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Energy agency says high cost of LNG could deter buyers

(S&P Global Platts; Nov. 13) - The International Energy Agency warned Nov. 13 that the relatively high cost of liquefied natural gas could deter buyers in developing markets where affordability is a primary concern. In its World Energy Outlook report, the IEA said that while technological and financial innovations were making LNG more accessible to a new generation of importing nations, competition from other fuels could play a role in dampening LNG demand growth.

"There is significant uncertainty as to the scale and durability of demand for imported LNG in developing markets around the world," the IEA said in its report. "LNG is a relatively high-cost fuel. Investment in liquefaction, transportation, and regasification adds a considerable premium to each delivered gas molecule. Competition from other fuels and technologies, whether in the form of coal or renewables, loom large in the backdrop of buyer sentiment and appetite to take volume or price risk," the report said.

"The LNG industry faces a struggle to gain a strong foothold in developing markets where affordability is a key consideration," the report said. Despite this, the IEA said that LNG was set to overtake pipeline gas as the main way of trading natural gas over long distances by the late 2020s. Developing economies in Asia are the main engines of LNG growth with the market share of LNG in total worldwide gas demand growing from 20 percent in 2018 to 40 percent by 2040, the report said.

Floating terminals for LNG import and storage gain in popularity

(Financial Times; London; Nov. 10) - When shale drilling flipped the U.S. from a country short of natural gas to becoming the world's largest producer, onshore terminals built at a cost of billions of dollars to receive imports of liquefied natural gas were suddenly white elephants. When Egypt managed to boost its domestic gas output, reducing its reliance on LNG imports, the transition was easier: The main infrastructure simply left.

That is because Egypt was using floating storage and regasification units, or FSRUs. The FSRU is a type of LNG tanker fitted with equipment to gently warm liquefied natural gas back into a gaseous state so it can be piped to customers on land. The first FSRU was launched in 2005. Today the fleet consists of 35 vessels, according to IHS Markit. More than 100 import projects that will use FSRUs are in the works, IHS said. The FSRU is cheaper and faster to install than an onshore plant. If a country's situation changes, the owner can unmoor an FSRU and move to a more favorable destination or use it in the interim as an LNG carrier. That was the case in Ghana. After months of waiting for a pipeline, jetty, and breakwater, FSRU owner Golar LNG raised anchor in 2017 and took it elsewhere. "If something happens in this relatively unstable world, you can sail away," said Sveinung Støhle, CEO of Höegh LNG, which owns 10 FSRUs.

An onshore regasification terminal can cost \$500 million to \$1 billion and take four years to construct. The infrastructure necessary to offload an FSRU costs \$80 million to \$200 million and can be operational in less than two years.

Warm weather, weaker economy in China hold down LNG prices

(Reuters; Nov. 11) - Liquefied natural gas spot prices in Asia have dropped to seasonal lows and could remain weak on expectations of a mild winter depressing demand for gas for heating, trade sources and analysts said. A slowdown in China's coal-to-gas switch amid a weaker economy is also curbing gas purchases and weighing on prices, traders said. Spot LNG prices are currently at their lowest for this time of the year in a decade since Reuters first started publishing the price.

"Milder winter weather is forecast across northeast Asia. Although long-range forecasts are highly uncertain, the prospect of milder weather and weaker demand is weighing on market sentiment," said James Taverner, director at research and consultancy firm IHS Markit. In Japan electricity prices fell to a six-month low last week as temperatures held above average and clear skies after a wet October increased solar supplies.

Japan, the world's largest LNG importer, is expected to have warmer-than-usual weather through January 2020, the weather bureau said. Imports of the fuel into Japan had already dropped by 3 percent in October from the previous month, the first time since 2014 that shipments fell in October, Refinitiv shiptracking data showed. In China, the world's second biggest LNG importer, temperatures are up to 3 degrees Celsius higher than normal in some regions. The warmer weather, combined with a weaker Chinese economy, could also affect spot LNG prices, traders said.

Several factors lead to drop in China's gas imports

(S&P Global Platts; Nov. 12) - China's natural gas imports of LNG and pipeline gas in October declined 10.3 percent year on year to 6.52 million tonnes, the latest data from the General Administration of Customs showed, a significant reversal from growth rates of around 27 percent in recent years. Sources attributed lower October imports to the economic slowdown, a long shutdown at PetroChina's Rudong LNG terminal, the

relaxation of China's coal-to-gas switching policies, and stricter emission restrictions and lower industrial activity during the country's National Day holidays in early October.

October is typically a time of year where you see gas storage restocking and firm baseload industrial and city gas demand, but this has not been the case this year because of a combination of slow industrial activity and a lack of need to refill inventories, said S&P Global Platts Asia LNG analytics manager Jeff Moore. "The situation could turn back around with the start-up of heating demand in northern China." Even so, any growth would be much smaller than last winter, Moore said.

Softer coal-to-gas switching policies and the continuous economic slowdown are also behind weaker gas demand and lower imports in October, market sources said. China imported a total of 77.71 million tonnes of gas in the first 10 months of this year, up 7.9 percent from the same period last year, according to customs data. The growth was well down from the 36 percent year-on-year growth of January-October 2018.

Greenhouse-gas emissions up for second year in a row

(Bloomberg; Nov. 12) - Global greenhouse-gas pollution rose for a second year, ending a lull in emissions and putting the world on track for further increases through 2040 unless governments take radical action. The findings in the International Energy Agency's annual report on energy paint a grim outlook for efforts to rein in climate change and mark a setback for the increasingly vocal environmental movement.

It said emissions levels would have to start falling almost immediately to bring the world into line with ambitions in the Paris Agreement to limit temperature increases to well below 2 degrees Celsius (3.6 degrees Fahrenheit) since the industrial revolution. Instead, the organization's most-likely scenario shows net emissions won't reach zero until at least 2070, or 20 years past the deadline suggested by climate scientists.

Strong economic growth, surging demand for electricity and slower efficiency gains all contributed to a 1.9 percent increase in carbon dioxide emissions from energy in 2018, the IEA said in a report released Nov. 13. It's another indication that efforts to shift the world away from the most polluting fuels are moving too slowly to have a major impact. While wind and solar power are booming, the world's thirst for energy also is lifting consumption of coal and other fossil fuels, pushing more pollution into the atmosphere.

Developing nations have deployed more coal plants even as industrial countries work to phase out the fuel, a legacy that will last years as the plants are built to run for decades.

U.S. shale producers will pump less and hope for higher prices

(Wall Street Journal; Nov. 11) - After pushing U.S. oil and gas output to record levels, some shale companies are doing the unthinkable: They are planning to pump less. The pullback is sharpest among the largest gas drillers. Several producers, including EQT and Chesapeake Energy, have said during third-quarter earnings that they may shrink output next year. Voluntarily restricting growth is a new dynamic and reflects a calculus that it is better to spend and produce less while hoping for higher commodity prices.

A pullback by oil producers would likely cause U.S. oil production growth — already slowing this year — to flatten further in 2020. The U.S. has more than doubled its crude output over the past decade. Gas producers, meanwhile, are attempting to whittle down a glut that has driven prices to multiyear lows. Natural gas prices averaged \$2.41 per million Btu from April through September, the lowest in decades, according to consulting firm RBN Energy. Most analysts believe gas prices will remain low for years.

The belt tightening comes as many shale companies are under financial pressure to boost returns as their access to capital constricts. While some earned positive cash flow during the third quarter, the industry has a long way to go to win back investors who have grown weary of its lackluster returns. For companies that predominantly drill for oil, the budget cuts reflect their limited ability to borrow money as much as they do crude prices, said Raoul LeBlanc, an executive director at IHS Markit. "These guys don't have the ability to borrow anymore," LeBlanc said.

U.S. on track to become net energy exporter in 2020

(CNBC; Nov. 11) - U.S. shale oil production has shown some signs of moderation in recent months and production growth could be slowing down, but experts told CNBC at Abu Dhabi's influential oil and gas summit that the U.S. shale revolution won't be stopped any time soon. The U.S. is expected to become a net energy exporter in 2020, exporting more energy products ranging from oil to natural gas, than it imports, according to the U.S. Energy Information Administration.

Jason Bordoff, professor and director at Columbia University's Center on Global Energy Policy, said Nov. 11 that he didn't think the net-exporter status would be short-lived. "I think the growth in production is going to slow but it's still growing," he said at the Abu Dhabi International Petroleum Exhibition & Conference. The energy statistics bureau announced back in January that it expected the U.S. to become a net energy exporter in 2020 for the first time ever. The U.S. has been a net importer of energy since 1953.

The Energy Information Administration projected U.S. crude output will rise to 12.3 million barrels per day in 2019 from a record 11 million in 2018. It forecasts that U.S. crude oil production will rise in 2020 to an annual average of 13.2 million barrels per

day. Yet there are signs of moderation, too. The count of active drilling rigs is down, and capital spending by the industry is slowing as producers try to boost their cash flow.

New gas pipelines add to U.S. export capacity

(Natural Gas Intelligence; Nov. 8) - The U.S. will add a total of 16 billion to 17 billion cubic feet per day of capacity from almost four dozen new natural gas pipeline projects this year, much of which will increase shipments to Mexico and deliveries to liquefied natural gas export facilities on the U.S. Gulf Coast, according to the U.S. Energy Information Administration.

"Many of these pipeline projects will provide additional takeaway capacity out of the Permian Basin in western Texas or enable additional Permian natural gas production to reach the interstate pipeline system," the EIA said. Among those pipelines is Kinder Morgan's Gulf Coast Express pipeline (2 billion cubic feet per day), which began providing takeaway capacity from the Waha hub in the Permian Basin on Sept. 25.

Other pipelines due for completion this year will deliver gas to demand centers, "in particular to LNG export facilities on the Gulf Coast," the EIA said. They include the Cheniere Energy Midcontinent Supply Header Interstate Pipeline (at 1.44 bcf per day) that will move gas from the prolific Anadarko Basin to the Gulf Coast for export.

Louisiana LNG developer burns through \$12 million a month

(S&P Global Platts; Nov. 8) - Tellurian is reviewing its spending as commercial talks to secure sufficient equity agreements to finance its proposed Driftwood LNG export project stretch into 2020, later than previous estimates, CEO Meg Gentle said in a podcast posted on the company's website Nov. 8. The developer burned through cash at approximately \$12 million a month in the third quarter, and some analysts have questioned its liquidity as it heads into a critical period for wrapping up commercial deals tied to the Louisiana project. Bank financing depends in part on those efforts.

Tellurian said it plans to finalize remaining equity commitments by the end of March 2020. That is in line with when it expects to complete a preliminary agreement that it reached with India's Petronet in September that calls for the country's major LNG importer to invest up to \$2.5 billion in Driftwood, in exchange for up to 5 million tonnes per year of LNG from the terminal. The full project is estimated at \$30 billion.

While Tellurian has recently stopped issuing public guidance about when it will make a final investment decision, it is maintaining plans to start construction in 2020 and begin exports in 2023. Federal regulators approved the project earlier this year. Driftwood's initial output volume is planned at 12 million tonnes per year, more than half of which

would go to Petronet, France's Total and Tellurian's own marketing efforts. At full development. Driftwood could produce 27.6 million tonnes per year.

Industry expert criticizes candidate's pledge to ban fracking

(CNBC; Nov. 11) - One of the energy industry's most prominent experts is flabbergasted at Democratic presidential contender Elizabeth Warren's pledge to ban fracking if elected. "The notion just to say I'm going to stop fracking, it is like this all-encompassing term — what are you talking about? I mean really, what are you talking about?" Dan Yergin, vice chairman of IHS Markit and founder of IHS Cambridge Energy Research Associates, asked at the Abu Dhabi International Petroleum Exhibition & Conference.

"In the U.S., oil production is primarily regulated by the states but there is so much that the federal government can do with a thousand cuts of regulation and so forth ... and to just say she's against fracking shows a total lack of understanding," Yergin said Nov. 11. "And by the way, this has been one of the most dynamic parts of the U.S. economy — you're talking about millions of jobs," Yergin said. "This is just some notion, and they're not even able to explain what they don't like about fracking."

International Energy Agency Director Fatih Birol in September said a fracking ban "would have major implications on the market for the U.S. economy, for jobs growth and everything," and was "not good news for energy security, because U.S. gas provides a lot of security to the markets." In September Warren pledged to put a "total moratorium on all new fossil fuel leases for drilling offshore and on public lands" and "ban fracking everywhere" on her first day in office.

New England utility will truck in LNG, CNG to avoid shortfalls

(S&P Global Platts; Nov. 11) - Facing a potential shortfall in natural gas supplies blamed in part on regulatory holdups of a key interstate pipeline project — utility National Grid is planning to use trucked shipments of liquefied and compressed natural gas to ensure supplies to customers in New York and New England during the coldest parts of winter. Rhode Island regulators on Nov. 6 approved the utility's request for a waiver to operate a temporary LNG regasification facility in Portsmouth, Rhode Island.

The plan calls for National Grid to truck in LNG to the site, where it will be vaporized and injected into the gas distribution system to provide an emergency backup gas supply to Aquidneck Island. The project will operate Dec. 1 through March 31 and will only be used when needed to back up the gas supply to the island, the utility said in its waiver request. National Grid has announced similar plans to truck in compressed natural gas (CNG) to provide backup gas supplies during peak usage periods in New York.

The utility said it needs to ensure New York customers have adequate access to supplies because of state regulators in New York and New Jersey having slowed the progress of a pipeline to bring gas into New York City and Long Island. The company plans to use two temporary compressed natural gas stations on Long Island to handle demand on peak winter days. In May, citing the potential of supply shortfalls, National Grid declared a moratorium on new gas hookups in its downstate New York region.

Canadian producers look to join forces on barge-mounted LNG plant

(Bloomberg; Nov. 13) - Rockies LNG Partners, a group of Canadian natural gas drillers seeking new markets for their production, is considering building a liquefied natural gas export project on barges floating off the coast of British Columbia. While no decisions have been made, the nine-member group sees a floating LNG facility as a less-expensive option that also would have a "significantly" smaller environmental footprint, Rockies LNG Chief Executive Officer Greg Kist said.

The group is considering projects that could produce roughly 12 million tonnes per year, which would require LNG units on three barges, he said. "In Northern British Columbia, there are limited flat pieces of land, so if you could remove significant cost and impact associated with trying to flatten a piece of land, we think that that's a much better outcome than land-based facilities," Kist said. With the liquefaction units on barges, the only onshore facilities would be a jetty, control room and living quarters, he said.

Rockies LNG represents producers that have banded together to pursue new outlets for their gas as pipeline bottlenecks in Canada and an abundance of supplies from U.S. shale have pushed down local prices for years. A potential LNG project would take advantage of Canada's prolific gas supplies and proximity to Asian markets. The group expects to identify a potential project site in the first quarter of 2020, Kist said. Rockies is maintaining an earlier target of bringing its facility into service in 2026, he said.

Saudis sign \$3 billion deal to supply Bangladesh with LNG

(Reuters; Nov. 13) - Saudi Arabian state energy company Aramco plans to supply liquefied natural gas to Bangladesh as part of a tentative \$3 billion deal signed in October, officials told Reuters. ACWA Power and Saudi Aramco signed a deal with Bangladesh Power Development Board to develop a 3,600-megawatt LNG-fueled power plant and LNG receiving terminal in the country.

"Aramco will indeed supply the LNG. In addition, they will build the LNG terminal to store the LNG," said Salman Fazlur Rahman, investment adviser to Bangladeshi Prime Minister Sheikh Hasina. "ACWA will build the power station to convert LNG to power,"

Rahman said. Bangladesh is expected to become a major LNG importer in Asia alongside Pakistan and India as its domestic gas supplies fall.

Aramco is the world's largest oil company and plans to become a major global LNG player. Saudi Arabia does not produce any LNG, and Aramco is looking at buying and reselling the fuel. Bangladesh's annual imports of LNG could nearly triple to at least 10 million tonnes over the next three to four years, Tawfiq-e-Elahi Chowdhury, energy adviser to the prime minister, told Reuters in September.

Malaysia adjusts to LNG market change by looking for new buyers

(S&P Global Platts; Nov. 12) - Amid fundamental changes in the liquefied natural gas market that forced big players to revamp business models, Malaysia's national oil company Petronas is tapping new sources of LNG demand ranging from small-scale industries to growth markets like India and China. Large LNG producers are grappling with a structural shift in how LNG has been typically bought and sold, with spot prices falling to record lows, and 15- to 20-year contracts falling out of favor with gas buyers.

S&P Global Platts Japan Korea price for December cargoes was assessed at \$5.483 per million Btu on Nov. 11, nearly half the \$10.376 posted a year earlier, with the market under pressure from oversupply. Competition from new producers is also heating up, demand in mature markets like Japan and South Korea is saturating, and the abundance and commoditization of LNG has meant that expiring long-term contracts are being renewed with shorter durations and smaller volumes.

China's new private LNG importers, which emerged due to recent market liberalization, are increasingly seeking short-term contracts, especially when they see today's market, Ezhar Yazid Jaafar, chief executive of Petronas LNG, said on the sidelines of a recent conference in Singapore. He said some of the gas buyers are still looking at contracts of 12 or 15 years, but most are medium-term contracts of around five years. Malaysia saw a near 23 percent rise in LNG exports to China in the first 10 months of 2019 as buyers sought substitutes for U.S. LNG hit with tariffs due to the U.S.-China trade conflict.

Europe may not be able to take much more LNG

(Bloomberg; Nov. 12) - Europe's role as a destination of last resort for liquefied natural gas that traders can't sell elsewhere may now be reaching its limits. With storage full and winter looking mild, concerns are mounting for how much more LNG the region's terminals and pipelines can handle. Tepid demand in Asia and more supplies from the U.S. and Russia mean Europe's ability to absorb gas is under more strain than ever.

"This winter and next year are going to be complicated," Arturo Gallego, head of LNG trading and operations at U.K.-based energy supplier Centrica, said at the Bloomberg Commodity Investor Forum in London. "Europe has played an amazing role in this market, but maybe we are running out of tools now." Unless demand awakens, suppliers may be forced to reduce output. In an extreme scenario, a plunge in prices could even force a reduction, or shut-in, of U.S. export capacity.

The pressure on Europe's gas system may get even more intense. "If you want to bring a cargo into northwest Europe, I think you are going to struggle to find capacity," said Peter Abdo, managing director and head of global origination and LNG at Uniper SE's trading unit. Some LNG is already being sold at a discount in recent tenders, while traders are holding cargoes for longer than usual. "You will see some of the trading houses going round and round in circles trying to find the optimal market for their cargoes," said Debbie Turner, senior broker for LNG at Howe Robinson Partners.

Sanctions on Russia get in the way of its Arctic oil and gas ambitions

(OilPrice.com; Nov. 12) - Russia is betting big on offshore Arctic oil and gas projects and onshore deposits in Siberia to offset oil production declines at its maturing fields and to become a dominant liquefied natural gas supplier worldwide. But Russian oil and gas companies have been banned from access to western capital, which they need in order to work with U.S. and European majors in exploring and producing the resources.

The sanctions on Russia's oil and gas sector, first imposed in 2014, have driven away many of the world's supermajors from projects in the Arctic offshore and in shale formations in Siberia. Russian companies are left without partnerships in technology needed to explore, drill and potentially produce and process hard-to-extract oil and gas resources. The sanctions also play a role in stalled projects as international oil majors fled developments in the wake of the restrictions.

Although Russian firms downplay the effects of the U.S. sanctions on their development plans and their access to financing and foreign technology, and although domestic companies are focused on developing in-house technology to replace foreign-sourced tech, analysts believe challenging Arctic projects would likely take many more years to implement with only local content. Russia's own natural resources ministry admitted last year that the sanctions had hampered natural gas project developments in the country.

Repsol considers using rail to move Alberta oil to marine terminals

(Bloomberg; Nov. 12) - Repsol is looking as far away as western Canada for heavy oil for its European refineries amid dwindling supplies from Mexico and Venezuela. The

Spanish oil company is considering using rail to transport as much as 500,000 barrels of heavy crude a month 1,900 miles from Alberta to Montreal before loading it onto tankers bound for Europe, according to people familiar with the situation. The company has also considered shipping the crude to New Jersey for shipment to Europe.

Repsol has typically sourced heavy crude supplies from Latin America, particularly Mexico and Venezuela. But U.S. sanctions, as well as civil strife, have crippled Venezuela's oil production, which has fallen to less than 700,000 barrels a day from more than 2 million four years ago. Mexico's oil production has fallen for 14 straight years to 1.83 million barrels a day in 2018. That's left Repsol looking for alternatives. Repsol declined to comment in an email.

Repsol said its European refineries hold 25 percent of the continent's coking capacity. Coking units allow refineries to process heavier crude, which is typically cheaper than lighter oil, into high-value fuels such as gasoline and diesel. Alberta's landlocked status means it ships nearly all of its oil to the U.S. by pipeline or rail. Shipments of oil sands crude to Europe are rare. Repsol occasionally gets heavy Canadian crude via U.S. Gulf ports, where Canadian oil competes with U.S. crude for sea berths and pipeline space.