

# Oil and Gas News Briefs

## Compiled by Larry Persily

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#### **[U.S. may embark on another LNG export boom, but challenges ahead](#)**

(The Wall Street Journal; Dec. 18) - Is it time for a third U.S. LNG export boom? Market conditions are creating an ideal negotiating position for potential U.S. liquefied natural gas export terminals, which liquefy home-sourced gas to be shipped abroad. Gas prices in Europe and Asia are still high, while a mild start to the winter has helped bring down U.S. gas prices. Benchmark European prices are about 10 times higher than in the U.S.

Accordingly, hopes are running high for companies that might build out that next phase of LNG export terminals. Geopolitical winds are blowing in their favor, too. China's freeze on U.S. LNG trade seems to have thawed. In October and November, Chinese companies signed at least four long-term deals to buy LNG from the U.S. Meanwhile, there is a potential opening to find buyers in Europe, where the tense Ukraine situation bodes poorly for the prospect of Russian gas refilling depleted European inventory.

S&P Global Platts expects three to five North American LNG export projects to reach a final investment decision in 2022, heralding a "third wave" of U.S. LNG terminals after years of stalled projects. But getting sales contracts to line up financing is not that easy. New capacity is being built elsewhere in the world that doesn't require the slog of long-term deals. Qatar, the world's lowest-cost LNG producer, is funding a major expansion on its own balance sheet, without needing to sign long-term contracts with customers.

And environmental concerns and the uncertainty of gas as a transition fuel is also adding a headache for U.S. exporters. Buyers are increasingly bargaining for shorter contracts, which could make it tougher to cobble together financing from banks for the multibillion-dollar projects. The U.S. is on track to have the world's largest LNG export capacity by the end of 2022, but keeping that crown will be a tougher task.

#### **[LNG terminals consumed about 13% of U.S. gas production Dec. 17](#)**

(S&P Global Platts; Dec. 17) – Feed gas into U.S. liquefaction terminals hit a new record at 12.55 billion cubic feet per day on Dec. 17, as the export value of Gulf Coast cargoes surged amid strong demand in Europe. With colder weather predicted for most of Europe in the near-term — and the biggest temperature drops forecast for Russia — LNG markets could see more volatility in the coming week. Feed gas moving into LNG facilities Dec. 17 represented about 13% of total U.S. marketed gas production that day.

The positive trends for U.S. LNG export activity are expected to continue heading into the new year as a seventh major liquefaction facility, Venture Global LNG's Calcasieu Pass project in Louisiana, ramps up and starts production. Record-breaking global LNG prices and favorable netbacks to the Gulf Coast have continued to incentivize exports.

Prices in markets in Asia reached new highs on Oct. 6 and in Europe on Dec. 17. U.S. Gulf Coast FOB export cargo values rose to a new record Dec. 17, with the Platts Gulf Coast marker assessed at \$41.40 per million Btu. The higher netbacks to the Gulf Coast have been helped by lower freight costs to Asia. Panama Canal congestion remained relatively low, with the maximum wait on Dec. 17 for unreserved LNG tankers at three days northbound and five days southbound, according to the Panama Canal Authority.

### **Latest federal estimate reduces North Dakota oil reserves by 40%**

(Inforum; North Dakota; Dec. 17) - Federal geologists suggested in a report released this week that the volumes of untapped oil and gas in two major formations underlying North Dakota have fallen substantially since their last assessment in 2013. The U.S. Geological Survey estimated that 4.3 billion barrels of potential, undiscovered oil reserves are still accessible in the Bakken and Three Forks formations, a drop of more than 3 billion barrels, or 40%, since the agency's last report.

That decline is partly due to some 11,000 wells that have been drilled in the region over the past nine years, which the federal geologists noted have resulted in both more production and more knowledge of the formations' resources. North Dakota's top oil and gas regulator, Lynn Helms, said Dec. 17 that state officials had anticipated a drop in the federal estimate because of the high levels of drilling activity in the Bakken over the years since, but he added that the size of the decrease was "a little disappointing."

Still, Helms said that taking into account the cumulative barrels that the Bakken and Three Forks have already produced, the oil accessible through existing wells and the USGS estimates for undiscovered oil, "you actually have a pretty solid number" of 12.3 billion barrels of total output. "And we think that's on the lower side of what the ultimate number is." Helms said the state Department of Mineral Resources intends to take a deeper dive into the federal geologists' findings and offer more reactions next year.

### **Half of U.S. oil pipeline capacity unused as production below peak**

(Reuters; Dec. 16) - About half of U.S. oil pipeline space is sitting unused, heating up competition for barrels in higher-output areas like the Permian Basin in Texas. Overall U.S. pipeline capacity utilization is around 50%, compared with a range of 60% to 70% headed into early 2020 before the coronavirus pandemic hit, according to consultancy Wood Mackenzie. U.S. crude production, which surged to 13 million barrels per day in

early 2020 to make the United States the top oil producer, has averaged just 11 million barrels per day in 2021.

Oil and gas shippers often find themselves building pipelines amid a production boom only to find there is too much capacity when downturns occur. Numerous pipelines were built in the Permian in Texas and New Mexico — the largest U.S. oil field — while production surged between 2017 and 2020. Some pipeline operators in areas like the Permian Basin have responded by cutting pre-pandemic shipping rates, as the U.S. oil industry has been slow to recover from the coronavirus outbreak.

Generally, basins that are overbuilt with pipe, like the Permian, have lower uncommitted shipping rates than before the pandemic, but basins with less pip capacity have managed to raise rates, because there are fewer shipping options, said Ryan Saxton, head of oil data at Wood Mackenzie. An example of surplus pipe capacity is North Dakota's Bakken Shale, where production is lagging pre-pandemic levels. Energy Transfer's Dakota Access Pipeline, which can carry about 570,000 barrels per day, is at 77% utilization, compared with nearly full utilization before the pandemic, Saxton said.

### **[U.S. oil and gas drilling rig count highest since April 2020](#)**

(S&P Global Platts; Dec. 16) - The U.S. oil and gas rig count jumped by 16 to 716, energy analytics and software company Enverus said Dec. 16, with the Permian Basin by far recording the biggest weekly domestic gain. The week's total rig count is the highest since the first week of April 2020, when upstream producers were cutting their budgets and pulling rigs from domestic fields in response to low oil demand and plunging oil prices as the coronavirus pandemic raced around the globe.

For the week ended Dec. 15, oil-directed rigs gained 15 to 563, while gas-oriented rigs gained one to 153. Permian rigs rose by 16 to 306 — the first time rig counts in the West Texas/New Mexico basin have been above 300 since mid-April 2020. In addition, rigs in the Eagle Ford Shale of South Texas crept up five to 58. In the past two weeks, 28 rigs have been added to domestic fields, including 12 the week ended Dec. 8.

"The recent increase has been impressive," Taylor Cavey, S&P Global Platts Analytics senior analyst for supply and production, said. "That said, it is largely in line with [our] forecast. The Permian recovery has been fairly slow up until recently. I'm guessing it is finally catching up." Permian rigs hovered around the 270 mark during October and the first half of November 2021 before striding up.

## **Goldman Sachs sees \$85 oil in 2022 and 2023, maybe higher**

(Bloomberg; Dec. 17) - Oil at \$100 a barrel cannot be ruled out in 2023 as supply additions are expected to be too slow to keep up with record demand, according to Goldman Sachs. While the bank's base forecast is for Brent to stay around \$85 next year and 2023, it could breach triple digits through either higher cost inflation for drillers, or if an unexpected supply shortfall forces prices to spike, said Damien Courvalin, head of energy research.

The upside risks underscore why Goldman remains bullish on oil even after prices have rallied more than 40% this year. The bank sees the recent sell-off as overdone on unnecessary concerns about Omicron-related restrictions and expects investors to buy the dip once asset managers reallocate money next year. "There's insufficient supply in the face of strong demand," Courvalin said in a call with reporters Dec. 17. "Oil prices have to be higher to overcome the higher cost of capital to fund projects."

The recent \$10 dip in oil prices is likely an overreaction, Courvalin said, as governments seem to be responding to Omicron with more testing than new lockdowns so far. Longer term, output growth is being hit by challenges including upstream cost inflation and more expensive financing as investors opt to support ESG-focused sectors, he said. Investments in long-cycle oil projects have also dipped due to uncertainties around energy transition and its impact on fuel usage.

## **IEA worries that coal consumption could reach record high this year**

(Reuters; Dec. 17) - Rising consumption in China, India and the United States could bring global coal-fired power demand to a new all-time high this year, undermining efforts to cut greenhouse gas emissions, the International Energy Agency said on Dec. 17. The IEA said global power generation from coal was expected to reach 10,350 terawatt-hours in 2021, up 9%, driven by a rapid economic recovery that has "pushed up electricity demand much faster than low-carbon supplies can keep up."

Overall coal demand, including for power generation and industries such as cement and steel, is expected to grow 6% this year. Though it will not exceed record consumption levels of 2013 and 2014, it could hit a new all-time high next year, the report said. IEA Executive Director Fatih Birol said the increase was "a worrying sign of how far off-track the world is in its efforts to put emissions into decline toward net zero."

China is responsible for more than half of global coal-fired power generation and is expected to see a 9% year-on-year increase in 2021, the IEA said. Generation in India is forecast to grow 12% this year. Cutting coal use was a major bone of contention at climate talks in Glasgow last month, with countries finally agreeing to phase down consumption as part of their efforts to limit the rise in global temperatures.

## **FERC's tougher approach on climate change encounters opposition**

(Houston Chronicle; Dec. 17) - Tensions over the Federal Energy Regulatory Commission's tougher approach on climate change are flaring up, as Republicans look to put a halt to lengthy environmental reviews that have resulted in the cancellation of two pipeline projects. Sen. John Barrasso, R-Wyo., ranking member on the Senate Energy and Natural Resources Committee, said in a letter this week that the climate policies undertaken by FERC's Democratic chairman, Richard Glick, had the potential to diminish American natural gas supplies in the years ahead.

"The impression — if not the reality — that the commission is sympathetic to efforts to 'keep natural gas in the ground' will inflict more harm on the nation," he wrote. "It is increasingly clear that the commission's current posture toward its natural gas docket may jeopardize, rather than enhance, America's energy security." The letter comes as FERC's Republican and Democratic members spar over Glick's commitment to analyzing greenhouse gas emissions produced by natural gas pipelines and liquefied natural gas facilities, which require FERC approval for construction and operations.

So far, no project has been rejected for its contribution to climate change, but pipelines are undergoing more rigorous review than they are used to. The new approach on climate change is getting the attention of pipeline companies. This fall, both New Jersey Resources and Berkshire Hathaway Energy GT&S withdrew their applications for projects to expand their pipeline networks, citing the slow approval process at FERC.

## **Oregon land-use board will decide on oil-by-rail facility**

(Public News Service; Oregon; Dec. 20) - An effort to block expansion of an oil-by-rail facility in Portland could be solidified this week. This summer, the city of Portland decided to deny a land-use compatibility statement for Texas-based Zenith Energy, which receives oil by train, stores it and then loads it aboard ships. Noelle Studer-Spevak, of Families for Climate, among a coalition of groups working to stop the facility, said opponents are fighting it because of a dramatic increase in oil-by-rail traffic.

Zenith Energy said it plans to increase the amount of renewable energy, such as biofuels, moving through the facility. The company emphasized its plans comply with Portland's zoning codes and comprehensive plan. It has appealed the city's decision to the Oregon Land Use Board of Appeals, which is expected to decide the case Dec. 23.

Studer-Spevak pointed out one of the biggest concerns is about potential accidents, which could affect Portland neighborhoods. He also noted most if not all the oil coming into the terminal is not being used by Oregonians, but is sent to refineries in Washington state and California. "Portland was bearing the most risk with the least to gain by allowing this transloading facility to continue operation right here in our community."

## **Forecast predicts record U.S. natural gas production in 2022**

(U.S. Energy Information Administration; Dec. 16) – The federal energy data agency in its December Short-Term Energy Outlook forecast that U.S. dry natural gas production will increase from 95.1 billion cubic feet per day in October 2021 to 97.5 bcf per day by December 2022, a new record high. The previous monthly record of 97.2 bcf per day was set in November 2019.

In early 2020, COVID-associated declines in demand resulted in a corresponding gas price decrease and reduced drilling. As a result, monthly natural gas production declined to a low of 87.3 bcf per day in May 2020. Dry gas production in the U.S. has generally risen since then, with a brief exception in February 2021, when winter weather substantially reduced gas production in Texas.

The U.S. Energy Information Administration's forecast for U.S. gas production growth includes expected output from gas-directed drilling activity as well as gas production associated with crude oil production (associated gas). In both the Haynesville region (mainly in Texas and Louisiana) and the Appalachia Basin (mainly in Pennsylvania and West Virginia), increased drilling activity and greater output per well have led to more gas production in recent months, according to the agency's report.

## **No decision on new Russian gas line into Germany until July**

(Bloomberg; Dec. 16) - A regulatory decision allowing natural gas flows to Europe via Russia's controversial Nord Stream 2 pipeline won't be made before July, Germany's federal network agency said. The regulator, also known as Bundesnetzagentur, halted the certification process in mid-November and asked the Swiss-based operator of the pipeline — which is owned by Russia's Gazprom — to set up a German subsidiary to comply with European regulations.

The agency will resume the certification as soon as the necessary criteria are met, its president, Jochen Homann, said Dec. 16. "A decision won't be made in the first half of 2022." The German regulator is still waiting for the project operator to submit documentation, Homann said. "This is not in our hands." The move confirms what the market had anticipated. European benchmark gas prices briefly jumped amid concerns that the line may only start operating once stockpiling for next winter is well under way.

The continent is suffering from the worst supply crunch in decades, with gas inventories abnormally low and futures prices soaring to record levels. Nord Stream 2, a twin gas link across the Baltic Sea, is set to carry almost 2 trillion cubic feet per year of gas from Russia to Germany. The project was initially expected to start operations by the end of 2019, but it has faced multiple hurdles, including opposition in Europe and from the U.S. Construction of the pipeline was completed in September, despite U.S. sanctions.

## **Energy outlook forecasts B.C. will pass Alberta in gas production**

(Business in Vancouver; Dec. 16) - British Columbia will surpass Alberta as Canada's biggest natural gas producer by 2028, driven largely by LNG exports, according to a new outlook by the Canadian Energy Regulator. Canada's Energy Future 2021 report projects Canada's energy use and production through 2050, with projections varying depending on two main scenarios – current policies and evolving policies. The latter is if Canada and other countries adopt even more stringent climate change policies, like higher carbon taxes, than what are currently in place or announced.

Canada's carbon tax is set to rise by \$15 a year until it hits \$170 per tonne in 2030 – a current policy. An evolving policy scenario would be one in which the tax would continue to rise past 2030, or increase in price. In both scenarios, the outlook projects less domestic use of fossil fuels and increased use of electricity. It predicts that coal will comprise less than 1% of Canada's energy mix by 2035, compared to 5% in 2019.

Oil and gas production in Canada is not projected to decline commensurate with a decline in fossil fuel consumption in Canada, since much of the oil and gas is exported. The report predicts oil production in Canada will increase by about 800,000 barrels per day by 2032 – a 16% increase from today's 5 million – before plateauing. By 2050, the production will fall by 17%. Increased gas production in the next few decades will be concentrated in the Montney formation, with growth occurring more in British Columbia.

## **Hong Kong's first LNG import terminal set for 2022 start-up**

(Maritime Executive; Dec. 16) - Hong Kong's first LNG import terminal will be launched in 2022, operating under a new joint-venture agreement between Japan's Mitsui O.S.K. Lines and Dutch tank storage company Royal Vopak that also will supply the LNG. The new joint-venture company will own the world's largest floating storage and regasification unit (FSRU) and will have a long-term contract with Hong Kong LNG Terminal to provide jetty operations and maintenance, along with port services.

The joint venture will control Mitsui's FSRU Challenger, which can store cargoes from the equivalent of almost two fully loaded standard-size LNG carriers. The ship is 1,133 feet long, with a beam of 180 feet. Mitsui says it is the world's largest FSRU. Before positioning the vessel in Hong Kong, it will be renamed Bauhinia Spirit. The offshore jetty platform for mooring the FSRU and LNG carriers that will deliver the fuel is under construction. The terminal is approximately 14 nautical miles offshore.

As the fuel is regasified aboard the ship, it will be piped to Hong Kong to provide gas feedstock to dedicated power plants. It is being developed to support the government's target to improve air quality and environmental conditions by increasing the percentage of power generation by natural gas.

## **Mitsubishi plans to boost its LNG volumes**

(S&P Global Platts; Dec. 17) - Japan's Mitsubishi sees its LNG business playing a pivotal role as the world's energy transition gathers pace, and expects to boost its LNG production and trading volume to 20 million tonnes per year in 2030 amid anticipated demand growth in Asia, said Jun Nishizawa, CEO of Mitsubishi's natural gas group. Mitsubishi, among the 10 biggest private-sector LNG suppliers globally with 12 million tonnes per year of equity production capacity, is urging operators of the projects it has equity stakes in to ensure stable output and supply, Nishizawa said.

Mitsubishi has equity stakes in LNG projects in Australia, Brunei, Indonesia, Malaysia, Oman, Russia and the U.S. Mitsubishi, which participates in the Cameron LNG project (operating) and LNG Canada project (under construction), sees North America as a highly flexible supply source for Europe and Asia with relatively low country risk, he said. "We expect our LNG equity production capacity and third-party LNG lifting volumes to be about 20 million tonnes in 2030," Nishizawa said.

Mitsubishi expects its LNG equity production capacity to reach about 15 million tonnes per year in the mid-2020s due mainly to an addition of 0.38 million tonnes from the Tangguh Train 3 in Indonesia and 2.1 million tonnes from LNG Canada, both of which are under construction.

## **BP signs deal to supply gas in China from LNG import terminal**

(S&P Global Platts; Dec. 16) - BP has signed a sale-and-purchase agreement with a subsidiary of China's State Power Investment Corp. to supply about 9.6 billion cubic feet per year of pipeline natural gas to the southern Guangdong province for a period of 10 years starting in 2023, BP's China unit said on its social media account Dec 15. Under the agreement, BP will provide SPIC Guangdong Co. with the fuel regasified from the LNG receiving terminal of Guangdong Dapeng Liquefied Natural Gas Co.

State Power Investment Corp. is one of China's largest state-owned generation utilities. The contract signals a move toward direct procurement of its gas supply from private-industry players, as opposed to relying on national oil companies for energy supply. An increasing number of companies outside the three big NOCs — Sinopec, PetroChina and CNOOC — are entering the gas business, with many leveraging on their size and stronger creditworthiness to sign long-term gas deals.

BP was the first international oil company in China to invest in an operational LNG terminal with its 30% share of the Guangdong Dapeng LNG terminal, which accounts for about 50% of Guangdong's gas consumption. BP started supplying gas from LNG imports directly to its customers in China in January 2021.



## **Taiwanese vote in support of proposed LNG import terminal**

(Taipei Times; Dec. 19) - Taiwanese voted Dec. 18 against relocating a liquefied natural gas import terminal project from its planned site by 51.6% to 48.4%, a result that will alleviate the government's concerns of meeting its 2025 goal of phasing out nuclear power. The electorate was asked to vote on whether Taiwan's third LNG import terminal project should be relocated from its planned site near algal reefs off Taoyuan's Guanyin District. Environmentalists had supported the move to protect the reef.

Pan Chong-cheng, who initiated the referendum, said he and supporters of relocating the project were disappointed in the result but would accept it. "We cannot lose heart over the result, as there is still plenty of work for us to do to continue protecting the algal reefs," he said. Groups seeking to protect the reefs will now focus on the outcome of an environmental impact assessment of the project.

Pan said the referendum was not intended to halt construction of the terminal, but to relocate the project. Aiming to phase out nuclear power by 2025, the government plans to replace nuclear power with natural gas and green energy, raising the ratio of power generated by burning gas to 50%, the ministry said.

## **Brazil attracts strong international interest in offshore lease sale**

(Reuters; Dec. 17) - France's TotalEnergies, Shell, Malaysia's Petronas and Qatar Energy on Dec. 17 scooped up big offshore fields in Brazil, together with state-owned Petrobras, paying nearly \$2 billion to its cash-strapped government. While TotalEnergies (28%), Qatar Energy (21%) and Petronas (21%) made the top offer for Sepia field, Petrobras, formally Petroleo Brasileiro, later entered the consortium by exercising preference rights to take a 30% stake.

Petrobras (52.5%), Shell (25%) and Total (22.5%) secured the nearby Atapu field. Officials, who had been keen to attract major foreign players, deemed the auction a success, and analysts said the offers agreed to were relatively rich. The sale was widely seen as a test of Brazil's investment climate and of large oil producers' willingness to keep spending big on traditional oil assets, despite increasing pressure over climate change and toward energy transition.

TotalEnergies, which snapped up a stake in both blocks, said the investment will bring output with "costs well below \$20 per barrel of oil equivalent," with carbon emissions rates below industry levels. The winners were determined by the share of production provided to the government: 37.43% for Sepia and 31.68% for Atapu. Brazil attempted to auction both fields in 2019, but neither received offers, even from Petrobras. At the time, complex legal issues and rich signing bonuses kept oil majors away.

## **Shell will use manure to make biomethane for truck fuel**

(Bloomberg; Dec. 15) - Trucks in Germany could soon be running on fuel made partly from manure at one of Europe's biggest oil refineries. Shell is aiming to produce liquefied natural gas with a bio-component for use in heavy vehicles within about two years. Trucks using the fuel can travel for about 900 miles without refilling, according to Shell, which will make the fuel at Rheinland, Germany's biggest oil-processing complex.

Shell's move is among initiatives aimed at cutting carbon emissions at the Rheinland site, which includes the Godorf plant where the "carbon-neutral" LNG will be made. Its sister facility, Wesseling, was the first European refinery to start production of green hydrogen last year, albeit on a small scale. Shell plans to stop processing crude at Wesseling in 2025.

"Biomethane LNG is perfect for heavy-duty vehicles and maritime transport," said Seyhan Turan, director of Altass Consulting, whose clients include the European Commission and the Department of Business, Energy and Industrial Strategy. Biomethane can be made from food waste or other organic matter. Shell said it will use manure that would otherwise release methane if left to rot in the farmyard. Shell's idea is to mix it with fuel made from natural gas, resulting in a carbon-neutral product.

## **BP, tanker operator test out running tankers on biofuel**

(Reuters; Dec. 17) - BP and Maersk Tankers successfully completed trials using marine fuel blended with biofuel for oceangoing tankers as efforts grow to tackle the shipping sector's greenhouse gas emissions. Global shipping accounts for around 3% of global carbon emissions. The sector is considered relatively hard to decarbonize because of a lack of alternatives to marine fuel. The trials were completed on two refined oil product carriers chartered to BP from Maersk Tankers, BP said in a statement.

Maersk Tankers is a subsidiary of A.P. Moeller-Maersk. Each vessel was supplied with Marine B30 biofuel, consisting of 30% fatty acid methyl esters (FAME), a biodiesel made from recycled cooking oil and renewable oil sources, blended with very low-sulfur fuel oil. "No adverse effects to equipment or machinery were observed during or after the trials. No modifications to the engine or infrastructure were required," BP said.

## **Yukon Territory sets record for electricity demand**

(CBC News; Canada; Dec. 16) - A new record for electricity demand was set Dec. 16 in Canada's Yukon Territory. Around 7:51 a.m., the territory recorded a peak of 104.42 megawatts, according to a news release from Yukon Energy. The new record is about a half a megawatt higher than the previous record of 103.84 megawatts recorded on Jan.

14, 2020. While in general over 90% of the electricity generated in Yukon comes from renewable resources, during periods of high electricity in the winter Yukon Energy has to use its liquefied natural gas and diesel resources to generate additional electricity.

But when it comes to setting records, Andrew Hall, CEO of Yukon Energy, said it's not that unusual. "Typically, during the winter, when the weather is cold, demand for electricity in the Yukon reaches its maximum. And that's because folks use more electricity for heating their homes, for cooking meals, there's more lighting demand, because the days are shorter," he said.

"We get new home construction, construction of new apartment buildings. And typically, those new homes are all heated by electricity," Hall said. There are also other reasons, ones that are "in the name of climate change," he added. That includes people trying to limit fossil fuel heat by swapping to electric heat. And, he said some Yukoners are switching to electric vehicles. "Over time, those two new demands, in the name of climate change, will also contribute to growing demand for electricity."