

# Oil and Gas News Briefs

## Compiled by Larry Persily

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#### **Companies reach deal with Papua New Guinea for LNG expansion**

(Reuters; April 8) - France's Total and its partners signed a long-awaited deal with Papua New Guinea on April 8 that will allow initial work to start on a \$13 billion plan to double the country's liquefied natural gas exports. Developing the Pacific island nation's gas reserves is seen as crucial to its economy as LNG is its biggest export earner. Oil Search, a partner with Total and ExxonMobil, said the agreement will allow the parties to start engineering and design work for the project called Papua LNG.

They now aim to make a final investment decision in 2020, targeting first gas in 2024, Oil Search said. The Australian company had hoped the deal with the government would be sealed in 2018, as LNG developers in Canada, Mozambique, Qatar, and the U.S. race to meet an expected supply gap in Asia in the early 2020s. The agreement was delayed after an earthquake hit PNG a year ago, sapping government resources and slowing talks over issues such as how much gas will be reserved for local needs.

Papua LNG plans to develop the Elk and Antelope gas fields to feed two liquefaction units to be built at the 5-year-old PNG LNG plant run by ExxonMobil. Total said the Papua LNG project will add 5.4 million tonnes per year capacity. At the same time, ExxonMobil plans to add a third train at PNG LNG, to be fed with gas from its existing fields and a new field, P'nyang. Together, Papua LNG and the ExxonMobil expansion are set to roughly double exports from the PNG LNG plant to 16 million tonnes a year.

Under the deal signed, the government will hold a 22.5 percent equity in Papua LNG. Total, Exxon, and Oil Search have agreed to front the government's share of the costs until a final investment decision. The government then will have to fund its equity share of construction, roughly \$900 million, assuming the project is 70 percent debt financed.

#### **Japanese utilities' joint venture buys from LNG Canada**

(Reuters; April 8) - Japan's JERA, the world's top buyer of liquefied natural gas, on April 8 said it had signed an agreement with a Mitsubishi unit to buy up to 16 cargoes a year, or 1.2 million tonnes, from the LNG Canada project under construction in Kitimat, British Columbia. The heads of agreement between JERA and Mitsubishi's Diamond Gas International is for about 15 years starting April 2024, said JERA, a joint venture between Tokyo Electric and Chubu Electric. The plant is scheduled to start up by 2024.

The Shell-led C\$40 billion LNG Canada project was given the go-ahead by the Anglo-Dutch giant and its partners last October, making it the first major new liquefaction project to win approval in recent years. Along with Shell and Mitsubishi, the other partners are PetroChina, Korea Gas and Malaysia's Petronas. Buyers from the project include trading house Vitol as well as Tokyo Gas, Toho Gas, and Korea Gas. The 1.2 million tonnes in the JERA deal represent almost 10 percent of the project's capacity.

The JERA deal with Diamond International includes destination flexibility, allowing JERA to resell cargoes at its choice. The joint venture said the terms are in line with the Japan Fair Trade Commission ruling in June 2017, which declared that destination-restriction clauses traditionally inserted into long-term LNG sales contracts were anti-competitive. The commission called for destination flexibility in contracts.

### **Novatek provides Putin the Arctic expansion he wanted**

(Bloomberg; April 7) - Almost 1,500 miles from Moscow, the tiny port of Sabetta nestles in a desolate Arctic peninsula. A former outpost for Soviet geologists, it's now the site of Russia's most ambitious liquefied natural gas project, operated by a newcomer to the LNG market. Novatek, the main shareholder of the Yamal plant, said its plans for more projects will transform Russia into one of the biggest exporters of the fuel within a decade. Already gas exports from Sabetta are giving President Vladimir Putin's Russia another conduit into the world economy for the country's unrivaled energy resources.

Novatek has demonstrated that it's possible to produce and liquefy the fuel in such harsh conditions at competitive prices and ship it to markets thousands of miles away in Europe and Asia. That's helped by receding arctic ice which is allowing a specially built fleet of strengthened tankers to ship fuel along Russia's northern coast. This week, Putin will tout the potential for development of Russia's hydrocarbons at the International Arctic Forum in St. Petersburg. Russia's leader has been a longstanding supporter of developing oil and gas resources locked under the region's permafrost.

When opening the first production train at Yamal in late 2017, Putin said the region gives Russia the "niche it deserves" in the LNG market. "We can boldly say that in this century and the next, Russia will expand thanks to the Arctic." Novatek is almost ready to announce its second Arctic LNG project, while already considering a third. Russia, the world's largest gas exporter, has been slow to join the global LNG boom as it has focused investment on pipeline supplies to Europe, but Novatek is changing that. State-owned giants Gazprom and Rosneft are looking at LNG too.

## **Novatek succeeds at leading Russia's LNG growth**

(Natural Gas World; April 6) - Novatek is the largest independent oil and gas company in Russia. But its size pales in comparison with its domestic, state-owned competitors Gazprom and Rosneft with 10 times the annual revenues of Novatek. Nevertheless, Novatek is at the frontier of innovation in Russia's energy sector, particularly liquefied natural gas. Gazprom and Rosneft have not kept up with LNG market developments.

Even though Gazprom currently owns a majority stake in the 10-year-old Sakhalin-2 LNG export project in Russia's Far East, Shell is the company that provided technology and developed the terminal. And while Rosneft pushed and succeeded in freeing LNG from Gazprom's longstanding gas export monopoly, its own plans to develop an LNG export business have yet to materialize. Instead, Novatek seized the opportunity.

Independent and nimble, Novatek was able to take risks the state-owned firms were not ready for. It started up Yamal LNG, the country's second export terminal, in December 2017, and already is moving toward its next project, Arctic LNG-2, which it hopes will become operational in 2022-2023. Novatek advertises the low-cost of its LNG (\$0.10 for feedstock and \$0.50 for liquefaction per million Btu), along with its geographic location that can serve Europe or Asia, positioning Novatek as an important portfolio player.

While impressive, Novatek's accomplishments haven't exclusively relied on business acumen and/or low costs. The Russian government has been extremely supportive of Novatek's Yamal venture, paying for infrastructure and granting a 12-year tax holiday.

## **Novatek says Yamal LNG capacity will grow to 18.5 million tonnes**

(Reuters; April 10) - The chief executive of Russia's leading liquefied natural gas exporter Novatek, Leonid Mikhelson, said April 9 the final output capacity of the company's Yamal LNG plant in the Siberian Arctic is expected to reach 18.5 million tonnes per year. The plant, launched in December 2017, has exceeded its planned annual production capacity of 16.5 million tonnes. In addition to that boost, Novatek expects to launch a new liquefaction unit with capacity of about 1 million tonnes by the end of this year, Mikhelson said at the International Arctic Forum in St Petersburg.

## **Trump wants to make it easier to ship LNG by rail**

(Bloomberg; April 11) - President Donald Trump wants to allow the shipment of liquefied natural gas in railroad tank cars, a move that would open new markets for the fuel but could risk catastrophic accidents if a car were to derail. Trump on April 10 ordered the Transportation Department to write a new rule permitting LNG shipments in specialty

tank cars. The order follows a lobbying campaign by railroads and gas advocates who argue it's needed to serve the U.S. Northeast, which is short of gas pipeline capacity.

The effort, which could help offset falling rail shipments of coal, mirrors how the oil industry turned to trains to ship crude when there weren't enough pipelines to meet demand. But a series of spills and other accidents — including a runaway oil train that derailed and killed more than 40 people in a small Quebec town in 2013 — have safety advocates warning against putting LNG on the rails.

"It's a disaster waiting to happen," said Emily Jeffers, with the Center for Biological Diversity. "You're transporting an extraordinarily flammable and dangerous substance through highly populated areas." LNG is already shipped aboard oceangoing carriers, ferried across the U.S. in trucks and held in storage tanks to ensure enough gas is on hand when demand escalates. LNG does not burn on its own and can't ignite in its liquefied state. The risk comes if a tank car ruptures and LNG is exposed to the air, triggering a rapid conversion back into a flammable gas. However, supporters of rail transport stress that the gas dissipates rapidly and has a narrow ignition window.

### **Toshiba's deal to sell its U.S. LNG business falls apart**

(Reuters; April 11) - China's ENN Ecological Holdings Co. said April 11 it will scrap a deal to buy Toshiba's U.S. liquefied natural gas business due to a failure to obtain approvals from its shareholders and from a U.S. government panel that monitors foreign investments. The cancellation is a blow to Toshiba, the once-mighty Japanese conglomerate as it must look for a new buyer for the LNG business that it previously said could potentially cause losses as much as 1 trillion yen (\$9 billion).

The reasons for ENN's cancellation were that the deal was not completed by the March-end closing date in the agreement and that the required conditions could not be met in a short time, leading to considerable uncertainty in proceeding with the transfer, Toshiba said. Toshiba in November agreed to pay ENN to take over its LNG business in the United States as part of a plan to shed money-losing assets. The deal was subject to review by the Committee on Foreign Investment in the United States (CFIUS).

Under the deal Toshiba would have sold its America LNG unit to ENN Ecological, a unit of ENN Group. Toshiba would have made a one-time payment of \$821 million to ENN to take over Toshiba's \$7 billion, 20-year commitment starting in 2020 to purchase 2.2 million tonnes of LNG per year from Freeport LNG in Texas. Toshiba had decided it did not want to carry the long-term risk of possibly losing money on the gas during market downturns.

## **Saudi Aramco may get into LNG trading business**

(Bloomberg; April 9) - The world's largest oil company is moving into the world of liquefied natural gas, offering to supply Pakistan with cargoes of the fuel even though it doesn't produce any, according to a Pakistan government official. Saudi Aramco Products Trading Co., the merchant arm of Saudi Aramco, has expressed interest in selling LNG cargoes on a spot or short-term basis to Pakistan, said Nadeem Babar, head of Prime Minister Imran Khan's task force on energy reforms.

Aramco will send a delegation to Pakistan this week to discuss the proposal, Babar said. An Aramco spokesperson declined comment. Any sale of LNG would be a first for the world's largest oil producer. Aramco doesn't produce any LNG, but in January it hired an employee to develop its LNG business, focusing on trading and marketing. The energy giant has been looking at natural gas assets in Russia, Australia, and the United States, Saudi Energy Minister Khalid Al-Falih said last month.

Natural gas, which emits less carbon than oil or coal when burned, is expected to be the fastest-growing fossil fuel with demand seen expanding 43 percent through 2040 versus 10 percent for oil, according to the International Energy Agency. Saudi Arabia is also planning to boost its use of gas at home to replace oil-fueled electricity generation.

## **Cheniere ready to sign deals with China as it waits out trade fight**

(Bloomberg; April 7) - America's biggest liquefied natural gas exporter is ready to sign long-term agreements with buyers in China, the world's top market for the fuel, with or without a trade truce. Cheniere Energy isn't delaying any LNG deals because of the trade dispute, CEO Jack Fusco said in an interview in Shanghai. If that's happening, it's on the part of Chinese customers or their government, he said.

"Their approval process is between them and their regulatory agencies," Fusco said on the sidelines of the LNG2019 conference. "We are a publicly traded company, and we are not going to slow down." A supply deal between Cheniere and China Petrochemical Corp., known as Sinopec, is reportedly awaiting a resolution to the U.S.-China trade spat. The companies had been in talks for nearly a year when progress stalled as the U.S. escalated a tariff war between the two countries, sources said last month.

While China has at times been a large buyer of spot LNG from the United States, the only long-term contract is between Cheniere and a unit of state-owned China National Petroleum Corp. for 1.2 million tonnes per year over 25 years. That deal was signed in February 2018 before the U.S.-China trade fight intensified. "Two companies working together could be a win-win," Fusco said. "A Chinese company and an American company, trying to show our administrations what the possibilities are."

## **Report criticizes regulatory delays for Canadian pipelines**

(Calgary Herald; April 4) - Frustrated by regulatory delays, pipeline companies have submitted just one proposal for a new natural gas pipeline in Canada the past two years, according to a new report that blasts Canada's competitiveness. The Canadian Energy Pipeline Association and consultancy Ernst & Young released a report April 3 sharply critical of regulatory overlap, uncertainty and timelines in Canada relative to the U.S., which the report said is now a more attractive place to build pipelines.

The report notes that since 2016, Canadian companies have submitted only one new pipeline project for National Energy Board approval compared with 14 equivalent applications to the U.S. Federal Energy Regulatory Commission. The NEB proposal is an application from TransCanada to expand and de-bottleneck its 15,000-mile Nova gas pipeline system in Alberta and British Columbia, which is the largest gas line network in Canada but has required maintenance to alleviate pinch points along the system.

"Over the past several years there has been an increase in the volume, complexity, and duplication of regulations imposed on the pipeline industry in Canada," Ernst & Young's Canadian oil and gas leader Lance Mortlock wrote. "This regulatory layering, along with other factors, is decreasing Canada's competitiveness." The report showed that overall capital spending in the U.S. oil and gas sector has increased 38 percent since 2016, while capital spending in Canada decreased 19 percent over the same time period.

## **Canada has gas but finds it hard to get to market**

(Forbes; April 5) - In this booming age of natural gas, high-resourced Canada has seen flat production and demand over the past decade. This is a bit surprising since Canada enjoys many of the same advantages as the U.S. shale revolution. Canada has a huge shale gas resource, leading oil/gas companies and experts, and a free market. Up 25 percent over the past decade, Canada's proven gas reserves now stand at a very solid 70 trillion cubic feet. The Montney shale play in the west could hold a staggering 450 tcf.

But some 97 percent of all gas produced in Canada occurs in the westernmost provinces, and the obvious problem with such a western-based supply system is that over 70 percent of the population lives in the eastern half of the country. Canada's gas industry has quickly devolved into crisis mode. Soaring shale production in the U.S. has lowered the need for Canadian gas imports, and Canada's gas sales to the United States, long its only customer, have steadily declined 25 percent since 2007.

In fact, some companies such as TransCanada have been cutting pipeline tolls to try and get Western Canadian gas to central and eastern provinces and to better compete with imports of cheap shale flowing into the country from the United States. Worse, building new pipelines to move gas out of Alberta has been extremely slow, facing

pushback from environmental groups and/or indigenous peoples, regulatory burdens, costs overruns and other problems, especially to reach the coast for LNG export.

### **Exxon in talks for LNG export of Israel's offshore gas**

(Bloomberg; April 10) - ExxonMobil is in discussions to build a platform that would expand the export reach of Israel's biggest gas field. The company is in talks with the firms developing the Leviathan field to build a floating liquefied natural gas production facility, sources said. The project would allow Leviathan partners to export to countries not reached by pipeline and avoid the need for pipelines to connect to LNG facilities in Egypt. It's possible the discussions won't lead to a partnership, the sources cautioned.

Despite considerable gas finds in the Eastern Mediterranean over the past decade, viable export routes have proven tough to find and global energy firms haven't rushed in. Leviathan's U.S. and Israeli partners have signed deals to meet demand in Egypt, Jordan, and Israel, but haven't yet found a way to export to Europe or East Asia. The partners developing Leviathan, a deep-sea find of about 21 trillion cubic feet, have bookmarked the next phase of the field's development for export deals.

Israel's Delek Drilling, the biggest shareholder in the Leviathan field, is looking into several options, such as buying a stake in one of Egypt's liquefaction plants. For Exxon, expanding into Israel would reflect the company's growing ambitions in the Eastern Mediterranean, an area that straddles Egyptian, Israeli, Lebanese, and Cypriot waters. Exxon established a foothold in the region in February, when it found an offshore gas reservoir in Cypriot waters that's about one-third the size of Leviathan.

### **Shell drops out of Gazprom-led Baltic LNG project**

(Reuters; April 10) - Shell has decided to drop out of the proposed liquefied natural gas project led by Russia's Gazprom on the Baltic coast. The move comes as Western firms struggle to expand in Russia amid pressure from U.S. economic sanctions, while for Gazprom it could mean limited access to Shell's technology and no access to Shell's money. Shell, which has a long history of energy cooperation with Russia, said earlier it was studying the possible implications of a recent decision by Gazprom to move toward the full integration of its Baltic LNG and gas processing plants.

"We have decided to stop our involvement in this project," said Cederic Cremers, Shell Russia's chairman. Shell remains a shareholder in the Gazprom-led Sakhalin-2 plant, which produces LNG on Russia's Pacific island of Sakhalin. Its decision to leave the Baltic project leaves open a question about the availability of liquefaction technology without Shell's participation. Shell had developed a technology specifically for the

Sakhalin LNG plant, and in February said it had created a 50/50 venture with Gazprom that would use Shell's know-how to develop Russia's own liquefaction technology.

The venture was expected to insulate Russia from any new U.S. sanctions on LNG, a sector in which key technology belongs to a handful of players — mainly global majors such as Shell, Exxon, and Total. Russia, one of the world's biggest oil producers, has been under Western sanctions since 2014 due to its role in the Ukraine crisis. Gazprom is now poised to rely on industrial gases company Linde as its technology supplier for the Baltic project.

### **Shell signs up with Sinopec to study China's shale oil resources**

(Reuters; April 8) - Shell has entered China's shale oil sector, signing an agreement with state-owned Sinopec to study an East China block, part of the nation's early efforts to unlock the potentially massive unconventional resource. China is already in the initial stages of developing its vast shale gas resources with production last year providing just 6 percent of total gas output after more than a decade of work. China's shale oil is at a basic phase due to challenging geology and hefty development costs, experts said.

Shale oil comprises less than 1 percent of China's crude output after several years of development, said Angus Rodger, research director of Asia-Pacific upstream at Wood Mackenzie. "China's shale oil has very low permeability, which means very low per-well output that makes the economics hard to work," said an official with China's Ministry of Natural Resources. Sinopec said April 8 it had agreed with Shell to study the Dongying trough of Shengli in China's eastern province of Shandong.

The deal makes Shell one of the few international oil and gas explorers venturing into China's shale oil sector and follows the company's exit from shale gas drilling in Sichuan province in the southwest after spending at least \$1 billion and getting poor results. Unlike shale gas, which is highly concentrated in Sichuan, most of China's shale oil is trapped in the country's eastern regions.

### **Britain plans for the day when no fossil fuels are burned for electricity**

(Bloomberg; April 8) - Two years after Britain had its first coal-free day since the Industrial Revolution more than 200 years ago, the nation's electrical network operator is readying itself for life without fossil fuels. The grid may start dropping its need for natural gas power for short periods in about 2025, coinciding with coal's complete phaseout. The system wants to be "zero-carbon capable" by then, said Julian Leslie, head of national control at National Grid's electricity system operator.

While gas regularly provides more than half of the U.K.'s electricity, increasing wind and solar power output means the need for the fossil fuel is sometimes low, falling below a quarter of usage on windy days. To eliminate the need for fossil fuels, the U.K. will need to begin thinking about how to replace gas-fueled power plants straight away, Leslie said. "All of those things need to happen in order to make the zero-carbon aspiration happen," he said. "In 2025 it may just be for half an hour, it may just be for an hour. Then gradually, in the years that follow, that time period will grow and grow."

National Grid's Electricity System Operator was created on April 1 as a legally separate entity within National Grid. Its aim is to promote competition on the U.K.'s power and gas network to the benefit of consumers. Large coal and gas power stations give the network more resilience, while solar and wind plants reduce grid stability as they are dependent on weather conditions. Without gas and coal, it'll probably be crucial to create the systems to address network fluctuations to limit crashes and blackouts.

### **Drilling in Norway's sensitive Arctic waters loses support**

(Bloomberg; April 7) - Western Europe's biggest petroleum producer is falling out of love with oil. To the dismay of Norway's powerful oil industry and its worker unions, the opposition Labor Party over the weekend decided to withdraw its support for oil exploration offshore the sensitive Lofoten Islands in Norway's Arctic, creating a solid majority in parliament to keep the area off-limits for drilling.

The dramatic shift by Norway's biggest party is a blow to the support the oil industry has enjoyed and could signal that the nation is nearing the end of an era that made it one of the world's most affluent countries. Oil companies led by state-controlled Equinor have said that gaining access to the Lofotens is key if the country wants to maintain production as resources are depleted. Estimates suggest that 1 billion to 3 billion barrels of oil could be hiding off the archipelago, which is also considered a natural wonder.

"The whole industry is surprised and disappointed," said Karl Eirik Schjott-Pedersen, head of the Norwegian Oil and Gas Association. "It doesn't provide the predictability we depend on." Yet Labor's decision wasn't a big surprise. Norwegians are starting to question their biggest export and source of wealth amid growing concerns over climate change. Even some oil executives had already given up on the Lofotens, which has been kept off-limits for years thanks to political compromises.

### **Short-term boost to U.S. oil production creates long-term problems**

(Wall Street Journal; April 8) - Shale companies from Texas to North Dakota have been managing their wells to maximize short-term oil production, although that has long-term

consequences for America's energy boom. By front-loading the wells to boost early oil flow, many companies have been able to accelerate growth. But these newer wells peter out more quickly and companies have to drill new ones sooner to sustain output.

Another side effect is the wells are unleashing enormous amounts of natural gas. That's because gas escapes more easily than oil from underground reservoirs as pressure falls. Gas production in the two largest U.S. oil fields, in Texas and North Dakota, grew 43 percent from January 2018 to January 2019, according to U.S. Energy Information Administration data. There isn't enough pipeline capacity to bring all that fuel to market, so companies in West Texas some days have had to pay people to take it away.

Large quantities are also going up in smoke as companies burn gas they cannot move or sell. Operators in West Texas and North Dakota flared more than 1 billion cubic feet of gas daily last October, according to public data and Rystad Energy. In some cases, newer wells are producing more gas and less oil than wells drilled just a few years earlier. Because oil is more valuable than gas, the shift in the gas-oil ratio means that these wells are less profitable. Higher gas production paired with lower oil output also can be a sign of fatigue, symptomatic of lowered pressure in a subsurface reservoir.