Oil and Gas News Briefs Compiled by Larry Persily March 23, 2023

Canadian government could take US\$15 billion loss on oil line project

(Bloomberg; March 20) - Canadian taxpayers may end up taking a loss of C\$20 billion (nearly US\$15 billion) on the government-owned Trans Mountain Pipeline after costs to expand the line skyrocketed, according to Morningstar. Prime Minister Justin Trudeau's government will probably get no more than C\$15 billion on its C\$35.5 billion total price tag for the finished line when it sells Trans Mountain to private parties — and possibly much less, Morningstar analyst Stephen Ellis said in an interview.

The government paid Kinder Morgan C\$4.5 billion for the system in 2018 after the company threatened to cancel plans to nearly triple the line's capacity to 890,000 barrels a day. The construction cost of the project has soared to about C\$31 billion because of a range of factors including supply-chain challenges and multiple delays. "At a C\$31 billion investment cost, no way the pipeline is going to recover costs," Ellis said.

Trans Mountain is Canada's only oil line to tidewater, moving crude from Alberta to the coast near Vancouver. The government bought it because it considers the expansion economically important, giving oil shippers the option to export to markets other than the U.S. But Trans Mountain has to compete with Enbridge's much-larger system that carries Canadian crude into the U.S. as far as the Gulf Coast. That will limit the tolls Trans Mountain can charge, keeping returns for the pipeline "very low," Ellis said. The expansion is 80% complete and scheduled to start operations in the first quarter 2024.

Energy analysts warn Europe is overbuilding LNG import capacity

(Politico; March 21) - European countries risk wasting huge sums of money on liquefied natural gas import infrastructure they won't need after "panicking" in response to Russia's pipeline shutoffs, expert analysts warned. In a rush to find alternative sources of gas after Russia's Gazprom began limiting Europe's vital pipeline imports, many European countries — and Germany, in particular — fast-tracked plans for new LNG infrastructure to bring in supplies by sea from the United States, Qatar and elsewhere.

But according to a new analysis by the Institute for Energy Economics and Financial Analysis, European countries may have hugely overshot the mark, with current planned import capacity far exceeding likely LNG demand by 2030. If current infrastructure plans are carried out, LNG import terminal annual capacity across Europe — including in the U.K., Norway and Turkey, which are closely connected to the EU's gas market — could exceed 14.1 trillion cubic feet of gas, the analysis shows.

But with EU-wide gas demand falling and renewable sources of electricity projected to make up a larger share of Europe's energy mix, actual LNG demand in 2030 could be as low as 5.3 tcf per year, IEEFA predicts. That would leave a gap of unused LNG import capacity equivalent to more than half of Europe's overall gas demand. Such a situation could see terminals across Europe sitting idle and becoming "stranded assets," warned Ana Maria Jaller-Makarewicz, energy analyst at IEEFA and author of the analysis. "This is the world's most expensive and unnecessary insurance policy."

Top-10 insurer tightens policies on oil and gas producers

(Wall Street Journal; March 22) - Global insurer Chubb is tightening its requirements on insurance policies for oil and gas producers, demanding that they reduce emissions of methane, a potent greenhouse gas. Chubb, a top-10 insurer in the worldwide oil and gas market by premium volume, will also stop underwriting projects in areas designated as protected by state, provincial or national governments, effective immediately.

The company has been under pressure from climate activists, who have targeted banks and insurers to cut off funding and insurance coverage for fossil fuel companies. Chubb's actions fall short of their demands to quit sales to oil and gas producers. Chubb CEO Evan Greenberg said in an interview that the carrier's move wasn't motivated by activists' pressure. The insurer's plan is a "science-based and technical way" to help with carbon reduction, he said. As an underwriter, Chubb will be able to verify that clients are taking the required steps. "If not, then we won't underwrite them."

A wholesale quitting of sales to producers, he said, puts at risk the nation's energy security, because renewable energy isn't ready to pick up the slack. "We're trying to balance between society's two competing interests," he said. Many of the company's oil and gas clients already have technology in place for reducing methane emissions, "and those that don't, we're giving them a grace period to put a plan in place." Chubb will require clients to provide "evidence-based plans" for managing methane emissions. Chubb is one of the world's largest publicly traded property-casualty insurers.

First Nations-led clean-energy projects move ahead in Canada

(Canadian Press; March 19) - On a wintry day last November, Daphne Kay looked up at an expanse of gleaming solar panels located on Cowessess First Nation reserve land just east of Regina, Saskatchewan, and cried. It was the mix of past and present that moved her, watching her fellow community members hold a traditional round dance to mark the grand opening of the Cowessess' newly completed 10-megawatt solar farm.

"I thought about my grandfather, who has passed away, and how during his time he wanted us to live in a healthy way that honored our traditions, but also brought

prosperity for future generations," said Kay, who grew up on Cowessess and, in her job as community energy specialist with Cowessess Ventures, played a key role in the development of the new solar farm. The C\$21 million Awasis solar project connects to Saskatchewan's electricity grid and is capable of powering about 2,500 homes a year.

It's an example of many Indigenous-led clean-energy projects blossoming in Canada. Others include: First Nations-owned Meadow Lake Tribal Council Bioenergy Centre, in Saskatchewan, which will generate carbon-neutral green power using sawmill waste; in Nova Scotia, the Membertou, Paqtnkek and Potlotek First Nations are partners in what is expected to be North America's first green hydrogen and green ammonia project; in Ontario, the Oneida energy battery storage project, the largest in Canada, is being developed in partnership with the Six Nations of the Grand River Development Corp.

Agency forecasts 25% of U.S. 2050 gas production exported as LNG

(Natural Gas Intelligence; March 17) - U.S. gas production and LNG exports are likely to grow through 2050, with domestic gas consumption dropping only slightly, according to the U.S. Energy Information Administration. All of the scenarios modeled in EIA's latest Annual Energy Outlook released March 16 show the United States remaining a net exporter of natural gas through mid-century, driven by rising international demand.

On the home front, meanwhile, "Despite the shift toward renewable sources and batteries in electricity generation, domestic natural gas consumption remains relatively stable — ending recent growth in most cases," researchers said. "Gas production, however, in some cases continues to grow in response to international demand for liquefied natural gas, supported by associated gas produced along with crude oil."

The Annual Energy Outlook reference case shows U.S. LNG exports totaling 9.98 trillion cubic feet of gas per year by 2050, more than 200 million tonnes of LNG, up from 3.96 tcf, or 82 million tonnes, recorded in 2022. Lower 48 onshore and offshore dry gas production, is projected to total 41.68 tcf in 2050 in the reference case, up from 36.1 tcf in 2022. If the projection is accurate, it would mean that almost 25% of all U.S. dry gas production in 2050 would be exported as LNG.

U.S. set record in 2022 for exports of petroleum products

(U.S. Energy Information Administration; March 20) - In 2022, the United States set a new record for petroleum product exports, up 7% from 2021, according to the Energy Information Administration's Petroleum Supply Monthly report. U.S. petroleum product exports averaged 5.97 million barrels per day in 2022 (405,000 more than in 2021), driven by an increase of 18% (193,000 barrels per day) in distillate fuel oil.

Geopolitical disruptions that occurred in 2022 are likely to continue to affect global trade of crude oil and petroleum products in 2023. In the European Union, petroleum from Russia had accounted for a large share of all energy imports, but the EU banned imports of crude oil from Russia starting in December 2022 and imports of petroleum products starting in February 2023. The high volume of U.S. petroleum product exports in 2022 were in response to Europe's needs, and also reflected longer-term trends.

U.S. exports of total petroleum products — which do not include crude oil — has more than doubled to 5.97 million barrels per day in 2022 from 2.31 million in 2010. Propane was the largest commodity export product by volume in 2022. In 2010, the U.S. exported 109,000 barrels per day of propane, compared with almost 1.4 million in 2022. Propane and other hydrocarbon gas liquids are primarily exported to the Asia Pacific region, accounting for more than half of total U.S. propane exports.

Putin talks about another gas pipeline, but China mostly quiet

(Reuters; March 22) - Russian President Vladimir Putin and Chinese leader Xi Jinping met in Moscow for two days of talks that ended March 21, during which they discussed a new 1,600-mile pipeline, Power of Siberia 2, to deliver gas to China via Mongolia. Putin said Russia, China and Mongolia had completed "all agreements" on finishing the pipeline, although a subsequent Russian statement said details still need to be resolved. China is not expected to need additional gas until after 2030, experts say.

The proposed pipeline would bring gas from the huge Yamal Peninsula reserves in west Siberia to China. The first Power of Siberia pipeline runs for 1,865 miles into China's northeastern Heilongjiang province. The new route would cut through eastern Mongolia and into northern China, according to a map by Russia's Gazprom. Gazprom began a feasibility study on the project in 2020, and has aimed to start delivering gas by 2030.

The new line could carry 1.8 tcf of gas a year. But a joint statement after the talks said only that the parties involved "will make efforts to advance work on the study and approval" of the pipeline. Official accounts of Xi's statements after the meetings do not mention the line. "We don't really think it's finalized yet, there are still lots of finer details to be hammered out," said Wang Yuanda, China gas analyst at intelligence firm ICIS.

Gazprom already supplies gas to China through the first Power of Siberia pipeline under a 30-year, \$400 billion deal, which was launched at the end of 2019. Expected to supply almost 780 billion cubic feet of gas in 2023, it will deliver increasing volumes before reaching full capacity of 1.3 tcf by 2027. Meanwhile, China has a new line to get almost 900 bcf of gas annually for 30 years from Turkmenistan via Tajikistan and Kyrgyzstan.

Russia continues LNG expansion talk, but target looks unrealistic

(Natural Gas Intelligence; March 22) - Russia aims to nearly triple liquefied natural gas exports to 100 million tonnes per year by 2030 by expanding the list of gas fields allowed to export the fuel, Prime Minister Mikhail Mishustin said in a televised government meeting earlier this month. Draft amendments aimed at achieving that goal would "legally free up reserves for liquefied natural gas export and make clear to Asian importers, particularly Chinese, that volumes small or large are available," said Jonathan Stern, a senior research fellow at the Oxford Institute for Energy Studies.

Russia is considering allowing state-controlled operators with gas reserves in the northern areas of the Krasnoyarsk Territory in east Siberia and the Arctic Yamal-Nenets Autonomous Area to ship the fuel to delivery points in Asia. The draft amendments would modify Russian gas laws to allow companies to export LNG without Gazprom, which largely has a monopoly on the trade. Novatek already has an exemption to export LNG on its own, and has been doing so since 2017 at its Yamal Peninsula project.

Any increase in exports would likely come from new LNG facilities under development, primarily in Russia's north, according to a report from Columbia University's Center on Global Energy Policy. Gazprom's planned projects include Vladivostok LNG in Russia's Far East, Ust Luga LNG on the Baltic, and an expansion at Sakhalin-2. Combined with Novatek's two planned Arctic facilities, along with Rosneft's Dalniy Vostok LNG, the projects could bring total new liquefaction capacity to 51.1 million tonnes.

If these projects are completed by 2030, Russia's overall LNG capacity could reach 87 million. That would still be short of the Kremlin's target. "But most of these projects, especially the large-scale ones, currently look unrealistic due to Western sanctions on access to finance, as well as Western liquefaction technologies," CGEP said.

New or unknown traders emerge as top movers of Russian oil

(Bloomberg; March 21) - Six little-known companies emerged as new kings of Russian oil in December, collectively handling enough of the country's exports to catapult them into the leagues of the world's largest commodity traders. The question of who has been managing the flow of Russian oil after big international traders cut ties with Moscow has been one of the oil market's biggest mysteries. Now, Russian customs data seen by Bloomberg for the final four weeks of 2022 show that the six companies based in Hong Kong and Dubai in total handled about 1.4 million barrels a day of Russian crude oil.

That is more Russian oil than trading giants like Trafigura or Vitol would generally have handled before the war in Ukraine. Buying the oil is legal, but successive rounds of international sanctions have pushed the trade deeper into the shadows and made it all but impossible for analysts and government officials to get hard data on who is involved.

The data seen by Bloomberg give information on buyers Dec. 5 to Dec. 31. Many of the biggest buyers were large Chinese and Indian state companies, and units of Russian oil

companies, but there were six traders in the top 15. The largest among them was Nord Axis, which bought 521,000 barrels a day of Russian oil in December, all from Rosneft.

Nord Axis, which incorporated last year in Hong Kong, was unknown in the market until July when it was announced as the buyer of Trafigura's stake in Rosneft's flagship Arctic oil project, Vostok Oil. Bloomberg couldn't find a website for Nord Axis and wasn't able to contact the firm. The other buyers include Tejarinaft, a Dubai company which bought 244,000 barrels a day from Rosneft in December. It's not clear how the six traders were able to finance the flow of Russian oil, which was worth over \$2 billion for the month.

Russia overtakes Saudi Arabia as No. 1 oil supplier to China

(Al Jazeera; March 20) - Russia overtook Saudi Arabia to become China's top oil supplier in the first two months of 2023, according to Chinese government data, as buyers snapped up sanctioned Russian oil at steep discounts. Arrivals from Russia totaled 15.68 million tonnes in January and February, or 1.94 million barrels per day, up 23.8% from 1.57 million in the corresponding 2022 period, data from the General Administration of Customs showed on March 20.

Russia was China's second-largest overall crude supplier last year, shipping 86.2 million tonnes. Saudi Arabia was China's top supplier in 2022, selling 87.49 million tonnes of crude during the year, equivalent to 1.75 million barrels per day. But in a small decline, imports of Saudi crude totaled 13.92 million tonnes in January and February, equivalent to 1.72 million barrels per day, down from 1.81 million a year earlier.

Western sanctions and a price cap on seaborne Russian crude following Moscow's invasion of Ukraine have limited the buyer pool for Russian supply, leading it to trade at deep discounts to international benchmarks. Independent Chinese refiners, many of them based in Shandong province, have been among the main beneficiaries of this shift in pricing power. February-arriving Russian ESPO crude at Shandong ports was bought in January at a discount of about \$8 relative to the Brent benchmark.

China's imports of Russian oil, gas and coal up 54% in past year

(Bloomberg; March 20) - In the year since Russia invaded Ukraine, roiling global energy markets, China's appetite for Moscow's oil, gas and coal has grown, with imports rising by about 54%. Beijing's spending on Russian energy, including crude oil and refined products, coal and gas, ballooned to \$88 billion in the year through February, according to Chinese customs figures, replacing other buyers that have shunned Russian exports because of the war. That compared to \$57 billion in the previous 12 months.

China's growing share of Russian exports is key to the increasingly asymmetric relationship between China and Russia, laid bare during President Xi Jinping's visit to Moscow this week. Russia receives a reliable source of funding for its war machine in spite of international sanctions, while its energy-hungry eastern neighbor gets to gorge on vast flows of fossil fuels, often bought at discounted rates.

The data over the period show that Russia was China's top supplier of crude, passing Saudi Arabia. It was also its second-biggest source of coal after Indonesia, and No. 3 for liquefied natural gas after Australia and Qatar. The last ranking doesn't include the volumes of gas piped overland, which China stopped reporting at the start of last year.

Long-term gas deals may test China-Russia energy 'friendship'

(Bloomberg; March 20) - China has billed Xi Jinping's trip to Moscow this week as a "journey of friendship." Talks on a long-term gas deal may reveal the limits of what he can and will do for Vladimir Putin. Russia, which was the world's largest gas exporter until it invaded Ukraine last year and lost access to most of its key markets in Europe, is eager to boost shipments to China. But that requires extensive and expensive new pipelines, since much of Moscow's existing export infrastructure faces West.

Even as Russia has ramped up gas deliveries to China since the invasion through an existing pipeline under a pre-war deal, supplies via another proposed link haven't started. And talks on third line that would carry even more gas than the first two combined so far haven't yielded a contract. Those discussions remain a bellwether of just how far China is willing to depend on Russia for key energy supplies.

"There's definitely potential for further deepening of energy cooperation between countries, but if China becomes overreliant on Russian energy imports, does that create risks in the future?" said Kevin Tu, the managing director of Agora Energy Transition China. "That's a factor that China needs to consider," he added. "The Chinese seem to be under no time pressure to negotiate," Vitaly Yermakov, senior research fellow at The Oxford Institute for Energy Studies, said earlier this year. "Russia is sitting on a time bomb, facing a potential sharp reduction in gas export volumes."

Protestors greet arrival of floating LNG import unit in Italy

(Euronews; March 20) - A ship that will help Italy reduce its reliance on Russian natural gas sailed into a storm of protest on March 19, with demonstrators claiming it poses a risk to the environment and a threat to tourism. Same as many European countries, Italy's demand for gas had been met by supplies from Russia through pipelines until last year's war on Ukraine. The country has turned instead to liquefied natural gas, brought in from around the world before being converted back into gas and fed into pipelines.

The ship that arrived at Piombino, Italy, the Golar Tundra, is a floating storage and regasification unit. Stefano Venier, CEO of Italian gas group Snam, which bought the ship last June, said earlier this week it would start operations in May. But protestors who gathered when the ship arrived are angry it is being moored in their area. Francesca Marino, of Committee La Piazza, said the ship is dangerous and will be moored too close to homes. She said there are more stringent safety rules in other parts of Italy.

The location was chosen so that the gas can easily be transported by pipeline to Italy's heavily industrialized north, although the government said the location is temporary, and that after three years the ship will move. There have been months of local protests against the project, and a small march was staged March 19 ahead of the vessel's latenight arrival from Singapore. In addition to safety concerns, environmental groups have warned the project will slow down Italy's transition to renewable energy.

Sempra gives go-ahead for Port Arthur LNG project in Texas

(Reuters; March 20) - U.S. power and gas utility Sempra Energy said on March 20 the first phase of its proposed Port Arthur liquefied natural gas export terminal in Texas has received the financial commitment to move ahead, with investment firm KKR & Co. agreeing to a minority stake in the project. Though KKR's investment was not disclosed, an infrastructure fund managed by KKR will buy a 25% to 49% indirect, non-controlling interest in Port Arthur LNG.

Sempra's unit also has finalized its joint venture with ConocoPhillips. The U.S. oil and gas producer last November said it would acquire a 30% non-controlling interest in the Port Arthur Phase 1 project in Texas through the joint venture. Sempra estimates total cost at \$13 billion for the project, planned for an annual production capacity of 13.5 million tonnes per year of LNG. ConocoPhillips and units of several European energy companies have signed on to take 10.5 million tonnes under long-term agreements.

Additionally, Sempra Infrastructure announced the closing of the project's \$6.8 billion non-recourse debt financing and the issuance of the final notice to proceed under the project's engineering, procurement and construction agreement. This marks the second final investment decision on a Gulf Coast LNG export project within a week. Venture Global LNG said last week it would go forward with the second phase of its Plaguemines export plant in Louisiana, estimated at \$21 billion.

Texas LNG developer postpones investment decision a few months

(Upstream; March 20) - NextDecade has delayed a decision whether to build its Rio Grande liquefied natural gas export facility in Texas, now expecting the final investment decision by the end of the second quarter instead of its previous timeline of before

March 31. In a filing with the U.S. Securities and Exchange Commission, the developer said it had extended the terms of its construction agreements with Bechtel through to June 15 to accommodate the delayed investment decision.

The lump-sum cost of engineering, procurement and construction for the first three liquefaction trains of Rio Grande LNG is estimated at \$11.5 billion, for a total production capacity of about 16 million tonnes per year. In later phases, it could be expanded to five trains with total capacity of 27 million tonnes. Rio Grande LNG was one of several projects expected to reach a final investment decision in the first quarter of this year. NextDecade's project in Brownsville is being planned to capture and store more than 90% of its carbon dioxide emissions, to allow marketing of its LNG as low carbon.

Growth in green hydrogen will depend on demand, lower prices

(Reuters opinion column; March 21) - Clean-burning hydrogen has been hyped as a potential solution to a swath of climate-related energy problems, from fueling trucks and powering industry to generating electricity — all while emitting only puffs of harmless vapor. The fuel is getting backing from an array of influential stakeholders, including fossil fuel firms which hope to avoid future stranded oil and gas assets by switching to the production, distribution and storage of hydrogen instead.

But for the bright future to become reality, a rapid and widespread surge is needed in hydrogen demand that will justify a concurrent jump in hydrogen production — ideally from renewable energy sources so that the fuel's only climate footprint is water. Very little green hydrogen, or hydrogen produced from green energy sources, exists today, as most current hydrogen is made using natural gas, and known as blue hydrogen.

Several firms have committed to scaling up green hydrogen output over the coming decade, using solar or wind energy to power electrolyzers that will split water into its constituent parts, hydrogen and oxygen. The prevailing hope is that the ongoing acceleration in renewable energy development will trigger a surge in renewable energy supplies and a sharp drop in the cost of power produced from green sources. In turn, that should drive the cost of renewable-powered electrolysis below that of other forms of hydrogen production, and allow for a rapid global surge in green hydrogen output.

Australia getting closer to needing LNG imports

(Sydney Morning Herald; March 20) - Australia could be just years away from importing natural gas, despite the nation's vast production of the fuel, amid new warnings of looming energy shortages that have seen an East Coast shipping terminal developer report growing demand from customers seeking to bring in LNG cargoes starting in

2026. Mining billionaire Andrew Forrest's privately owned Squadron Energy is building what could become Australia's first LNG import terminal.

The proposed Port Kembla Energy Terminal, near Wollongong, has emerged as one of the most viable near-term solutions to boost gas supplies into New South Wales and Victoria, where the Australian Energy Market Operator is projecting an energy shortage when gas demand outstrips supply by 2027. Squadron Energy has reaffirmed its commitment to completing the project, and said it was seeing "significant and growing" customer demand to contract gas imports through the terminal starting in 2026.

Australia is one of the world's largest gas producers, but massive volumes from Queensland's gas fields are locked into long-term export contracts to LNG buyers in Japan, Korea and China, while gas produced in Western Australia cannot be transported to the eastern states. As gas fields in Bass Strait, which have traditionally supplied the bulk of East Coast gas demand, are rapidly drying up, regulators have warned that Victoria could face gas shortfalls as soon as this winter. By 2027, states would face yearly gas supply deficits unless new gas supplies were made available.