# Oil and Gas News Briefs Compiled by Larry Persily September 13, 2021

#### Russian gas producer gets licenses to drill in nature reserve

(Barents Observer; Norway; Sept. 9) - Leonid Mikhelson, the leader of Russia's largest independent gas producer, Novatek, earlier this year approached the Kremlin with a request to obtain licenses to additional natural gas fields on the Yamal Peninsula. He said the resources of the Arkticheskoye and Neytinskoye fields are crucial for Novatek's development of new Arctic projects. "The existing resource base of Novatek in the Yamal Peninsula does not provide the necessary volumes for the timely adoption of an investment decision for the Ob LNG project in 2021," his letter read.

It took only few weeks before Novatek secured control of the licenses. According to the Interfax news agency, the auction included special conditions that favored Novatek — no other company bid. Novatek paid the equivalent of \$180 million for the licenses, the company said. Resource estimates amount to 2.9 billion barrels of oil equivalent, which includes 14.6 trillion cubic feet of gas. Ob LNG would be Novatek's third major gas project in the region. Yamal LNG started up in 2017; Arctic LNG-2 is under construction.

However, unlike the company's other licenses in the far northern region, the newly obtained Arkticheskoye and Neytinskoye areas are located in a protected nature reserve. According to Russian law, industrial activities are prohibited in nature reserves. But environmental legislation will not necessarily put a stop to Novatek's expansion into the vulnerable tundra. Previously, the borders of the Yamalsky reserve have — on several occasions — been adjusted following pressure from oil and gas companies.

## Novatek reports problems with Russian-made liquefaction equipment

(Barents Observer; Norway; Sept. 10) - The fourth production train at Novatek's Yamal liquefied natural gas project was brought online this spring after a challenging implementation period. The pandemic played a role, but more serious problems were related to equipment failing to perform as designed in the extreme Arctic cold.

Leonid Mikhelson is chairman of the management board for Novatek, Russia's largest private gas producer. Speaking to reporters at the Eastern Economic Forum in Vladivostok last week, he confirmed that Train 4 at Yamal LNG works poorly. "It's not about the technology itself, all equipment is entirely made in Russia. The Russian companies had not [previously] produced such equipment," Mikhelson said to Interfax. "Both the turbo-expanders and the compressors are completely new. It must be admitted that our manufactures and factories still have to learn how to make good products. We have claims against almost all suppliers of equipment for the fourth line," Mikhelson said. "It works, but it is bad." At full production capacity, Train 4 will produce 950,000 tonnes per year. Compared with the other three trains of 5.5 million tonnes capacity each per year, Train 4 is a small-scale production line. The pipes and equipment for the three first trains were all produced by European manufacturers.

# Papua New Guinea says takeover could harm national interest

(Reuters; Sept. 10) - The Papua New Guinea government said Australia-based Santos' takeover of Oil Search could harm the national interest, as the deal would give a foreign company too much control over its oil and gas resources and could sap capital from the country. Oil Search in August agreed to a takeover by Santos valuing the PNG-focused company at \$6.2 billion. The companies expect to finalize terms after completing a review of each other's books. The PNG government must approve the deal.

"If the merger will result in the weakening of any Papua New Guinean shareholders or shareholder interests, reduction in market liquidity, potential for job losses ... and loss of local ownership of the company assets to a foreign interest, it is not in PNG's national interest," Deputy Prime Minister Samuel Basil said in a statement late on Sept. 9.

Santos said the merger would better align stakeholdings in Papua New Guinea gas projects — PNG LNG and Papua LNG — that would further support investment. ExxonMobil leads the PNG LNG project, while French major Total is leading the group trying to develop a second project, Papua LNG. "We see the PNG government could withhold approvals in an attempt to extract further value from the merger," Credit Suisse analyst Saul Kavonic said, though he does not expect the government to block it.

Oil Search is listed on the Papua New Guinea stock exchange, while Santos is listed in Australia — another issue for the government. "Papua New Guineans will be denied access to direct investment into significant domestic projects of national importance, like the ExxonMobil PNG LNG and Total Papua LNG," Basil said. If Santos did not list the merged group in PNG, local shareholders would be forced to hold Australian shares, hitting the PNG's listing fee income and portfolio fees for local administrators, he said.

# Saudis may take in investors for \$110 billion gas project

(Bloomberg; Sept. 9) - Saudi Aramco is considering a bold move to open up one of the world's largest unconventional gas fields to foreign investors, as it looks to fund a \$110 billion project to help it diversify from oil sales, people familiar with the matter said. The state-controlled producer is working with an adviser as it explores raising new equity or

debt for its vast Jafurah site, the people said. It has started preliminary talks with potential investors including large commodity traders, according to the sources.

Deliberations are in the early stages and Aramco could decide to pursue other ways of raising money to fund the development. A representative for Aramco declined to comment. Any deal involving Jafurah would mark a rare example of Aramco allowing external investors the chance to hold stakes in its upstream oil and gas assets. Previous attempts in the late 1990s to bring in Big Oil companies to help develop reserves failed.

Saudi Arabia's gas reserves are the largest in the Arab world after Qatar, according to BP. The Jafurah field is a priority for the kingdom's rulers as they look to reduce a reliance on revenue from crude exports. The site is estimated to hold 200 trillion cubic feet of rich raw gas, and Aramco expects to begin production there in 2024, reaching about 2.2 billion cubic feet per day of sales by 2036. Since Aramco was fully nationalized in 1980, most foreign investment in the kingdom's energy industry has been restricted to downstream assets such as refineries and petrochemical plants.

# Exxon finds more oil offshore Guyana

(Reuters; Sept. 9) - ExxonMobil said on Sept. 9 it had made a discovery at Pinktail in the Stabroek Block offshore Guyana, as it develops a major new oil and gas find. Exxon operates the 6.6-million-acre Stabroek Block as part of a consortium that includes Hess Corp. and China's CNOOC. It has made at least 20 discoveries there. The company said the find would add to the previous recoverable resource estimate of more than 9 billion barrels of oil and gas, without specifying the size of the latest discovery.

The company's second production facility, the Liza Unity, set sail from Singapore to Guyana in early September. The floating production, storage and offloading vessel is crossing the East Indian Ocean, with an estimated arrival in the South American Atlantic Coast nation on Nov. 15, according to Refinitiv Eikon vessel tracking data. The vessel will be utilized for the Liza Phase 2 development and is expected to begin production in early 2022, with an output capacity of about 220,000 barrels per day of oil.

The consortium began producing crude in late 2019. Hess Chief Executive Officer John Hess said in remarks to the Barclays CEO Energy-Power Conference on Sept. 9 that the Liza 1 project was producing at its nameplate capacity of 120,000 barrels per day. He said the company expected the Stabroek block to produce at least 1 million barrels per day through six production vessels by 2027. The Payara project, the consortium's third in the Stabroek block, is expected to start up in 2024, Hess reported.

## Extensive damage delays Gulf Coast production recovery

(Bloomberg; Sept. 11) - Hurricane Ida unleashed such furious winds and waves that almost two weeks later oil drillers, power suppliers and refiners are still picking up the pieces. They won't be done any time soon. The damage to offshore platforms, pipelines and even heli-pads was so severe that two of every three barrels of oil normally pumped from the U.S. sector of the Gulf of Mexico are unavailable. The ripple effects are still playing out as refiners and brokers scour the globe for replacements and the Gulf's biggest oil producer, Shell, tells some customers it can't honor supply commitments.

It will be weeks — maybe longer — before normal conditions can be restored off the Louisiana coast and in the system of oil-processing and chemical plants that occupies a 100-mile corridor from New Orleans to Baton Rouge. The recovery efforts are being closely watched around the world in large part because of the unprecedented scale and duration of the oil outages. Within days of the hurricane, traders were seizing on arbitrage opportunities created by the disappearance of some U.S. Gulf grades of oil.

Typically, when hurricanes menace the oil-producing region, drillers batten down hatches, shut off the subsea wells funneling oil to platforms and evacuate crews. When the skies clear, they often can chopper inspection teams back out in a matter of hours or days and resume production shortly thereafter. After Ida, that wasn't possible. Even the lone road connecting Port Fourchon to the rest of the state was knocked out of commission by Ida's massive wall of sea water and the tons of sand it swept ahead.

# U.S. loans crude to Exxon to make up for hurricane-related shortfall

(Reuters; Sept. 9) - The U.S. Energy Department said on Sept. 9 it has approved a second loan of 1.5 million barrels of crude to ExxonMobil from the Strategic Petroleum Reserve (SPR) after damage from Hurricane Ida devastated offshore oil production. Exxon is moving the oil to its 520,000 barrel-per-day refinery in Baton Rouge, Louisiana. The plant resumed normal operations earlier in the day.

The Energy Department has now authorized loans totaling 3.3 million barrels to help refiners cope with the dearth of oil coming from the U.S. Gulf. Last Thursday, U.S. Energy Secretary Jennifer Granholm authorized the first loan to Exxon's Baton Rouge plant. That day it also loaned 300,000 barrels of oil to Placid Refining Co.'s refinery near Baton Rouge. Three-quarters of U.S. Gulf of Mexico oil production remain offline after Ida made landfall over a week ago. Ida was one of the worst hurricanes for oil producers since back-to-back storms in 2005.

The SPR had 621.3 million barrels of crude in stock as of last week, according to the Energy Department, the lowest since August 2003. The SPR has four major storage facilities, two in Texas and two in Louisiana, to deliver crude to nearby refineries for fuel

production. It was developed in the 1970s after the Arab oil embargo spiked gasoline prices, but has been tapped recently after unusual fuel disruptions like hurricanes.

# Russian crude heading to U.S. to replace lost Gulf production

(Reuters; Sept. 10) - Trading houses are rushing to supply Russian Urals crude to the United States where oil production was hammered by Hurricane Ida in August, three trading sources said on Sept. 10. Ida, one of the most devastating hurricanes for oil companies operating in the U.S. Gulf of Mexico since storms in 2005, led to prolonged halts in the area's offshore oil output. About three-quarters of production remains shut.

Trading firms, including Trafigura, Vitol and Litasco, have secured about 5 million barrels of Russian Urals for loading in September and for delivery to the United States, the three sources told Reuters. Urals oil cargoes to the United States are rare, and usually only a few are shipped every few months.

"Urals is a good grade to fill supply gaps," one trading firm source said, adding that it is available in the spot market and is the right quality for many U.S. refiners. All the sources declined to be named, as trading firms typically do not comment publicly on their operations. Two of the sources said they expected more Urals cargoes to be secured for delivery to the U.S. in the coming days as supply shortages hit refiners.

## New climate change report may help activists in their lawsuits

(Bloomberg; Sept. 8) - More lawsuits seeking to curb carbon dioxide emissions are likely in Europe, spurred by a recent report that called the role of human activity "unequivocal" in global climate change. Activists have seized on the Intergovernmental Panel on Climate Change's 3,949-page report, released last month, telling energy companies "(we'll) see you in court."

"It may help to bring in a broader diversity of litigants," said Catherine Higham, a policy analyst at the London School of Economics' Grantham Research Institute on Climate Change and the Environment. "It might be the call to action for some groups that haven't necessarily been thinking about litigation in the past, but who are reading and starting to use litigation in ways they haven't done."

Environmentalists have tried for years to use courts in their fight to slow the effects of climate change or to hold companies and governments accountable for the crisis, with limited success. Most of the wins have been in Europe. In the U.S., such lawsuits have struggled to gain traction. But this year's edition of the report is even more definitive in blaming human activity, making it easier to argue a link between emissions and extreme

weather. It provides "additional value" for claims of damages and compensation, said a lawyer who represented a Dutch environmental group in its recent win against Shell.

## Oil demand recovering, but 'downside risks remain'

(Bloomberg; Sept. 9) - Some of the world's biggest economies are seeing oil consumption turn the corner and even surpass pre-pandemic levels as falling COVID-19 infection rates drive a recovery in activity. Oil demand in China, the world's top energy consumer, will be 13% higher next quarter than in the same period in 2019 before the pandemic, according to SIA Energy. Indian fuel sales extended a rebound last month, while U.S. consumption of petroleum products just hit a record high.

Europe has also just had its best August for gasoline demand in 10 years, markettracker IHS Markit said. The improvement in consumption across major economies is buoying oil prices that have rallied around 40% this year. "The worst for Asian fuel demand is over and we see a soft recovery of oil demand in the coming months," said Sengyick Tee, an analyst at Beijing-based SIA. China's overall oil consumption will be led by a more than 20% jump in gasoline use next quarter from 2019, he said.

While motor fuel is powering the recovery as people take to the roads after months of lockdown, the situation for other fuels isn't as positive. Jet fuel demand is languishing because of the lack of international air travel. Meanwhile, with some of Asia's largest economies reporting tens of thousands of virus infections per day, threats to energy demand remain. "For now, the worst for Asia oil demand is over, but the downside risks remain," said Qiaoling Chen, an analyst at energy consultancy firm Wood Mackenzie.

# CEO of top U.S. shale producer warns of under-investment

(Reuters; Sept. 9) - The head of top U.S. shale producer Pioneer Natural Resources on Sept. 9 said consolidation among oil and gas producers will slow in the next two years, particularly as oil majors bow out of the market. Pioneer was central to a wave of U.S. shale deals, with multibillion-dollar buys of Parsley Energy and DoublePoint Energy. But deal-mania is mostly over because of a lack of cash and worries about future demand, Pioneer CEO Scott Sheffield said at the Barclays CEO Energy-Power Conference.

Sheffield warned that if the oil industry focuses too heavily on environmental, social and governance issues, it could lead to under-investment that would drive up energy prices. He predicted Brent crude next year could trade between \$65 and \$80 a barrel. Deals will slow because the market has generally not rewarded firms embarking on major acquisitions or capital spending increases. Pioneer's shares fell more than 6% after its \$6.4 billion acquisition of DoublePoint. "Shareholders want consolidation in the industry, but they don't want you to do it," Sheffield said at the conference.

Pressure from shareholders to focus on increasing payouts and preparing for a lowercarbon energy future is inhibiting deals, Sheffield said. He estimated there are only about five companies with enough drilling inventory to last the next 15 to 20 years, and said those looking to grow would have to acquire more reserves.

#### Oman energy minister says lack of investment will push up oil prices

(S&P Global Platts; Sept. 9) - Global oil prices could soar to \$200 per barrel if no new investments are made in the oil and gas sector in the short-term, Oman's energy and minerals minister said Sept. 9 in reply to the International Energy Agency's assessment for reaching net-zero emissions by 2050. The IEA said in May that under an energy scenario needed to put the world on a path to net-zero emissions by 2050, there should be no new oil and gas developments and that global oil demand would collapse by 75%.

"Recommending that we should no longer invest in new oil. ... I think that's extremely dangerous," Mohammed al-Rumhy said at a dialogue on clean-energy transitions in the Middle East and North Africa region organized by the IEA. "My biggest fear, if we stop investing in the fossil fuel industry abruptly, is there will be energy starvation and the price of energy will just shoot [up]. The demand for oil and gas may go down but in the short-term we could see \$100 or \$200, which although it sounds very attractive today [to producers], it's something that I think many of us, if not all of us, would not like to see."

The race to net-zero emissions is a race against time, IEA executive director Fatih Birol told the ministerial dialogue. "It's an interesting race. Unless everybody finishes the race, nobody wins the race," Birol said. "The largest consumers are taking these steps and this will have implications for oil demand and therefore for the investments."

# Spot-market LNG in Asia climbs past \$20

(Reuters; Sept. 10) - Asian spot prices for liquefied natural gas rose this week to their highest seasonal level on record, as European buyers competed with the Far East for limited world supply. The average LNG price for October delivery into Northeast Asia was estimated at about \$20.10 per million Btu, up \$0.20 from the previous week, industry sources said.

Prices for November delivery were stretching further toward \$21, traders said. The cost of fuel, used for power generation, has risen 10-fold since the \$2 seen last year, when the COVID-19 pandemic reduced demand. Traders in Europe have been trying to rebuild stockpiles ahead of the winter season, when heating consumption rises. European inventories have been under 70% capacity, below the 85% 5-year average, as the continent suffers from lower Russian supplies.

"We are running out of time to replenish inventories before it gets cold," a Londonbased trader said. "And there are not enough cargoes to meet demand from Asia and Europe." U.S. natural gas futures climbed to a seven-year high earlier this week, while futures in Europe also hit all-time record.

## Goldman Sachs warns cold winter could boost U.S. natural gas prices

(Natural Gas Intelligence; Sept. 9) - Recent market tightness could herald "violent price upside" for U.S. natural gas this winter if it's colder than average, said analysts at Goldman Sachs Commodities Research. In a note to clients, analysts led by Samantha Dart, Damien Courvalin and Huan Wei said U.S. Energy Information Administration storage data and strong power burns in August have added to "existing winter storage concerns, further increasing the winter risk premium priced in the market."

U.S. benchmark Henry Hub prices "have broken out of the \$3.85 to \$4.15 per million Btu trading range seen since late July," rallying about 20% over the past week to \$4.71 as of last Sept. 3, they noted. Under an average winter weather scenario, the Goldman team believes the market can balance at \$3.65, about \$1.10 below current winter 2021-2022 forwards. However, winter temperatures that are one standard deviation colder than average could trigger a price rally above \$10, with U.S. average gas demand increasing by more than 3 billion cubic feet per day.

## China will release oil reserves to help bring down refiner costs

(Reuters; Sept. 9) - China's state reserves administration said on Sept. 9 it would release crude oil reserves to the market via public auction to ease the pressure of high feedstock costs on domestic refiners. The release, described as a first, will be made in phases and is mainly for integrated refining and chemical plants, the National Food and Strategic Reserves Administration said in a statement. That potentially rules out the participation of smaller, independent refiners known as "teapots" in the bidding.

The move will "better stabilize domestic market supply and demand and effectively guarantee the country's energy security," the administration added, without specifying the volume of crude it would sell. China, the world's biggest crude oil importer, is famously secretive about its strategic petroleum reserves and rarely releases information on the amount of oil it holds. Beijing has repeatedly taken steps to cool a rally in the price of key commodities this year, even auctioning off state metal reserves for the first time in more than a decade to try and keep manufacturers' costs down.

Consultancy Energy Aspects in early July estimated that China's strategic petroleum reserves can hold 220 million barrels of crude oil, equivalent to 15 days of demand. The out-of-the-blue announcement from the reserves administration comes with benchmark

Brent crude prices up almost 40% this year amid a rebound in energy demand after a coronavirus-led collapse in 2020.

## Mexico cuts production forecast for Pemex as company struggles

(Bloomberg; Sept. 9) - Mexico cut its forecast for oil production at Pemex next year and reduced its tax burden after a string of accidents at offshore platforms signaled the highly indebted state company is struggling. The country's Finance Ministry lowered a preliminary estimate for crude output in 2022 to 1.826 million barrels a day, from a March 31 forecast of 1.867 million, according to a draft of next year's budget proposal.

The draft budget also reduced the profit-sharing duty that Pemex has to pay the government to 40% next year, from 54% in 2021. The company continues to face output declines and reduced exports of its flagship Maya heavy crude, a problem that has been exacerbated by two offshore platform accidents in as many months, with the August explosion knocking a quarter of its output offline.

Mexican President Andres Manuel Lopez Obrador has promised to return Pemex to its former glory by scaling back the energy reforms of his predecessor and limiting competition from private companies. The measures have failed to win over international ratings agencies such as Moody's Investors Service and Fitch Ratings, which rate Pemex bonds as junk. The company has the highest debt of any major oil company.

## Mexico's president proposes more spending to boost oil production

(Bloomberg; Sept. 9) - Mexico President Andres Manuel Lopez Obrador is raising the spending plan for Pemex for next year to about \$32 billion in a bid to boost flagging oil production. The funds allocated for the state producer in a 2022 budget proposal, including operational spending, represent a 17% boost from this year. Of the total, about \$18 billion will be earmarked for exploration and production investment, a 26% jump.

The generous budget reflects the president's goal to revitalize Pemex after more than a decade of consecutive output declines and to make the country self-sufficient in energy. The spending increase contrasts with widespread belt-tightening in the global oil industry as the pandemic continues to cloud the demand outlook and major economies increasingly focus on boosting renewable energy to fight climate change.

Pemex has been investing in onshore and shallow water fields, which has enabled it to boost production of an ultra-light oil known as condensate. Yet, output of its main grades continues to shrink as productivity at big offshore fields dwindles. In addition, it has also begun a process to refinance Pemex's debt. Some observers are skeptical

about whether the financial aid will be enough to move the needle on Pemex's debt of \$115 billion, the highest of any oil company.

# Exxon/Qatar LNG project in Texas on schedule for 2024 start-up

(Natural Gas Intelligence; Sept. 9) - Construction on the Golden Pass liquefied natural gas export project in Texas is progressing, with the facility on track to come online in 2024, according to ExxonMobil. There are currently about 4,000 people at the work site for the three-train, 16-million-tonne facility, ExxonMobil Qatar President Dominic Ganetti said recently. Qatar Petroleum has a 70% stake in the project, with ExxonMobil at 30%.

In a filing late last month with the Federal Energy Regulatory Commission, Golden Pass indicated it was working to install the foundation for the first train, the piling for the third train, and erecting steel for a controls building. The project is estimated at \$10 billion. In North America, there are six operating liquefaction and export terminals in the U.S., with Golden Pass and another in Louisiana under construction, plus one under construction on Canada's West Coast and one on Mexico's West Coast.

Meanwhile, former Qatari Energy Minister Abdullah Bin Hamad Al-Attiyah said Golden Pass would likely supply QP's European customers, freeing up the state-run company's domestic supplies for exports to other Middle Eastern countries and Asia.

## Cheniere plans decision on Corpus Christi expansion next year

(Natural Gas Intelligence; Sept. 10) - Cheniere Energy said Sept. 7 it expects to take a final investment decision next year for the Stage 3 expansion at its Corpus Christi liquefied natural gas export terminal in Texas. Executives said the operator is focused on lining up commercial contracts for the expansion, which could add more than 10 million tonnes per year to Corpus Christi's annual production capacity of 15 million tonnes. The company is aiming to sign long-term contracts with "diverse creditworthy customers from Asia, Europe and North America," CEO Jack Fusco said.

The project would come online about five years after sanction, Cheniere said. The Corpus Christi terminal shipped its first cargo in late 2018. The Stage 3 expansion would include as many as seven mid-sized liquefaction units. Cheniere also plans to complete the sixth train at the flagship Sabine Pass LNG terminal in Louisiana and bring it online early next year. That would be about one year ahead of schedule and within budget, the company said. The sixth unit will boost the annual production capacity at Sabine Pass to 30 million tonnes. The terminal shipped its first cargo in 2016.

# Carbon-neutral LNG gains in popularity, but critics question savings

(Bloomberg; Sept. 8) - Liquefied natural gas shipments tagged "carbon neutral" are gaining popularity among Asian buyers, despite criticism that the emissions offsets used to justify the label don't actually cancel out planet-warming emissions generated by the fossil fuel. In the past month alone, BP and Malaysia's Petronas delivered so-called green cargoes to customers in Taiwan and Japan, respectively.

Twice as many carbon-neutral LNG shipments have changed hands so far this year than 2019 and 2020 combined, according to a tracker by BloombergNEF. Gas-hungry North Asia, which is looking for ways to reduce emissions, continues to be the main destination, with Japan as the largest buyer. But critics, including those from within the industry, have called for more transparency when it comes to offsetting emissions from fossil fuels with carbon credits.

There is no industry-wide standard for measuring emissions from LNG, nor is there government oversight to ensure that offsets deliver the carbon savings promised. Many shipments use cheap offsets from forest-protection projects that fund brush clearing or alternate uses of land to save trees, but don't remove much carbon from the atmosphere. The market for carbon-neutral LNG is still in its infancy, with trades expected to reach 1 million tonnes this year, according to BloombergNEF. Over 356 million tonnes of LNG was imported in 2020, according to an industry group.

## Work completed on Nord Stream 2 Russia-to-Europe gas line

(Washington Post analysis; Sept. 10) - A natural gas pipeline built under the Baltic Sea from Russia to the German coast is shaking up geopolitics. Nord Stream 2, as it's called, has fueled worries in the U.S. and beyond that the Kremlin's leverage over Europe and its energy market will increase once the pipeline is operational. Championed by outgoing German Chancellor Angela Merkel, it was completed Sept. 10 after the U.S. and Germany reached a deal on the project.

The 764-mile line will double the capacity of the existing undersea route from Russian gas fields to Europe. The original Nord Stream opened in 2011 and can handle almost 2 trillion cubic feet per year. Russia's Gazprom owns the project operator, with Shell and four other investors contributing half of the 9.5 billion euro (\$11.3 billion) cost. The final pipeline link to Germany under the Baltic Sea, one of the world's most contentious, was completed at 8:45 a.m. Moscow time on Sept. 10, Gazprom said in a statement.

While people familiar with Gazprom's plans say the company wants to start flowing gas through the first leg of the pipeline on Oct. 1, the timing of actual flows into Europe's grid will depend on a decision by Germany's regulator. Initially expected to come online in 2019, the project was delayed by U.S. sanctions. Nord Stream 2 will help Europe secure a relatively low-cost supply of gas at a time when the continent's own producers

are reducing output. It's also part of Gazprom's decades-long effort to diversify its exports to Europe as the region moves away from nuclear and coal.