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Shift from Russian energy 'has been a godsend' for U.S. producers

(Financial Times; London; July 18) - When a pandemic-induced drop in demand turned U.S. oil prices negative for the first time three years ago, then-President Donald Trump implored Russia and Saudi Arabia to cut output to restore order to energy markets — and spare U.S. producers further economic pain. Eventually, they agreed. But that time of cooperation, and that U.S. vulnerability to other oil and gas producers, seems like distant memories now. The soaring fuel prices and energy crisis triggered by Russia's war on Ukraine last year have upended long-established global energy trading patterns.

As a result, Russia's fossil fuel dominance in Europe has been shattered. The U.S. oil and gas producers so imperiled in 2020 have capitalized with bumper profits and exports. Meanwhile, the Biden administration has pushed ahead with sweeping climate legislation designed to break decades of dependence on fossil fuels. "The war put energy security front and center in a manner people thought was no longer feasible," says Amy Myers Jaffe, a New York University research professor and energy expert.

"The U.S. came out ahead with rising oil and gas exports and a new multibillion-dollar congressionally mandated plan to win in clean tech," Jaffe said. This advantage seems likely to last. In the wake of the war, European and Asian utilities have been signing deals to keep buying American natural gas into the 2040s as they diversify supply. Even as the U.S. and European Union try to accelerate the transition to cleaner fuels, American fossil fuels are becoming more central to global trade and energy security.

Moscow's aggression has altered geopolitical priorities, analysts point out. "The invasion coincided with and amplified a historic shift from the primacy of decarbonization to energy security," says Bob McNally, a former White House adviser who now runs Rapidan Energy Group. "For U.S. exporters, it has been a godsend."

Economics push U.S. shale patch to cut back drilling new wells

(Wall Street Journal; July 17) - The shale patch is shedding rigs at the fastest pace since the height of the pandemic despite healthy oil prices. Private companies, which added rigs at a fast pace as the pandemic abated, have drilled up many of their best remaining wells, forcing them to decelerate. Meanwhile, their larger, public brethren are not speeding up their drilling as they sit on bigger inventories of premium undrilled wells.

The number of rigs drilling for oil and gas has dropped to about 670 from around 800 at the beginning of the year, with private drillers accounting for roughly 70% of the decrease, according to David Deckelbaum, an analyst at investment bank TD Cowen. The slowdown augurs tepid U.S. oil production growth for the rest of the year, analysts said. The Energy Information Administration expects domestic output growth to increase by fewer than 300,000 barrels a day in 2024 from this year — a little more than 2%.

Taylor Sell, CEO of Element Petroleum, said the company's break-even — or the price needed to fund drilling without a loss — had increased by between \$5 and \$10 to reach between \$55 and \$60 a barrel, in part because the cost of materials such as steel pipes is roughly 40% higher than 18 months ago, he said.

While U.S. oil prices have averaged about \$75 a barrel since the beginning of the year — a level that generally allows profitable operations for smaller drillers — weak natural gas prices — down two-thirds from last year's peak — have eaten away at cash flows. Companies are also dealing with limited pipeline capacity, leaving some no choice but to flare a large chunk of gas production that they can't bring to market, they said.

Goldman Sachs forecasts \$150 billion oil and gas investments in 2024

(Bloomberg; July 17) - Big Oil appears to be warming up to megaprojects again. ExxonMobil's move last week to lay out a clear timeline for its Mozambique liquefied natural gas project signals not only that the industry is back in growth mode but also that it's more comfortable again with large, higher-risk fossil-fuel developments. Exxon, which is also building up oil production in Guyana, is not alone.

ConocoPhillips in March won federal approval for an \$8 billion oil project in Alaska, while TotalEnergies is working on a \$10 billion oil development in Uganda. BP and Shell both recently announced plans to spend more on fossil fuels in years to come. In LNG, NextDecade on July 12 decided to move ahead with an \$18.4 billion export facility in Texas. It's the latest in a string of approvals for U.S. Gulf Coast projects aimed at replacing Russian gas supply to Europe and meeting expanding Asian demand.

Across the world, the pace of investment decisions on long-term oil and gas projects will accelerate to \$150 billion by 2024, almost three times the low of 2020, according to Goldman Sachs. Global LNG production and deepwater oil are driving the pickup. But megaprojects come with substantial economic and environmental risk. Executives will have to convince investors that the new developments won't repeat the mistakes of the decade before COVID. Back then, many projects were over-engineered, over-budget and repeatedly delayed, destroying vast amounts of shareholder capital.

Louisiana grants \$184 million in tax exemptions for LNG project

(Louisiana Illuminator; July 15) - The Louisiana Board of Commerce and Industry approved over \$187 million worth of industrial tax exemptions on July 4. Venture Global Calcasieu Pass LNG will get the overwhelming share of those tax breaks — an estimated \$184.6 million — for just the first year of its contract under the state's lucrative Industrial Tax Exemption Program (ITEP). Venture Global applied for ITEP consideration for the liquefied natural gas export terminal it has built in Cameron Parish.

The board approved the tax exemption without much discussion, though member Sen. Bret Allain pointed out that Venture Global also will receive supplemental tax credits for the same project via the state's Quality Jobs Program, which gives rebates for portions of business payroll or project facility costs. ITEP gives large manufacturers exemptions on their property taxes, a primary source of revenue for local governments to pay for public schools, law enforcement, roads and other community services.

Because Venture Global filed its ITEP application in 2015, it avoided changes Gov. John Bel Edwards made to the program through an executive order after he took office in 2016. He limited the local property tax exemption to 80% of a company's tax bill and required companies to create or retain jobs in exchange for the tax breaks. Most significantly, Edwards gave local governments the authority to approve or deny ITEP applications. The LNG export terminal started initial shipments last year.

Final production module arrives from China for LNG Canada project

(LNG Global; July 18) - Global engineering and construction company Fluor Corp. announced on July 18 that it has achieved a significant milestone in the LNG Canada project in Kitimat, British Columbia. Fluor celebrated the arrival of the last module from its fabrication yard in Zhuhai, China, marking the completion of module fabrication for the export development. Fluor, working in collaboration with its joint-venture partner JGC Corp., of Japan, is working on LNG Canada's engineering, procurement, module fabrication and delivery, construction of infrastructure, utilities and marine facilities.

Fluor's module work at the coastal British Columbia site started with delivery of the first major component in March 2022, which was 145 feet tall and weighed more than 5,000 tons. Overall, a total of 215 modules of varying sizes have been delivered to the project site, culminating in the arrival of the final module. LNG Canada, a joint venture of Shell, Malaysia's Petronas, PetroChina, Mitsubishi and Korea Gas, is set for an initial production capacity of 14 million tonnes of LNG per year. Some operations at the facility will start next year, with the first cargo planned for 2025.

Bechtel wins another contract to build U.S. Gulf Coast LNG plant

(Engineering News-Record; July 17) - Bechtel Energy has been given its second goahead in three months to start construction of a large liquefied natural gas project in Brownsville, Texas, with NextDecade's July 12 announcement of a final notice to proceed on the Rio Grande LNG export terminal, under a Phase 1 lump-sum turnkey engineering, procurement and construction contract valued at about \$12 billion.

The first phase consists of three liquefaction trains to produce 17.6 million tonnes a year. With future potential expansion of two more trains, the terminal could produce 27 million tonnes, said Paul Marsden, Bechtel Energy president of global business. In announcing its final investment decision for Phase 1, NextDecade called the \$18.4 billion in total financing "the largest greenfield energy project financing in U.S. history." It includes about \$5.9 billion of financial commitments from equity partners. Production start-up is scheduled for 2027 on the 750-acre site along a deepwater port.

Next Decade's news follows the March announcement by Sempra Infrastructure to OK the \$13 billion Phase 1 Port Arthur LNG project in Texas, with Bechtel also selected for the engineering, procurement and construction contract. Set to come on line in 2027 and 2028, it includes an amended \$10.5 billion contract for Bechtel, up from \$8.9 billion in 2020. Cheniere awarded Bechtel a contract of undisclosed value in February to complete a front-end engineering and design study to expand Sabine Pass LNG in Louisiana to add nearly 20 million tonnes per year of capacity to its existing 34 million.

Louisiana LNG project developer still looking for equity partners

(S&P Global; July 18) - Tellurian sees its Driftwood project in Louisiana as the last of the major proposed U.S. LNG export projects with a viable chance of delivering supplies to global buyers by the end of the decade, following recent final investment decisions by rival developers, Executive Chairman Charif Souki told S&P Global Commodity Insights. The FIDs — most recently, NextDecade's decision to build the first phase of its Rio Grande project in Texas — have come as Tellurian continues its effort to secure equity investors to move the Driftwood project to full construction by the end of the year.

"I'll be patient and I'll wait for deals that actually offer a handsome return for the shareholders of Tellurian," Souki said in an interview at the LNG 2023 conference in Vancouver, British Columbia. Driftwood, which has its permits, would produce 11 million tonnes per year in its first phase. Tellurian expects to own 45% of the first phase. The company is not looking to sell gas long-term to buyers unless they invest in the project, Souki said. That is a departure from most other U.S. developers that have traditionally relied on long-term offtake agreements to secure financing for their projects.

Tellurian says it has raised some \$2 billion in mezzanine financing — \$1 billion via a sale-and-leaseback land deal announced in April, and another \$1 billion commitment that the company is confident in finalizing. Tellurian expects to secure \$7 billion in bank financing. After the \$1.5 billion that Tellurian has reported putting into the project, Souki

said that leaves about \$2 billion that Tellurian needs in equity from partners in order to finalize financing for the first phase of Driftwood.

Qatari energy minister says gas needed as long-term baseload fuel

(S&P Global; July 18) - Qatar's Energy Minister Saad al-Kaabi said July 18 there is the need for "a realistic and resolute energy transition," with gas as a reliable baseload source in the energy mix "for most nations" well beyond 2050. "All of us have a dual responsibility to ensure the development of renewable capacity alongside a robust baseload capability; to help people realize that emotional calls to cancel hydrocarbons are not only unrealistic but are also detrimental to a realistic transition," Kaabi said.

He said the future should be a robust mix of multiple energy sources, including hydrocarbons, renewables, nuclear and hydrogen. "Hydrocarbons are not going to disappear any time in the near future, and we need to manage their extraction and use responsibly," Kaabi said in his online address at the LNG Producer-Consumer Conference in Tokyo. "It is very concerning" to see economic factors leading to the most ardent environmental advocates burn coal in defiance of supporting cleaner energy.

"This highlights the need for a realistic and resolute energy transition, starting with a solid integration of natural gas in the energy mix of today and tomorrow," Kaabi said. "We strongly believe that gas will be needed as a safer reliable baseload in the energy mix for most nations." Kaabi also called for "a speedy energy transition to consider that the world needs a fair and effective transition with a realistic and stable path," as well as prioritizing developing countries that need much more energy resources.

UAE energy minister says investment in LNG is insufficient

(Reuters; July 19) - Current investments in gas infrastructure are falling short of what is needed, officials at an industry conference in Japan said on July 19, citing the role they say the fuel has to play in global energy security and the transition to net-zero emissions. Big producers have in recent years promoted gas as a transition fuel in the push for cleaner energy — a move fiercely resisted by environmentalists — as renewables like wind and solar face technical factors like intermittency of supply.

Fears over energy security have also boosted demand for liquefied natural gas, after a European energy crisis triggered by Russia's invasion of Ukraine in 2022 left countries scrambling for alternatives to Russian gas. In video remarks played during the LNG Producer-Consumer Conference in Tokyo, the energy minister for the United Arab Emirates said there has not been enough investment in the gas sector. "Lack of investment is affecting both producers and consumers, and their access to affordable and reliable energy and economic growth," Suhail Mohamed Al Mazrouei said.

"Do we have enough investment in gas and LNG to cover for converting all coal plants in the world to gas? The answer is no," Mazrouei said. Gas has a long-term role to play in the global energy markets, Fatih Birol, executive director of the International Energy Agency, told the conference in a video message, though he added there is a "strong need" to cut emissions from gas supply. "The challenge is how to balance the near-term needs for additional gas supply when the global markets are volatile, with (the) longerterm (need) of reaching our climate goals," he said.

Exxon looks to double its LNG portfolio to 40 million tonnes by 2030

(Nikkei Asia; July 19) - ExxonMobil will significantly expand its liquefied natural gas business by doubling the annual amount it handles to more than 40 million tonnes by 2030, looking to tap demand from Asian and European importers that have become focused on energy security in the wake of the invasion of Ukraine. "We're very bullish about the growth opportunities in natural gas and LNG. When you think about that in the portfolio with a corporation, investing in more LNG is certainly part of the strategy," Andrew Barry, vice president in charge of LNG marketing, told the Nikkei newspaper.

Exxon holds stakes in LNG projects in Qatar and Papua New Guinea. Its current portfolio volume is around 22 million tonnes per year, and the company is partnering with state-owned Qatar Energy to build a liquefaction plant in Texas, as well as investing in the expansion of Qatar's export capacity. Exxon aims to make investment decisions on new projects in Mozambique and Papua New Guinea within the next few years, with each project's production expected to begin by the end of the decade.

In addition, Exxon has agreed to long-term contracts to purchase a total of 5 million tonnes per year from LNG plants in the U.S. and Mexico. Some plants are close to investment decisions, and all are expected to start operations in the 2020s, Barry said.

North Asia buyers taking less Russian LNG

(Bloomberg; July 19) - North Asia liquefied natural gas buyers are accelerating a push to diversify away from Russia, reducing imports from the country to the lowest level in almost two years. At least two Japanese utilities are asking its suppliers to reduce deliveries from Russia, according to people with knowledge of the matter. End-users in South Korea aren't buying Russian LNG from the spot market, the people added.

Russian deliveries to Asia fell by about 15% last month to roughly the lowest level since August 2021, according to shipping data compiled by Bloomberg. Even Chinese importers, which boosted purchases after Russia's war against Ukraine began last year, are taking fewer deliveries. They are buying the least Russian LNG in almost a year, with June shipments half the level of May, according to data compiled by Bloomberg. The decline comes as overall supply of LNG has increased following last year's energy crunch. The crisis following the invasion of Ukraine that sent gas prices skyrocketing has prompted countries to diversify supply to ensure energy security. While there aren't any international sanctions on Russian LNG, Asia importers are keen to avoid scrutiny from governments and customers, as well as potential risks to payments or shipping.

Japan will propose global stockpile plan for natural gas

(Bloomberg; July 17) - Japan plans to propose a global stockpile for natural gas, similar to emergency reserves in the oil sector, to help avoid future shortages and stabilize prices. The nation's government will suggest that the International Energy Agency should create a gas stockpiling framework for member nations, according to people familiar with the details. The proposal will be set out during a conference in Tokyo on July 18, said one of the people, who asked not to be named as the details are private.

Japan's trade ministry is co-organizing the LNG Producer-Consumer Conference with the IEA. The government aims for its gas stockpile proposal to be included in the agenda for an IEA ministerial meeting in February. The IEA already requires member nations, such as the U.S. and Japan, to have an emergency reserve of oil equivalent to at least 90 days of net imports for times of emergency, and Japan's proposal is targeted toward creating a similar strategy for natural gas.

Russia's invasion of Ukraine upended gas markets around the world, triggering recordhigh prices and stoking worries about security of fuel supplies. At the Group of Seven summit earlier this year, Japan and Germany pushed for the inclusion of language that left the door open for public investment in gas. European Union member states already have gas storage targets, but a global framework doesn't exist. Storing the fuel for long periods of time could be challenging for Asian countries like Japan and South Korea, which typically keep it in the form of liquefied natural gas that evaporates over time.

EU wants to make joint natural gas purchases a permanent plan

(Bloomberg; July 17) - The European Union wants to make joint gas purchases — a crisis measure to stop members bidding against each other — a permanent feature of the bloc's post-Russia energy strategy. The European Commission, the bloc's executive branch, is proposing extending the measure to include purchase of hydrogen and decarbonized gases, like biomethane, according to a document seen by Bloomberg News. It could also include other energy services, like carbon capture and storage.

Participation in the joint-purchase platform would be voluntary, except in the event of another energy crisis when the bloc could make pooling demand obligatory. It would exclude Russian gas, according to the document. "This exclusion is driven by the war

started by Russia and its weaponization of energy and the objective to diversify away from Russian fossil fuels," it said.

The move shows the commission believes the emergency measure intended to avert the kind of energy price surges seen last year has been a success and provides a model for future cooperation. Commission Vice President Maros Sefcovic has touted the potential of the platform to also buy hydrogen as well as serve as a blueprint for the purchase of critical raw materials needed for clean technologies. The proposal would be included within the bloc's hydrogen and decarbonization package, which is currently being negotiated by member states and the European Parliament.

Nations collaborate to limit methane emissions in LNG supply

(Bloomberg; July 18) - The U.S., the European Commission, Japan, South Korea and Australia are collaborating to limit methane emissions from liquefied natural gas supply chains as concerns mount over the climate impact from leaks of the potent greenhouse gas. Although few details were released, the partnership represents a shift for some of the world's biggest LNG buyers that have historically prioritized security of supply. It may force suppliers who want to sell to Japan and Korea to reduce accidental and intentional releases of methane from their supply chains.

Methane is the primary component of natural gas and is responsible for almost a third of the world's heating since the industrial revolution. "This initiative is an unprecedented cooperation among LNG buyers to achieve a cleaner LNG value chain by encouraging LNG producers to reduce methane emissions," Japan's Minister of Economy, Trade and Industry Yasutoshi Nishimura said at the LNG Producer-Consumer Conference on July 18 in Tokyo, where the initiative was announced.

The European Commission and Japan want to move toward data collection to provide emissions intensity data at a cargo, portfolio and operator level, according to a joint statement released by the group. In a separate session at the conference, the Japan Organization for Metals and Energy Security said it would work with LNG buyers JERA and Korea Gas to collect data on methane emissions from individual LNG projects.

EU and Japan agree to strengthen energy cooperation

(S&P Global; July 18) - The European Union and Japan agreed July 18 to strengthen their energy cooperation by establishing an EU-Japan energy security dialogue on global LNG "architecture." In a statement, the EU said the dialogue would see collaboration on a global "early warning" system to help pre-empt possible supply shocks and ensure global LNG security of supply. "The EU and Japan will build on their expertise in developing resilient energy security policies based on cooperation between regions and countries," it said. "The parties see the transparency of energy markets as the backbone of the security of supply and therefore believe that it should be part of the future global LNG architecture."

The new cooperation pact came as EU and Japanese officials met July 18 during the 2023 LNG Producer-Consumer Conference in Tokyo. The agreement follows an EU-Japan summit on July 13 in Brussels where the two sides agreed to step up cooperation to develop secure and transparent global LNG markets. LNG supplies to the EU and Japan last year totaled 169 million tonnes, about 42% of global LNG trade in 2022.

Japan strengthens energy ties with top LNG producer Qatar

(Reuters; July 19) - Japanese Prime Minister Fumio Kishida agreed to strengthen energy ties and economic cooperation with major gas producer Qatar on July 18, the final leg of a Gulf tour that has focused on securing energy supplies and promoting Japanese high tech. Kishida, who has been urged by Japan's gas lobby to secure new liquefied natural gas supplies from Qatar, held talks with Emir Sheikh Tamim bin Hamad al-Thani. They agreed to upgrade their countries' relationship, "especially in energy, economy, defense, security and academic exchange," the emir's office said.

The two countries did not announce new LNG deals, but Kishida told Sheikh Tamim that "LNG serves a crucial role in Asia for a realistic energy transition," according to a Japanese foreign ministry statement. Kishida emphasized that Japan had been the country to gain consensus from the G7 nations on the importance of natural gas and LNG investments, the statement said, "based on the understanding that mid- to long-term investment in such energy is indispensable for the G7."

Japan, which remains highly dependent on oil and gas imports, did not renew several long-term LNG contracts with Qatar when they lapsed in 2021 and 2022, significantly reducing gas imports from one of the world's top LNG exporters. Meanwhile, several other Asian buyers have signed long-term LNG supply contracts with Qatar, including a pair of record-length 27-year deals with Chinese importers for gas from Qatar's expansion, which will increase the Gulf Arab state's gas production by more than 60%.

Vietnam encounters numerous hurdles in adoption of LNG

(Reuters; July 16) - Vietnam received its first shipment of liquefied natural gas this month, a milestone for the energy-hungry country, but various hurdles mean it could take years for imported gas to ease the country's long-running power shortages. Disagreement over pricing, power plant construction delays and lack of supply contracts

are dogging the Southeast Asia manufacturing hub's adoption of LNG, hampering its ambitions to make imported gas a major fuel, industry insiders say.

Vietnam's urgent need to boost electricity supply, laid bare by recent rolling blackouts, has raised concerns among foreign investors about whether Vietnam can remain a reliable option to diversify manufacturing away from China. Half the businesses in a June poll by the European Chamber of Commerce in Vietnam said the power crisis had hurt investment. Some were considering alternatives or pausing spending on factories.

Failure to execute on its plans would mark another blow to Hanoi's climate goals, which include imported and domestic gas as a transition fuel to reduce use of coal. With power demand forecast to grow 6% annually for the rest of the decade, Vietnam unveiled in May a \$135 billion electricity road map that, among other investments, would add 13 power plants fed by imported LNG by 2030.

Imported LNG most expensive power plant fuel in Pakistan

(Dawn; Pakistan; July 17) – The Pakistani government has formally acknowledged that imported liquefied natural gas has become the most expensive power generation fuel in the country, even surpassing furnace oil for whose replacement the multibillion-dollar LNG infrastructure was set up in the first place almost a decade ago. In a major decision setting the reference power-purchase tariff for each month of the current fiscal year, the National Electric Power Regulatory Authority has reinforced that hydropower remains the cheapest source of electricity supply to the national grid.

The cost of hydropower is about 13% of the price of power produced from imported LNG, with oil-fueled power generation just slightly cheaper than LNG. Determining the reference power-purchase price is of utmost importance, according to the regulator, as it is a direct pass-through to consumers and accounts for 90% of the consumer-end tariff.

The regulator said that around 30% of total generation during the current year is expected from hydro, 17% from local coal, 12% from imported coal, 18% from nuclear, 10% from local gas, 5% from LNG, 2% from furnace oil and the remaining around 6% would be contributed by renewables, such as wind and solar.

New maritime industry emissions standards a setback for LNG

(Vancouver Sun; July 15) - The fossil fuel and shipping industries just got a serious shot across the bow over relying on liquefied natural gas as a transition fuel. Earlier this month, the International Maritime Organization finalized stricter global emissions standards, while closing a significant regulatory loophole that had been spurring the use of LNG as a shipping fuel. LNG has lower carbon dioxide emissions than other fossil

fuels used in shipping, but it also emits significant amounts of methane, a short-lived but powerful greenhouse gas responsible for more than 25% of current global warming.

Past emissions rules focused solely on reducing shipping's CO2 emissions and failed to fully include methane, which makes up 70% to 90% of natural gas. The International Maritime Organization's new strategy now considers the full life cycle of shipping fuels and their greenhouse gas emissions, including methane. The new accounting method means LNG can no longer sail under the radar when it comes to emissions, said Elissama Menezes, global campaign director for the Say No to LNG coalition.

The energy sector has aggressively pitched LNG as a bridge fuel until low- or zeroemission alternatives are fully developed. Compared to heavy fuel oil predominantly used in maritime shipping, LNG emits much less carbon dioxide and harmful air pollutants such as sulfur, while meeting previous emission standards and being economically attractive to the shipping industry.