Oil and Gas News Briefs Compiled by Larry Persily December 4, 2017

Shell, Chinese partner reach deal to send gas to Australia LNG plant

(Australian Financial Review; Dec. 1) - Shell has finally paved the way for a multibillion-dollar development of its large Arrow coal-seam gas resource in Queensland, Australia, inking a 27-year deal for a gas sale to its own majority-owned US\$20 billion Queensland Curtis LNG venture. The deal, one of the largest gas-supply contracts on the country's East Coast, involves two separate Shell ventures with different Chinese partners.

PetroChina is a 50 percent owner of Arrow, while fellow Chinese oil giant China National Offshore Oil Corp. (CNOOC) has a stake in the LNG plant, which supplies gas to the domestic and export markets. The liquefaction plant and export terminal started operations in December 2014. The sales contract involving about 5 trillion cubic feet of gas will allow for the staged development of the Arrow coal-seam resource, with the initial phase expected to get underway next year. Gas flow is expected to start in 2020.

As the owner of the largest chunk of undeveloped gas in the tight East Coast market, Arrow has been under pressure to find a commercial project to bring the gas to market. But Shell has always said that an LNG-scale market opportunity was essential to justify the huge cost of getting the gas out of the ground. The deal will bring an additional 600 million cubic feet of gas a day to the Queensland market. Shell Australia chair Zoe Yujnovich said the deal allows Arrow gas, which was originally intended to supply a stand-alone LNG plant, to make use of the Queensland plant's existing infrastructure.

Many of China's LNG import terminals running overcapacity

(Platts; Nov. 30) - Capacity utilization rates of over 130 percent at China's northern and eastern liquefied natural gas terminals are limiting the possibility of significant import growth, despite surging domestic prices due to robust winter demand. Chinese market participants said they are cautious about the country's LNG import outlook in December and January as terminals are facing capacity bottlenecks and logistical constraints.

The high capacity use and pipeline supply obligations mean that China's three state oil and gas companies — China National Offshore Oil Corp., PetroChina, and Sinopec — could struggle to capitalize on soaring prices in the domestic trucked LNG market, sources said. The three firms operate most of the LNG import terminals in north and east China. "There's a limit to how much [LNG cargoes] the companies can import, with their northern receiving terminals already running above full capacity," a source said.

A second Chinese importer said shipping schedules are so "packed that it is hardly possible to take in more cargoes." The average utilization rate at the top five north and east China LNG receiving terminals from August to November stood at 136 percent, according to Platts Analytics and China Customs Statistics. Furthermore, obligations to deliver gas into pipelines for residential use this winter is also limiting the amount of LNG that can be redirected into the high-margin trucked LNG market.

Clean-air initiative takes toll on China's ceramic tile factories

(Reuters; Nov. 29) - The city of Zibo, China's ceramics capital, is undergoing environmental shock therapy to clear its filthy skies and transform its economy — and not everyone is happy. Much of Zibo's industrial district has become a ghost town of shuttered factories, empty showrooms, and abandoned restaurants after a clean-up campaign that began last year intensified this winter.

"There used to be a lot of workers here but now they are demolishing the entire place," said a caretaker, pointing at the deserted warehouse of an abandoned factory he was guarding. Zibo, home to 4.5 million people about 260 miles south of Beijing in Shandong province, is one of 28 northern cities targeted in an unprecedented six-month anti-pollution, anti-coal, pro-natural gas blitz as China scrambles to meet air-quality targets.

The city is also at the heart of a wider, long-term government effort to upgrade China's heavy industrial economy. Once responsible for about a quarter of China's ceramic tile output, Zibo has slashed capacity by 70 percent and shut more than 150 companies and 250 production lines as part of a war on pollution. Surviving plants rushing to comply with tough new standards have to deal with natural gas shortages this winter.

Some local businessmen accuse Beijing of running roughshod over local industry and paying too little heed to circumstances on the ground. "If Zibo was the only place producing tiles in the whole country, then it wouldn't be a problem. But this is an unfair policy: they are closing us but not others," a factory owner said.

China wants gas producers, sellers to hold down prices

(Reuters; Dec. 3) - China's state planner has ordered eight regions to meet with natural gas producers, liquefied natural gas terminal operators and traders Dec. 4 to "regulate" the market as prices of the fuel soar due to winter heating demand, a government official said. The meetings highlight Beijing's concerns about rising gas prices amid its policy to shift millions of homes to gas heating from coal for the winter along with thousands of factories and businesses to combat air pollution.

Last week, the industrial provinces of Hebei and Shandong warned of gas shortages and ordered cuts to some industrial and commercial users. The upcoming meetings should warn the market participants that the government will punish any companies found to be involved in manipulating prices or monopolizing the market, the official at the National Development and Reform Commission said.

The regions include top gas-producing regions Shaanxi, Inner Mongolia, Xinjiang and Sichuan, and major gas-consuming regions such as Hebei, Jiangsu, Liaoning and Beijing. Wholesale prices of LNG ex-factory in Inner Mongolia were as high as 7,750 yuan (\$1,172) per tonne (more than \$24 per million Btu) and 8,050 yuan per tonne in Shanxi on Dec. 4, up from around 7,200 yuan a week ago, according to data from a price monitoring agency. Domestic prices hit their highest since at least 2011 last week.

Gulf Coast LNG developer touts low-cost gas supply

(Platts; Nov. 30) - The "second wave" of U.S. LNG production is coming in the early 2020s and will be based on essentially free gas, according to project developer NextDecade, one of three proponents of natural gas liquefaction plants in Brownsville, Texas. NextDecade CEO Kathleen Eisbrenner promoted her company's project at an LNG conference in Lisbon on Nov. 30.

The basic argument is that gas output from the Permian basin, the U.S. shale oil industry's hottest hot spot, is going to grow substantially, not because it is necessarily wanted but because it will be produced as associated gas alongside the oil. Eisbrenner said drilling-and-completion spending in the Permian basin will double year-on-year in 2018 to make up 44 percent of all such U.S. spending. The revenue from liquids production will provide the profits, making the gas available at a very low-cost.

The gas cannot be reinjected, and it cannot be flared for more than short periods. The prospect of a lot more Permian gas has prompted several new pipeline proposals to take the gas to market, including four major lines with total capacity of 6.4 billion cubic feet a day. The gas will most likely be liquefied for export. In addition to low-cost gas, Eisbrenner said development costs for NextDecade's Rio Grande LNG could be as low as \$500 per metric ton of output capacity, less than half the cost of other LNG projects.

U.S. industries worry LNG exports could drive up domestic prices

(Argus Media; Nov. 28) - The U.S. should reexamine the effect rising LNG exports will have on domestic manufacturing and jobs, the head of a trade association said last week. Paul Cicio, president of the Industrial Energy Consumers of America, said the Department of Energy should have a safety valve to reduce liquefied natural gas

exports to protect the public interest. The trade group has long spoken out against unrestrained gas exports that it fears could drive up the cost of gas for its members.

The group of chemical, plastic and steel industries wants the department's annual evaluation of the effect of exports to include a forward look at likely outcomes. The department has the authority to modify or cancel export licenses if it finds them contrary to the national interest. The department has said it does not intend to alter licenses to control domestic gas prices, but could revisit the issue if exports harm the economy — making some potential Asian LNG importers nervous about investing in U.S. projects.

Despite those existing protections, Cicio said the department should be more cautious. The federal Natural Gas Act requires the department to evaluate the effect of exports and approve applications if they are in the public interest, but does not define what that means. Cicio said excessive exports could suppress U.S. job creation or result in job losses if gas prices rise as a result.

U.S. LNG exports drive up trading volume in natural gas futures

(Reuters; Nov. 30) - A surge in speculative interest in the U.S. liquefied natural gas export boom has pushed open interest in natural gas futures to an all-time-high volume, traders said Nov. 30. "There has been a narrative around the market that the LNG exports are going to be the difference-maker this winter, in terms of getting supplies tight and prices higher," said John Kilduff, a partner at energy hedge fund Again Capital in New York. "The thesis is attracting a lot of interest," he said.

Weather models are forecasting a fierce cold air mass by mid-month December, Kilduff said. "The fuse appears lit." Natural gas futures for calendar 2018 have been trading at a premium since August 2016 due primarily to expectations of rising exports next year. The United States is expected to be a net gas exporter on an annual basis in 2017 for the first time in 60 years, due in part to sharp growth in LNG shipments abroad.

The country, which was not exporting any LNG at the start of 2016, is expected to have the world's third-biggest export capacity of the fuel by the end of 2018. The trade is led by Cheniere Energy's Sabine Pass, La., liquefaction terminal that opened in February 2016, with Dominion Energy's Cove Point, Md., terminal to start up next month. In 2018, three more plants are expected to start: Kinder Morgan's Elba Island facility in Georgia, Freeport LNG's facility in Texas, and Cheniere's Corpus Christi facility in Texas.

FERC chair says environmental groups slow down pipeline approvals

(Reuters; Nov. 30) – National environmental groups waging legal battles against energy projects are delaying approval of U.S. natural gas pipelines, the top federal energy regulator said Nov. 30. The groups' lawyers "understand how to use all of the levers of federal and state law to frustrate pipeline development," Neil Chatterjee, the chairman of the Federal Energy Regulatory Commission, told a natural gas industry meeting.

Some recent approvals of gas pipelines have taken two or more years. Chatterjee said he hoped a timeline of two-plus years would not become the new industry norm. While industry officials have often complained about climate activists, Chatterjee's comments, which he said reflected his opinion, are rare for a regulator. He did not identify any specific groups, but the Sierra Club and 350.org both have ongoing campaigns to reject pipelines filled with gas from hydraulic fracturing production.

The groups are fighting fossil fuel projects because they say the production slows the transition to cleaner sources, such as wind and solar. Their lawyers exert pressure on the FERC review process using legal strategies on federal endangered species, clean water and environmental review laws, Chatterjee said. He will head FERC until next month's expected swearing-in of Kevin McIntyre, an energy industry lawyer.

India's 2020 clean-air rules could boost natural gas as vehicle fuel

(Bloomberg; Nov. 30) - India's push for cleaner fuels will not just trigger an electric car boom. It will also drive consumption of natural gas as the nation weans car owners away from polluting fuels like petrol and diesel, among the largest contributors to Asia's third-largest economy's import bill. Gas will offer cheaper mileage, especially after stricter emission standards are rolled out in April 2020.

Compressed natural gas boosts car mileage and lowers costs. It's 59 percent cheaper than petrol and costs 41 percent less than diesel, according to BloombergQuint's analysis. This doesn't factor in the price of the car and maintenance and insurance costs. As a kitchen fuel, piped natural gas is 26 percent cheaper than a subsidized liquefied petroleum gas cylinder.

New Delhi already uses compressed natural gas for public transport. Mumbai has been increasing the fleet of its gas-powered passenger vehicles and other cities may follow suit. The stricter standards will be rolled out in 2020 in a bid to reduce sulfur emissions. The new standards are expected to increase the costs of trucks and buses running on petrol and diesel, making natural gas more cost-efficient.

<u>Calgary company selects Prince Rupert for propane export terminal</u>

(The Canadian Press; Nov. 30) – Calgary-based Pembina Pipeline said its board of directors has approved construction of a propane export terminal at Prince Rupert, B.C., to ship the fuel to markets in Asia and Central America. Pembina said the project at a former pulp mill site on Watson Island is expected to cost about \$260 million, up from a \$150 million estimate last spring due to minor scope changes, dock maintenance and additional site preparation.

The facility, which still requires regulatory and environmental approvals, is expected to be in service by mid-2020 and will have a capacity of 25,000 barrels per day of propane. The abandoned industrial site includes an unused shipping berth with a rail line that will allow Pembina to ship in propane for processing and export. Meanwhile, construction is underway on a separate propane terminal near Prince Rupert that was approved early this year by Calgary-based AltaGas. That project is estimated at up to \$500 million.

The city took possession of the Pembina site two years ago when the pulp mill closed. Propane production has increased rapidly in Canada and the United States in recent years as gas producers have tapped into more shale formations. Propane is a byproduct of shale gas production, and Canadian producers have been looking for new markets for it since their propane has lost market share to growing U.S. supplies in key petrochemical markets.

Alberta suffers another credit-rating downgrade

(CBC News; Canada; Nov. 29) - Shortly after Alberta's finance minister delivered an optimistic prognosis for the province's fiscal health, a credit agency offered a less rosy view. Toronto-based DBRS downgraded the province's long-term debt from AA (high) to AA with a negative outlook, saying Alberta "has yet to demonstrate any real willingness to address the weakest budget outlook among all provinces." The \$45 billion budget for 2017-18 shows a projected \$10 billion deficit mostly due to weak oil and gas revenues.

On Nov. 28, Finance Minister Joe Ceci announced that economic growth in the province would be higher than expected this year and the projected deficit marginally smaller. But in a news release Nov. 29, DBRS said the outlook was not good enough. "DBRS is concerned that the plan to return to balance relies on a recovery in resource revenues, rather than fundamental adjustments to the budget. As a result, debt will continue to rise and there is no clarity as to when the credit profile will stabilize."

The rating agency said deeper budget cuts are needed. "Proposed expense measures will be insufficient to meaningfully address the fiscal imbalance," the company said. DBRS said it would revise its negative outlook if the province introduced a "credible plan" resulting in the stabilization of the debt-to-GDP ratio. In May, S&P Global Ratings

downgraded Alberta's credit rating for the third time since December 2015 by two notches from AA to A+ due to the province's continuing deficits and accumulating debt.

Canada steps in to resolve local permitting dispute over oil pipeline

(The Canadian Press; Nov. 29) - The federal government wants to see a new process established to resolve conflicts over permits that Kinder Morgan says is delaying construction on its Trans Mountain oil pipeline expansion in British Columbia. Canada's Natural Resources Minister Jim Carr said the government has written to the National Energy Board, endorsing the creation of a panel that would address conflicts over municipal or provincial permits.

Kinder Morgan has appealed to the board, arguing the city of Burnaby in Metro Vancouver is wrongly withholding construction permits for Trans Mountain after it has been approved by the federal government. British Columbia's provincial government has also promised to do everything in its power to stop the expansion. Ottawa approved the \$7.4 billion project last year, but Trans Mountain has faced opposition and legal challenges from local communities, environmentalists and First Nations.

The pipeline goes from an Edmonton area tank farm to a port in Burnaby, B.C. Kinder Morgan wants to triple the line's capacity to 890,000 barrels a day. "The government is supportive of establishing a process that would assist in resolving any conflicts over the issuance of municipal or provincial permits and avoid unnecessary delays to project construction or regulatory compliance," Carr said. Kinder Morgan has asked the energy board for an order allowing work to begin without permits from Burnaby.

OPEC extends production cut, but other factors will influence market

(Reuters columnist; Nov. 30) - OPEC and its allies are taking a multi-layered bet that global oil dynamics will work in their favor by extending their crude oil production cuts until the end of 2018. It may give the impression that OPEC and its partners are firmly in control of what's happening in global crude markets. The reality is somewhat different.

There are two main elements, firstly demand from the fastest-growing major markets in Asia, namely China and India, and secondly, how much extra crude will producers outside the deal, most notably U.S. shale drillers, bring to global markets. China, the world's top crude buyer, has seen imports surge 11.8 percent in the first 10 months of the year. Of course, China's import growth may not be as strong next year.

The risk is that China next year looks more like India this year. India, the world's third-largest crude importer, has seen only modest growth this year, with imports up 1.2

percent in the first 10 months of the year. While there are reasons to be optimistic that India will perform better in 2018, the risk for OPEC and its allies is that both India and China surprise to the downside when it comes to demand growth.

On the supply side, the main factor outside of OPEC's control is how much U.S. shale oil will be produced. U.S. output is nearing a record. That's the sort of news that OPEC and its partners won't want to hear, especially since the discount of U.S. oil to Brent crude is over \$6 a barrel, wide enough to make shipping across the Pacific profitable.

OPEC deal a compromise between Saudi Arabia and Russia

(Reuters columnist; Dec. 1) – Ministers from OPEC and their allies have agreed to extend their production pact all the way to the end of 2018, but with a review in June that will take into account market conditions and progress toward rebalancing. The outcome represents a successful compromise between de facto OPEC leader Saudi Arabia (which wanted to announce an extension throughout 2018) and non-OPEC heavyweight Russia (which wanted to avoid giving such a long commitment).

The compromise allows ministers to signal their resolve to do whatever it takes to rebalance the market (a Saudi priority), while preserving flexibility to adapt to changing market conditions (a Russian one). Critically, it recognizes the oil market has already made significant progress toward rebalancing but that there is uncertainty about how quickly the process will be completed.

Global oil stocks are down; crude oil in floating storage has fallen by 50 million barrels since June; and products stockpiles are down to their five-year average. Rebalancing is now more than half-way completed, said Saudi Oil Minister Khalid Al-Falih. For Saudi Arabia, the emphasis is on maintaining production discipline to get the job finished and avoid a renewed slump in oil prices. Russia, however, has begun to worry about what comes next once rebalancing has been achieved. Oil prices could rise, and rising prices would encourage a sharp increase in drilling and production from the U.S. shale sector.

Mauritania says Exxon close to oil and gas exploration deal

(Reuters; Nov. 29) - ExxonMobil is close to a deal to explore for oil and gas offshore Mauritania, its first foray into the West African country, Mauritania's oil, energy, and mines director said Nov. 29. ExxonMobil declined comment. Interest has surged in oil and gas fields offshore of Mauritania and neighboring Senegal since big discoveries by Cairn Energy and Kosmos Energy, the latter now partnered with BP, in separate projects the past three years. Both are expected to start production early next decade.

London-based BP is already developing a major gas project and France's Total has bought into several exploration licenses in both countries. "We have agreed on the terms of three blocks," Moustapha Bechir, Mauritania's director general of oil, energy, and mines said of the Exxon deal, stated at an oil and gas conference in Dakar.

Experts describe the deep waters in West Africa as the next big frontier in energy drilling, though the true size of the deposits is unknown. BP next year plans to make a final investment decision on a liquefied natural gas project that would ship West African gas worldwide. Senegal's and Mauritania's oil and gas were discovered by new technology that has given companies a better idea of what lies under the sea bed.