Oil and Gas News Briefs Compiled by Larry Persily January 5, 2023

Exxon, Chevron keep their investment dollars closer to home

(Wall Street Journal; Jan. 3) - The globe is shrinking for ExxonMobil and Chevron as the two largest U.S. oil companies pull back on big international oil projects and concentrate on a handful of more lucrative assets closer to home. The two giants plan to spend most of their annual budgets in the Americas this year, with Chevron saying it will pour 70% of the capital allocated for production into oil fields in the U.S., Argentina and Canada, and Exxon saying it will spend a similar portion of its budget in the Permian Basin of New Mexico and West Texas, Guyana, Brazil and also liquefied natural gas projects.

Their focus on the Western Hemisphere is expected to continue for years as they give priority to growing shareholder returns and cut costly frontier drilling projects. Their retreat from places such as Southeast Asia, West Africa, Russia and parts of Latin America — sometimes by choice, sometimes by fiat — marks an era of retrenchment for companies that had spent decades putting stakes in the ground around the world.

"The cases of them going to new countries are few and far between," said Ben Cahill, a senior fellow at the Center for Strategic and International Studies, a Washington think tank. "It's a natural consequence of investors demanding higher returns. Companies are being more selective." For much of their modern history, Chevron and Exxon scoured the globe for oil to add to their booked reserves, often entering into partnerships with state-run companies in the most challenging, costly projects.

Cahill said the advent of U.S. shale eased Western companies' concerns about finding oil. A shareholder revolt against overspending a few years ago pushed them to shrink their footprints. Exxon's 2021 oil and gas output was down almost 18% compared with its peak in 2011, according to S&P Global Market Intelligence. Chevron's international output fell 3% last year after the expiration of concessions in Thailand and Indonesia.

BP will expand investments in U.S. Gulf and onshore Texas

(Reuters; Jan. 4) - BP said on Jan. 4 it planned to expand investments in the Gulf of Mexico and Texas, where it has its two top U.S. oil and gas production operations. The increase comes as inflation costs hit the industry and as the White House calls on oil companies to expand supply to reduce fuel prices for consumers. The London-based company said it plans to increase spending in its U.S. onshore oil and gas business, mostly in Texas, by 41% to \$2.4 billion in 2023 from \$1.7 billion last year.

BP also said it planned to raise its Gulf of Mexico investment to an average of \$2.3 billion a year in 2023 to 2025 from \$2 billion per annum in the past five years. Despite that boost, BP has reduced its offshore production plans in the Gulf to around 350,000 barrels of oil equivalent per day in the mid-2020s from the 400,000 previously planned.

BP operates four deepwater production platforms in the Gulf: Atlantis, Mad Dog, Na Kika and Thunder Horse. The \$9 billion Mad Dog 2 project is expected to start production in 2023, the company said. Mad Dog 2 includes BP's fifth U.S. platform, Argos, the start of which has previously been delayed from 2022 to 2023.

Russia's December oil exports fall to lowest level of the year

(Bloomberg; Jan. 3) - Russia's crude shipments slid to the lowest for 2022 in the final four weeks of the year as sanctions crimped Moscow's exports. Cargoes bound for China, India and Turkey, which have become a lifeline for Russian supplies displaced from Europe, saw a third straight drop. The country's overall seaborne flows fell by 117,000 barrels a day, about 4.2%, to 2.615 million barrels on a four-week average.

Inflows to the Kremlin's war chest have sagged amid the G-7 and European Union sanctions designed to punish President Vladimir Putin for his war on Ukraine. And a shortage of tankers to haul cargoes over the much longer distances required following the EU ban on seaborne crude imports from Russia may also be having an impact. The ban that came into force on Dec. 5 has closed off Moscow's closest oil market, which took roughly half of Russia's seaborne exports at the start of the year.

The ban has led to much longer voyages for shipments, with journeys now taking an average of 31 days from Baltic ports to India, compared with just seven days from the same terminals to Rotterdam. That's putting more pressure on the dwindling fleet of ships whose owners are willing to haul Russian cargoes. Meanwhile, the volume of crude on vessels heading to China, India and Turkey — the three countries that have emerged as the only significant buyers of Russian crude — was down in December.

More debt raised for climate-friendly projects than fossil fuel ventures

(Bloomberg; Jan. 4) - For the first time, more money was raised in the debt markets for climate-friendly projects than for fossil-fuel companies. Roughly \$580 billion was arranged in 2022 for renewable energy and other environmentally responsible ventures, while the oil, gas and coal industries turned to lenders and underwriters for closer to \$530 billion, according to data compiled by Bloomberg.

But it's not that green financing is finally winning out over fossil fuel lending. Rather, Big Oil looks to be getting more money from elsewhere. High oil prices over the past year have likely freed energy companies from their dependence on capital markets, said April Merleaux, research manager at the environmental nonprofit Rainforest Action Network. "We're also seeing fossil-fuel companies turn to less traditional sources of capital, such as private equity, which is much harder for us to track," Merleaux said.

Bankers are generating considerably more revenue these days from selling green bonds and loans. In 2022, they pocketed an estimated \$3.3 billion of fees from these deals, exceeding the \$2.5 billion earned from lining up bonds and loans for the highestpolluting energy sectors, Bloomberg data show. Credit Agricole, BNP Paribas and Bank of America ranked as the top arrangers of green bonds and loans last year, according to Bloomberg data, while RBC Capital Markets, Wells Fargo and JPMorgan Chase were the leading providers to the fossil-fuel industry.

Tokyo Gas in talks to buy U.S. natural gas producer

(Reuters; Jan. 3) - A unit of Tokyo Gas is in advanced talks to buy U.S. natural gas producer Rockcliff Energy from private equity firm Quantum Energy Partners for about \$4.6 billion, including debt, people familiar with the matter said on Jan. 3. If finalized, the deal would be the latest move by a Japanese entity to secure gas in jurisdictions perceived as friendly, the importance of which has risen for the import-dependent Asian nation after gas supply markets were roiled by Russia's invasion of Ukraine.

The all-cash deal for Houston-based TG Natural Resources, which is 70% owned by Tokyo Gas, to buy Rockcliff will be announced this month, the sources said. Castleton Commodities owns the other 30% of TG Natural Resources. TG is arranging funding from several financing sources to support the deal, including banks and private credit providers, added the sources, who cautioned that no deal was guaranteed and talks could end without an agreement. Tokyo Gas is Japan's biggest city gas supplier

Rockcliff produces more than 1 billion cubic feet per day of gas from the Haynesville shale formation, which stretches across Louisiana and East Texas. Quantum originally backed the Rockcliff management team with a \$350 million investment in 2015. Buying Rockcliff would significantly increase TG Natural Resources' operations, with the company already producing around 330 million cubic feet per day as of June 2022 from the Haynesville formation, according to its website.

U.S. and Qatar tied in 2022 as world's largest LNG exporters

(Bloomberg; Jan. 3) - The U.S. tied Qatar as the world's top exporter of liquefied natural gas last year, a milestone for the meteoric rise of America as a major supplier of the fuel. Both countries exported 81.2 million tonnes in 2022, according to ship-tracking data compiled by Bloomberg. While that's a modest increase for Qatar, it marks a huge

leap for the U.S., which only began exporting LNG from the Lower 48 states in 2016 and has seemingly overnight become a dominant force in the industry.

The shale gas revolution, coupled with billions of dollars of investments in liquefaction facilities, transformed the U.S. to a major supplier. The global energy crisis and a shift away from Russian pipeline gas has increased demand for U.S. LNG, with several new export projects proposed for the Gulf Coast. The U.S. would have been the world's top LNG exporter in 2022 if not for a fire at the Freeport export plant in Texas, which has kept the plant shut since June. The facility is slated to restart operations later this month, which will cement the U.S. as the biggest exporter of the fuel.

Still, the U.S. will need to build a lot more LNG export capacity if it wants to hold onto the top spot through the end of this decade. Qatar is in the midst of an enormous expansion to its production capacity, which could solidify its position as the LNG leader from 2026. In another shakeup, Japan overtook China to become the biggest LNG importer in 2022, according to ship data. China's zero-COVID restrictions dashed demand for the fuel, while Japanese rivals hoarded gas to prepare for winter.

Russia profiting from record LNG sales to China

(High North News; Jan. 2) - Energy ties between Russia and China continue to expand, with the latter receiving a record-setting number of deliveries from Russia's Yamal LNG project in 2022, including two winter shipments via the Northern Sea Route arriving during the past two weeks. While European countries significantly reduced their overall energy imports from Russia during 2022, China's oil and liquefied natural gas imports from the country experienced record highs over the past 12 months.

The data confirm that Russia continues to be able to find buyers not subject to Western sanctions, replacing some of the volume it previously exported to the European Union with new buyers in Asia, especially China and India. During the first half of 2022, China's imports from Yamal LNG in the Russian Arctic and the Sakhalin-2 project in the Far East were up 22%, to 1.84 million tonnes. In November alone, China imported 852,000 tonnes of LNG, primarily from Yamal LNG and Sakhalin-2. Similarly, China's oil imports from Russia experienced record highs in 2022.

Just last week, an ice-capable LNG carrier made a late-season delivery to the Chinese port of Tangshan after spending 18 days traversing the ice-covered Northern Sea Route. A sister ship followed about a week later, with a delivery at Tianjin in northeast China. In addition, Russia has successfully pursued a strategy of replacing lower-priced pipeline gas to Europe with higher-value LNG. The Russian government stands to benefit from increased LNG sales. It recently raised the tax on LNG exporters from 23% to 34%, projected to bring in an additional \$3.5 billion to the federal budget in 2023.

Novatek tells Chinese yards to resume work on LNG modules

(Upstream; Jan. 2) - Russia's Novatek has ordered Chinese yards to restart work on production modules destined for its Arctic LNG-2 project in West Siberia after an eightmonth hiatus in activities following European sanctions on Russia. The yards have also been asked to substitute European equipment with a Chinese equivalent in order to sidestep European Union sanctions imposed following Russia's invasion of Ukraine.

A number of Western partners, including France's Total, Germany's Linde and Siemens and Japan's Mitsui, which provided both technical knowhow and services as well as financing, have exited the Arctic LNG-2 project over the past six months. In addition, a number of ice-capable LNG carriers under construction in South Korea by Daewoo Heavy Industries were canceled. Novatek hopes that Russia's domestic Zvezda shipyard, which was already slated to build some of the LNG carriers with design and technical assistance from Daewoo, can step up and build the full order of 15 vessels.

Novatek last year reported the first liquefaction train would go into service by 2024. Work on Trains 2 and 3 at a yard in Murmansk resumed after Paris-based Gygaz — a joint venture between Technip Energies and Saipem — assigned its contractual obligations to Gydan LNG, a new Dubai-based consortium with Russian project management company Nipigas as apparently the only member. The \$20 billion LNG project would be capable of producing almost 20 million tonnes per year at full build-out, slightly larger than the nearby Yamal LNG terminal, which Novatek started up in 2017.

U.S. cargo arrives at Germany's first LNG import terminal

(Wall Street Journal; Jan. 3) - Germany's newly constructed liquefied natural gas terminal received its first full cargo from the U.S. on Jan. 3, as Berlin races to shore up its supply after the end of its decadeslong energy relationship with Russia. The shipment arrived at the LNG import terminal in the port town of Wilhelmshaven on the North Sea, a facility that was built at a breakneck speed in less than a year to help Germany avert an energy shortage.

The gas supplier, a subsidiary of Venture Global LNG, is likewise rapidly expanding its facilities to meet Europe's rising demand. The tanker, the Maria Energy, was loaded on Dec. 19 in Calcasieu Pass, Louisiana, at a facility Venture Global brought online in the middle of last year. Venture Global LNG last year secured \$13.2 billion in financing and gave final approval for a second export project, Plaquemines LNG, near New Orleans — the first new U.S. plant to receive a green light in three years.

With German industry and households highly reliant on the fuel, the country raced to secure gas from other exporters and build its own facilities to import LNG. Dozens of LNG import facilities are slated for construction across the European Union in coming

years, with the EU estimating that ending its reliance on Russian fossil fuels will add at least 300 billion euros, equivalent to \$320 billion, in infrastructure costs through 2030.

European natural gas futures fall to lowest price since last February

(Bloomberg; Jan. 2) - European natural gas prices started the new year declining as mild weather curbed demand. Benchmark futures dropped as much as 7.9% to the lowest level since Feb. 21, extending three weeks of net declines. Weather forecasts point to temperatures above seasonal norms for most of the region in the next two weeks, which will help Europe avoid depleting its gas stocks too soon this winter.

After a year of extreme volatility — with energy costs reaching record highs amid Russia's war in Ukraine — the market starts 2023 less stressed. Gas prices declined about 47% in December as Europe managed to replace much of Russia's curbed flows with supplies of liquefied natural gas. Milder temperatures for an extended period, together with a typical year-end slowdown in industrial demand, may help the region keep inventories well stocked until the end of the season. Lower gas prices are also a relief for the European economy, which is pressured by high inflation rates.

German Chancellor Olaf Scholz said the energy crisis triggered by Vladimir Putin's invasion of Ukraine was a "tough test" for the continent's biggest economy and urged citizens to continue saving energy in the months ahead. Germany's gas storage levels rose to 90% over the past week, compared with a five-year average of 73% for this time of year, according to Gas Infrastructure Europe.

Europe looking ahead to energy supplies for next Christmas

(Bloomberg; Jan. 1) - Expert eyes are starting to turn to Christmas 2023, as Europe has kept the lights on through the holidays despite an energy crisis that has gripped the continent for more than a year. While grids remain focused on ensuring there is enough gas and electricity to supply households in the next months, experts are concerned that all the same challenge could be repeated next winter, and perhaps even get worse.

In December, one of the U.K.'s most respected energy consultancies warned gas prices could remain high until the end of the decade. The situation next winter will, to no small extent, depend on how cold January, February and March prove to be, experts say. If the weather is unseasonably warm, people are unlikely to need as much gas to heat their homes, leaving European storage sites with more reserves when winter ends. This would make it easier to replenish its stocks over the summer, even without Russian gas.

Several nations are adding or expanding their capacity to import liquefied natural gas, which will help bring in additional supply, but there are limits on what is available in the

global LNG market, and storage limits, too. Martin Young, a senior analyst at Investec, said there will also be a little more wind power brought online before next winter, which will help with electricity supply. However, there is still uncertainty over some coal and nuclear electricity generators as countries look to extend the life of several plants.

Houston makes first cut with hydrogen hub application

(Houston Chronicle; Jan. 3) - Houston-area leaders seeking to make the city one of the nation's designated hydrogen hubs have received a push from the U.S. Energy Department. The department's Office of Clean Energy Demonstrations received 79 "concept papers" from groups seeking to host one of the six to 10 hydrogen hubs, and 33 of those, including Houston's, have been officially encouraged to follow through with complete applications. (An application from the state of Alaska did not make the cut.)

Full applications are due in April, and if Houston is selected it would receive some of the \$7 billion set aside by the Biden administration to spur hydrogen development. The hubs would be in places with abundant natural gas reserves and would test ways to produce and use hydrogen. Already, Houston sets itself apart from other applicants with its existing hydrogen production and infrastructure. The region produces about a third of U.S. hydrogen and is home to over half the country's dedicated hydrogen pipelines.

Most of that gas is used in the Houston area's refining and petrochemical industries, but a coalition of private and public groups — including the University of Texas at Austin, French gas supplier Air Liquide, oil major Chevron, the nonprofit Center for Houston's Future and GTI Energy, a research and development company based in the Chicago area — are hoping a federal designation and funding will help expand the industry.

California oil and gas producer plans state's first hydrogen fuel plant

(Los Angeles Business Journal; Jan. 2) - Long Beach-based oil and gas company California Resources Corp. is getting into the hydrogen fuel business. Last month, the company announced the first project under its major new carbon sequestration initiative: an agreement to partner with Tulsa, Oklahoma-based Lone Cypress Energy Services to develop a hydrogen fuel plant that uses natural gas as its feedstock.

The technology is known as "blue hydrogen." It would be "green hydrogen" if the energy for the process came from renewables instead of natural gas. The plant would be located above California Resource's main oil and gas producing field at Elk Hills in Kern County. This blue hydrogen plant is expected to be operational by the end of 2025. It would be the first plant of its kind in the state.

As part of the plant's operation, California Resources would take the carbon dioxide byproduct that is captured and sequester it in an underground storage vault. Financial terms of the partnership and the expected cost to build the hydrogen fuel plant were not disclosed. This is the first — and rather modest — carbon sequestration project under California Resources' "carbon terra vault" initiative that aims to capture and store underground 200 million tonnes of carbon dioxide over the next five years at an overall estimated cost of \$2.5 billion. The company unveiled the initiative in mid-2021.

'Green' steel mill in Finland will use hydrogen in production process

(Bloomberg; Jan. 3) - Norway's Blastr Green Steel is planning a €4 billion (\$4.3 billion) investment to construct a low-carbon steel factory in Finland in what could be one of the largest industrial projects to take place in the Nordic country. Blastr signed a letter of intent with Fortum Oyj on the planned location, an industrial area in Inkoo on the south coast of the country, according to a statement by Business Finland on Jan. 3. The facility will include integrated hydrogen production and employ as many as 1,200.

Steelmaking is one of the most polluting industries in the world, with huge blast furnaces heating iron ore with coking coal. A cleaner way is to use hydrogen produced with renewable energy. A number of companies, including Sweden's SSAB and Finland's Outokumpu Oyj, are exploring green-steel technologies, though it's not yet produced at an industrial scale. The Blastr factory is set to produce 2.5 million tons of hot- and cold-rolled green steel annually from 2026.

The company chose Finland for its factory in part due to the abundance of wind power, according to CEO Hans Fredrik Wittusen. While Blastr is yet to secure funding for the project, it plans to raise debt and funds on the capital markets, the CEO told newspaper Helsingin Sanomat. An investment decision is due in the beginning of 2025, according to the newspaper. Blastr is backed by Vanir Green Industries, founded by Tore Ivar Slettemoen, who is also one of the founders of Freyr Battery, a company that targets the production of green battery cells to decarbonize energy and transportation systems.

Orders for LNG-fueled ships down slightly in 2022

(Ship & Bunker; Jan. 4) - A total of 222 LNG-fueled ships were ordered last year, down only slightly from 2021's record total of 240 orders despite surging LNG prices. Almost three-quarters of 2022's orders were for container ships and car and truck carriers, and 9% were refined-product tankers, marine classification society DNV said in an emailed statement on Jan. 4. While the LNG bunker industry may be relieved that the decline was restrained to a single-figure percentage dip, it still represents a significant change from the exponential growth seen in previous years.

A total of 876 LNG-fueled ships are now either on order or in operation, according to the DNV data. A total of 104 new LNG-fueled ships entered service last year, representing 41% growth in the sailing fleet. Second to LNG, shipyards received orders for 35 ships that will operate on methanol, the second most popular alternative fuel. Fuel prices are a concern: LNG priced in fuel oil terms at Rotterdam averaged \$1,802.50 per tonne last year, according to Ship & Bunker data, up by 138.7% on the year, while very-low-sulfur fuel oil at the Dutch port gained 44.3% to \$735 per tonne.