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Last two of seven Australia LNG mega-projects near start-up

(Reuters; April 23) - Shell and Inpex are in the final stretch of a years-long race to export gas from offshore northern Australia, where both have spent billions of dollars building large and complex maritime vessels to grab a slice of Asia's booming LNG market. Shell and Inpex, Japan's biggest oil and gas producer, are vying for first gas from two overlapping fields after delays and overruns that have plagued both projects. The two are the last of seven LNG export projects built for Australia this decade.

Shell's 1,600-foot-long Prelude floating liquefied natural gas production and storage unit and Inpex's Ichthys Explorer semi-submersible gas production platform are both the world's largest of their class. Their combined cost has been estimated at around \$55 billion. "Prelude and Ichthys are both record-breaking mega-projects that have been competing throughout their development," said Saul Kavonic, of energy consultancy Wood Mackenzie. "We currently assume first cargo from Ichthys in third-quarter 2018 and from Prelude in the fourth quarter, with risk of further delays," Kavonic said.

The race means more than just pride as the Prelude and Ichthys fields straddle the same gas in the Browse Basin, according to Wood Mackenzie. "Their reservoirs are connected, meaning whichever project starts producing first will draw some gas away from the other project," Kavonic said. Prelude is expected to have an annual capacity of 3.6 million tonnes of LNG. Ichthys will send gas onshore to Darwin through a 550-mile pipeline, where the gas will be liquefied for export. Ichthys will have an annual capacity of nearly 9 million tonnes of LNG. Both fields are rich in valuable gas condensate.

Commissioning cargo on its way to Ichthys LNG in Australia

(Reuters; April 23) - Japan's Inpex Corp. and its partners have bought a cargo of liquefied natural gas to cool their Ichthys LNG plant in Australia ahead of a potential start-up of the much-delayed facility, a company spokesman said April 23. Liquefaction facilities must be chilled before production can begin, typically by using the super-chilled fuel from other liquefaction plants. The LNG tanker Pacific Breeze is currently in the Java Sea and expected to reach the Ichthys plant on April 26.

Ichthys, at more than \$37 billion, has seen several delays and cost overruns of billions of dollars due to technical difficulties. Inpex, Japan's top oil and gas producer, said in March it had delayed its latest planned start-up to April or May. Start-up was originally slated for 2016. Taiwan's CPC, the biggest customer of Ichthys, is scheduled to take

delivery of its first LNG cargo in the second half of this year, a source familiar with the matter said. Other customers of the project mostly include Japanese utilities.

Inpex holds 62.245 percent of Ichthys, France's Total 30 percent, with the rest spread among Taiwan's CPC Corp. and Japanese utilities Tokyo Gas, Osaka Gas, Kansai Electric, JERA Corp., and Toho Gas. At full production, the plant is rated at 8.9 million tonnes of LNG per year and 100,000 barrels a day of condensate.

Novatek says it has lowered cost per tonne at Arctic LNG-2 project

(Bloomberg; April 22) - Russia's second multibillion-dollar liquefied natural gas plant in Siberia is going to be cheaper than earlier estimates. Novatek has raised the planned production capacity of its proposed Arctic LNG-2 facility, allowing it to reduce the cost per tonne of production to less than that of the nearby \$27 billion Yamal LNG, which started up in December. Capital costs are key for LNG-2 as Novatek, which partnered with Total and Chinese investors at Yamal, has yet to find investors for the project.

The plant's capacity has been finalized at 19.8 million tonnes a year, up from earlier estimates of as much as 18.3 million. Yamal LNG's production capacity is 16.5 million tonnes per year from three liquefaction trains. Novatek has not disclosed any costs for Arctic LNG-2, other than to report the costs will be less per-tonne than Yamal. "It's going to happen for many reasons, including higher production capacity," Novatek's billionaire CEO Leonid Mikhelson told reporters at the company's shareholder meeting in Moscow.

Novatek has started delivery of some early construction items at the gas field that would feed Arctic LNG-2, though its project-financing options are limited by U.S. sanctions that prevent the company from accessing U.S debt and equity markets — with little clarity on whether current tensions between the Kremlin and the White House may at some point result in new limitations or risks for the company. Novatek faced similar financial sanctions and turned to China for much of the debt and equity needed to build Yamal.

LNG trader sees possible supply crunch from under-investment

(Reuters; April 24) - Last year's strong demand for liquefied natural gas, led by Asia's major economies, is expected to continue this year and should absorb some of the new supply coming onstream, industry executives said at a conference April 24. The global LNG industry has been expecting prices to be depressed by a rush of new supply as projects to produce 40 million to 50 million tonnes of LNG per year are coming online over the next two years, mainly in Australia and the United States.

But a surge in Asian demand last year took the market by surprise with some producers now expecting the new supply to be easily absorbed by the increasing consumption across Asia. "For the past three years, we were told at every conference that we'll have a gas bubble, that gas is oversupplied, that we won't be able to sell LNG ... but it's a bubble that never came," Jean-Pierre Mateille, vice president of trading at Total's gas and power division, said at the LNG Forum 2018 conference in Singapore.

Thomson Reuters Eikon data show global LNG imports have risen 40 percent since 2015. "If we move away from the next one, two, three years, the industry is growing at 20 million to 30 million tonnes every year but we're not taking FIDs (final investment decisions) for that kind of volume," said Hadi Hallouche, head of LNG at commodity trader Trafigura. "There seems to be a consensus that from two years onwards we have a (supply) crunch because we have under-invested in production," he said.

Bangladesh becomes world's 41st LNG importing nation

(Platts; April 25) - Bangladesh has joined the ranks of liquefied natural gas importing countries with the arrival of its first cargo at Moheshkhali Port on April 24. This makes Bangladesh the first new country to start LNG imports in 2018, and only the second since Jan. 1, 2017, as Malta was the only new LNG importer last year. Bangladesh becomes the 41st LNG importer in the world, up from just about a dozen in 2000.

The Qatari cargo arrived on the floating storage and regasification unit, Excellence, at the Moheshkhali LNG terminal, and heralds a new era in Bangladesh's energy sector, said State Minister at the Ministry of Power, Energy and Mineral Resources Nasrul Hamid. The Excellence is owned by U.S.-based Excelerate Energy Bangladesh. Its cargo can supply gas to meet local needs for about 15 to 20 days. The \$180 million infrastructure project has a capacity to deliver 3.75 million tonnes of LNG per year.

Excelerate will operate the terminal for 15 years at a fee of \$90 million per year, after which ownership will transfer to national oil company Petrobangla. The maiden cargo was delivered under a 15-year contract signed in 2017 between Petrobangla and Qatar's RasGas for 2.5 million tonnes a year, priced at 12.5 percent of the three-month average of Brent crude. The country is negotiating with other suppliers for additional deliveries of up to 3 million tonnes per year. Bangladesh's second floating LNG import terminal, also owned by Excelerate, is expected to start operations later this year.

South Korean oil refinery joins ranks of LNG importers

(Platts; April 24) - Malaysia's state-run Petronas, through its subsidiary Petronas LNG, has delivered its first LNG cargo to S-Oil Corp., making the South Korean oil refiner one of the newest LNG buyers in the region. But unlike most other Northeast Asian LNG

buyers, S-Oil will use the gas as feedstock for petrochemical production and to power units at its 669,000-barrel-a-day refinery at Onsan instead of just for power generation and heating.

The LNG carrier Puteri Zamrud Satu delivered to the Posco Gwangyang terminal on April 22, Petronas said in a statement April 24. The cargo is the first delivery under a 15-year sales-and-purchase agreement between Petronas LNG and S-Oil from 2018 to 2033. Under the agreement, Petronas LNG will supply up to 700,000 tonnes of LNG per year to S-Oil. Petronas supplies LNG mainly from its Bintulu complex. S-Oil, which is 63.4 percent owned by Saudi Aramco, did not immediately respond to queries.

While state-owned Korea Gas has typically been the main importer of LNG for South Korea, the country has embarked on a long-term plan for gas and power market liberalization, allowing other parties to import gas and access distribution infrastructure.

Japan wants to help boost U.S. LNG sales to Asia to ease trade deficit

(Japan Times; April 24) - The Japanese government said it will promote U.S. liquefied natural gas exports to Asia to help slash Washington's trade deficit. Masaki Ishikawa, chief of the Trade and Economy Cooperation Bureau in the Ministry of Economy, Trade and Industry, spoke of the plan at a bilateral economic dialogue April 23 in Washington, expressing hope it will "broaden the scope of Japan-U.S. cooperation."

The United States has been producing increasing volumes of LNG while Asia sees rising demand of the gas used for electric power generation. Under the envisioned cooperation, the government-backed Japan Bank for International Cooperation will offer loans for the construction of LNG shipment hubs. Disaster and accident insurance associated with LNG sea transport will be provided by Nippon Export and Investment Insurance, which is wholly owned by the government.

In addition, the Japanese and the U.S. governments said they have agreed to offer personnel training for Vietnamese and Filipinos to assist LNG infrastructure projects in Southeast Asia. Japan and the United States will also team up on commercial LNG projects in Bangladesh, Indonesia, and the United Arab Emirates.

LNG carrier takes first cargo from Maryland terminal to Japan

(Bloomberg; April 25) - The giant Japanese ship LNG Sakura is doing its share to appease President Donald Trump's frustration over trade with Asia. The vessel with the largest spherical holding tanks in the liquefied natural gas industry is taking its first shipment from Dominion Energy's Cove Point, Md., terminal to the Asian nation. With a

name that means cherry blossom, the ship can serve "as a symbol of friendship and goodwill between Japan and the United States," according to co-owner Nippon Yusen.

It's an easy win for both countries. For the Trump administration, which has been pushing for Asian purchases of America's abundant shale gas supplies to reduce a trade imbalance, it suggests the pressure may be working. Japan, the world's largest buyer of LNG, needs the fuel to meet power demand at its highest level since 2011. Most importantly, keeping good relations with the U.S., the largest buyer of its exports after China, is vital for Japan's economy. The ship left Cove Point on April 22.

"There's definitely been concern in the Japanese government about the Trump administration's focus on trade deficits, so this may be an effort to demonstrate that Japan is working that issue," said Jason Feer, global head of business intelligence at Poten & Partners. "It's interesting the first Japanese-owned cargo from that facility is actually going to" that country. Although Asian nations are signing multiple long-term contracts with U.S. LNG exporters, there is uncertainty over how much gas they will actually import themselves rather than sell to the global market's highest bidder.

China will be better prepared for winter gas demand, official says

(Reuters; April 23) - China is unlikely to see a repeat surge in liquefied natural gas imports this coming winter as the world's largest energy consumer has learned from the previous cold season to keep demand under control, the head of Unipec said April 24. "Last year was a special year," Chen Bo, president of Unipec, the trading arm of China Petroleum & Chemical Corp, or Sinopec, said at an LNG forum in Singapore, referring to government policies that caused China's LNG imports and prices to soar last winter.

China overtook South Korea as the world's No. 2 LNG importer in 2017 at 38 million tonnes, 46 percent above a year ago. Imports soared after the government ordered millions of homes to switch to gas and electric heating from coal to counter rising air pollution. "We didn't have the experience before to deal with such a situation," Chen said. This year, "demand will increase but the government and companies will control."

The surge in gas demand caused by the government fuel-switching policy created a gas supply shortfall that caused interruptions in shipments to industrial customers as gas was diverted to residential users. Chinese companies have announced plans to secure more gas ahead of next winter. Sinopec said in early April that it will increase its gas supplies significantly in the next six years and also plans to more than double its LNG receiving capacity in the next six years to 26 million tonnes on an annual basis.

Boston Globe editorial calls for ratepayer-financed gas pipelines

(Boston Globe editorial; April 22) – When Massachusetts legislators blocked financing for a new gas pipeline into New England in 2016, they claimed to be saving money for ratepayers and helping the environment. But nearly the opposite has happened. And now the damage — environmental and financial — is starting to pile up. The toll this year has been eye-popping: Greenhouse-gas pollution exploded during this winter's cold snap, generators burned 2 million barrels of oil, and the region relied on Russian liquefied natural gas. It sparked a mini-revival for the region's moribund coal industry.

That extra pollution was expensive. Energy costs totaled more than \$700 million over the same period last year. Now, in a potential additional cost, a regional power plant and LNG importer is demanding financial support to stay in business — as the state continues to block efforts to relieve gas pipeline shortages. The costs to consumers and the environmental damage are the result of elected officials' decisions. The Legislature should reconsider and join efforts by other states to expand the region's gas pipelines.

The strategy would be to join with Connecticut and Rhode Island, which have already authorized gas pipeline financing, to ensure that the area's fuel supply is solved in ways that mitigate environmental damage as much as possible. A ratepayer-financed pipeline would cost money but would also result in lower energy costs. Blocking pipelines was pure symbolism. The resulting emissions — and the resulting costs that Massachusetts legislators imposed on their constituents and the rest of New England — are all too real.

Houston columnist criticizes anti-pipeline efforts

(Houston Chronicle columnist; April 25) - A 61-year-old woman in a Virginia treehouse, British Columbia's premier and Nebraska farmers are fighting to stop pipelines passing through their backyards, failing to realize they are doing more environmental harm than good. Across North America, companies have discovered new reservoirs of oil and gas, which need new pipelines to reach markets. But if protesters get their way that won't happen, prolonging our reliance on dirtier fuels such as foreign heavy crude and coal.

The anti-pipeline movement has joined property-rights activists and environmentalists. The not-in-my-backyard sentiment is as old as America itself, but so is eminent domain, the government's power to force landowners to sell their property for a public good, such as a road, power lines or pipelines. While I understand how a landowner must feel, sometimes the needs of the many outweigh the needs of the few. If officials obey the law, and if landowners are properly compensated, that's the cost of modern life. Environmentalists believe that if they can stop pipelines, they will strand the assets and make them not worth drilling. But stopping an oil pipeline does not slow production. It merely moves the crude onto more dangerous and polluting conveyances, such as rail cars. Perhaps the most misguided protests are against gas pipelines. The U.S. is awash with gas, which has made cleaner-burning gas-fired power plants more economical, displacing coal and reducing the industry's greenhouse emissions to 1990 levels.

Battle continues over oil line replacement project in Minnesota

(The Associated Press; April 23) - Minnesota regulators should approve Enbridge's proposal for replacing its aging Line 3 oil line only if it follows the existing route rather than the company's preferred route, an administrative law judge recommended April 23. Calgary-based Enbridge says the project is necessary to ensure the reliable delivery of Alberta production to Midwest refineries. The company says the existing line, from the 1960s, is subject to corrosion and cracking and can run at only half its original capacity.

The administrative law judge's recommendation that the replacement line follow the existing route sets up further disputes, however, because the existing line crosses two Ojibwa reservations where tribal governments have made it clear they won't consent to the rebuild and actually want the old pipeline removed altogether. The judge wrote that Enbridge has established that the project is needed. The state regulatory commission will consider the judge's ruling and is expected to make its final decision in June.

If the project is approved, some opponents have threatened a repeat of the protests in North Dakota that delayed work for months on the Dakota Access pipeline, in which Enbridge owns a stake. The company's Line 3 carries crude 1,094 miles from Hardisty, Alberta, through North Dakota and Minnesota to a terminal in Wisconsin. Enbridge said the project would restore the line's original capacity of 760,000 barrels a day. Enbridge estimates the cost at \$5.3 billion in Canada and US\$2.9 billion for the U.S. portion.

B.C. oil-and-gas region rallies in support of controversial pipeline

(CBC News; April 22) - As British Columbia prepares to head to court to clarify the province's jurisdiction over the Trans Mountain oil pipeline, over 100 people rallied in support of the project in the province's northeast April 21. "Our battle cry now is for LNG and Kinder Morgan," said Alan Yu, organizer of the rally in Fort St. John. Premier John Horgan said his government's case will be filed in B.C.'s Court of Appeal by April 30 and will seek to clarify the province's rights to protect its coast and economy from a spill.

The proposed C\$7.4 billion expansion would nearly triple the capacity of the Kinder Morgan pipeline that carries crude from near Edmonton to the Vancouver area to be loaded on tankers and shipped overseas. The federal and Alberta governments support the Trans Mountain project, while British Columbia has said it is defending its coast from a potentially catastrophic oil products spill.

Even though the line would not come through the Fort St. John area in northeast B.C., Yu said it's important to show there are British Columbians who support the project. "In Fort St. John, we transport our natural gas by pipe. We have oil here as well," he said. "We are for the distribution of oil and gas." That sentiment was shared by Ian Fife, who drove nearly 250 miles from the gas-producing Fort Nelson area to attend the rally. "The 'no' side is being heard so much, but the yes side ... no one really worried about it."

Higher oil prices will not damage demand, says Goldman Sachs

(Bloomberg; April 23) - Goldman Sachs sees oil's rally the same way as Saudi Arabia: It won't check the world's soaring thirst for crude. Oil's surge to the highest prices in more than three years will in fact spur more demand as swelling reserves of Middle East dollars are reinvested overseas and stimulate the global economy, Goldman's head of commodities research said. "Global demand growth is absolutely stellar," Jeff Currie said. "You'd have to get a really high price before you start to see it damage demand."

Goldman's assessment is in line with that of Saudi Energy Minister Khalid Al-Falih, who said in Jeddah on April 20 that oil above \$70 a barrel has not hurt consumption. Falih spoke at a gathering of OPEC nations and allies, where the cartel reaffirmed its plan to constrict supplies. The U.S. may actually benefit from OPEC's intervention as increased Middle East oil revenues flow out of the region and bolster economic activity elsewhere, Goldman's Currie said April 23 at an oil and gas conference in Abu Dhabi.

Meanwhile, OPEC has little to fear from a revival in U.S. shale production, Currie added. Many analysts have warned that as the group's output-reduction strategy boosts prices, increased U.S. shale drilling would unleash a new glut. But American producers face challenges in raising output, including limited pipeline capacity, availability of oil service companies and a need for consolidation in the industry, he said.