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U.S. LNG profits from high prices, but drop expected by summer

(Platts; Jan. 2) - Business is booming this winter for the U.S. LNG export industry. With global gas prices at their highest in over three years, export margins from the U.S. are at their strongest yet. In December, those margins propelled U.S. liquefied natural gas shipments to the highest monthly volume on record, nearly 85 billion cubic feet of gas, more than two dozen cargo loads from Cheniere Energy's Sabine Pass, La., terminal.

Thanks to a natural gas shortage in China, bitterly cold temperatures in Japan and a supply shortfall in Australia, global spot-market prices, currently around \$11 per million Btu, appear likely to linger through mid-February. Combined with the looming start-up of exports from Dominion Energy's Cove Point facility in Maryland and elevated global gas prices, U.S. exports are poised to remain in record-setting territory again this month. But with markets betting on weaker shoulder-season demand by April, U.S. exporters could face prices below \$8 by early March and the upper \$6s before the summer months.

As U.S. exports continue to build in 2018, a return to lower prices later this year will pose new challenges both for exports and for a domestic U.S. gas market that's growing increasingly dependent on the whims of global demand. With the addition of Cove Point to the four liquefaction units at Sabine Pass, nameplate feed-gas demand from U.S. export facilities will rise to 4.2 bcf a day by late first-quarter. That much consumption could represent about 5 percent to 6 percent of total domestic gas demand this year.

Pakistan saves money with long-term LNG deal vs. spot-market prices

(The International News; Pakistan; Jan. 3) - Buying liquefied natural gas from state-owned Qatargas under a 15-year agreement linked to global oil prices saved Pakistan \$76 million over three months compared to currently much higher prices on the spot market. The savings count LNG deliveries for December 2017 and January-February 2018. The long-term deal, signed in February 2016, pegged 1 million Btu of Qatari LNG at 13.37 percent of the preceding three-month average price of a barrel of crude.

For example, at an average oil price of \$60, the LNG price would be \$8.02 per million Btu, while spot-market prices for delivery in Asia this winter have approached \$11. When spot-market LNG prices were lower in an oversupplied market than oil-linked prices, domestic critics attacked Pakistan's deal as too expensive. But the market

shifted for the winter, and in December Pakistan's average savings per LNG cargo stood at about \$2.3 million. For January average savings per cargo was \$5.7 million.

However, an official of Pakistan's ministry of petroleum and natural resources warned: "LNG cargoes supplied on a spot basis should not be compared with cargoes bought under long-term agreements. This is because of difference in market dynamics and factors that affect the prices like demand and supply situation, global weather condition, plants maintenance, geopolitical situation, freight elements, and port charges." Pakistan started importing LNG in 2016 and added a second receiving terminal in November.

Taiwan Power looking for bidders on 15-year LNG deal to start 2023

(Platts; Jan. 1) - State-owned Taiwan Power Co., or Taipower, has issued a request for expressions of interest for its first international long-term LNG supply contract, seeking 1.8 million to 2.4 million tonnes of LNG per year for 15 years or longer. Taipower issued the tender at the end of last year, requesting LNG to be delivered to the company's planned Taichung receiving terminal. The terminal is set for completion in the second half of 2023, which is synchronized with the first cargo, the tender document showed.

An oil-linked contract pricing basis is preferred but is negotiable, according to the document seen by S&P Global Platts. The deadline for submissions is March 15. The company plans to shortlist potential suppliers and issue a request for proposals by the end of the third quarter of 2018, with contract negotiations to start in the fourth quarter. The company's requirement is underpinned by Taipower's planned Taichung combined-cycle Unit 1 and Unit 2 power plants totaling 2.6 gigawatts of generation capacity.

Taipower is currently supplied with gas by CPC Corp., Taiwan's only LNG importer. Taipower's move to secure its own long-term supply underscores the government's announcement in 2017 on shifting the country's energy mix to phase out nuclear power and reduce carbon emissions. By 2025, gas-fired power plants are expected to supply 50 percent of electricity. Taipower is awaiting Ministry of Economic Affairs' approval in spring 2018 for its feasibility study on the power plants and LNG facility.

Analysts say LNG industry needs to start planning for new supplies

(Bloomberg; Jan. 4) - The liquefied natural gas industry needs to start planning for shortages even as analysts project a glut continuing into next year, according to Sanford C. Bernstein & Co. The next wave of LNG project decisions is set to begin as early as this year, Bernstein analysts including Neil Beveridge said Jan. 4 in a report. That's a more aggressive timetable than the firm made in September, when it said investment decisions for the next group of plants wouldn't come until 2019.

Energy companies will approve investments for more than 150 million tonnes a year of new supply capacity over the next four years, according to the report. By comparison, global consumption was 286 million tonnes in 2017. Projects in Qatar, Papua New Guinea, Russia, and the U.S. are most economically appealing, followed by Mozambique, Australian expansion projects and an Alaska project, Bernstein said.

Demand grew by about 10 percent last year, led by emerging markets and especially China, where coal-to-gas switching policies have the country on track to surpass Japan as the world's biggest LNG importer by 2030, Beveridge said. New projects coming online over the next few years will result in excess production capacity of as much as 54 million tonnes in 2020, but the market will stay tight in winter when demand increases.

Russian gas output up 7.9 percent in 2017 to new record

(Bloomberg; Jan. 1) - Russia's natural gas production rose to its highest ever last year, driven by increasing sales to Europe and rising domestic demand. Government data published Jan. 2 showed that output jumped 7.9 percent to beat a 2011 record. With a list of export projects including plans to make pipeline deliveries into China and new liquefied natural gas plants, the country may close the gap on the United States, which leapfrogged Russia to the top spot in global production of the fuel nine years ago.

Russia needs to strengthen its position in the global market, President Vladimir Putin said last month. Already the world's largest overall exporter of the fuel, the nation is working to boost output with new LNG plants stretching from the Baltic to the Pacific coast. That will pit the country against the world's biggest LNG producers, including Qatar and Australia. Russia is also working to keep its pipeline gas shipments to Europe near record levels this year. Russia's 2017 gas production totaled 24.4 trillion cubic feet.

Gazprom meets more than a third of Europe's demand for gas and the nation's most lucrative market was worth some \$37 billion in revenue last year. Russia's gas exports to Europe and Turkey rose by 8.1 percent to a record-high 6.845 trillion cubic feet in 2017, Alexei Miller, head of Gazprom, said in a statement Jan. 3, despite European Union efforts to cut its member nations' reliance on Russian energy. State-run Gazprom plans to start pipeline exports to China in late 2019.

China should subsidize development of its shale gas, economist says

(Global Times energy economics columnist; China's Xiamen University; Jan. 2) - China has shown its determination to tackle pollution by shifting from coal to natural gas. But the move created gas shortages. Oil and gas companies didn't expect or plan for the rapid growth of gas demand. In the long run, China has to exploit its own resources to

build a new energy structure, and that means government support and subsidies for companies during the early stages of shale gas development.

China's overall gas demand grew 15 percent in the first half of 2017, according to industry data. A majority of the increase was for industrial use. Even without the coal-to-gas conversion project, a rise of more than 10 percent in gas demand was certain. The recent rise in the price of imported liquefied natural gas to cover China's needs is unsustainable; the nation cannot bear high dependency on the international market.

China must develop its own resources, shale gas in particular. China is No.1 in the world in shale gas reserves. But there are only a few companies producing shale gas in China because the cost outweighs the market price. The key question is how to draw capital into the sector. Given the current cost and profit ratio, no company is willing to get in. China needs more companies to join the shale gas industry to boost technology and cut costs. Policy support and subsidies will bring more companies into the game.

China could lead the world in total gas imports in 2018

(Reuters; Jan. 3) - Beijing's crackdown on air pollution has put China on track to pass Japan this year as the world's biggest importer of natural gas. China is already the biggest importer of oil and coal. Data compiled from Thomson Reuters Eikon indicates China's 2017 imports of pipeline gas and liquefied natural gas will top 67 million tonnes, up by more than a quarter from 2016. LNG imports alone surged more than 50 percent.

China still lags Japan, with its annual gas imports of about 83.5 million tonnes, all as LNG, but China's overall pipeline gas and LNG imports topped Japan's in September and again in November, government data and shipping flows show. Analysts say the trend is set and China should top Japan for the full year in 2018.

"Both LNG and pipeline imports will continue to increase in the next few years. We expect China to overtake Japan as the world's largest gas importer in 2018," said Miaoru Huang, Asia gas and LNG senior manager at energy consultancy Wood Mackenzie. "But Japan will remain as the No.1 LNG importer until around 2028." China last year started to move millions of households and many industrial facilities from coal to gas as part of efforts to clean its air, sparking an unprecedented rally in gas imports.

Qatar completes money-saving merger of its two LNG producers

(Platts; Jan. 3) - Qatar has announced the official start of operations of the newly integrated company combining the Persian Gulf state's two LNG producers, Qatargas and RasGas, in a merger Doha hopes will save as much as \$550 million a year and improve the country's competitiveness. LNG production will now be operated by a

single company called Qatargas, state-owned Qatar Petroleum said in a statement Jan. 3.

The world's largest LNG operator, with a current liquefaction capacity of 77 million tonnes per year, will be led by current Qatargas CEO Sheikh Khalid bin Khalifa al-Thani. He will oversee Qatar's ambitions to raise its output capacity by 30 percent to 100 million tonnes a year, which were announced last July just three months after it lifted a 12-year moratorium on further development on its vast offshore North Field.

Qatargas' shareholders include Qatar Petroleum, ExxonMobil, Total, ConocoPhillips, Shell, Mitsui and Marubeni. Qatar's planned LNG capacity increase is expected to take five to seven years, at a time when the global market is set for a period of oversupply as a slew of new projects comes online, particularly in the United States. Qatar is well placed to compete with any LNG supplier because it has very low LNG production costs thanks to the co-production of valuable natural gas liquids from the North Field.

Mideast LNG exporters look to improve market share by 2025

(Gulf Times; Qatar; Dec. 28) – The Mideast region's market share of global LNG exports will improve by 2025 after a drop in 2020, driven by additional production in Qatar and new production in Iran, according to the Doha-based Gas Exporting Countries Forum. In the early 2010s, the Middle East was the biggest LNG exporter globally, with more than one-third of the region's volumes being exported from Qatar, Oman, the UAE and Yemen, the group said in its Global Gas Outlook 2017.

However, capacity expansion in other regions has eroded the Mideast's share of the market. It is forecasted that, by the end of 2020, only 28 percent of total LNG exports will come from the Middle East. However, the group said there is optimism that the share will recover for the region with debottlenecking of existing capacity; Qatar's plans to expand its output capacity by 30 percent; hopes that Yemen can recover from its civil war to restore its LNG capacity; and the entry of Iran into the LNG export market.

"The developments in Qatar and Iran will increase the region's share of LNG exports to more than 30 percent by 2025," the forum said.

Extreme cold reduces output while U.S. gas demand set record Jan. 2

(Reuters; Jan. 2) - Cold weather gripping much of the U.S. is denting gas production in the nation's shale patches, with output of the heating fuel down more than 20 percent since last month in North Dakota's Bakken region, according to analysts. Gas flows on interstate pipelines out of North Dakota dropped to about 1 billion cubic feet per day on

Jan. 2, down from 1.3 bcf on Dec. 25, according to Genscape. "That drop is due to the freeze-off we're seeing," said Andrew Bradford of energy consultancy BTU Analytics.

Natural gas production often can be affected by water vapor in pipeline systems freezing and hindering the flow. Unlike crude oil, gas must be piped immediately from the well to a processing facility. In Hettinger, N.D., temperatures fell to 45 degrees below zero on Jan. 2, one of the coldest temperatures recorded on the planet for the day. Gas demand in the Lower 48 states reached an all-time high of 144 billion cubic feet per day on Jan. 2.

Winter cold challenges U.S. natural gas supply and prices

(Bloomberg; Jan. 2) - A polar blast across the eastern U.S. is proving to be a crucial test for the nation's natural gas market: Can record demand outweigh surging production from America's shale basins, sparking a sustained price rally? Deliveries of the heating and power-plant fuel jumped to 143 billion cubic feet Jan. 1 in the Lower 48 states, PointLogic Energy data show. That tops the record reached four years ago during the "polar vortex," which unleashed bone-chilling cold across the Midwest and Northeast.

Gas futures have surged in response, though they're still trading at less than half the high they reached in 2014. America's increasing reliance on gas has stoked speculation that a frigid winter will drain stockpiles — already below normal for the time of year — sending prices soaring. The U.S. is exporting more gas than ever by pipeline to Mexico and on tankers sailing across the globe, and power plants are burning record amounts as coal plants and nuclear reactors shut amid competition from cheap shale supplies.

Gas futures for February delivery rose 9.7 cents to \$3.05 per million Btu on the New York Mercantile Exchange on Jan. 2. Prices have jumped 19 percent from a 10-month low on Dec. 21. Though prices have climbed, they're far from the levels above \$6 seen in 2014. New pipelines are shuttling gas from shale plays like the Marcellus in Pennsylvania and West Virginia — America's biggest reservoir of the fuel — to major markets, helping to meet rising demand.

Deep cold pushes up Canadian natural gas prices 72 percent

(Financial Post; Canada; Jan. 2) - The deep freeze currently chilling most of North America is providing a boost to beleaguered Canadian natural gas producers, but analysts believe the colder temperatures would need to last for months for prices to improve further. Between Christmas and New Year, AECO, Alberta's natural gas price benchmark, soared 72 percent from \$2.50 per thousand cubic feet to \$4.30 as extreme-cold warnings were issued for the entire province and throughout much of Canada.

The drop in temperatures in Alberta was so severe that some gas wells were frozen shut — a phenomenon industry players call "freeze-offs," which occur when the water and condensation in a well freezes on its way to the surface. The frozen wells helped limit gas supplies while demand surged. "The jump we saw in prices, it was impressive to see, but it's very, very short-lived," Calgary-based GMP FirstEnergy analyst Martin King said of the recent uptick in AECO spot prices.

King said gas storage levels in Alberta are still significantly higher than a year ago, although increasing volumes of gas are being produced in Alberta and around North America. "It's going to take a lot of cold for many, many weeks to make a sizable difference in storage levels. ... We are so overstocked on gas right now, it's crazy."

FERC approves more pipelines to move Marcellus gas to market

(Platts; Jan. 2) - The Federal Energy Regulatory Commission has granted approval to the second-largest natural gas pipeline expansion project in the U.S. Northeast, the 170-mile, 2.7-billion-cubic-feet-per-day Mountaineer XPress project in West Virginia. The project, sponsored by TransCanada's Columbia Gas Transmission, was approved Dec. 29. It is producer-backed and expected to boost production in the Marcellus shale and increase deliveries from the Northeast to other regions, particularly the Gulf Coast.

Mountaineer XPress is the third major expansion of Columbia Gas' pipeline system to receive approval in 2017, following the January approval of the Leach XPress project (1.5 bcf a day) and the November approval of the WB XPress project (1.3 bcf a day). Mountaineer XPress is the fourth project targeting West Virginia production takeaway capacity to receive FERC approval in fourth-quarter 2017, bringing total capacity approvals targeting West Virginia production to 7.5 bcf a day in the past three months.

In addition to the \$2 billion Mountaineer Xpress project, FERC on Dec. 29 approved Columbia Gulf Transmission's Gulf XPress project to move 860 million cubic feet a day, adding seven new compressor stations in Kentucky, Tennessee, and Mississippi. In approving the projects, FERC found precedent agreements with shippers to be an adequate demonstration of need, despite challenges from environmental groups that had warned of a potential overbuild.

Pipeline companies work to deliver more shale oil to Gulf Coast

(Reuters; Dec. 29) - Several oil pipeline companies this month agreed to move ahead on multibillion-dollar projects that would link Texas shale fields to Gulf Coast export hubs, offering new outlets for burgeoning output expected in 2018. Crude production from two large Texas shale fields next year is expected to rise about 800,000 barrels

per day, researcher East Daley Capital Advisors estimates. Most pipelines will not be finished until 2019, when analysts say existing lines from West Texas will be nearly full.

On Dec. 29, prices at the Midland hub in West Texas were \$60.66 a barrel, compared with \$65.01 a barrel at East Houston. A wide spread encourages producers to sign long-term pipeline contracts to get higher prices. "If you are a pipeline company, you need to do something now," said John Zanner, an analyst at consultants RBN Energy. "Pipes are filling up from Midland to the Gulf."

Pipeline firm EPIC said it is going ahead with a 590,000-barrel-per-day pipeline tying the Permian and Eagle Ford shale basins to Corpus Christi, Texas. The line is expected to start up in 2019. Buckeye Partners last week began seeking shipper commitments for a Permian-to-Gulf-Coast line expected to open in 2019. It will carry up to 600,000 barrels per day of crude and condensate. Phillips 66 and Enbridge began soliciting for a crude line that would take 385,000 barrels per day along a similar route starting in 2019. The success of such campaigns usually determines whether construction will proceed.

Oil majors show little interest in Norway's latest exploration round

(Bloomberg; Jan. 2) - Norway is realizing it will have to do without the deep pockets of the biggest oil companies as it seeks to extend its hydrocarbon era that has made it one of the world's richest nations. The most recent blow came when only 11 companies applied for new blocks in the Arctic Barents Sea, touted as the country's most promising area for exploration. Of the five supermajors, only Shell applied.

"It's a warning and a cause for reflection," said Stale Kyllingstad, CEO of IKM Gruppen one of the biggest suppliers to Norway's oil industry. "The Norwegian shelf isn't as popular anymore. It's a concern." A three-year slump in the industry has seen Exxon and BP relinquish their role as field operators in Western Europe's biggest producer. The landscape is changing in the North Sea basin in Norway and the U.K. as companies search for higher margins in projects such as liquefied natural gas or U.S. shale.

The indifference to Norway's Arctic packs a special sting. The area is thought to hold half of the country's undiscovered oil and gas, or almost 9 billion barrels, and success in the Barents will be key to stopping a further decline in the country's output in the 2020s. Financial muscle will be needed to develop an area with little infrastructure. "The farther north you go, the bigger companies you need to sit in the front seat," Kyllingstad said.

Big Oil's disengagement comes at a difficult time for a Norwegian industry just recovering from a bruising downturn that saw the loss of 50,000 jobs. Norway's oil production has been halved since a 2000 peak. After Statoil's US\$6 billion Johan Castberg oil field starts production in the Barents in 2022, the project pipeline is scant.

China inserts itself into Artic development

(Bloomberg; Dec. 29) - As the Arctic Circle's ice melts away, people of the High North feel their top-of-the-world economy heating up. Gold mines, roads, and a full spectrum of energy projects dot the horizon — with Russia leading the way and other Arctic countries scrambling to catch up. There's much to do, and not enough capital to go around. That means countries with deep pockets, deep ambition and no Arctic coastline — namely China — can get a seat at the table.

Investing at the top of the world isn't easy. The remoteness of the region and a lack of basic infrastructure means the Arctic is simply not wired into the rest of the global trade system. Arctic financial data are scarce. But global asset manager Guggenheim Partners has shed some light on what's likely to come next in the Arctic. It has spent the past seven years studying the region and the past three years amassing a database of 900 planned, in-process, finished, cancelled, and desired Arctic infrastructure projects.

Taken together, they would require as much as \$1 trillion in investments. So far, Russia's oil-and-gas money has underwritten a lot of the work, giving President Vladimir Putin a leg up as changing conditions open access to new riches. Underscoring many of these initiatives is maneuvering by China — whether through trade deals or financing. Who can build their projects first, and who funds them, will go a long way in determining which countries are best positioned to exert economic dominance in the region. China cannot physically claim Arctic territory, but it can buy stakes and influence.