Oil and Gas News Briefs Compiled by Larry Persily December 21, 2017

China may see Russian LNG as bargaining edge in price negotiations

(Nikkei Asian Review; Dec. 18) - Russia has commenced shipments of liquefied natural gas from its Arctic project, Yamal LNG, and it owes China a big "thank you." After the west imposed economic sanctions against Russia for its annexation of Crimea, it was China that stepped up to provide vital funding for Yamal. There is no shortage of LNG in the global market, and there is an oversupply and numerous eager sellers, from Qatar to Australia. So, it is fair to ask why China was so eager to invest in the Arctic project.

One reason is that China wanted to boost its bargaining power, said Daisuke Harada, of the Japan Oil, Gas and Metals National Corp. He explained it this way: China National Petroleum Corp. will begin importing gas from Russia's largest producer, Gazprom, in 2019 or 2020 via a pipeline across Siberia. By teaming up with Yamal's lead developer, Russia's No. 2 gas player Novatek, CNPC will be able to compare the costs of LNG and pipeline gas, weigh one against the other, and gain an edge in price negotiations.

Another probable reason: China is taking advantage of the west's sanctions against Russia to make inroads in development of Arctic resources. The Arctic is sitting on 1,670 trillion cubic feet of gas, accounting for 30 percent of global undiscovered gas resources, according to a 2008 estimate by the U.S. Geological Survey. Of all the countries that border the Arctic Ocean, Russia lays claim to the largest area. In addition to gas, there is also a real possibility that oil fields can be developed in Russia's Arctic.

Bank says China's growing demand could shift LNG to seller's market

(Australian Financial Review; Dec. 20) - Runaway gas demand in China is transforming the outlook for liquefied natural gas in Asia and could see a return to a seller's market in 2018. That is several years earlier than currently anticipated, according to a Deutsche Bank forecast that stands as a stark contrast with other gloomier predictions. With China's LNG imports up an astonishing 48 percent this year — driven by government-ordered coal-to-gas switching — another bigger-than-expected increase next year could wipe out the oversupply that was forecast to swamp the market in 2018, the bank said.

"This could see 2018 as a transition year for LNG, moving from a buyer's market to a seller's market, potentially bringing forward the commonly accepted 2023-24 inflection point where demand overtakes supply," Sydney-based energy analyst John Hirjee said in the bank report. That compares with a recent forecast from Sydney-based

investment bank Macquarie, which warned oversupply would plague the market until 2022 or even 2027 if the U.S., Russia, and Qatar push ahead with projects in a fight for market share.

On the supply side, as new production is surging, the massive wave of LNG project construction is about to end, Deutsche Bank said. And it suggested potential delays could affect the start-up of the last of Australia's wave of multibillion-dollar projects: Inpex Corp.'s Ichthys LNG and Shell's Prelude floating LNG. Deutsche also noted that Russia poses "a significant risk" to others looking to sell to China. Russian gas producer Novatek is expanding rapidly into LNG exports, and a gas pipeline from Siberia to China is under construction, though its start-up target of December 2019 could slip to 2020.

China's LNG demand expected to continue growing in 2018

(Reuters columnist; Dec. 20) - China strode like a colossus over major commodity markets in 2017, as the world's biggest buyer of natural resources made its presence felt on demand for coal, iron ore, crude oil, and liquefied natural gas. China's influence on major commodities is likely to remain the single most important factor driving supply and demand in 2018.

LNG imports surged 48 percent in the first 10 months of 2017, as Beijing encouraged a switch from coal to the cleaner-burning fuel. Add in pipeline imports from Central Asia, and China's total gas imports were up 26.5 percent in the first 11 months of 2017. Despite the surge in gas imports, and a 9.1 percent gain in domestic gas output in the first 11 months, it became clear that China doesn't have enough of the fuel available to meet its plans to largely phase out coal boilers used by industry and residential heating.

If history is a guide, however, it's likely that by next winter China will have improved its gas infrastructure and will be able to consume more of the fuel. Given the constraints on domestic gas output and the capacity limitations for pipeline imports, this suggests LNG imports will once again rise strongly in 2018. Nonetheless, 2018 is still likely to be a year where global LNG supply will exceed demand, especially during periods of weaker consumption in the northern spring and autumn.

China announces 5-year plan to convert more cities to cleaner energy

(Reuters; Dec. 16) - Amid a deepening heating crisis, China announced Dec. 16 a five-year plan through 2021 to convert more northern Chinese cities to clean winter heating, state media reported. An unprecedented government campaign to switch millions of households and thousands of businesses from coal to natural gas in northern China this

winter has backfired. Severe gas shortages have sent prices soaring nationwide, hitting businesses and residents across China's industrial heartland.

The five-year plan was announced by 10 government agencies, including the National Development and Reform Commission and National Energy Administration, the online edition of Securities Times quoted the China Energy News as saying. The government has made "concrete arrangements" to provide more heat from geothermal, biomass, solar, gas, electric, industrial waste, and clean coal, the Securities Times said. Half of northern China would have converted to cleaner heat by 2019. It gave no further details.

The campaign to convert to gas is part of long-running government efforts to clean the region's toxic air after decades of unbridled economic growth. But factories are closing or operating at reduced capacity, businesses are seeing profits shrink as supply chains are disrupted, and residents are struggling to keep warm in sub-zero temperatures without adequate heat at home or in classrooms, according to interviews conducted by Reuters across the region this month.

China's shift to gas may have come too fast

(Bloomberg; Dec. 20) - As the icy winds of northern China seeped through Liu Yinguang's single-pane windows, the new gas-fired heater in the kitchen sat idle: There was no gas. The 59-year-old laborer was among hundreds in Lirangdian village, south of Beijing, who had been waiting months for gas since the Communist Party banned coal to ease the region's infamous smog. When Liu complained that his 8-year-old grandson couldn't sleep through the cold nights, a local official told him: "Wait patiently."

Authorities relented earlier this month and let villagers burn coal. Liu and his family sit on the front lines of China's biggest policy reversal since President Xi Jinping pledged to unleash an "iron hand" against air pollution. Across the country, officials obediently banned coal before backtracking as they struggled to find supplies and connect villages to gas pipelines. The episode exposes a potential pitfall as Xi amasses greater power to force reforms through China's bureaucracy: Change can sometimes happen too fast.

While residents of wealthier Beijing breathe cleaner air, the heating shortages risk undercutting Xi's promise to improve the lives of the poor. "It used to be underimplementation that was the problem. And now it's over-implementation," said Andrew Polk, co-founder of a research firm in Beijing. The speedy shift overwhelmed the nation, and the gas shortages drove up fertilizer costs, slowed factories, and forced suppliers to send liquefied natural gas tanker trucks 1,400 miles to bring heating fuel to homes.

"What the government failed to consider is the complexity of gas-infrastructure installation and farmers' ability to afford such fuel," said Tian Miao, an energy specialist at Everbright Sun Hung Kai Co., a wealth-management firm in Beijing.

China may step in if U.S. blocks Total from Iranian gas project

(Jerusalem Post; Dec. 15) - China National Petroleum Corp. is considering taking over Total's stake in a giant Iranian gas project if the French company leaves Iran to comply with any new U.S. sanctions, sources said. Total signed a billion-dollar deal to develop the South Pars gas field in July. The contract gave CNPC the option to take over Total's stake if it pulled out, according to sources. The deal was the first major Western energy investment in the Islamic Republic since international sanctions were lifted in 2015.

But after President Donald Trump refused in October to certify that Tehran is complying with the nuclear deal that led to lifting the sanctions, Congress will have to vote whether to reimpose sanctions on Iran. That action could bar companies working in Iran from also operating in the United States. Rather than risk its U.S. operations, Total has said it would leave Iran. CNPC could take over Total's 50.1 percent stake and become operator of the project if Total withdraws from Iran, a senior Beijing-based source said.

Under the terms of the agreement to develop phase 11 of South Pars, the world's largest gas field, CNPC already holds a 30 percent stake, while the Iranian national oil company's subsidiary holds 19.9 percent. The project will have a production capacity of 2 billion cubic feet of gas per day, Total has said. It would start supplying the Iranian domestic market starting in 2021.

Saudis could be looking for U.S. shale deal, maybe even stake in LNG

(Dow Jones Newswires; Dec. 20) - Saudi Arabia is hunting for an energy deal in American shale country. Saudi Arabian Oil Co., known as Aramco, has had initial conversations about either taking a stake in Tellurian, a recent Houston-based entrant in the push to build liquefied natural gas plants on the U.S. Gulf Coast, or agreeing to buy some of its fuel in the future, sources said. Aramco has also inquired about acquiring assets in two giant U.S. oil and gas basins, the Permian and Eagle Ford.

Any effort to acquire U.S. oil-and-gas production assets would mark a watershed moment for Saudi Arabia. It has been the world's top oil exporter for decades, but booming U.S. shale production has shaken the kingdom, depressing prices and compelling Saudi Arabia to rethink its dependence on oil revenues. Investing in shale production could give Saudi Arabia a better understanding of the U.S. oil-and-gas industry, which has upended the traditional model of energy production.

Producing and exporting U.S. LNG would diversify Aramco, which could be attractive to investors ahead of the company's planned initial public offering in 2018. Saudi Arabia has a lot of gas, but it's hard to extract and high in sulfur content that increases its processing costs. Importing LNG so far hasn't made economic sense for Saudi Arabia. The kingdom subsidizes electricity costs for consumers, so the costs of imported LNG make it less attractive than just burning the country's large reserves of oil.

Venezuela awards gas licenses to Russian company

(Reuters; Dec. 17) - Venezuela has awarded licenses to a unit of Russian oil major Rosneft to develop two offshore gas fields, Rosneft said in a statement. Venezuelan President Nicolas Maduro signed the deal during a visit to Venezuela by Rosneft CEO Igor Sechin. During the visit, Sechin also discussed Rosneft's cooperation with Venezuelan state energy company PDVSA, the statement said.

Under the agreement, which is valid for 30 years, wholly owned Rosneft unit Grupo Rosneft will become the operator of Venezuela's Patao and Mejillones offshore gas fields, Rosneft said. The company will have the right to sell all of the production for export, including as liquefied natural gas, the Rosneft statement said. It said estimated reserves at the two fields total almost 6.5 trillion cubic feet of gas, with annual production predicted at close to 250 million cubic feet a day.

Venezuela's unraveling socialist government is increasingly turning to ally Russia for the cash and credit it needs to survive. PDVSA has debts to state-owned Rosneft of \$6 billion, the Russian company estimated in August. Russia's finance ministry last month agreed to restructure Venezuela's debt to Moscow, but not PDVSA's debt to Rosneft.

Russia may help bring gas to Pakistan and India

(The Express Tribune; Pakistan; Dec. 19) - Pakistan and Russia are set to ink agreements this week on laying an offshore gas pipeline and also a pipeline to move regasified LNG imports from a coastal import terminal to northern cities in Pakistan. Moscow could pour a reported \$10 billion in investment into the projects, though both are now just at the feasibility-study stage.

Russia, which controls and manages huge gas reserves in Iran, wants to export Iranian gas by laying an offshore pipeline to Pakistan and India, which are seen as alternative markets because Moscow fears it may lose its traditional buyers in Europe over the Crimea stand-off amid western sanctions. Russia is looking to gain a foothold in the markets of Pakistan and India, and gas-rich Iran is Pakistan's western neighbor.

Pakistan and Russia are poised to ink memoranda of understanding for the offshore pipeline and North-South (Lahore-Karachi) LNG pipeline. Pakistan in recent years has suffered gas shortages, particularly in winter, as domestic production has stood static while demand is growing. The country started importing LNG in 2015, and this fall opened its second import terminal.

Japan expects LNG demand will slip 2.2% next year

(Platts; Dec. 19) - Japan's liquefied natural gas imports are expected to drop to 81 million tonnes in the 2018-19 fiscal year that starts in April, down 2.2 percent from projected imports of 82.8 million tonnes in the current fiscal year as more nuclear reactors restart, the Institute of Energy Economics, Japan said Dec. 19. The IEEJ based its forecast on the assumption that the number of nuclear reactors to restart will reach nine by the end of fiscal year 2018-19 from the current five.

Kyushu Electric's two Sendai reactors, Kansai Electric's two Takahama reactors and Shikoku Electric's one Ikata reactor are currently in operation. As to LNG prices, higher oil prices are projected to push up Japan's LNG import price with the average including oil-indexed long-term contracts expected at \$9.70 per million Btu next year. Spotmarket prices, however, are expected to come in significantly lower, at an average \$6.40 for 2018, the IEEJ said.

The IEEJ also said 26.3 million tonnes of additional LNG annual supply capacity is expected in 2018-19, bringing total global capacity to 304.7 million tonnes. Against this, additional demand of 14.8 million tonnes is projected next year to bring global LNG demand to 293.2 million tonnes.

Egypt plans to stop LNG imports next year as new gas field starts up

(Bloomberg; Dec. 19) – Egypt's energy shortages and power blackouts could be a thing of the past. Eni's massive Zohr gas field, the Mediterranean Sea's largest offshore field, started production earlier this month. Its huge reserves — discovered in 2015 and estimated at 30 trillion cubic feet — could be a permanent remedy to the most populous Arab nation's power needs and bring Egypt closer to its goal of energy self-sufficiency.

On Dec. 16, gas from Zohr began to flow to a facility in Port Said city, with initial production of 350 million cubic feet per day. Daily output is expected to rise to about 1 billion cubic feet in June, and then to 2.7 bcf by the end of 2019. The project could also eventually enable Egypt to return to exporting gas. Previously, Egypt had sufficient supplies to export gas by pipeline to Jordan and Israel and as LNG. Gas shortages began after the 2011 uprising against then president Hosni Mubarak.

The ensuing political struggles scared off tourists and investors, and Egypt had to give up gas exports in 2014 to meet local demand. Egypt now imports liquefied natural gas at high cost to meet its needs. It bought 89 LNG cargoes in fiscal year 2015/2016 at \$2.2 billion, according to the oil ministry. It plans to stop imports by the end of next year because of gas from Zohr, the oil minister said last month. "Zohr is a game changer for Egypt," said Hany Farahat, a senior economist at Cairo-based CI Capital Holding.

Indonesia may look to resell its surplus U.S. LNG cargoes

(Platts; Dec. 19) - Indonesia is planning to postpone LNG imports until at least mid-2019 because more gas is being produced at the Jangkrik field than expected, leading to more supply for domestic needs from the Bontang gas liquefaction plant. The decision could affect the long-term contract between state-owned Pertamina and Houston-based LNG exporter Cheniere Energy. Under the contract, Indonesia is to take 1.52 million tonnes per year from Cheniere's Corpus Christi, Texas, LNG plant starting in 2019.

While long-term LNG contracts tend to lack a mechanism to defer or cancel a significant supply volume, the inherent flexibility of U.S. LNG deals means that offtakers, such as Pertamina, can either resell the volumes to third-parties or divert them to alternative markets if they don't need the gas at home. Pertamina, the majority owner in the 40-year-old Bontang LNG plant, could integrate the Cheniere volumes into its own portfolio for delivery to customers either in Indonesia or elsewhere in Asia, market sources said.

Most of the additional gas production is coming from the Eni-operated deepwater Jangkrik project, which started up ahead of schedule and is already supplying gas to the Bontang LNG plant. Production from Jangkrik was originally expected at around 450 million cubic feet per day in 2017. However, production has already ramped up to 600 million cubic feet. With rising output, Pertamina is expecting to have a surplus of 47 LNG cargoes available from Bontang for delivery in 2018, up from 36 cargoes in 2017.

Maryland LNG plant owner denies report of price renegotiations

(Reuters; Dec. 19) - Dominion Energy said Dec. 19 it had no plans to renegotiate any of its liquefied natural gas sales contracts, a day after India's oil minister said state-owned gas importer GAIL (India) was renegotiating pricing deals with Dominion and another U.S. supplier. "The characterization of contract renegotiations is false ... and Dominion Energy does not intend to renegotiate contract terms in the future," the company said.

Oil Minister Dharmendra Pradhan told lawmakers Dec. 18 that GAIL was renegotiating its long-term contracts with Dominion, which is starting up its LNG plant on Chesapeake Bay in Maryland, and Cheniere Energy, which opened its Sabine Pass, La., export terminal in 2016. GAIL has contracts to buy 5.8 million tonnes of LNG per year from the

two projects. LNG prices have fallen in recent years due to a glut of supply, and Indian companies already have succeeded in renegotiating two non-U.S. long-term contracts.

Dominion said while it had no plans to renegotiate contracts, it continued to talk with customers ahead of the launch of commercial operations at its \$4 billion Cove Point LNG export terminal. The company nudged back the expected start of commercial operations at the plant to early next year from year-end 2017. With Sabine Pass, Cove Point and four more export terminals under construction, the United States is expected to have the third-biggest LNG export capacity in the world by 2019.

Gulf Coast LNG hopeful proposes new pipelines to supply feed gas

(Platts; Dec. 18) - LNG hopeful Tellurian proposed Dec. 18 building two new pipelines to move the growing output of Permian and Haynesville shale gas to the Gulf Coast and boosting access to cheap feed gas for its proposed Driftwood liquefied natural gas export terminal in southwest Louisiana. The announcement comes as the Houston-based company tries to convince investors and LNG buyers that its proposed facility is an attractive option among the multiple terminals eyeing a start-up in the 2020s.

While none of the second wave of U.S. projects has taken a final investment decision this year, Tellurian is aiming to prove commercial viability in 2018 at the same time as it will be soliciting shipper interest in its proposed Permian Global Access Pipeline and Haynesville Global Access Pipeline — each intended to move 2 billion cubic feet of gas per day. The company's previously proposed Driftwood Pipeline, at 4 bcf a day, is moving through the regulatory process. The three lines are projected to cost \$7.3 billion.

While traditionally an oil play, the Permian in West Texas and southeastern New Mexico has been seeing a surge in associated gas, and producers are increasingly looking for options to move those supplies to the coast, where the resources are in high demand for both domestic use and exports. Permian dry gas production has grown 1.1 bcf a day in 2017, and is currently estimated around 6.2 bcf a day, Platts Analytics data show. Platts Analytics anticipates an additional 1 bcf a day of growth by July 2018.

Louisiana questions property tax break that benefits LNG plants

(The Advocate; Baton Rouge, LA; Dec. 17) - In a marshy corner of southwest Louisiana the residents of Cameron Parish are sitting on a gold mine, but they are unable to reap its full rewards. Over the past decade, their region has seen investment in multibillion-dollar liquefied natural gas plants. Cheniere Energy and Cameron LNG are collectively investing \$29 billion in the parish. Theoretically, at least, the crush of new construction should be generating hundreds of millions of dollars in property tax revenue each year.

Such a windfall would be transformative for a rural area of less than 7,000 people still recovering from hurricanes Rita in 2005 and Ike in 2008. But parish government is limping along, short of money for basics like a new school and sheriff deputies. The disconnect between a lack of funding for services and huge capital investments is due to a state program that exempts new manufacturers from property taxes for 10 years.

By year 11, when their owners would be expected to start paying taxes, the value of the plants and machinery usually has depreciated so much that local governments can hope to receive only a modest bump in collections. That explains why the tax break has come under fire in recent years, especially as so much money is being invested in LNG projects. Experts and some politicians have begun to question whether it makes sense.

From 2011 to 2016, Cameron Parish's forgone property taxes amounted to \$4.2 billion — an average of \$700 million a year. The parish exempts about 10 times the amount of property taxes it collects, far and away the highest such ratio in the state. Right next door, Calcasieu Parish, home to Lake Charles LNG, was No. 2 among Louisiana's 64 parishes in industrial tax exemptions, with \$2.8 billion given away over that same span.

Protests continue at Port of Tacoma LNG plant construction site

(KOMO TV; Seattle; Dec. 18) - Protesters who have been at the Port of Tacoma for months staged their largest demonstration Dec. 18 against construction of a \$310 million liquefied natural gas production and storage facility. More than 150 people blocked roads into the Puget Sound Energy construction site. Among the issues is whether the facility is being built on tribal land or land owned by the city of Tacoma.

The city and Port of Tacoma say the land belongs to the city and that they have the right to lease it to Puget Sound Energy for a gas liquefaction plant and 8-million-gallon storage tank for LNG that will be used to fuel marine vessels and provide gas during peak winter demand. But protesters don't agree, and they have chained themselves to construction equipment in the past few months.

Work continues on the project, which is scheduled for full operations in 2019. At peak production, the LNG plant will be capable of making 250,000 gallons a day. Protestors say the facility poses a danger to the region and the global climate.

Chevron runs into delay in reinjecting CO2 from Australia gas project

(The West Australian; Dec. 18) - Technical problems with Chevron's landmark effort to store carbon dioxide from the Gorgon LNG project deep underground may result in more than 5 million tonnes of greenhouse gas being released into the atmosphere over two years. The \$2.5 billion program to inject CO₂ from the offshore Gorgon gas field

underneath the Pilbara's Barrow Island is a major plank of the \$US54 billion LNG project and the recipient of \$60 million in federal government funding.

A Chevron report to the state government released Dec. 18 said start-up checks this year found leaking valves, valves that could corrode and excess water in the pipeline from the LNG plant to the injection wells that could cause the pipeline to corrode. The report to the Department of Water and Environmental Regulation said remedial work meant CO² would not be injected any earlier than the December quarter of 2018.

Chevron had told the government in February — when gas from the CO₂-rich Gorgon field first flowed — that the injection would begin in the first half of this year. An inability to reinject the CO₂ underground this year and in 2018 would mean that the gas would be vented to the atmosphere, making it difficult for Chevron to meet a condition imposed by the Environmental Protection Act in 2009 that at least 80 percent of the carbon dioxide extracted from the gas field over any five-year period is injected underground.

Canadian oil backs up in Alberta, sells at discount of \$25 per barrel

(Bloomberg; Dec. 15) - The trains are running late for Canada's oil producers just when they need them the most. After a two-week shutdown of one of the largest pipelines to the U.S. caused oil to back up in Alberta tank farms, Canadian railroads struggling to fulfill commitments to ship other commodities are not available to help. "It's hard for the railroads to change their operating plan really quickly," Steve Owens, a rail analyst at IHS Markit, said Dec. 13. "There are equipment constraints and crew constraints."

Canadian heavy oil prices sank this week to the cheapest level in four years versus U.S. benchmark West Texas Intermediate — a \$25-per-barrel discount to the U.S. crude — leaving oil shippers racing to clear the glut in Alberta in hopes that prices will recover. But rail lines are busy trying to catch up on delayed grain shipments and can't fit more crude trains at their terminals. Canadian crude fell after TransCanada's Keystone pipeline went down just as new oil sands production was filling up pipelines once again.

For December, Enbridge, which operates the other main pipeline conduit from Alberta to the U.S., rationed the most space on its heavy-oil lines since May and then even further rationed shipments this month. Renewed interest in railing heavy Canadian oil to U.S. refiners began about two weeks ago when Western Canadian Select crude prices fell to a \$20-a-barrel discount to WTI, according to people familiar with the situation.