains per day bound for power producers in February, well below the plan for 313 trains, and no higher than in February 2022. The rail system is becoming a binding constraint on the ability to move more coal to generators and ensure they have sufficient fuel.

Generators' coal stockpiles are currently equivalent to 12 days of consumption, an improvement on this time last year (9 days) but below the corresponding levels in 2021 (15 days), 2020 (28 days) and 2019 (18 days). To stretch supplies, the government has directed generators to import more coal to be blended with domestic production. The government has also ordered privately owned generators that rely on expensive imported coal to maximize output to relieve power shortages.

Texas proposals in the running for federal funding as hydrogen hubs

(Houston Chronicle; March 5) - The likelihood that Houston will host one of the nation's federally funded hydrogen hubs is increasing following the Department of Energy trimming the field of contenders. The department selected three proposed Texas hubs — including two in Houston — to submit applications for a piece of the \$7 billion pie the agency has set aside for the development of hydrogen as an alternative to fossil fuel.

The funds would offer a boost to a region already poised to lead in hydrogen, a cleaner-burning gas that many of Houston's energy companies see as key to their efforts to decarbonize their operations. The hubs would be in places with abundant natural gas reserves and would test ways to produce and use hydrogen. The three Texas proposals are among 33 projects still in the running for the federal funding, down from 79 submitted last year. As many as 10 hubs could be chosen to receive the money.

The Texas coalitions include: The Leading in Gulf Coast Hydrogen Transition (LIGH2T) Hub, which includes the University of Houston, Southern States Energy Board, National Energy Technology Laboratory, a Marathon Petroleum subsidiary and chemical companies INEOS and Linde; HyVelocity Hub, which includes the University of Texas at Austin, gas supplier Air Liquide, Chevron, the nonprofit Center for Houston's Future and GTI Energy, a research-and-development company; and Christi Horizons Clean Hydrogen Hub, for which the Port of Corpus Christi is the primary applicant.

German developer picks African nation for green hydrogen project

(Reuters; March 8) - German project developer Conjuncta on March 8 said it signed a memorandum of understanding with the West African country of Mauritania, Egypt's energy provider Infinity and the United Arab Emirates' Masdar for a \$34 billion green hydrogen project in Mauritania. The project will have a production capacity of up to 8

million tonnes of green hydrogen or other hydrogen-based end products annually, with an electrolyzer capacity of up to 10 gigawatts, the company said in a joint statement with the firms involved and the Mauritanian government.

"(This project) will have a strong link to Germany both as a technology provider and a potential offtaker of green energy," Conjuncta CEO Stefan Liebing said. Germany has been scrambling to ramp up its renewables capacity to compensate for Russian fuel imports and meet climate targets. In December, Berlin approved the construction of the country's first hydrogen pipeline network.

The first phase of the Mauritania project, to be located northeast of the coastal capital of Nouakchott, should be completed in 2028 with planned capacity of 400 megawatts, Conjuncta said. Green hydrogen is produced using renewable energy sources, such as wind or solar, rather than natural gas.

Japan and Australia cooperate on hydrogen venture

(Sydney Morning Herald; March 7) – Australia's Latrobe Valley's fading coal industry is set to be reignited, with Japan's green energy fund kick-starting a billion-dollar commercial-scale liquefaction and shipping facility in Victoria's Port of Hastings. It will process hydrogen extracted from coal, creating the world's first liquefied hydrogen supply chain. The joint venture, led by Japan's largest industrial conglomerates, will use carbon capture and storage to sequester carbon dioxide below ground in Bass Strait.

The project would send the hydrogen extracted from coal in purpose-built bulk carriers to Kawasaki, Japan's heavy industry heartland. Hydrogen — which emits only water when it burns — has been touted as a promising future tool to decarbonize heavy industry, provided the method of making it is emissions-free. Japan has set a 2050 target for net-zero emissions and is betting on hydrogen to lessen the role of fossil fuels.

Four of the country's industrial titans — Kawasaki Heavy Industries, Iwatani Corp., J-Power and Sumitomo Corp. — are backing the venture. Japan's \$24 billion Green Innovation Fund has committed \$2.35 billion to help build the facility in Hastings and construct a bulk carrier for deliveries to Kawasaki. "We are now aiming to start operations by late 2020s," said a manager at Japan Suiso Energy, a subsidiary of Kawasaki Heavy Industries. The venture would initially produce 40,000 tonnes a year of carbon-neutral hydrogen before ramping up to 225,000 tonnes.

Russia runs bigger deficit as oil sells at steep discounts

(Wall Street Journal; March 6) - Russia's government budget plunged into a deeper deficit in February, heaping pressure on the Kremlin to square the ballooning costs of its

war in Ukraine with falling oil revenues caused by a raft of Western sanctions. The soaring budget hole comes after both the Russian economy and the state have weathered Western sanctions better than expected during the first year of the war.

Some economists have warned the pain would rise as time goes by. Russia's budget deficit rose to \$34 billion for the first two months of the year, Ministry of Finance data showed March 6, up from \$25 billion in January. That means the shortfall has nearly hit the government's full-year target of \$39 billion in just the first two months of the year. As a result, the government has increasingly tapped its rainy-day fund and borrowed domestically to plug the gap.

Driving the deficit, oil and gas revenues fell by 46% in January-February compared with the same period last year. 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. While Russian oil has continued to flow — the country's exporters have been able to divert barrels to China, India and Turkey — its price has declined as Moscow loses its bargaining power. Russia's flagship Urals blend traded at under \$50 a barrel in February, according to the Russian Ministry of Finance, a deep discount to global benchmark Brent crude which fetches around \$80 a barrel.

Gazprom needs to replace gas sales to Europe to maintain profits

(Natural Gas Intelligence; March 6) - Gazprom was the largest contributor to Russia's budget in 2022 despite a sharp drop in natural gas export volumes, but 2023 could prove more difficult as global prices have declined and the country searches for new customers to replace those lost in Europe. Although Russia's LNG exports remained strong last year and are expected to rise in 2023, gas pipeline flows to Europe have reached historic lows, dropping to around 1.7 billion cubic feet per day in January, according to the European Network of Transmission System Operators for Gas.

"The abrupt disappearance of the European gas export market ... represents a significant problem for Gazprom and for the Kremlin because of a threat to gas export revenues," the U.K.-based Oxford Institute for Energy Studies recently wrote in a research paper. Moscow is eager to pipe more gas to China, however those plans will require complex negotiations and binding agreements, the research paper reported.

In the meantime, Russia has been given a boost by its liquefied natural gas exports. Those shipments will continue rising as the Arctic LNG-2 facility is scheduled to come online later this year or early in 2024, said Jonathan Stern, a senior research fellow at the institute. Overall, Russia's LNG exports were up 8.5% from in 2021, and Russia has ambitious plans for LNG.

Gazprom's future profits will depend on how quickly Moscow can strengthen its exports. "Russia has two, maximum three years, to address weak links in its gas export

strategy,” the institute report said. “If solutions are not found, the risks of very negative developments on the export revenue side will become very apparent.”

Russia reportedly will mothball Baltic Sea gas pipelines

(Reuters; March 3) - Russia's ruptured undersea Nord Stream gas pipelines are set to be sealed up and mothballed as there are no immediate plans to repair or reactivate them, sources familiar with the plans have told Reuters. Nord Stream 1 and Nord Stream 2, each consisting of two pipes, were built by Russia's state-controlled Gazprom to pump almost 4 trillion cubic feet of gas a year to Germany under the Baltic Sea.

Three of the pipes were ruptured by unexplained blasts in September; one of the Nord Stream 2 pipes remains intact. But soaring tensions between Moscow and the West over Russia's invasion of Ukraine had already brought Nord Stream 1 to a standstill and prevented Nord Stream 2 from coming online. Gazprom has said it is possible to repair the lines, but two sources familiar with plans said Moscow saw little prospect of relations with the West improving enough in the foreseeable future to need the pipelines.

Europe has drastically cut its energy imports from Russia this past year, while state-controlled Gazprom's exports outside the former Soviet Union almost halved in 2022 to reach a post-Soviet low. Sources said that while there is no plan to repair the ruptured pipelines, they would at least be conserved for possible reactivation in the future. This would most likely mean sealing the ruptured ends and putting a coating into the pipes to prevent corrosion from seawater.

Tankers continue transferring Russian oil offshore North Africa

(Bloomberg; March 6) - A large amount of Russian oil continues to be transferred between tankers just a few miles off the coast of Spain — just a few weeks after authorities there wrote to local firms reminding them that the activity is prohibited. Four Very Large Crude Carriers, or VLCCs, are now anchored off Ceuta, a Spanish enclave in North Africa, according to Vortexa and ship-tracking data compiled by Bloomberg. Between them, they can hold about 8 million barrels of oil.

One, the Veronica, already received cargo transfers from two smaller tankers and is now taking oil from a third. A second, the Anshun II, just received one cargo from a smaller vessel. The two others have yet to start. In early February, Spanish authorities sent a letter to local shipping services firms reminding them of a prohibition on providing fenders for ship-to-ship transfers if it involved Russian oil, or the suspicion of Russian oil, even in international waters. There was a pause of about two weeks afterward, but from late February at-sea transfers off Russia's flagship Urals grade restarted there.

European Union firms are barred from providing an array of services unless the cargo on board is purchased at or below a Group of Seven price cap of \$60 a barrel. It's unclear if that's the case for the oil that's being switched at Ceuta. Ship-to-ship transfers have become an important logistical tool in getting Russian oil to market. About a third of Urals exports were switched at sea last month, according to Vortexa.

Tanzania energy ministry says progress made toward LNG project

(Reuters; March 7) - Negotiations for construction of a \$30 billion liquefied natural gas terminal between Tanzania, Equinor and Shell are complete and contract preparations are underway, Tanzania's energy ministry said. The development of Tanzania's vast offshore gas resources has been held up for years due to regulatory delays. Last June, all three parties signed a framework agreement aimed at getting closer to the start of construction. The government wants to reach a final investment decision in 2025.

"Minister January Makamba said negotiations on the construction of the LNG project were complete, and now experts are at work drafting contracts," the energy ministry said on Twitter March 6. It did not provide a timeline for when the contracts would be signed. Shell operates Tanzania's Blocks 1 and 4, which hold 16 trillion cubic feet in estimated recoverable gas. Equinor operates Block 2, in which ExxonMobil holds a stake and which is estimated to hold more than 20 trillion cubic feet of gas.

Equinor and Shell, along with ExxonMobil, Ophir Energy and Pavilion Energy, plan to build the LNG export plant in Tanzania's southeast Lindi region. Tanzania already uses some of its natural gas discoveries for power generation and to run manufacturing plants. It also plans to build a fertilizer plant.

Santos says partners proceed with FEED on Papua LNG project

(World Oil; March 7) - Santos has announced that the joint venture in which it holds 22.8% has launched front-end engineering and design for an LNG project in Papua New Guinea. Papua LNG is expected to have liquefaction capacity of up to 6 million tonnes of LNG per year, with first production expected by the end of 2027 or early 2028.

The partners have selected a plan using four electrically powered liquefaction trains with a combined capacity of 4 million tonnes per year, to be installed within the existing PNG LNG project site. In addition, Papua LNG would have access to 2 million tonnes of capacity from the existing LNG project operated by ExxonMobil. PNG LNG went online in 2014, and now operates with an annual capacity of 8.3 million tonnes. Exxon holds a 37.1% stake in the new project. TotalEnergies, at 40.1%, would operate the venture.

Using electric power and rejecting reservoir carbon dioxide will reduce the carbon intensity of the proposed project. Costs will be refined during the FEED phase and the partners intend to explore project finance opportunities for a portion of the cost. A final investment decision is anticipated by early 2024.

Rising costs push up liquefaction fees at new U.S. projects

(S&P Global; March 6) - Rising material and financing costs have increased the fixed liquefaction fees required to support new U.S. LNG export projects to the high-\$2s per million Btu range, up from \$2 to \$2.25 less than a year ago, Cheniere Energy CEO Jack Fusco said March 6. Fusco's comments in an interview at the CERAWEEK by S&P Global energy conference in Houston underscored the inflationary pressures that U.S. developers are navigating as they work to meet global demand for new LNG capacity.

The need for developers to command higher fees to underpin project financing represents a stark departure from just two or three years ago, when some developers were offering long-term supplies at or below \$2. "Everything is higher," the Cheniere chief said. "If I was looking at a crystal ball, to meet the equity returns and the debt capacity, it would have to be in the upper \$2s."

The past year has seen a blitz of contracting activity tied to LNG export projects amid strong buyer interest in securing more U.S. supplies, which offer destination flexibility and the relative stability of long-term contracts with fixed liquefaction fees. Long-term deals covering more than 58 million tonnes per year of U.S. LNG have been announced over the past year. Generally, the contracts charge a fixed liquefaction fee plus the cost of gas, which includes the gas consumed in the liquefaction process.

Chesapeake signs 15-year deal to supply LNG trader

(Reuters; March 6) - U.S. energy company Chesapeake Energy said March 6 it would supply a unit of Swiss global commodity trader Gunvor with up to 2 million tonnes per year of U.S. liquefied natural gas for a period of 15 years. U.S. LNG exporters have seen demand for the fuel soar after Europe imposed sanctions on Moscow over Russia's invasion of Ukraine, squeezing an already-tight global natural gas market.

Under the deal, the companies will choose a U.S. export plant to liquefy gas and deliver the LNG to Gunvor with a target start date in 2027. Chesapeake, the largest LNG producer in the U.S., operates liquefaction plants in Louisiana and Texas. The purchase price of the LNG will be indexed to the Japan-Korea Marker, which is a benchmark gas price in Asia — a change from many U.S. LNG supply contracts which are linked to the U.S. natural gas benchmark price plus a set liquefaction fee. The deal comes on the

heels of the Feb. 28 expiration of Gunvor's agreement to buy 3 million tonnes a year from Tellurian's proposed Driftwood LNG plant in Louisiana for 10 years.

BP slows down investment in renewables to maintain oil and gas

(Reuters; March 7) - BP CEO Bernard Looney's pursuit of green energy outstripped all rivals three years ago when he outlined a radical blueprint to move away from fossil fuels. Last month he applied the brakes, slowing BP's planned cuts in oil and gas and scaling back planned renewables spending in the wake of the war in Ukraine. The oil major isn't backing away from renewables though, its green chief Anja-Isabel Dotzenrath stresses, it's simply changing the terms of the relationship.

Dotzenrath told Reuters that BP is reviewing its solar and onshore wind businesses as part of a revamp that will see it move away from selling the clean electricity it produces, instead holding most of it to supply its growing electric vehicle charging network and production of low-carbon fuels. The renewables scrutiny follows reviews by Dotzenrath of BP's offshore wind and hydrogen businesses over the past year, which led to overhauls that saw it scrap some projects and seek to revise terms of others.

"We made some changes internally and created a focused hydrogen organization, a focused offshore wind organization," Dotzenrath said. The stakes are high, though, given solar alone comprises more than half of BP's 43-gigawatt list of renewables projects. The most eye-popping change in the strategy update last month was BP slowing its planned cuts in oil and gas output from 40% to 25% by 2030 compared with 2019 level. It also lowered its projected annual spending on renewables to up to \$5 billion by 2030 out of a total group budget of up to \$18 billion, down from \$6 billion out of \$16 billion under its previous update in 2022, according to a Reuters analysis.

Coalition sues to block March 28 Gulf of Mexico lease sale

(The Hill; Washington, DC; March 6) - A coalition of environmental organizations on March 6 announced a lawsuit against the Bureau of Ocean Management, arguing the bureau's sales of leases in the Gulf of Mexico are unlawful. In the lawsuit, plaintiffs argued BOEM's plans to lease more than 70 million acres of Gulf waters for fossil fuel development are based on a "deeply flawed" environmental review.

The Biden administration had previously canceled the lease sales due to contradictory court rulings, but following a provision negotiated by West Virginia Sen. Joe Manchin in the Inflation Reduction Act requiring the sales, they are set for March 28. The lawsuit argues the BOEM environmental impact statement failed to properly incorporate risks from factors such as oil spills and ship strikes and that it did not properly assess the risks from greenhouse gas emissions.

Plaintiffs in the lawsuit include national organizations such as the Sierra Club, the Center for Biological Diversity, EarthJustice and the Natural Resources Defense Council, as well as local advocacy groups including Healthy Gulf and Bayou City Waterkeeper. “Holding this offshore oil lease sale without careful environmental review is both unlawful and morally reprehensible,” said Kristen Monsell, oceans legal director at the Center for Biological Diversity. The Biden administration initially barred all new oil and gas drilling on federal lands and waters, but resumed leasing in spring of 2022.

Russia draws up plans to ship coal to Arctic port for delivery to Asia

(High North News; March 6) - Russia’s Ministry of Transport is drawing up plans to use the river ports of Krasnoyarsk and Lesosibirsk in the center of the country to send coal via the Yenisei River to the Arctic and then through the Northern Sea Route to Asia. The ministry aims to dispatch the initial shipments during the 2023 navigation season. According to Russian officials, the use of inland river routes is considered one of the keys to expanding the Northern Sea Route to its full potential.

During a meeting of the State Commission for the Development of the Arctic, ministry officials discussed the readiness of the infrastructure of inland water transport to ensure the export of coal, lumber and grain products along the Ob-Irtysh and Yenisei River corridors and onward through the Northern Sea Route to countries of Southeast Asia. The plan foresees using the Yenisei River ports of Krasnoyarsk and Lesosibirsk to send coal shipments north to the Arctic sea port of Dudinka. The coal would be transhipped onto oceangoing cargo vessels before heading east on the Northern Sea Route to Asia.

CP Rail will test hydrogen-powered locomotives in Alberta

(CBC News; Canada; March 6) - An Alberta manufacturing company is nearly finished preparing a second hydrogen-powered locomotive for CP Rail, with the hope of signing a deal with the railway to produce more of the train engines in the years to come. Bilton Welding and Manufacturing is working to convert three diesel locomotives at its facility in Innisfail, located about 60 miles north of Calgary. CP Rail is already testing the first hydrogen-powered engine to move cargo in the Calgary-area.

The hydrogen locomotives are part of a trial at the railway aimed at reducing emissions. CP Rail has received government funding to support the project. For Bilton, the project has the potential to grow into a new line of business as the manufacturer estimates it could produce about 10 locomotives per year. CP Rail expects to operate all three of the hydrogen and battery-powered locomotives by the end of the year, in addition to operating a pair of hydrogen-production and fueling facilities in Calgary and Edmonton.

"It's a perfect test bed. If you can operate there — heavy haul, cold temperatures, the most challenging operational conditions I've ever experienced in my career. And if it works there, it will work everywhere," CP Rail CEO Keith Creel said during a speech at the RailTrends 2022 conference in November. A hydrogen locomotive relies on a fuel cell, which involves a chemical reaction that converts hydrogen to water. The process generates electricity that is stored up in batteries and powers the locomotive's motor.