

# Oil and Gas News Briefs

## Compiled by Larry Persily

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#### **Changes in LNG market benefit bigger players**

(Reuters; Nov. 11) - The race is on for liquefied natural gas suppliers to build export terminals as demand soars, but the criteria for financing such projects have shifted as traditional relationships with LNG buyers have begun to disintegrate. Shell's positive investment decision last month for its C\$40 billion LNG Canada project was a boost for the industry, which is emerging from almost three years of low prices and weak investment. Shell's decision is expected to get the ball rolling on a wave of approvals for similar projects around the world that have been planned for years but not yet finalized.

But LNG Canada represents a different financing structure, not reliant on commitments from large buyers as previous projects. Instead, Shell initially will absorb development costs into its budget and will worry about the ultimate buyers later. As one of the largest LNG traders in the world, it can absorb the new volumes into its global portfolio.

Demand for LNG is there — it is expected almost to double by 2030, leaving room for plenty more export terminals despite an influx of fresh supply from new, mostly U.S., terminals. But projects have struggled to find offtakers as the world's biggest buyers in Japan and South Korea seek nimbler terms while others such as India and Pakistan are less creditworthy. "The projects that we might see now are the ones that don't rely on offtake agreements," said Frank Konertz, an LNG analyst at S&P Global.

The average term of offtake deals has halved to less than eight years from almost 20 years in 2010, with volumes per contract falling by two-thirds, according to Shell's 2018 LNG outlook. The buyers for about half of such contracts have no credit rating. Shorter, smaller, less creditworthy buyers make financing the expensive projects more difficult. This makes projects by large players such as Shell, Total, and Exxon easier to finalize.

#### **IEA expects more risk sharing between LNG developers and buyers**

(S&P Global Platts; Nov. 13) - The pickup in new LNG export project approvals in the second half of 2018, notably in Qatar and Canada, suggests that the risk of an abrupt tightening in global LNG around the mid-2020s may be easing, the International Energy Agency said in its World Energy Outlook 2018. Still, a steady flow of additional projects will be required to meet demand, and there is considerable disagreement between buyers and sellers about what kind of contract structures will underpin new investments.

The outlook for new projects is more optimistic, the IEA said, as an increasingly liquid, flexible and transparent trading space is creating opportunities to spread market risks more evenly among stakeholders and along the value chain. Nearly a third of LNG transactions are currently taking place outside the long-term supply framework.

While projects that can come to market quickly and at a low cost — such as the Qatari expansion and, to a lesser extent, U.S. brownfield projects — are the ones most amenable to the industry's current focus on capital discipline and short-cycle investments, large-scale greenfield projects can also find a place supported by new emerging market solutions, the IEA said. For players with less access to credit, U.S. LNG developers are offering prospective buyers equity stakes in new projects in exchange for bearing some of the market risk associated with the new capacity.

### **[Australian gas projects could benefit from U.S.-China trade fight](#)**

(Forbes; Nov. 11) - China's appetite for cleaner-burning natural gas, and its dislike for U.S. products, has created a perfect climate for the \$30 billion development of gas fields — which have sat on the sidelines for more than 40 years — to supply liquefied natural gas projects in Australia. The Browse project is a series of fields off the northwest coast that were found in the 1970s but their remote location and lack of an affordable onshore site for gas processing made them too difficult to develop despite repeated attempts.

Scarborough, further south in the Indian Ocean, was discovered a few years after Browse but suffered the same problems of location and a lack of commercial options. Both fields are now moving off the drawing board thanks to a combination of factors that includes improved production technology, growing demand in China and other Asian countries for LNG, Chinese cutbacks in oil and gas purchases from the U.S., and a fresh sense of urgency among the gas field owners that they need to act quickly.

Woodside Petroleum, Australia's LNG leader, is behind the twin development plan with the first steps taken last week with signing of agreements between owners of the gas fields and existing onshore liquefaction plants that would take the new supply. Browse is in a joint venture of Woodside, Shell, BP, PetroChina, Mitsui, and Mitsubishi as Japan Australia LNG. Scarborough's shareholders are Woodside and BHP.

The plan is for Browse gas to be piped more than 700 miles south to the North West Shelf LNG plant, with the new gas needed to make up for a looming shortfall from existing gas fields that have been in production for 38 years. Scarborough gas will head to the Pluto LNG plant, along with gas from Chevron's Clio-Acme fields.

## [Australian LNG producer warns of competition in global race](#)

(Sydney Morning Herald; Nov. 14) - Energy giant Woodside said Western Australia is in the hot seat to meet the looming global gap in liquefied natural gas supply but warned that regulators need to process approvals quickly and companies need to keep costs down if they want to beat heavy overseas competition. Speaking at the Committee for Economic Development of Australia on Nov. 13, senior vice president Niall Myles promoted Woodside's plans to develop the Burrup Peninsula into a huge gas hub.

The Burrup hub involves the proposed development of 20 trillion to 25 trillion cubic feet of gas resources from the Scarborough, Browse and Pluto fields — more than the state's oldest gas field, the North West Shelf, has produced in its three decades of operation. The hub would expand and connect the existing Pluto LNG facility with the North West Shelf LNG project's Karratha gas plant, extending the lives of both facilities by 30 years and better preparing them for the surge in global demand.

But Myles said Woodside is not the only company aware of the global race to develop new LNG supplies. "Price spikes signal that there is now a change in the market, those market dynamics have triggered a race to sanction new LNG projects in Canada, America, Mozambique, Qatar, and Russia, so the timing for us to develop the Burrup hub is right now. The timing is right but it's also tight. Projects that can contain costs and bring new resources through existing and proven facilities will be at an advantage."

## [Nova Scotia LNG hopeful will focus on raising money](#)

(Reuters; Nov. 12) - Pieridae Energy, the company behind the C\$10 billion Goldboro liquefied natural gas export project in Nova Scotia, wants to issue new equity before taking a final investment decision by the middle of next year, an executive said. Mark Brown, vice president of business development, said finalizing offtake agreements — usually the stumbling block for projects seeking FIDs — is not an issue due to the large purchase commitment it has from German utility Uniper.

However, Pieridae still needs to finalize supply deals that will enable it to get feed gas into the plant and it needs to complete financing for the project. "In terms of offtake agreements, I would set that aside," Brown said Nov. 9. "It's really now three elements — finalization of supply, finalization of transport, and finalization of equity financing."

Goldboro is unusual among the two dozen proposed North American LNG export projects in that it has one major customer committed to take half its capacity: Uniper agreed to buy 5 million tonnes a year for 20 years. In addition, Uniper is eligible for \$4.5 billion in loan guarantees from the German government. In addition to equity dollars to help fund development costs, the company also needs to finalize its acquisition of Alberta gas producer Ikkuma Resources, which would supply the LNG plant, as well as an agreement with TransCanada to pipe the gas across the country to Nova Scotia.

## **IEA predicts natural gas will overtake coal by 2030**

(Reuters; Nov. 12) - Natural gas is expected to overtake coal as the world's second-largest energy source after oil by 2030 due to a drive to cut air pollution and the rise in liquefied natural gas use, the International Energy Agency said Nov. 12. The Paris-based IEA said in its World Energy Outlook 2018 that energy demand would grow by more than a quarter between 2017 and 2040.

Global gas demand would increase by 1.6 percent a year to 2040 and would be 45 percent higher by then than today, the IEA said. The estimates are based on the IEA's "New Policies Scenario" that takes into account legislation and policies to reduce emissions and fight climate change. They also assume more energy efficiencies in fuel use, buildings and other factors.

"Gas is the fastest growing fossil fuel in the scenario, overtaking coal by 2030 to become the second-largest source of energy after oil," the report said. China, already the world's biggest oil and coal importer, will soon become the largest importer of gas, the IEA said. China is the world's third-biggest user of gas behind the United States and Russia, but it imports about 40 percent of its needs as local production cannot keep pace. Emerging economies in Asia will account for about half of total global gas demand growth by 2040, the IEA report said.

## **South Korea burns more LNG as it moves away from coal**

(S&P Global Platts; Nov. 12) – LNG sales by state-owned Korea Gas Corp. surged 37.9 percent year on year in October, driven by strong demand for power generation, company officials said Nov. 11. KOGAS attributed the increase in LNG sales to higher operation of gas-fired power plants in line with President Moon Jae-in's push to reduce the country's heavy reliance on coal and nuclear power generation. Under Moon's push to boost nuclear safety, seven of South Korea's 24 reactors have been shut down for maintenance, boosting LNG consumption for power generation.

KOGAS, which has a monopoly in domestic natural gas sales, sold 2.59 million tonnes last month, compared with 1.87 million a year earlier. It marked the 11th consecutive month of increase in the company's LNG sales since December last year. The 37.9 percent rise in October was the biggest increase since April 2010.

To meet growing demand, KOGAS has increased LNG imports by 13.7 percent year on year to 27.77 million tonnes over January-September this year. "KOGAS LNG sales are expected to remain strong next year on the back of the government's push for energy transition from coal and nuclear to renewables and LNG," a company official said. The government is considering cutting the import tariff on LNG to zero next year from its current 2 to 3 percent to ease consumers' financial burden and boost consumption.

## **Sinopec says it will boost winter gas supply 18 percent over last year**

(Reuters; Nov. 12) - Chinese state oil major Sinopec said Nov. 12 it will supply 640 billion cubic feet of natural gas during the heating season that kicks off this week, up 17.7 percent from last year, to meet rising demand in the world's fastest-growing gas consumer. The comments come as China prepares to switch on residential heating systems across the north of the country Nov. 15 with millions more households set to rely on gas rather than coal.

Demand for gas will increase sharply again this winter and next spring, Sinopec said, adding that extreme winter weather would increase supply difficulties. The company said it has increased its spot-market purchases of liquefied natural gas and each of its three LNG import terminals are due to run at full capacity.

Sinopec also has filled two of its gas storage sites and is accelerating construction of an additional storage facility allowing it to meet emergency demand during the heating season. It is expected to have more than 140 bcf of storage capacity when completed. It is also speeding up the construction and operation of new pipelines in northern provinces. Sinopec has said it wants to more than double its LNG receiving capacity over the next six years and lift domestic shale gas production two-thirds by 2020.

## **China spreads out LNG purchases, trying to avoid winter price spikes**

(Reuters; Nov. 13) - China's appetite for liquefied natural gas has not slowed but its purchases have been spread more evenly, avoiding last year's spike to meet winter demand, Australia's top independent LNG producer said Nov. 12. "China learned from last year, from the last winter, that the peakiness in demand ... really distorted the market," said Woodside Petroleum CEO Peter Coleman. "It distorted prices, and it meant they were not able to get gas to consumers in China during the peak of winter."

Coleman said China has flattened that demand by buying across the year and building up storage, while the volume overall has grown. "So the total is increasing, but the peakiness has gone out of it," Coleman told reporters after speaking at the Melbourne Mining Club. Woodside sells most of its LNG to customers in Japan and South Korea but has a tie-up with privately owned ENN Group to boost sales in China.

Chinese demand for cargoes for delivery in February would be the real measure of how prepared the system is for winter, the CEO said. Those cargoes would need to be bought in December. LNG demand in North Asia's main hubs in Japan, China, and South Korea has slowed in recent weeks, raising concern that forecasts for a milder than usual winter may dent consumption. There are also signs that the ongoing U.S.-China trade war is starting to dent industrial demand in China.

## [China's gas imports could match the entire EU by 2040](#)

(Bloomberg; Nov. 12) – China is forecast to become the world's largest gas-buying country with net imports approaching the level of the entire European Union by 2040, according to the International Energy Agency's World Energy Outlook. China overtook South Korea as second-largest liquefied natural gas importer last year and is on track to surpass Japan. By 2040 it will be buying a total of 13 trillion cubic feet of LNG and pipeline gas per year, while volumes into the EU will be just 1 percent above that.

China's emergence as a super power in the energy markets will benefit exporters of LNG as well as Russian pipeline gas supplier Gazprom which next year will complete its first link to deliver the fuel to China — the Power of Siberia line. China's gas demand could triple to 25 tcf by 2040, with domestic production covering about 40 percent of the demand but unable to keep pace with the growth, the IEA forecast said. The report said China will account for nearly 30 percent of total global demand growth through 2040.

Global gas trade expands 2.3 percent per year, under the IEA's scenario, with LNG boosting its share of the global market to almost 60 percent from 42 percent, "making the gas market much more global and interconnected."

## [China takes steps to avoid gas supply crunch, price spikes this winter](#)

(Reuters' columnist; Nov. 13) - The liquefied natural gas market in Asia appears to be coming to terms with the likelihood that China will still buy robust volumes over winter, but not quite at the rate it did last year. China's unrestrained appetite for the fuel last winter drove spot prices to what was then a three-year high, upending a market that had previously believed a supply surplus was looming. However, this time around, China appears to be managing its winter demand in a more orderly fashion.

That means while it will still likely increase cargoes in the coming months, it won't be trying to suck every available drop of LNG from the global market. Having been caught short last winter, China has taken steps to ensure that this winter will see adequate supplies. It has boosted storage facilities and domestic output, while making full use of pipelines from Asia and LNG import terminals are being maximized.

Domestic gas production rose 6.2 percent in the first nine months of the year, while LNG and pipeline gas imports were up 33 percent in the first 10 months of the year. State-controlled oil and gas major Sinopec said Nov. 12 it will boost its gas supply for the heating season by 18 percent from last winter and that its three LNG terminals are fully booked for December and January. PetroChina said the Central Asia-China pipeline will supply a record volume of gas this winter. The announcements show that Beijing is determined not to see a repeat of last year's supply crunch and price spike.

## **Yamal gets 8<sup>th</sup> ice-breaking LNG carrier; 7 more under construction**

(Reuters; Nov. 12) - A new ice-breaking tanker capable of navigating the Arctic on its own is set to load its first liquefied natural gas shipment from Russia's fast-expanding Yamal LNG facility. The Georgiy Brusilov left South Korea's Daewoo Shipbuilding and Marine Engineering shipyard at the weekend and is due at Yamal's Sabetta port on Nov. 28, Refinitiv Eikon data shows. It is the eighth ARC7-class LNG carrier, which are longer than the Titanic, to join the Yamal fleet operated by Teekay, Mitsui OSK Lines, and Dynagas with another seven expected.

The vessels have enabled Yamal's operator Novatek to ramp up production since its first LNG cargo at the end of last year. Output at the Siberian gas project output is constrained only by the number of carriers able to traverse the waters of the Arctic westward without the help of icebreakers. While the Arc7 carriers can ply the Northern Sea Route during the summer from Russia to Asia, during winter they go westward and either deliver to northwest Europe or transfer the LNG to finish the journey to Asia.

All but one of the ships ordered by Novatek are named after early 20th century Russian Arctic scientists and explorers. The Christopher de Margerie is named after the late head of oil major Total, which has a 20 percent stake in Yamal LNG. Novatek hopes to bring a third liquefaction train at Yamal into operation by December, making it one of the largest LNG export facilities in the world with a capacity of 16.5 million tonnes a year.

## **Putin talks energy supplies and investment with Asian leaders**

(S&P Global Platts; Nov. 14) - Russian President Vladimir Putin is in Singapore where he hopes to secure a bigger foothold for energy supplies and LNG investment among Asia's fastest-growing economies. Bilateral talks between Putin's delegation, including Energy Minister Alexander Novak, and delegations from some of the region's biggest economies including Japan, South Korea, and Indonesia are being held in conjunction with the Russian-ASEAN dialog and East Asian Summit.

Asia is a growing market for Russian energy, including liquefied natural gas, and a potential source of investment for the world's largest producer of resources. The Kremlin has increasingly looked to build its presence in the Asian region following the imposition of tough sanctions by the United States on Russia. In a statement released Nov. 14 following a meeting between Putin and Japanese Prime Minister Shinzo Abe, Russian minister Novak described energy deliveries from Russia to Japan as "high and stable."

Japanese companies hold significant stakes in the Sakhalin-1 and Sakhalin-2 oil and gas projects in Russia's Far East. "Japanese partners are looking into joining other LNG projects in Russia," Novak said. Russia and Japan have an advisory energy

council that includes working groups covering hydrocarbons, atomic energy, and energy efficiency.

### **Cheniere starts LNG production at Corpus Christi plant**

(S&P Global Platts; Nov. 14) - LNG production began Nov. 14 at Cheniere Energy's export terminal near Corpus Christi, Texas, as the facility prepares to ship its first cargo, a spokesman said. The terminal is the third major liquefied natural gas export facility in the United States — taking advantage of the shale gas boom and boosting U.S. efforts to be a bigger player in the global LNG market. An unladen LNG tanker, the Golar Tundra, has been moored to a jetty at the terminal since Nov. 11.

The Cheniere spokesman said the tanker was expected to carry the first cargo sometime soon, though the exact timing was unclear and the destination undisclosed. Cheniere became the first U.S. exporter of LNG produced from shale gas in February 2016 when its Sabine Pass terminal in Louisiana shipped its initial cargo. Dominion Energy began exporting LNG in March from its Cove Point terminal in Maryland.

Cheniere has five liquefaction trains in operation at Sabine Pass. A final investment decision is expected by early 2019 on whether to build a sixth train. At Corpus Christi, three trains are under construction. Train 1 is producing the first commissioning cargo.

### **FERC issues draft EIS for Louisiana LNG project**

(Reuters; Nov. 13) - Venture Global's proposed Plaquemines liquefied natural gas export terminal in Louisiana took a step toward receiving federal approval on Nov. 13 when the Federal Energy Regulatory Commission issued its draft environmental impact statement. The report said "construction and operation of the project would result in some adverse environmental impacts, but impacts would be reduced to less-than-significant levels with mitigation." The draft EIS, however, said Plaquemines, combined with other LNG projects in the area, could result in significant impacts on air quality.

Venture Global proposes to develop the Plaquemines facility to produce 20 million tonnes of LNG per year. It is one of a long list of LNG terminals proposed for the U.S. Gulf Coast, Canada, and Mexico. Virginia-based Venture Global, which said it wants the Plaquemines plant to enter service in 2023, also is working to develop a smaller export terminal in Calcasieu Pass, also in Louisiana. In addition to needing FERC approval, the development company also is looking to arrange financing, take in investors, and firm up LNG sales contracts. FERC issued its draft EIS for the Calcasieu project in June.



## **Supply fears, cold weather drive U.S. natural gas prices higher**

(CNBC: Nov. 14) - Natural gas prices surged in panicky and volatile trading on Nov. 14, after the latest weather forecasts raised fears that the U.S. is heading for a potentially colder-than-expected winter with too little gas supply. Futures for December were up about 12.5 percent at \$4.61 per million Btu in afternoon trading but had been up as much as 20 percent in an early rush of panic buying. Prices also rose across futures contracts that that would cover the winter through March, indicating that prices could be pressured all winter by dwindling storage, which is at a 15-year low for this time of year.

"Overnight, there was another round of cold trends, and that kind of lit the fuse and everything exploded," said Jacob Meisel, chief weather analyst at Bespoke Weather Services. "The six to 10- and 11- to 15-day [forecasts] both saw rather significant cold trends. ... We've just been continually trending colder and colder."

Meisel said the price could get to \$7 to \$8 if December and January are very cold. "If cold weather really takes off, the skies the limit." As forecasts have been adjusted for colder temps, gas prices have been on a tear and are now up 35 percent since the start of November. Government data last week showed the amount of gas in U.S. storage rose by 65 billion cubic feet to 3.208 trillion cubic feet, 16 percent below the five-year average and the lowest amount in storage during a first week of November since 2003.

## **UAE, Saudi national oil companies will collaborate on natural gas**

(The National; Abu Dhabi; Nov. 12) - Abu Dhabi National Oil Co. (ADNOC) on Nov. 11 signed a framework agreement with Saudi Aramco, the world's biggest crude exporter, to consider collaboration opportunities in the natural gas and liquefied natural gas sectors. The deal between two of the biggest energy producers in the Arabian Gulf illustrates a strategic shift as they seek to boost revenues from gas and LNG sectors.

The two national oil companies will partner on economic feasibility studies and share knowledge and experience in LNG markets. The United Arab Emirates is increasingly moving to gas for its own power needs, as it frees up more oil for exports. This month, Abu Dhabi's Supreme Petroleum Council approved a five-year capital expenditure plan of more than \$100 billion for the state-run company to increase capacity and unlock its sour gas resources, as well as develop downstream capabilities at home and abroad.

The UAE (Abu Dhabi is the capital) announced it had found 15 trillion cubic feet of gas in existing and untapped blocks last week, adding to its 201 tcf of existing gas reserves. ADNOC is the majority owner of the country's sole LNG export terminal, which started operations in 1977. Minority partners are Mitsui, BP, and Total. Abu Dhabi's Supreme Petroleum Council has adopted a gas strategy to sustain LNG production to 2040.

## **Decision possible next year for Turkmenistan-to-India gas pipeline**

(Reuters; Nov. 13) - The TAPI pipeline project to supply Turkmenistan's gas to India and Pakistan via Afghanistan is moving closer to securing funding, and a final investment decision could be made next year, its chief executive said Nov. 12. The development, a key step forward for the project after decades of delays, could see the new pipeline link the energy-rich central Asian nation to some of the strongest growth markets in the region. Turkmenistan holds an estimated 690 trillion cubic feet of gas.

Muhammetmyrat Amanov, chief executive of the TAPI Pipeline Co., told an industry conference in the United Arab Emirates capital of Abu Dhabi that the cost of the pipeline had been reduced to \$7 billion from an initial estimate of \$10 billion, and that its first stage could cost only \$5 billion. "We are planning to make a final investment decision in the first half of next year and then, stage by stage, finalize construction in Pakistan, Afghanistan, and India," he said. The first gas could be delivered to Afghanistan within around a year from the FID, and to Pakistan within two years, he said.

The project has been supported by import/export credit agencies in Germany and Italy, he said, which will fund exports of equipment for the project from those countries. Other potential financiers for the deal include the Asian Development Bank and the Islamic Development Bank, he said. TAPI stands for Turkmenistan-Afghanistan-Pakistan-India.

## **Anadarko, Shell disagree on timing of Mozambique gas projects**

(Financial Times; UK; Nov. 12) - Shell said Anadarko is holding it and the Mozambique government hostage by refusing to supply enough gas for local use in the first phase of a giant liquefied natural gas export project. Anadarko and Eni have discovered about 150 trillion cubic feet of gas in Mozambique waters and have made initial investments in separate gas projects expected to cost up to \$40 billion in total to develop. Most of the gas will be pumped onshore to two LNG trains for export to Asia and Europe.

As part of efforts to develop the local economy, Shell plans to build a 38,000-barrel-a-day gas-to-liquids plant to produce kerosene, diesel and naphtha. But Moon Hussain, director of the project, said Anadarko was obstructing its plans by refusing to supply gas until the second phase of the LNG project, which is not expected to start until 2031. "If we don't get the gas," Hussain said last week, "the benefits of that get pushed out well beyond 2030 and the development of local industries ... gets pushed out beyond."

Anadarko, he said, was "holding everybody to hostage" and could easily certify more gas to supply Shell's project. Steve Wilson, Anadarko's Mozambique manager, questioned the economics of the gas-to-liquids project. "I'm scratching my head, thinking this is a bloody fairy tale. ... We have to differentiate here between aspirations and reality," he said of Shell's wish to start its gas-to-liquids plant in 2025. Shell said its

project is commercially feasible and would make a big contribution to Mozambique's development. Anadarko said it needs to assign its gas reserves to the LNG project.