Oil and Gas News Briefs Compiled by Larry Persily April 5, 2018

Gas pipeline to China largest project ever for Gazprom

(Financial Times; London; April; 2) - An 8,500-person crew is working year-round to build Gazprom's 2,000-mile Power of Siberia pipeline that runs from the gas fields of eastern Siberia to the Chinese border. The pipeline is Russia's most ambitious, costly and geopolitically critical energy project since the fall of the Soviet Union and represents a \$55 billion bet on uncharted territory for the world's biggest gas company. Russia's first eastern gas pipeline is the most striking physical manifestation of President Vladimir Putin's diplomatic pivot toward China amid worsening relations with the west.

For Gazprom, it's the largest and most expensive project in its history, including field development costs. When the gas starts moving in December 2019, the world's largest gas exporter will be connected for the first time with the world's largest energy importer. Already more than half completed, the pipeline snakes across plains and swamps, rivers and permafrost, creeping at a rate of about 1.2 miles a day. "This is a very big and difficult engineering task," said Vladimir Shmatovich, a vice president at TMK, a Russian company supplying pipe to Gazprom.

The major investment is not without risks, such as a fall in oil revenues or lower-thanexpected gas demand from China. Any cooling of the new warmth in the fickle Beijing-Moscow alliance could hurt demand for gas. China sees the pipeline as a part of its future energy security, but Beijing is not short of other willing suppliers. "The Chinese were very tough," said one person involved in the project negotiations. "[But] what is a decade for a country that thinks of itself as 5,000 years in the making?"

Since Russia and China signed the gas supply agreement in 2014, Chinese banks and companies have poured more than \$40 billion into Russian businesses, including loans to projects such as a \$27 billion Yamal liquefied natural gas plant in the Arctic and share purchases such as CEFC China Energy's 14.2 percent stake in oil company Rosneft.

Investors, banks may need to take more risk to finance LNG projects

(Wall Street Journal; April 2) – Liquefied natural gas may be the only big growth market for fossil fuels. Last week, Lorenzo Simonelli, CEO of oil field services giant Baker Hughes, painted a bullish long-term picture. While overall fossil-fuel demand has slowed, LNG is seen growing by 4 to 5 percent a year through 2040. He said the industry was surprised by how quickly demand grew last year, especially in China.

Meanwhile, the market has changed. LNG megaprojects in Australia, Qatar, and Russia caused supply to outstrip demand and some operators were forced to alter contracts on terms more advantageous to buyers. Some buyers chose not to lock in 15- to 20-year contracts linked to oil prices. Now contracts are about a third as long — with more wiggle room. That's a problem for anyone seeking to finance a new project.

Analysts at HSBC point out that only 12 million tonnes per annum of new LNG production capacity were added in 2016 and 2017 — about half the pace of 2009-2014 and not enough to meet projected demand. One solution might be convincing banks to take on more risk, financing new projects with only half of the output under contract.

Another might be for equity investors to take more risk. Yet another way to get projects running, according to the HSBC analysts, might be for services companies like Baker Hughes to chip in some money themselves. Given the long time it takes to develop a project, though, the market might get tight again due to lack of new capacity. Sky-high spot prices would then attract a wave of investment, leading to the next crash in prices.

Tokyo Gas expects flexible LNG contracts to become the norm

(Reuters; April 2) - Japan's biggest city gas seller Tokyo Gas expects that contracts for liquefied natural gas cargoes with destination flexibility will spread from the West and Japan to become common worldwide, the company's new president said. Japan's Fair Trade Commission last June ruled that destination restrictions that prevent reselling of contracted LNG cargoes breach the country's competition rules. The decision is set to shake up the Asian market for the fuel in the same way as in Europe.

"Europe has been free from destination clauses basically, while Japan also issued such a recommendation and Asia is set to follow up," said Tokyo Gas President Takashi Uchida. U.S. LNG exports are already free from destination restrictions. "The global trend is clearly toward lifting destination clauses. It is a buyer's market now, so we can get good conditions," Uchida said.

"If you don't need gas, you don't need to take it and you can bring it to somewhere else," Uchida said. Tokyo Gas and Japan's JERA Co., the world's top LNG buyer, have separately renewed their expiring contracts for Malaysian LNG. Thanks to the buyer's market, Tokyo Gas, Japan's second-biggest buyer of LNG, renewed its long-term Malaysia contract with destination flexibility "at good terms," Uchida said. Tokyo Gas plans to increase its ratio of short-term and spot LNG cargoes to long-term contracts.

Japan sees growing role from selling its surplus LNG in Asia

(CNBC; April 2) - China's ambitious Belt and Road Initiative is changing the landscape of emerging countries by pouring money into infrastructure and energy, leaving regional rivals seemingly in the dust. But Japanese companies see opportunity in an important industry in China's backyard: liquefied natural gas. Facing an excess of natural gas at home, Japanese firms are looking to sell their surplus LNG overseas. In that role, Japan is making an effort to shape the gas market in many emerging Asian countries.

In October, Japan's trade minister said the country will offer \$10 billion in support to supply LNG or build gas infrastructure in Asia. That's a move that will "kill several birds with one stone," according to Jane Nakano, a senior fellow in the Energy and National Security Program at the Center for Strategic and International Studies. Not only will the investment help Japan slash its stocks of LNG, but it will also boost its alliance with the United States by driving demand for U.S. gas, Nakano said in a recent podcast.

Southeast Asia is a fierce battleground for energy firms, as Japanese companies, armed with their vast experience in the LNG field, build new plants and infrastructure to supply the region. Gas demand in those countries is growing rapidly and despite China's attempts to dominate the region through wider economic power, Japan still has a competitive edge in the natural gas industry.

Global LNG market could come up short until new tankers are built

(Bloomberg; April 1) - More new tankers were ordered in the first quarter of 2018 to carry liquefied natural gas than in all of 2017. Still, the buildout won't come fast enough to meet growing global demand. That's the message from GasLog, a Monaco-based tanker owner and manager that's predicting a 30- to 40-vessel gap by 2020 as the number of export terminals worldwide continues to rise.

Shipping costs could rise, and it may be tougher to get the gas to markets, said Jefferson Clarke, an analyst at London-based Poten & Partners. "There's a good chance LNG shipping costs will rise because demand will grow faster than the existing fleet," Clarke said. At the same time, geographic dislocation could lead to challenges. "When you have a shortage, vessels aren't always where you need them to be," Clarke said. "If there's additional demand in one basin, there may be no ships in another."

Most LNG tankers take two-and-a-half years to build. In 2016, six new vessels were ordered and there were 10 orders for new tankers last year. Since January 1 this year, a dozen more tankers have been ordered. But even that may not be enough to keep up with rising demand and an expanding set of export terminals. The shortage won't affect the entire LNG industry. Most ships operate under long-term contracts at fixed terms.

Spot-market LNG prices in Asia drop 22% February to March

(Interfax Global Energy; April 3) - Asian spot-market LNG prices fell by 22.2 percent in March from February, the steepest drop for a single month since February 2016. The spot-market price in Japan, South Korea, China, and Taiwan averaged about \$8 per million Btu in March, down from over \$10 in February. The end of winter demand and ample supplies contributed to the drop in prices.

Softer demand prompted eight Chinese terminals to cut their prices for trucked LNG for April by an average of 22.6 percent from March, the largest drop in prices since at least January 2013.

Industry worries change in Australian tax laws could hurt investment

(Australian Financial Review; March 26) - Woodside Petroleum's Browse liquefied natural gas project in Australia has emerged as a key target for the expected toughening up of the country's rules on petroleum taxation, highlighting concerns that any scaling back of generous tax deductions for capital spending could risk derailing more than \$50 billion of future investment across the industry.

The local head of Shell, which is Woodside's biggest partner in the \$US20.5 billion Browse proposal, underlined the worries about the potential impact, saying any changes in the country's Petroleum Resource Rent Tax would make it more expensive to do business in Australia. "It will add to the costs of operating in Australia. It is something for us to be cautious about," said Zoe Yujnovich, Australia chair of Shell. The tax structure allows companies to fully recover their investment before they start paying the tax.

Political and public criticism has grown as the government has collected little revenue from the resource tax after companies invested tens of billions of dollars in LNG projects in recent years. The Australian government is reviewing the tax structure and will propose changes. Woodside's \$US9.7 billion Scarborough gas project off Western Australia and ConocoPhillips' \$US4 billion Barossa gas project off the north coast are also expected to be in the firing line depending on the tax changes.

"The next potential wave of Australian projects ... could all potentially be put at risk, depending on the details," said Saul Kavonic, of energy consultancy Wood Mackenzie. Tax changes "could sway the upside versus downside calculus undertaken by industry when deciding to take a final investment decision."

Explorer plans to frack first well in U.K. in third quarter

(UPI; April 3) - The first-ever hydraulic fracturing effort in the United Kingdom is set for the third quarter following well completion in Lancashire. Cuadrilla Resources said April 3 it completed the first-ever horizontal shale gas well at its exploration site at Preston New Road in Lancashire. The British government estimates shale basins in the country may hold more than 1,000 trillion cubic feet of gas.

Shale gas development is in its infancy in the country, though the British government moved to fast-track the permit process. Francis Egan, Cuadrilla's CEO, said finishing the first horizontal well in the country is a step toward getting gas flowing to British homes. "From the data we have amassed so far we are optimistic that, after fracturing the shale rock, gas will flow into this horizontal well in commercially viable quantities demonstrating that the U.K.'s huge shale gas resources can be safely produced."

Though the government in 2016 published a 600-page ruling that said shale gas was in the national interest, Cuadrilla has been the target of widespread protests from opponents of hydraulic fracturing. Cuadrilla said it would apply "in the very near future" for the permits necessary for fracking at its well site in Lancashire.

Protests continue against small LNG plant in Tacoma

(The News Tribune; Tacoma, WA; April 2) - Protesters of a liquefied natural gas plant being built on Tacoma's Tideflats gathered outside Puget Sound Energy's headquarters in Bellevue, WA., on April 2 and did a little building of their own. Protesters built a small replica of a Native American longhouse outside the entrance to PSE's headquarters. The longhouse was built without permits, protesters admitted, though they said they applied for permits with the city of Bellevue.

The demonstration was a dig at PSE, which was issued a notice of violation by the multi-county Puget Sound Clean Air Agency last April for "failure to obtain a notice of construction approval prior to construction." PSE spokesman Grant Ringel said the company supports the rights of the protesters to express their opinions. He said the protesters arrived about 8 a.m. and left about 10:30 a.m. The \$310 million project is under construction with an in-service date projected for late 2019.

"This is how it feels when your consent is taken from you — we're building without permission on PSE property, just as PSE is doing on our land," said Puyallup Tribe member Dakota Case. The tribal council said it was not adequately consulted about the project, which it said is located on ancestral tidelands. The land is owned by the Port of Tacoma. The plant will have capacity to make 250,000 gallons of LNG a day and store 8 million gallons on site. The LNG will be used as a backup gas supply on peak demand days and sold for transportation use, such as TOTE Maritime's Alaska-bound ships.

Shell-PetroChina gas field would help supply B.C. LNG plant

(Globe and Mail; Canada; April 1) - Shell Canada has mapped out plans to tap into its vast reserves of natural gas in northeast British Columbia to help supply a proposed liquefaction terminal on the West Coast for exports. The company's Groundbirch joint venture with PetroChina is positioned to play a leading role in supplying the Shell-led liquefied natural gas project, LNG Canada, proposed for Kitimat in northwest B.C. The partners in the LNG project are looking at a final investment decision later this year.

Shell owns an 80 percent stake in the Groundbirch gas play while the remaining 20 percent is held by PetroChina, which acquired its interest in 2012. The Groundbirch reserves in northeast B.C. are large with industry estimates saying they will last more than 35 years based on existing production levels of about 500 million cubic feet per day. Shell also holds 50 percent of LNG Canada, with PetroChina at 20 percent and Korea Gas and Japan's Mitsubishi each at 15 percent.

Another important source of gas will be the Cutbank Ridge play in northeast British Columbia. Encana holds a 60 percent stake in the Cutbank Ridge joint venture with Mitsubishi owning 40 percent. LNG Canada's first phase will rely primarily on gas from Groundbirch and Cutbank Ridge, said Michael Crothers, president of Calgary-based Shell Canada. The project's initial phase of two liquefaction trains would have capacity to make 13 million tonnes of LNG per year.

Analysts speculate who signed 100-year pipeline contract to ship gas

(The Financial Post; Canada; April 3) - Gas producers and analysts are trying to solve a mystery: Who signed a 100-year contract to ship on TransCanada's pipeline system? The question has persisted since February when TransCanada informed its customers of the outcome of an open-season bidding to ship 260 million cubic feet of gas a day on its Nova Gas Transmission System to the critical east-bound export point called East Gate at Empress, Alberta, to feed the energy-hungry markets of Ontario and Quebec.

Calgary-based TransCanada has been working to expand access to East Gate following outcry from gas shippers in Alberta, many of whom blamed the pipeline giant for the volatility in the Alberta gas benchmark price through the second half of 2017 that at times led to negative prices. TransCanada said the average term the company awarded for space following one of its recent open season bidding was 107 years.

A century-long contract is quadruple the length of similar contracts TransCanada has awarded in recent months as the company has carried out multiple open seasons. "I just don't understand how you can run your business with a 100-year time horizon," Raymond James analyst Jeremy McCrea said. It has also led to something of a mystery, as companies try to ascertain what kind of company — either a utility or a gas

producer — would agree to a contract that long. "Who would've done that?" said Jupiter Resources vice president for capital markets Ryder McRitchie.

Exxon's Imperial Oil puts B.C. shale gas assets up for sale

(Globe and Mail; Canada; April 3) - Imperial Oil has put a natural gas property in British Columbia on the block in the latest example of a major producer paring exposure to Canada. Imperial and its partner in the development, ExxonMobil, are selling their Horn River shale gas asset in the province's northeast corner. Exxon owns a majority stake in Imperial. The property includes 239,000 acres plus ownership in pipelines, roads, and facilities, according to a posting in the Daily Oil Bulletin, an industry trade publication.

Imperial shelved the Horn River project last year at the same time it abandoned the long-stalled Mackenzie Valley gas pipeline in the Canadian Arctic, taking a \$289 million charge in the fourth quarter. Proposals for the Mackenzie line go back to the 1970s. In 2016, Imperial sought a buyer for its Norman Wells oil operations — founded in the late 1930s — in the Northwest Territories, and has also sold its network of gas stations as it focuses spending on its expanding oil sands business in Alberta.

The latest move by the Calgary-based company comes amid a broad retreat from Canada by the world's largest energy companies, a pullback that has sparked fears the country is losing ground to the United States in attracting investment in energy projects. The 50/50 Horn River joint venture with Exxon was once touted as a potentially major supply source for liquefied natural gas export projects proposed for the British Columbia coast, but those multibillion-dollar developments have mostly stalled.

India ready to offer investment in Iranian gas field

(Reuters; April 4) - India is set to offer a \$3 billion to \$4 billion development plan for Iran's Farzad B gas field next week after Tehran reduced the scope of the project, two people familiar with the matter said. Relations between the two countries, which have long held deep trade ties, were strained last year after Iran sought other investors for the gas field and media reports suggested Tehran would award it to Russia's Gazprom. In retaliation, India directed its state refiners to cut oil imports from Iran.

At a meeting in New Delhi in February, Iran reduced the scope of the development plan for the Farzad B field and asked India to submit a revised proposal, said the two sources. New Delhi and Tehran have been trying to narrow differences over Farzad B development rights since its 2008 discovery by Indian firms led by ONGC Videsh, the foreign investment arm of Oil and Natural Gas Corp.

Indian companies were hoping to get rights to develop the asset as the South Asian nation was one of the handful of nations that continued to deal with Iran during years of sanctions against the country over its nuclear program. The new terms confine Indian companies to just production of gas and development of the field. The new terms do not include gas processing and development of downstream projects. The field is estimated to hold 22 trillion cubic feet of reserves, of which 16 tcf are deemed recoverable.

Indonesia will keep more LNG for domestic use after plant expansion

(Reuters; April 4) - BP is targeting shipping 119 cargoes of liquefied natural gas from its Tangguh project in Indonesia's West Papua province this year, including 22 for the domestic market, a company official said April 4. BP expects to keep the same balance of shipments between export and domestic unchanged to 2020, BP Indonesia country head Dharmawan Samsu told a parliament hearing. After 2020, BP will dedicate roughly one-third of the expanded Tangguh output to domestic needs, about 60 cargoes.

Growing energy demand at home is pushing Indonesia to keep more LNG to meet the domestic needs of the far-flung archipelago that stretches 3,000 miles. Tangguh's annual output capacity is 7.6 million tonnes from two liquefaction trains. A third train is under construction and expected to be completed around 2020, Samsu said. The plant opened in 2009. Indonesia's first LNG facility opened in 1977.

BP leads the Tangguh project with a 40.22 percent stake with partners from Japan, China, South Korea, and Indonesia. China is listed as the buyer of slightly more than one-third of this year's output at Tangguh.

Canadian oil sold at \$7.32 discount to U.S. crude in January

(Edmonton Journal; April 3) - Continued pipeline bottlenecks boosted the discount that Canadian oil suffers vs. U.S. oil prices in January from the end of 2017, a new report says. But that gap could begin to shrink once the Sturgeon refinery northeast of Edmonton reaches full operation later this year and gives Canadian producers another processing option, said a forecast released April 3 by consulting firm Deloitte.

The report, which comes as construction of three major Alberta pipelines remains uncertain, said the discount between Edmonton Light oil prices and U.S. benchmark West Texas Intermediate increased to US\$7.32 per barrel in January after averaging US\$3.93 in the past three months of 2017. That difference, which in the past five years has hit nearly US\$20, is expected to shrink to approximately US\$3.50 by 2019.

"WTI (West Texas Intermediate) crude prices pulled away from Canadian crude prices in the quarter as supply in Canada exceeded pipeline capacity, causing transportation issues north of the border," the report said. "In recent years, the differential has become significantly more volatile primarily due to the emergence of U.S. shale production and oversupply in Canadian markets."