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Petronas may have a plan to avoid salmon habitat at LNG terminal

(Bloomberg; Dec. 27) - Malaysia's Petronas is seeking to move ahead with its proposed \$27 billion liquefied natural gas plant on the British Columbia coast after identifying a new site for the marine terminal, a shift that could lower costs and ease local opposition. The Pacific NorthWest LNG project would continue as planned with the liquefaction plant on Lelu Island, near Prince Rupert, but the company would move the LNG-loading berths to neighboring Ridley Island, according to sources familiar with the negotiations.

A redesign would eliminate the costly suspension bridge and trestle-supported pier to marine berths that were part of the plan at Lelu Island, avoiding an environmentally sensitive marine area that has been a flash point of controversy — Flora Bank provides critical habitat for juvenile salmon. Under the new plan, the LNG would be piped to new marine berths at nearby Ridley Island, avoiding Flora Bank entirely. Petronas and its partners China Petrochemical Corp., Japan Petroleum Exploration, Indian Oil Corp. and Brunei National Petroleum Co. are expected to make their investment decision in 2017.

It is unclear how changing the design might affect the construction timeline. Petronas is in talks with the government and stakeholders to see if the modification could be carried out without sparking fresh regulatory delays, according to the sources. The project won Canadian government approval in September following more than three years of regulatory review. In that time, the global LNG market tanked with spot prices for the fuel falling by more than two-thirds amid a supply glut. Petronas is reassessing the project's costs before it goes to its partners to make a final investment decision.

B.C. minister predicts Petronas will make LNG decision summer 2017

(Globe and Mail; Canada; Dec. 27) - B.C. Natural Gas Development Minister Rich Coleman says patience is a virtue during the liquefied natural gas industry's worldwide slump. Coleman said he believes Malaysia's Petronas will make a final investment decision in the summer of 2017 on its multibillion-dollar Pacific NorthWest LNG project, proposed for near Prince Rupert. That would be a year later than originally expected.

A summer decision would come after the provincial election in May. Premier Christy Clark's B.C. Liberal Party campaigned hard to promote LNG in the 2013 election, pledging to set up a "prosperity fund" and cut taxes. But only one small LNG project — out of 20 hopefuls — has been sanctioned for construction since the election, and Clark has played down expectations over the past year amid a global glut of the fuel.

Coleman, who met with Petronas executives in Malaysia in October, said the venture is reviewing more than 190 conditions attached to the federal government's environmental approval of the project. "You have to get the numbers and then you have to sit down with your partners and see if the contracts work," Coleman said in a year-end interview. "They are looking at their design. They're going to try and drive their costs down."

The weak global market has not been friendly to B.C. LNG projects. "It's not only a matter of a recovery. It is a matter of a sustained recovery," said Andy Calitz, CEO of Shell-led LNG Canada, which is on hold. "There is space in the market in the mid-2020s for LNG from Canada. There is time and space for the start of construction in the near future in Canada so that LNG can be supplied in the mid-2020s into Asia."

Weak LNG prices cut into Australian state's royalties

(Gladstone Observer; Dec. 28) - Before construction began on the three liquefied natural gas projects set on Australia's Curtis Island, Queensland State Premier Anna Bligh expected the government to rake in about \$850 million in royalties from the LNG sector. The Bligh government committed to spend half of the windfall on either a "future fund" for education and training or on individual trust funds, with newborns receiving between \$7,800 and \$9,500 to spend on education and training after the age of 18.

But these lofty projections have fallen well short, with figures released in the latest midyear fiscal review revealing the government received only \$68 million from the LNG sector in royalty payments this financial year. In the next financial year, the Queensland government is banking on raising \$68 million in LNG royalties, \$120 million by 2018 and \$250 million by 2020. All three LNG projects are ramping up operations after almost \$60 billion in capital. The investment decisions were made in 2010 and 2011, when LNG prices were much higher than today and the market looked strong.

Although Tax Justice Network researcher Jason Ward was taken aback by how much the former government miscalculated its LNG royalties, he said the economic climate around LNG has changed significantly since 2011. "To be fair because the Queensland system is just a straight-up royalties system, production (on Curtis Island) hasn't been going for long and once it does ramp up, one would hope the government would collect more," Ward said. "(The Bligh projection) was a little pie in the sky but it would have been based on much higher global expectations on prices.

Little of first year's U.S. LNG ends up in Europe

(Platts; Dec. 27) – February's start-up of U.S. LNG exports based on cheap American shale gas had been expected to send a good proportion of cargoes across the Atlantic

to Europe, given the relatively short shipping route and Europe's massively underused LNG import capacity. But with European gas prices staying stubbornly low for most of the year and the profit margins for U.S. LNG largely eroded due to the slump in global LNG prices, in the end only a handful of cargoes ended up in Europe.

As 2016 nears its end, more than 50 cargoes have left Cheniere Energy's Sabine Pass terminal in Louisiana for international markets. But of those cargoes, just three landed in mainland Europe — one each in Portugal, Spain and Italy — while two went to Turkey. Industry sources said the loads to Spain were "test" cargoes, while the shipment to Italy was a one-off to meet obligations under the country's "peak-shaving" program.

The appeal of U.S. LNG in northwest Europe has yet to emerge, with fierce competition from pipeline suppliers Norway and Russia. Gazprom has dismissed the economic viability of U.S. LNG in Europe given currently low European gas prices and its own low production costs. Buyers in northwest Europe have reportedly told Cheniere they do not have any need now for U.S. LNG given the abundance of pipeline gas. Most of the U.S. LNG shipped in 2016 went to Chile, Mexico and Brazil. Cheniere conceded it made sense for the LNG to remain closer to home given the narrow margins. Meanwhile, with spot prices in Asia on the rise, eight Sabine Pass cargoes are heading to Asia.

Mid-size Canadian gas producer eager to reach Asian market

(Financial Post; Canada; Dec. 27) - While the Canadian oil patch is fixating on oil pipelines, natural gas player Seven Generations Energy is eager to see movement on gas pipelines to tap the Asian market, including liquefied natural gas export projects. Seven Generations president Marty Proctor said his company's interest in a liquids-rich pipeline to the West Coast is still an early stage idea, and compared it to a blank piece of paper. "We (expect) those opportunities will take affect into the next decade."

"The existing pipelines that deliver natural gas to the Lower Mainland, for example, are all full ... so any scale project to bring natural gas to the coastline requires a new pipeline," said Seven Generations senior vice president Tim Stauft. Seven Generations produced an average 314 million cubic feet of gas per day in the third-quarter this year, along with oil and gas liquids, from its acreage in British Columbia and Alberta.

New pipeline capacity may be required even as Canadian natural gas production is expected to drop to 14.8 billion cubic feet per day in 2020, from 15.4 bcf a day last year, according to the National Energy Board. Western Canadian natural gas shipments to Eastern Canada have fallen as cheaper U.S. shale producers have displaced them in recent years. Shut out from its traditional markets, Western Canadian gas producers are eyeing growth markets in Asia, though that would require capital-intensive LNG plants.

India will need to spend at least \$10 billion to meet natural gas goal

(Press Trust of India; Dec. 24) - The ambitious plan to more than double the share of natural gas in India's national energy mix from 6.5 percent in 2015 to 15 percent will need at least \$10 billion in investments just to add infrastructure for gas imports and new pipelines, according to a report. The analysis shows boosting LNG import and regasification facilities will require more than \$5 billion, plus money for 5,500 miles of new pipelines in the East and South, said the report by Indian rating agency Crisil.

Crisil director Rahul Prithiani said if the share of gas in the energy mix is to rise to 10 percent by 2020, it would mean a doubling of gas consumption. But given that domestic gas production is limited, demand for imported LNG could surge three-fold and the country's regasification capacity would have to jump to 60 million metric tons per year.

The government's move to lower coal dependency is in line with the commitment it made at the last Paris climate-change conference. Gas, though a relatively cleaner fuel than coal, continues to be a higher-cost option, which limits its use. Gas consumption by the power sector needs to rise significantly if India's energy-mix goal is to be met. The share of gas-based power in generation plunged to under 4 percent in fiscal 2016 from 12 percent in 2011 due to inadequate domestic supplies and costly LNG.

Maine considers multiple proposals for LNG storage

(Portland Press Herald; Dec. 26) - The holy grail for lower electric rates in Maine is to increase winter supplies of natural gas, used to generate half the region's power. For years, proponents sought new and expanded pipelines, but most major gas pipeline proposals are stagnating or have been defeated by environmental and community opposition. One alternative is to build a big tank to store liquefied natural gas during the summer, when prices are low, and then draw it off on winter days, when prices are high.

The storage tank could cost \$250 million, so the developer is asking the Maine Public Utilities Commission to make electric and gas customers help pay for it over 20 years. Industry officials say LNG storage has a good safety record, and the promise is that if Mainers chip in \$25 million annually to contract for LNG storage (a cap set by the state Legislature), they'll save even more on their electric bills. Maine homeowners typically pay between 20 and 24 percent more for electricity than the national average.

But another company is telling regulators it's cheaper to store LNG in existing tanks in New Brunswick, Canada, sending the gas by pipeline to New England when it's needed. Another company said it would be better to store gas in small, mobile tanks during the winter, close to factories and other big power users. The state Public Utilities Commission will try to decide the best answer. Meanwhile, environmental lawyers question whether any new gas storage is needed. To fight climate change, they want New England to run on greater amounts of renewable energy and less on gas.

Winter cold, growing U.S. exports help boost natural gas prices

(Globe and Mail; Canada; Dec. 28) - Frigid early winter temperatures in key regions of North America have driven up natural gas prices to levels not seen in more than a year, and longer-term developments in the industry point to sustained gains. New exports of the fuel began in 2016 with the start-up of a liquefied natural gas facility in Louisiana, and an expansion at the Sabine Pass plant is scheduled to come online in 2017.

Meanwhile, Mexico is importing increasing volumes of U.S. gas to fuel its own power plants, adding more call on North American supplies that have boomed in the past decade as the shale revolution took hold. Gas deliveries to Mexico averaged a record 4.2 billion cubic feet per day in August. It adds up to better economic conditions for gasproducing companies after lengthy doldrums, said Martin King, analyst at Calgarybased GMP FirstEnergy.

"If you buy our view that we're not going to be going back below \$3 (U.S) [per million Btu], at least on a sustained basis, for the next couple of years, that puts a lot of the North American resource back in paying economic territory. It wasn't going to happen at \$2 or \$2.25," King said. U.S. natural gas prices have surged nearly 20 percent over the past month, and are up 80 percent from a year ago. Gas for January delivery settled at \$3.93 on Dec. 28. Canadian spot prices are up 45 percent versus 12 months ago.

Alberta struggles with abandoned wells from bankrupt companies

(Calgary Herald; Dec. 27) - The number of oil and gas wells abandoned by industry expanded dramatically as depressed commodity prices forced operators to bankruptcy. Alberta's inventory of wells without an owner financially capable of clean-up roughly doubled this year to 1,400, a clear indicator of the economic turmoil of 2016. The surge means taxpayers will be on the hook to pay landowners annual rents to compensate them for use of their properties until the sites are returned to a natural state.

Land owners are seeking compensation in record numbers. "We're just dealing with the tip of the iceberg," said Daryl Bennet, director of the Alberta Surface Rights Federation. The Orphan Well Association — the industry-funded group responsible for cleaning up the wells — is struggling to keep up with demand. The association plugged a record 185 wells in fiscal year 2015-16 after doubling its budget to \$30 million, but the inventory still grew. In the first nine months of the current fiscal year, 630 wells were added to the list.

Landowners who stopped receiving rents from bankrupt oil and gas companies seek compensation through the Surface Rights Board. The group estimates it received close to 3,000 applications for payment this year, 10 times the typical amount. Average rents

for a single well range from \$2,500 to \$3,000 a year. The board sends the province a bill but the government strains to recoup the costs from industry. In 2015, the government paid landowners \$1.7 million in overdue rents, but recovered just \$121,500 in all of the past seven years. Abandoned wells end up in the lap of the Orphan Well Association, which cleans up the sites using funds collected from industry with a levy and other fees.

Texas littered with abandoned wells and environmental risks

(Texas Tribune; Dec. 21) - West Texas is shot through with old oil wells, some drilled more than a century ago. Once abandoned, fluids can seep to the surface and leak into groundwater and, in rare cases, the ground can sink or collapse. "If this stuff was even close to Austin, hell, it'd be national news," said Ty Edwards, assistant general manager of the Middle Pecos Groundwater Conservation District. "No one wants to claim responsibility," said a spokesman for the Texas Commission on Environmental Quality.

In Pecos, abandoned wells have spewed brackish water for more than 10 years, and the state has no plans to plug them. Locals have called the resulting body of water Boehmer Lake, though it's not a lake at all. No one swims in it, and the water is three times saltier than the Gulf of Mexico. Texas has more than 300,000 active oil and gas wells and, according to a 1990 study, more than 1.5 million oil and gas holes, including test wells, service wells and drills that came up dry.

While companies are required to plug holes once finished, some break the law and other holes pre-date current regulations. Following the oil market slide after years of increased drilling, Texas, Louisiana and Oklahoma face a surge in abandoned drill sites and insufficient manpower and funds to close them. Ronald Green, a hydrologist at the Southwest Research Institute, calls these wells "ticking time bombs" for aquifer and water supply pollution. Oil and toxic minerals can migrate underground, polluting surrounding groundwater when wells go unplugged.

Kazakhstan is spending down its sovereign-wealth fund

(Wall Street Journal; Dec. 24) - Kazakhstan President Nursultan Nazarbayev says the country's sovereign-wealth fund has the money to help wean the central Asian nation off its dependence on oil revenues and build an economy of entrepreneurs. But since the 76-year-old president created the so-called National Fund in 2000, his government has withdrawn \$83 billion, according to a Wall Street Journal analysis.

The National Fund had a balance of \$61 billion as of Nov. 30, down 21 percent from its peak in August 2014. Leaders of petro-states from Kazakhstan to Azerbaijan, Russia and Venezuela have spent billions of dollars from their sovereign-wealth funds as low oil

prices have pressured government budgets. Spending the money deposited in these funds — rather than just the investment income — threatens their long-term viability.

"It's really important for Kazakhstan and other oil-producing developing nations to convert these savings into a permanent windfall," said Angela Cummine, an Oxford University academic and author of "Citizen's Wealth," a book examining sovereign-wealth funds. "It is very unwise to draw down the fund until it is depleted because then the major windfall from oil will be gone but economic problems will remain."

Information on how the fund is spent isn't readily available. Money from the fund has helped finance construction of Astana, the new capital city. Kazakhstan's National Fund transfers billions of dollars each year to the government budget and projects.