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Federal review still pending for Petronas LNG project in B.C.

http://www.theglobeandmail.com/news/british-columbia/bc-minister-optimistic-about-Ing-deal-with-petronas-despite-delays/article23981756/

(Globe and Mail; Canada; April 16) – B.C. Natural Gas Development Minister Rich Coleman expects a liquefied natural gas project led by Malaysia's Petronas to forge ahead, but cautions that a final investment decision will be delayed by a lengthy federal environmental review. Coleman recently visited Malaysia, where he met the new chief executive of state-owned Petronas, Wan Zulkiflee Wan Ariffin. "I came out of Malaysia as optimistic, if not more optimistic, than I've ever been," Coleman said from Victoria.

The Canadian Environmental Assessment Agency launched its review of the Petronasled Pacific NorthWest LNG project in 2013, but there have been delays as the agency has sought more information about the impact on salmon habitat at Flora Bank. Pacific NorthWest LNG is proposing to build an LNG export terminal on Lelu Island, near Prince Rupert, B.C. The latest delay stems from Pacific NorthWest needing to prepare 3-D modeling, designed to predict changes that might occur to the environment.

The Petronas-led venture already has a provincial environmental certificate and now requires federal approval. The project originally planned to make its investment decision at the end of 2014, but pushed that back to 2015. Meanwhile, the federal ruling on Pacific NorthWest LNG could stretch into August or even September. First Nations in the area also have concerns about the important fish habitat around Flora Bank.

<u>Pipeline approval another step for Petronas-led LNG project in B.C.</u> http://calgaryherald.com/business/energy/pacific-northwest-lng-welcomes-b-c-gas-pipe-ok

(Calgary Herald; April 16) - Regulatory approval of a natural gas pipeline expansion in British Columbia improves the likelihood that the Pacific NorthWest LNG project will be built, but a final investment decision on the multibillion-dollar LNG investment still awaits other government approvals, the proponent said April 16. Canada's National Energy Board said April 15 it will recommend approval of the North Montney Mainline Project proposed by TransCanada to bring more gas out of the Montney Shale region.

The \$1.7 billion project will consist of two 42-inch pipeline sections totaling about 200 miles. It would allow transport of gas from northeastern B.C. and Alberta to connect with TransCanada's proposed 558-mile Prince Rupert Gas Transmission Project to provide

gas to the Petronas-led Pacific NorthWest LNG export facility on Lelu Island, near Prince Rupert, B.C. Initial capacity will be 2.4 billion cubic feet per day, with 2 bcf a day contracted to Progress, TransCanada noted.

"This (NEB) decision is a key component to fulfilling a core requisite that informs our final investment decision," said Pacific NorthWest president Michael Culbert. "With this decision in hand — and awaiting other regulatory approvals — Petronas and our partners will continue to work cautiously toward a final investment decision." Pipeline construction would not start unless the LNG project goes ahead. Culbert again warned the project will not be built if Canadian LNG prices aren't competitive in the market.

Reuters says Exxon, Qatar interested in Anadarko's Mozambique gas http://www.reuters.com/article/2015/04/17/us-anadarko-exxon-exclusive-idUSKBN0N823C20150417

(Reuters; April 17) - Anadarko is considering selling its multibillion-dollar stake in Mozambique's giant gas reserves, with ExxonMobil and Qatar Petroleum both showing interest, banking and industry sources said. Exxon is seen as the front-runner; it would be its first big acquisition since oil prices collapsed. The world's largest oil firm has been expected to follow the lead of Shell, which has agreed to buy BG Group for \$70 billion.

Anadarko, which has opened its data rooms to investors to learn a more detailed picture of its reserves, could sell up to its full 26.5 percent stake in Mozambique's offshore Area 1 license in the Rovuma Basin, the sources said. It sold a 10 percent stake in 2013 for \$2.64 billion to India's ONGC, but that was seen as overpriced and oil and gas prices have since fallen sharply, making it hard to value Anadarko's remaining asset.

Area 1 holds over 75 trillion cubic feet of recoverable gas. Anadarko initially planned to build a major liquefied natural gas export project to target Asian markets, but the possible sale calls that into question. Plummeting oil prices may have pushed Anadarko to review one of its most prized assets, one of the sources said. But it is unclear if the Houston-based firm is in any hurry to reach a deal. "This is a \$100 billion development that needs developers with significant cash," one banker said, referring to the full long-term costs of developing the liquefaction plant as well as future capacity expansions.

India's state-run businesses will invest billions in Mozambique gas http://economictimes.indiatimes.com/industry/energy/oil-gas/ongc-oil-india-and-bharat-petroluem-to-invest-6-billion-in-mozambique/articleshow/46905179.cms

(The Economic Times; India; April 13) – State-run oil and gas companies in India in the next four years will invest \$6 billion in developing a giant gas field off the Mozambique coast and a plant to liquefy the gas for export, India's Oil Minister Dharmendra Pradhan

said April 13. ONGC Videsh, the overseas arm of Oil and Natural Gas Corp., Oil India and a unit of Bharat Petroleum together hold 30 percent interest in Rovuma Area 1, which is estimated to hold 75 trillion cubic feet of recoverable gas reserves.

"We have invested more than \$6 billion so far (in the Mozambique field) and another \$6 billion will be invested by 2019 to develop Rovuma Area 1," the minister said. An estimated \$18.4 billion will be required to bring the first set of discoveries in Rovuma Area 1 to production and develop an LNG project. Pradhan, who returned from a two-day visit to the African nation, said the first LNG is targeted for 2018-end or early 2019.

Rovuma Area 1 is located along the coasts of northern Mozambique and southern Tanzania in the Indian Ocean. It ranges in water depths from 3,000 feet to 5,200 feet, about 20 to 40 miles from shore. Texas-based Anadarko is the operator of the block with a 26.5 percent stake. Japan's Mitsui holds a 20 percent stake.

Russia will invest in gas pipeline for Pakistan; looks to sell LNG http://timesofindia.indiatimes.com/world/pakistan/Russia-to-invest-2-billiln-to-build-pipeline-in-Pakistan/articleshow/46968999.cms

(Times of India; April 18) - Russia said it will invest \$2 billion to build a 680-mile gas pipeline from the southern Pakistan port city of Karachi to Lahore, which has more than 7.5 million residents and is the second largest metropolitan area in the country. The new pipe would be used to move imported liquefied natural gas. The two nations will sign a government-to-government deal next month, Pakistan's petroleum minister, Shahid Khaqan Abbasi, was quoted in press reports.

In return for the investment, Russian companies will be awarded the contract to build the pipeline, Abbasi said. Moscow will select a Russian firm as its preferred contractor to build the line. According to the agreement, the contract will be awarded without any formal bidding process. Russia also has offered to sell LNG to Pakistan.

Russia is the second-largest gas producer in the world, and is seeking to diversify its export markets after conflicts with the European Union, its main buyer, over Ukraine and gas pricing. Pakistan earlier this year took delivery of its first imported LNG, utilizing a floating receiving, storage and regasification ship. The country consumes an average of less than 4 billion cubic feet a day of gas, covered by domestic production, but is looking to import additional supplies.

Calgary company makes a big bet on LNG terminal in Oregon

http://www.calgaryherald.com/high+risk+game+Veresen+puts+everything+line+with+Jordan+Cove/10977828/story.html

(Financial Post; Canada; April 15) - Don Althoff is betting the fate of his \$5 billion company on a liquefied natural gas export project that — seven months before a potential investment decision — has yet to secure a single customer. "It's a high-risk game," the CEO of Calgary-based Veresen said about his greenfield LNG project in Coos Bay, Ore. Veresen also has midstream and power businesses, and a pipeline and natural gas-gathering joint venture with private-equity giant Kohlberg Kravis & Roberts.

But Althoff underscores the importance of the project, which has its share of opposition in the area. "I have got a \$5 billion market cap and I am looking at a \$7 billion capital project," Althoff said. "I am going to spend a lot of money to get this project. ... And when I do, people will pay me a premium for an investment in the project." Veresen is working on a new LNG model, focusing on tolling agreements to liquefy and load LNG for customers, without taking any of the market risk for the gas itself.

"It really is an infrastructure play versus an exploration and production play," Althoff said. "One thing that does is simplify the project. All I have to do is worry about a 370-kilometre pipeline and a terminal." For all of his confidence, the project does not boast a single customer, an issue he hopes to fix this quarter. Apart from customers, Veresen also needs financing, and approval from the Federal Energy Regulatory Commission, which has been in the works for three years and cost the company \$150 million.

Analysts warn Shell might not proceed with BG deal for Israeli gas http://www.globes.co.il/en/article-shell-acquisition-of-bg-endangers-leviathan-deal-1001028563

(Globes; Israel; April 15) - Analysts warn that Israel's regulator must act fast to save the Leviathan partners' \$30 billion gas deal with BG. Shell's acquisition of BG jeopardizes the deal for exporting gas from Israel's offshore field to BG, according to consultancy Eco Energy CEO Amit Mor. Geopolitical considerations come into play, Mor said. Shell considers many factors in its investment decisions, such as its future with Iran and other Arab countries. "I'm not sure how much Royal Shell will want to be linked with Israel."

Leviathan's partners and BG signed a letter of intent last June, under which 3.7 trillion cubic feet of gas would be piped to the BG liquefaction facility in Idku, Egypt, over 15 years. The deal's value is estimated at \$30 billion. The major deal, which involves the export of one-sixth of the gas reserves in the reservoir, is what will make the offshore development possible. Israeli anti-trust regulators, however, last year raised the possibility the government may want to dilute the owners' majority control of the field.

BG has signed no final agreement with the Leviathan partners, due to regulatory problems, but now Shell has entered the picture by acquiring BG, raising the question of whether the deal will actually go through. "Israel must create a stable regulatory environment if it wants the deal with Leviathan to go through," said senior energy

analyst Amir Foster. The value of BG's liquefaction facility in Egypt has been cut to almost nothing due to lack of adequate domestic gas supplies.

Santos expects first LNG from Australia plant in September http://af.reuters.com/article/energyOilNews/idAFL4N0XD6D620150417

(Reuters; April 17) – Australian oil-and-gas company Santos said April 17 it expects to start producing liquefied natural gas at its \$18.5 billion Gladstone LNG plant in Queensland, Australia, around September, updating a previous forecast for the second half of 2015. Looking to reassure investors who have been concerned about potential delays to the project, Santos said it had started feeding gas into the plant in March and the power supply for the operation is now running.

Gladstone is one of three liquefaction and export plants in Queensland starting up this year, all fed by coal-seam gas, with a combined capacity to produce up to 24.8 million tons of LNG per year (about 3.2 billion cubic feet of gas per day, on average). Santos' partners are Malaysia's Petronas, France's Total and Korea Gas. Shell takeover target BG Group's Queensland Curtis plant shipped its first cargo in January. The Australia Pacific LNG plant, operated by ConocoPhillips, is due to produce first LNG in mid-2015.

Those three plants, plus three more new projects on Australia's western coast, plus existing LNG capacity, will push the country past Qatar as the world leader in LNG.

Small LNG project near Vancouver admits 2017 start-up not likely http://www.straight.com/news/433031/woodfibre-lng-plant-squamish-likely-wont-be-and-running-2017

(The Georgia Strait; Vancouver; April 16) - There likely won't be a single liquefied natural gas export plant operating in B.C. by the next provincial election in 2017. The government's best bet as the first in a projected trillion-dollar new industry — Woodfibre LNG in Squamish, B.C., on the northwest shore of Howe Sound, just north of Vancouver — will not be up and running in the first quarter of 2017, as was previously planned.

Although Premier Christy Clark and her party will not have much to show for their 2013 campaign promise of prosperity from LNG, they may not come totally empty-handed. Woodfibre vice president of corporate affairs Byng Giraud expects the project will be in "heavy construction" around 2017. However, Giraud acknowledged that the original timeline of going into operation in early 2017 is "probably not achievable."

Woodfibre LNG, a subsidiary of Pacific Oil & Gas, part of the Singapore-based RGE group of companies, has not made a final investment decision. The 2.1-million-tons-per-

year project hopes to receive its provincial environmental assessment certificate this summer and says it will make an investment decision before the end of 2015. There are skeptics, however. "It would be incredible if they are ready to go in 2017," said Delena Angrignon, co-founder of My Sea to Sky, a local group opposing the Woodfibre project.

B.C. producers need to significantly boost drilling to feed LNG plants http://www.platts.com/latest-news/natural-gas/vancouver-britishcolumbia/major-boost-in-gas-drilling-needed-to-supply-21313740

(Platts; April 17) - Drilling for feedstock gas will need to be ramped up significantly to support LNG projects planned in British Columbia, industry officials said April 16 at the 3rd annual Canadian LNG Exports Conference in Vancouver. Nearly 3,000 wells have been drilled in the past few years at the Montney play in the Western Canadian Sedimentary Basin, but the extent of additional drilling that has to happen now is "staggering," said Tourmaline Oil CEO Michael Rose.

Several developers are due to announce final investments over the next year for their projects in British Columbia, and the top four hopefuls together would require gas supplies in excess of 6.3 billion cubic feet per day, said Ted Hanbury, vice president of corporate development for Painted Pony Petroleum. Just to supply 1 bcf per day, 105 to 115 new wells would have to drilled each year, Geoff Morrison, manager BC operations at the Canadian Association of Petroleum Producers, said on the sidelines of the event.

At that rate, it would mean about 700 new wells per year in the Montney to supply the four LNG export projects. Rose said his company has drilled 250 wells in the past four years in that play, and is currently producing 250 million cubic feet of gas per day.

Prince Rupert, B.C., faces funding gap if LNG projects move ahead http://www.thenorthernview.com/news/299617691.html

(The Northern View; Prince Rupert, BC; April 14) - Facing an infrastructure deficit already nearing \$300 million, the city of Prince Rupert, B.C., will need to come up with an additional \$14.5 million per year to support LNG-related operations, according to a report prepared for the city council by global economics consultancy KPMG. The report outlines some of the current infrastructure woes facing the city.

To sustain current operations, without considering any LNG developments, the city estimates it will need \$58 million for transportation-related items, \$37.8 million for the water system, \$163.6 million for the sewer system, \$22.6 million for city services and \$2 million for general operations, for a total of \$284 million. Transportation expenses include \$22 million for the road network, \$9.4 million for bridge replacement, \$5 million for retaining walls and \$21.6 million for replacing ferry docks.

Should any of the proposed LNG export projects proceed, the city will need even more money for transportation, utilities and other services. And while the city has an outline of what is needed to prepare for LNG, the answer to where the money will come from is unclear. "There are few viable options available at Prince Rupert's disposal to close this funding gap," the report said. "Other sources of funding may be necessary to close this gap and ensure that both industry and the city mutually benefit over the long term."

Nova Scotia LNG project looks toward final regulatory approval

http://www.capebretonpost.com/News/Local/2015-04-15/article-4112969/Bear-Head-LNG-fuels-hopein-Strait-area/1

(Cape Breton Post; Sydney, Nova Scotia; April 15) - A liquefied natural gas project that would bring industry and jobs to Cape Breton, Nova Scotia, is getting closer to reality now that the majority of regulatory approvals and permits have been issued, according to the company behind the undertaking. John Godbold, project director with Bear Head LNG, a subsidiary of Australia-based Liquefied Natural Gas Ltd., met with area residents, businesses and job seekers during an open house April 14.

Godbold said the only outstanding Canadian regulatory approval is at the Nova Scotia Environment Department. After final regulatory approval, the developer could move to a final investment decision. "Construction will take 36 to 42 months," Godbold said. Assuming the LNG plant gets some of its feed gas from U.S. production or pipelines, Department of Energy export approval would be required to move gas into Canada.

The Bear Head LNG project would target mostly European markets. "Nova Scotia is located halfway across the Atlantic Ocean, so it's closer to Europe than any other LNG project in the world," Godbold said, adding that markets in India, Malaysia and other places in Asia are also on the radar. The project started years ago as a proposed LNG import terminal. Liquefied Natural Gas Ltd. purchased the unfinished work and changed the plan to an export terminal.

Tokyo Electric, Chubu Electric choose name for joint venture

 $\frac{http://www.reuters.com/article/2015/04/15/japan-energy-utilities-idUSL4N0XC2W620150415}{\text{ }}$

(Reuters; April 15) - Tokyo Electric Power and Chubu Electric Power April 15 selected the name "Jera" for their 50-50 fossil-fuel venture that will start operations at the end of this month. The two companies' fuel transport and trading businesses would be integrated in October. The alliance will combine the upstream energy and fuel procurement businesses by around the summer of 2016, which would put Jera on a par with the world's biggest LNG buyer, state-run Korea Gas.

The alliance's name, Jera, is a play on the words Japan, energy and new era. The Japanese venture is likely to give Asian buyers more muscle to press producers for more flexible contracts at a time of depressed prices. The companies, the biggest and third-biggest of Japan's 10 regional power utilities, are to decide by spring 2017 whether to integrate all their fossil-fuel power stations. If they do, the venture would oversee 74 gigawatts of capacity, making it one of the world's largest power generators.

<u>Shipyard starts work on second LNG-powered vessel for BC Ferries</u> http://shipandbunker.com/news/am/504152-bc-ferries-game-changing-lng-bunkers-will-save-us-millions

(Ship & Bunker; April 15) - The president and chief executive of BC Ferries said April 14 that liquefied natural gas is a "game changer" for the firm, which operates 35 vessels throughout that province's coastal waters. Mike Corrigan made the remark in the wake of the April 10 construction start-up of the second of three new LNG-powered vessels at Remontowa Shipbuilding in Gdansk, Poland. The three ships will cost \$165 million.

The intermediate-class vessels will have the ability to use low-sulfur diesel in addition to LNG, and combined with two other ferries being converted to LNG are expected to save millions in fuel costs, Corrigan said. The three ferries from Poland will be delivered in 2016 and 2017. Each will be 351 feet long, carry 145 vehicles and 600 passengers.

Low prices lead to oil-field layoffs

http://www.wsj.com/articles/oil-layoffs-hit-100-000-and-counting-1429055740

(Wall Street Journal; April 15) - Like many other oil-field workers, Chris Sabulsky spent years working a schedule known as "14 on, 14 off" — two weeks at an oil or gas well followed by 14 days at home in East Texas, fishing for bass and crappie. But now, Sabulsky, 48, is spending his days sending out résumés, calling acquaintances to see if they know of job openings, and pondering his future. His job managing hydraulic-fracturing operations at well sites evaporated in February after the oil-price plunge.

Thousands of oil-field workers are in the same shoes or, more accurately, steel-toed boots. Since crude prices began tumbling last year, energy companies have announced plans to lay off more than 100,000 workers around the world. At least 91,000 global layoffs have already materialized, with the majority coming in oil-field-services and drilling companies, according to research by Graves & Co., a Houston consulting firm.

While the layoffs have hit office workers and high-skilled employees such as geologists and petroleum engineers, it's the roughnecks who are feeling the brunt of the cuts. "The closer your job is to the actual oil well, the more in jeopardy you are of losing that job,"

said Tim Cook, oil and gas recruiter and president of PathFinder Staffing in Houston. "Each time an oil rig shuts down, all the jobs at the work site are gone. They disappear." The number of working U.S. oil and gas rigs has dropped 46 percent so far this year.

<u>Cost-cutting, technology help companies survive at low oil prices</u>
http://www.bloomberg.com/news/articles/2015-04-16/shale-wells-are-turning-into-cash-gushers

(Bloomberg; April 16) - The profitability of some U.S. shale wells at current prices will almost double as cost-cutting and technology turns them into cash gushers despite oil's crash. A report by Citigroup highlights what companies such as EOG Resources have been saying for months: Belt-tightening across the industry and more strategic drilling in prolific areas would deliver ample profits even at \$50-per-barrel crude.

The improvement is driven by costs that are expected to fall by 20 to 30 percent and techniques that allow rigs to wring 30 percent more oil or natural gas from each well compared with a year ago, according to the Citigroup report April 15. That might bring some surprises when shale producers begin reporting first-quarter financial results over the next two weeks. While investors are braced for widespread losses, the numbers may not be as bad as some expect, said Richard Morse, lead author of the study.

Among specific companies, the potential for improvement varies greatly. SM Energy, which specializes in Eagle Ford (Texas) wells, is expected to see costs of \$32.52 a barrel. Penn Virginia, which also drills there, has costs of \$135.55 a barrel when debt is factored in. Antero Resources, which drills in Appalachia, has costs of less than \$18 a barrel because of the productivity of its wells, according to the report.