Oil and Gas News Briefs Compiled by Larry Persily July 17, 2023

Oil companies look to federal subsidies for carbon capture

(Climate Wire; July 13) - Oil companies have made billions of dollars drilling for carbonrich fuels that are overheating the planet. Now some of those same firms are seeking to profit from a new taxpayer-subsidized line of business: pulling carbon pollution from the atmosphere and pumping it back underground. At least seven oil and gas producers including more than half of the world's majors — are working on direct-air capture (DAC) projects or have financially supported direct-act capture companies, which can collect up to \$180 for each ton of carbon dioxide they sequester.

And four oil companies are known to have sought additional funding from the Energy Department's \$3.5 billion direct-air hub competition. Big Oil's little-known involvement in the emerging sector is raising concerns for some supporters of DAC and other carbon dioxide removal technologies, which climate scientists believe will be necessary to avert the worst impacts of global warming. "The role of carbon removal in addressing climate change is to remove legacy emissions. It's not to offset continued fossil fuel use," said Erin Burns, executive director of the climate advocacy group Carbon180.

DAC plants use fans, filters, power and piping to suck carbon dioxide from the air and permanently store it deep underground. Occidental Petroleum leader Vicki Hollub has described DAC not as a climate solution but a way to continue producing petroleum. "We believe that our direct-capture technology is going to be the technology that helps to preserve our industry over time," she said at a conference earlier this year.

Occidental has made a billion-dollar bet on DAC. The firm is working with DAC company Carbon Engineering to build a megaplant in Texas that would remove up to 1 million tons of CO2 per year, with the first phase scheduled for completion in 2025. The world's largest DAC plant in operation is only capable of removing 4,000 tons per year.

Exxon pays \$5 billion for Gulf Coast CO2 pipeline operator

(Wall Street Journal; July 13) - ExxonMobil is paying almost \$5 billion to buy Dallasbased Denbury, a pipeline operator that moves carbon dioxide, increasing its bet that it can make money collecting and storing other companies' emissions. Denbury emerged from bankruptcy in 2020 and has benefited from the Biden administration's climate bill by expanding its foothold in carbon capture and tapping into billions in government tax credits. With Denbury, Exxon will get 1,300 miles of pipelines, mostly in the Gulf Coast area, mostly used to move carbon dioxide from smokestacks to underground reservoirs. The deal gives Exxon a leg up on building out the asset base it will need to attract potential customers for its nascent business capturing carbon as a service for so-called hard-to-decarbonize industries such as cement and steel. Since October, Exxon has signed three deals to capture, move and store carbon emitted from manufacturing plants owned by fertilizer maker CF Industries, industrial gas company Linde, and steel producer Nucor. The first two are scheduled to come online in 2025, the third in 2026.

Exxon has said it would spend \$7 billion through 2027 beefing up its low-carbon business, which it began in 2021. Other big energy companies, including Occidental Petroleum and Chevron, have also said they would spend billions building out their carbon-collecting capacities in the coming decade. However, the economics and feasibility of trapping huge volumes of carbon underground are unproven. In addition, some environmental groups argue that the practice incentivizes companies to continue relying on fossil fuels rather than pivoting more quickly to green energy sources.

Even with federal money, plugging abandoned wells is a big challenge

(Energy Wire; July 14) - Across Schuyler Wight's two West Texas ranches, about 250 abandoned oil and gas wells sit open and unused, creating a link from the dusty surface to smelly chemicals and gases thousands of feet underground. Some of the wells are constantly bringing up noxious liquid, creating poisonous puddles and pools across his land that have killed cattle. Others bubble with methane, releasing the greenhouse gas.

There may be as many as 800,000 orphaned wells across the U.S., according to some estimates. In 2021, states reported 126,806 to the Department of Interior, although many experts say that number understates the problem. Along with being eyesores, the wells may be polluting groundwater and are estimated to be the 10th-largest source of methane emissions in the U.S., according to a study by McGill University in Canada.

The bipartisan infrastructure law signed in 2021 included \$4.7 billion in federal grants to start plugging the wells, creating new programs in many states. But the federal money is creating logistical and regulatory challenges, state officials said, raising many questions about whether the money will live up to its promise. Some officials say they are having a hard time finding enough crews to plug the wells under the timelines dictated by the federal funds, and contractors are charging higher prices than originally anticipated.

Many orphaned wells also remain undiscovered, putting pressure on states to develop new methods for finding and plugging them. "It's a constant game of catch-up," said Jason Simmerman, the orphan well program manager for Ohio's Department of Natural Resources. "We find new wells every week in the state of Ohio."

IEA cuts back forecast for global oil demand growth

(CNBC; July 13) - The International Energy Agency on July 13 cut its global oil demand growth forecast for the first time this year, primarily citing a worsening economic outlook that weighs "especially heavy" on wealthy countries. The world's leading energy watchdog said global oil demand is now on track to climb by 2.2 million barrels per day in 2023 to reach an average of 102.1 million barrels per day. China is set to account for 70% of the demand growth increase, the IEA said.

This forecast represents a downward revision of 220,000 barrels per day from last month's report, when the IEA predicted an increase of 2.4 million barrels per day of worldwide growth. "Persistent macroeconomic headwinds, apparent in a deepening manufacturing slump, have led us to revise our 2023 growth estimate lower for the first time this year," the IEA said in its latest monthly oil market report.

"World oil demand is coming under pressure from the challenging economic environment, not least because of the dramatic tightening of monetary policy in many advanced and developing countries over the past 12 months," the agency added. Looking ahead to next year, the IEA expects demand growth to slow to 1.1 million barrels per day, "as the recovery loses momentum and as ever-greater vehicle fleet electrification and efficiency measures take hold."

OPEC forecasts more demand for oil next year, tighter market

(Bloomberg; July 13) - OPEC predicts an even tighter global oil market next year, as the group anticipates a much bigger demand increase than other major forecasters. World oil consumption will climb by 2.2 million barrels a day next year to reach 104.3 million a day, the organization said on July 13 in its first detailed assessment of 2024. That's the double the growth rate projected by the International Energy Agency, which advises consuming nations.

The demand increase would outstrip the projected boost in supply from outside the cartel, pushing the world's daily appetite for OPEC's crude to 30.2 million barrels — or roughly 2 million barrels more than it pumped last month. That could allow the group to ease production constraints it's making this year to shore up prices. Saudi Arabia and its partners have curbed output to balance markets amid a faltering global economy and unexpectedly robust supplies from exporters including Iran and Russia.

Oil prices climbed above \$80 a barrel in London on July 12 for the first time in two months as those supply curbs, which include additional unilateral cuts by the Saudis in July and August, tighten markets. Demand in China also appears robust despite shaky economic indicators. The 13 members of the Organization of Petroleum Exporting Countries pumped an average of 28.2 million barrels a day in June, fractionally more than the previous month, according to the report.

Saudi Arabia to lose top oil-producer spot to Russia

(Wall Street Journal; July 13) - Saudi Arabia is set to fall below Russia and lose its spot as the largest oil producer in the OPEC+ alliance as its production cuts begin to bite, tightening the global oil market just as prices appear to be turning higher, the International Energy Agency said. The Gulf kingdom, the de facto leader of OPEC, has in recent months cut deep into its oil output, sacrificing its market share within the producers' group in an attempt to buoy low oil prices that have crimped its revenue.

The production cuts, which have largely not included other members of the oil cartel or its allies in the wider group known as OPEC+, have so far been undermined by stronger output from non-OPEC+ producers such as the U.S. But those rival supply increases look set to come to an end, just as a unilateral production cut by the Saudis is set to begin this month and while Russia's output also appears to be declining, though at a slower pace, the IEA said in its monthly market report.

Saudi Arbia's cut of 1 million barrels day, which Riyadh said last week that it would extend into August, will see the country's output slip to a two-year low of 9 million barrels a day, and make it the second-largest producer in the OPEC+ alliance, below Russia for the first time since early 2022. In bearing the brunt of the supply cuts, Saudi Arabia and Energy Minister Abdulaziz bin Salman have gone all in on a risky strategy to support Saudi oil revenue at the expense of market share. Analysts estimate Riyadh needs oil around \$80 a barrel to balance its budget and fund infrastructure projects.

Canadian pension fund invests in Dutch green hydrogen company

(Reuters; July 11) - Canada's biggest pension fund, CPP Investments, has made its first bet on green hydrogen playing a growing role in cutting emissions, with an overall 130 million euro (\$143 million) investment and purchase of a majority stake in a three-year-old Dutch firm. CPPI's investment is mostly in the form of capital that Amsterdam-based Power2X can use to develop new projects in Europe that seek to decarbonize hard-to-abate industrial assets by adopting green hydrogen.

The size of CPPI's equity investment and the valuation given to Power2X, which is codeveloping two projects and advising on others, was not disclosed. Green hydrogen backers hope that using renewable power to split water molecules can cut pollution by replacing gray hydrogen — or its derivatives methanol and ammonia — relied on by industries including refining, heavy transport, steel and fertilizers.

"Europe is generally seen as the leading industrial market or consumer for these green molecules. We thought it important to start with the consumers or the users of these molecules, and then build up from there," CPPI's head of sustainable energies, Bruce Hogg, told Reuters. Investor interest in Europe for tackling fossil fuel demand rather than just supply is growing, aided by the EU's green industrial plan, which has pledged subsidies and faster permits to ensure the region keeps pace in the green tech race.

Japanese company invests in renewables in Australia

(Australian Financial Review; July 13) - Japan's Inpex Corp. has plunged into renewable energy development in Australia with an investment of over \$325 million, significantly reducing its concentration in the natural gas sector. The Tokyo-based firm has signed a deal to buy a 50% stake in Italian-owned Enel Green Power Australia, in a move that will provide the wind and solar power developer with a fresh injection of capital.

It marks the entry of the Japanese company — better known in Australia as the operator of the \$US45 billion Ichthys LNG project in Darwin — into Australia's fast-growing wind and solar power sector. Enel's Australia renewables business has three operating plants involving 310 megawatts of solar power capacity, mostly focused at the Bungala solar farms near Port Augusta in South Australia, and with a smaller solar project in Victoria. However, it has several more projects in development.

Projects under development include the Flat Rocks wind farm in Western Australia's south, where the first turbines have been delivered to site. A 93MW solar farm is also under development in Victoria, and a 96MW solar and battery project is in the late stage of development at Quorn Park in New South Wales. Other wind, solar, storage and hybrid projects are in earlier stages of development as it seeks to capture a bigger share of Australia's renewable sector, which is targeted to account for 82% of electricity use by 2030. Enel is the world's largest private renewable energy player.

U.S. LNG building boom may be nearing its end

(Bloomberg columnist; July 14) - A record-breaking wave of investments in U.S. liquefied natural gas may be running out of steam. More than 36 million tonnes a year of new export capacity has been approved for construction so far this year, the highest ever for the country, according to Bloomberg calculations. The latest project — NextDecade's \$18.4 billion facility in Texas — agreed to move forward earlier this week. Although last year's gas crunch forced European importers to significantly increase LNG purchases from America, the window for additional U.S. LNG projects is closing.

While Europe is rushing to replace Russian pipeline gas, it is also looking to curb fossil fuel use by 2030 amid more ambitious green goals. Meanwhile, Qatar is racing to sell LNG from its \$50 billion expansion, putting it in direct competition with some proposed American plants. There is a crowded field of U.S. hopefuls. Of the 11 projects that still haven't been finalized, BloombergNEF analysts label seven as "unlikely" and the

remainder as "wild cards" as they have hurdles with contracting, financing and regulations. All of BNEF's "top pick" projects have already been approved.

LNG plants take years to build. If a project doesn't secure financing and begin construction in the next year or so, it would only be able to start production much later this decade — or early next decade. Competition would be fiercer at that time as other LNG facilities in America, Qatar and elsewhere start up. This is the last big investment cycle in U.S. LNG, closing a chapter on one of the gas industry's biggest surprise growth stories. The country transformed from being an importer to becoming the world's top exporter in two decades thanks to the shale revolution and enormous investments.

Global LNG imports rose 4.5% last year, even with decline in Asia

(Reuters; July 13) - Global LNG imports rose last year as Europe's scramble to replace Russian pipeline gas drove up the seaborne trade, making additional investments "ever more necessary" to ensure security of supply, an importer group said on July 13. The International Group of LNG Importers (GIIGNL) said in its annual report on the industry that global liquefied natural gas imports rose 4.5% last year to 389.2 million tonnes, up 16.9 million tonnes from the previous year.

That was driven overwhelmingly by Europe, where net LNG imports increased by 44.7 million tonnes to 119.7 million year-on-year, the group said. Jean Abiteboul, president of GIIGNL, said in a statement that the market faced an "unprecedented" energy crisis last year. "The challenge for the future will be to establish those market conditions that will trigger LNG investments, which, in an increasingly growing LNG market environment, are ever more necessary to guarantee security of supply at an affordable price."

Asian imports, led by China, dropped for the first time since 2015, falling by 20.6 million tonnes, or 7.6%, to 251.9 million tonnes in 2022, although the region remains the top destination with a 64.7% share of the worldwide total. The U.S. accounted for most of the new supply volumes, with an additional 8.4 million tonnes of LNG from expansion of existing projects and new ones coming online. The GIIGNL comprises 85 member companies in 27 countries, accounting for more than 90% of global LNG trade.

Louisiana LNG project delays commercial start-up to end of 2024

(Bloomberg; July 13) - Venture Global LNG is further delaying shipments for its longterm contract customers, with full commercial operations of its Louisiana liquefied natural gas export plant now not expected to start until the end of 2024. The company's latest revision for the start of contract cargoes from Calcasieu Pass LNG extends a previous delay by almost a year, according to people familiar with the matter who asked not to be named because the information is private. The 2024 date would constitute the longest commissioning period for any U.S. LNG project. The plant started initial operations in early 2022. And while the terminal has been steadily shipping LNG since March 2022, it has yet to enter full commercial operations, citing ongoing plant issues with its steam generators. Until that work is done and commercial operations begin, Venture Global has maintained it isn't obligated to supply LNG to its long-term customers at contracted prices. Instead, the company has been selling cargoes on the lucrative spot market, angering its contract customers.

Buyers, including Shell and Italian utility Edison, have lodged arbitration cases against Venture Global for failing to supply contracted shipments, the sources said. Edison confirmed its case. Other long-term customers at Calcasieu Pass include BP, Portugal's Galp Energia, Spain's Repsol and Polish company PKN ORLEN. Repsol said it's concerned about the significant delay and is seeking more information.

Chevron comfortable buying U.S. LNG, not building its own project

(Reuters; July 14) - Chevron is comfortable with buying U.S. liquefied natural gas on long-term contracts rather than constructing its own U.S. export facility, said Freeman Shaheen, the company's head of global gas. The second-largest U.S. oil and gas producer last month signed agreements with U.S. Gulf Coast developers Cheniere Energy and Venture Global LNG for a combined 4 million tonnes per year of the fuel. The deals will give Chevron more gas to market and diversify its risk, Shaheen said.

Chevron owns stakes in LNG projects in Angola and Australia, and has taken early steps with partners to advance a floating LNG project off the coast of Israel that would liquefy gas from the Leviathan field. The deals with Cheniere and Venture Global will provide an outlet for gas from Chevron's Permian Basin shale holdings in West Texas and New Mexico. The company holds about 2.2 million acres in the largest U.S. shale field. As Chevron's production in the Permian has grown, it has had to decide how much gas output would stay in the U.S. and how much should be exported, said Shaheen.

The company had to balance the investment needed to build an LNG facility in the U.S. against drilling more wells in the Permian, or investments in the Eastern Mediterranean, Argentina or West Africa, Shaheen said. "That is always a concern with any project that you do. ... We have to weigh that in the balance in terms of how we manage our sales and our portfolio," Shaheen said at a gas conference in Vancouver, B.C., this week.

Japanese government will insure loans for short-term LNG purchases

(Nikkei Asia, July 17) - The Japanese government will insure bank loans used to procure liquefied natural gas under short-term contracts, the Nikkei has learned, offering assistance to help businesses obtain the key resource. Government-backed Nippon

Export and Investment Insurance will collect premiums from private-sector lenders in exchange for policies that will cover more than 90% of loan amounts. The Ministry of Economy, Trade and Industry will soon announce the new trade insurance mechanism.

As a first step, NEXI will insure a loan by Sumitomo Banking for LNG importer JERA, a joint purchasing venture between Tokyo Electric and Chubu Electric. Japanese companies had previously opted for long-term LNG contracts to keep prices down. But with the government setting a goal of net-zero greenhouse gas emissions by 2050, businesses have begun switching to short-term deals. Short-term contracts are based on spot-market prices at the time, making them more susceptible to price volatility and driving lenders to seek additional protection for repayment. NEXI seeks to help lower risks via trade insurance and spur energy procurement under short-term deals.

Gazprom faces delay in Baltic Sea LNG project

(Upstream; July 12) - Gazprom's first solo-built liquefied natural gas terminal is facing another major delay after the Russian state-owned giant failed to secure key contracts to build a 160-mile pipeline to receive feed gas. The two-train, 13 million-tonne-per-year Ust-Luga terminal on the Baltic Sea is the first LNG plant that Gazprom is building on its own. Its previous LNG ventures involved partnerships with other companies, such as the Sakhalin-2 project in Russia's Far East that was led by Shell before the supermajor exited the country in response to Russia's invasion of Ukraine last year.

Western sanctions led to delays for Gazprom after specialized contractors withdrew from the Baltic LNG terminal project. And now, in a further setback, Gazprom has failed to attract contractors to bid for work on a connector line linking its remote, but prolific, cluster of Tambey gas fields on the Yamal Peninsula to the LNG plant via the Gazpromoperated pipeline network. The three Tambey fields hold estimated recoverable reserves of 180 trillion cubic feet of gas and 2.8 billion barrels of condensate and oil.

Gazprom originally targeted 2030 for first gas from Tambey, but in 2021 announced it was aiming to begin moving gas from the three fields in the Yamal Peninsula's northeast in 2026, after Russia's largest independent gas producer, Novatek, stepped up attempts to gain control of the fields. Novatek had reportedly told President Vladimir Putin that Gazprom's Tambey fields fit well with Novatek's strategy to boost LNG exports, as they lie close to Novatek's own Tambey field that provides feed gas for its Yamal LNG plant.

China allows city gas distributors to raise prices to better cover costs

(Reuters; July 11) - Chinese cities have been raising residential natural gas prices in recent weeks after Beijing launched a new mechanism linking residential prices with distributors' fuel costs, a reform long sought by the companies that can suffer financially

when they resell costly imported gas. Over 20 cities including Shijiazhuang and Handan in the north, Nanjing in the east and Mianyang in the southwest have raised retail gas by about \$1.50 per million Btu, according to industry officials and government websites.

That amounts to increases of about 13% to 15%, based on Reuters calculations, and marks a breakthrough reform to link retail gas prices with the cost of the fuel. China has in recent years taken steps to liberalize natural gas prices by allowing some cost pass-throughs in the commercial and industrial sectors, but has kept control of residential prices in what has been widely seen as an effort to avoid a consumer backlash.

The rigid pricing structure has at times squeezed distributors' margins and caused supply disruptions, especially in the winter heating season. The price increases follow a policy guideline issued in June by the National Development and Reform Commission economic planner, according to industry players. Under the guideline, retail residential prices are allowed to be readjusted once or twice a year in line with procurement costs for city-gas distributors, while non-residential prices may fluctuate quarterly or monthly.

Vietnam's coal imports for power generation climb to 3-year high

(Reuters; July 12) - Vietnam's thermal power emissions are primed for a steep climb this summer after the country's imports of thermal coal soared to their highest levels in three years in May and June. Vietnam's utilities boosted imports of thermal coal to more than 3 million tonnes in both May and June this year from a monthly average of around 1.5 million tonnes throughout 2022, data from Kpler shows, as a lengthy heat wave across the country caused a spike in air conditioner use.

The import spree brings Vietnam's total coal imports for the first half of 2023 to roughly 13.5 million tonnes, the highest for that period since 2020 when Vietnam's full-year coal imports hit an all-time record. The sharply higher coal imports indicate that power producers have boosted coal-fired electricity generation to keep up with the demand for power-hungry air conditioning, and may generate higher emissions going forward.

The sharp rise in thermal coal imports snaps a lengthy quiet spell by Vietnam, the 18th largest carbon dioxide emitter globally in 2022, on international coal markets. Coal accounted for an average of 38% of Vietnam's electricity generation in 2022, according to Ember, but coal's share in the generation mix rose to more than 50% in March as power firms increased overall coal-fired output.

Hawaii operator takes delivery of second LNG-fueled container ship

(Offshore Energy; July 13) - Hawaii-based shipping company Pasha Hawaii has taken delivery of the Janet Marie, the second of two new Ohana Class LNG-powered

container ships built at the AmFELS shipyard in Brownsville, Texas. The 774-foot vessel joins Pasha Hawaii's fleet serving the Hawaii/Mainland trade lane. The company's first Ohana Class vessel George III, also able to run on LNG, began service last August. Each can carry the equivalent of 2,525 standard 20-foot-long containers.

Operating on liquefied natural gas from day one, the Janet Marie, a Jones Act-compliant ship, surpasses the International Maritime Organization 2030 emission standards for ocean vessels, Pasha Hawaii said. Pasha Hawaii also has invested in building up the infrastructure for LNG refueling in the Port of Long Beach, which includes 40 cryogenic tanks. The vessels are named in honor of George Pasha III and Janet Marie Pasha, the late parents of Pasha Group president and CEO George Pasha IV.