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LNG industry could learn from lack of collaboration in Australia

(Bloomberg; May 8) - On the southern shore of Australia's Curtis Island, a jetty extends over a stretch of water to fill LNG carriers. There is another jetty 1.2 miles south and a third a further half-mile down the coast. For one industry veteran, the crowded shoreline represents a \$10 billion missed opportunity. It's the amount that could have been saved had the rivals that built three separate liquefaction plants on the island collaborated on a single LNG facility, said Martin Wilkes, a consultant with 20 years industry experience.

They could have produced the same amount of fuel but eliminated extra jetties, storage tanks and other costly infrastructure, he said. The extra cost may not have made energy giants flinch in the days of \$100 oil, but after the biggest price collapse in a generation it can make the difference between a project living and dying. Companies like ExxonMobil are now looking at proposed projects from Mozambique to Papua New Guinea and asking how developers that would have been competitors can instead be partners.

"We talked to the Curtis Island projects in 2009 about combining and collaborating," but they ended up building all three, said Wilkes, a Perth-based adviser at RISC Advisory. "There are significant savings to be made through collaboration, but people have to approach it in a way that's different than the past." The shift toward combining projects is part of a larger cost-cutting effort across an LNG industry trying to snap a dry period of more than two years without a major new project sanctioned.

Producers are under pressure to keep costs down as a spate of new LNG plants come online over the next few years, threatening to overwhelm demand and keep a cap on prices. But if producers can't find a way of affording new projects, that surplus could eventually flip to a deficit as cheap LNG spurs more consumption. Demand will outpace supply by 2026 without new developments being funded, according to Bloomberg New Energy Finance. The last large-scale onshore greenfield project to be funded was Russia's Yamal LNG, which reached final investment decision in December 2014.

Without customers, FERC-approved Louisiana LNG project on hold

(Argus Media; May 9) - The Federal Energy Regulatory Commission has authorized Magnolia LNG to begin site preparation at its location in the Port of Lake Charles, La. It is not clear, however, when, or if, Magnolia will be built because the developer has not signed up enough long-term customers to finance the \$4.5 billion project.

Magnolia "remains fully engaged" in trying to finalize LNG offtake agreements to allow a positive investment decision, said Greg Vesey, CEO of Australia's Liquefied Natural Gas Ltd., which owns Magnolia. The project is fully permitted to build four equal-sized liquefaction trains with a combined capacity of 8 million metric tons of LNG per year.

Magnolia has said it needs to finalize liquefaction contracts for at least 6 million tons per year to get financing, but so far it has signed only one binding deal for 2 million tons. A couple dozen U.S. LNG projects have been proposed, with only six under construction as low oil and gas prices and a market glut of LNG have hurt investment. The six projects have combined capacity of 73.5 million tons per year, almost equaling Qatar's world-leading 77 million tons.

B.C. election results could give Green Party a role in energy projects

(Bloomberg; May 10) - British Columbia's ruling Liberal Party was reduced to a minority government in a fiercely contested provincial election May 9, setting up a vote recount and raising the possibility that the Green Party will hold sway over multibillion-dollar energy projects. Premier Christy Clark's Liberals, in power since 2001, are poised to form the first minority government in the Canadian province in 65 years. The Liberals won in 43 of 87 districts, while the left-leaning New Democratic Party took 41 — putting both short of a majority, according to preliminary results from Elections B.C.

The Green Party grabbed a record three districts in what its leader described as North America's first elected green caucus. Recounts will take at least two weeks and could shift the totals. As the incumbent, Clark has the first shot at heading a minority government — a task made easier because she won the most seats and the popular vote — but acknowledged she would need to work with other parties to get things done.

In the birthplace of Greenpeace, Clark faced down environmental opposition to her support of Kinder Morgan's Trans Mountain oil sands pipeline expansion and the Petronas-led liquefied natural gas export terminal proposed for near Prince Rupert. Both projects are already approved by the B.C. and federal governments, but if Clark requires the support of the Greens to govern the province she will dealing with a party staunchly opposed to both projects — raising new questions about their fate.

Delays continue for Mozambique LNG project

(Agence France Presse; May 6) - The small fishing town of Palma was meant to become a symbol of Mozambique's glittering future, transformed by one of the world's largest liquefied natural gas projects. But the project has fallen far behind schedule and the town's fate is uncertain after LNG prices fell and the government became engulfed in a \$2

billion debt scandal. Palma remains a sleepy village of 3,000 people, still waiting for the promised arrival of new jobs and infrastructure.

The discovery of offshore gas reserves in 2010, estimated at 180 trillion cubic feet in the Rovuma Basin, was the biggest gas find in recent decades. Experts predicted that Mozambique could become the world's third-largest LNG exporter — an African version of wealthy Qatar. Plans moved fast, and Palma's residents were soon looking for opportunities to lift themselves out of poverty in one of the world's poorest nations.

But the project has run into strong headwinds. Initial estimates were that the first LNG would come on stream in 2016 but now is expected in 2023 — or later. The fall in global energy prices has led companies to slow down investment. Meanwhile, the government is caught up in a debt scandal that has triggered an economic crisis unseen since the end of the country's civil war in 1992. News emerged last year that Mozambique had borrowed massively, including secret loans totaling \$2 billion. The International Monetary Fund and World Bank have suspended budgetary support. The loans, which the government is unable to repay, were taken out in anticipation of the gas windfall that remains elusive.

Petronas still undecided on LNG investment in British Columbia

(Malaysian Digest; May 8) – Malaysia's Petronas said on May 8 that it has yet to make a final investment decision on its Pacific NorthWest liquefied natural gas export terminal planned in northern British Columbia. Petronas CEO Datuk Wan Zulkiflee Wan Ariffin said the current plan is to continue exploring options to make the project competitive with other LNG producers in North America.

"We will announce the final investment decision when the time is appropriate," he said at a press conference at the 19th Asia Oil and Gas Conference. "We are determined to monetize the reserves at the right price and at the right time," he said of the company's gas reserves that straddle the British Columbia-Alberta border. The state-owned company is currently the world's third largest LNG exporter (after Qatar and Australia).

The Petronas-led LNG development proposed for Prince Rupert, B.C., has received its federal environmental approvals and gas export license, but lacks an investment commitment by its partners.

Nominees fill out FERC; Senate confirmation could go quickly

(Bloomberg; May 8) – President Donald Trump has chosen an aide to Senate Majority Leader Mitch McConnell and a state utility regulator to serve on the Federal Energy Regulatory Commission, bringing FERC one step closer to regaining a quorum to rule on gas pipelines and utility mergers. Trump will nominate Neil Chatterjee, a senior

energy adviser to McConnell who has worked at the National Rural Electric Cooperative Association, and Robert Powelson of the Pennsylvania Public Utility Commission.

Kevin McIntyre, co-head of the Jones Day law firm's global energy practice, is said to be Trump's pick to lead FERC. Lawmakers and industry groups have been urging Trump to fill the vacancies on the commission quickly. The agency lost the quorum it needs to make major decisions when former chairman Norman Bay resigned in February, leaving two Democrats on the five-member panel. His departure has threatened to stall a massive expansion of the U.S. gas pipeline network brought on by the shale boom.

Once nominated, candidates must be vetted by the Senate Energy and Natural Resources Committee before a Senate confirmation vote. Committee Chair Sen. Lisa Murkowski has said she plans to clear nominees as quickly as possible. If the confirmation process goes smoothly, it could wrap up by early June, said Christi Tezak, managing director of the Washington-based firm ClearView Energy Partners.

BP and partner announce additional gas discovery offshore Senegal

(Platts; May 8) - BP and partner Kosmos Energy announced May 8 a new major gas discovery off Senegal able to feed a potential further liquefied natural gas project in the gas-rich West African basin. The Yakaar-1 exploration well in the Cayar Offshore Profond block discovered 15 trillion cubic feet of gross gas resources, in line with expectations, Kosmos said in a statement. The condensate-to-gas ratio is also on par with previous discoveries in the area, at 15 to 30 barrels per million cubic feet of gas.

"This discovery marks an important further step in building BP's new business in Mauritania and Senegal," BP's upstream head Bernard Looney said in a statement. Dallas-based Kosmos and BP each currently hold an effective 30 percent participating interest in the Cayar Offshore Profond license. BP recently stepped up its upstream investment in the region and last month agreed to buy a further 30 percent stake held by Timis Corp. in the Saint-Louis Profond and Cayar Profond blocks.

The Saint-Louis Offshore Profond block includes the Senegalese sector of the cross-border Tortue field, which is also estimated to contain more than 15 tcf of discovered gas. BP in December pledged to spend nearly \$1 billion, mostly on a multi-year exploration and development plan, to acquire a 62 percent interest and operatorship of adjacent blocks offshore Mauritania. The partners are planning a near-shore LNG facility, with a final investment decision next year and first gas possible in 2021.

Petronas looks for new markets for LNG

(Reuters; May 8) – Malaysia's Petronas is looking to tap new markets to sell liquefied natural gas, including as fuel for ships, the head of its upstream operations said May 8. State-owned Petronas also sees significant growth potential for LNG in India, Pakistan, Bangladesh and parts of Southeast Asia, upstream CEO Mohd Anuar Taib said. "The key for us ... is to figure out a way to broaden and expand the customer base," he said, adding that lower prices have opened up new markets previously unable to afford LNG.

Asian spot LNG prices have dropped by more than 70 percent since 2014, with production growing faster than demand. Spot prices for June delivery stood at about \$5.70 per million Btu on May 6, compared with \$20-plus in 2014. Malaysia is the world's third-biggest LNG exporter behind Qatar and Australia. The top destinations for its LNG are Japan, South Korea and China, but Petronas is broadening its horizons and the first cargo from its new floating LNG facility was shipped to India last month.

Petronas says short-term deals, smaller volumes may entice buyers

(Reuters; May 9) - Malaysia's state energy firm Petronas may try shorter-term LNG contracts and smaller cargo sizes to entice buyers at a time when it has major contracts coming up for renewal and the market is awash in supply, senior company officials said. The marketing drive coincides with rising production from start-up of Train 9 at the Petronas Bintulu export terminal and its first floating LNG unit.

The global LNG trade has become a buyers' market as growth in new supplies, mainly from Australia and the United States, exceeded demand and depressed prices. Asian spot LNG prices have dropped by more than 70 percent since 2014. "New demand creation is becoming a norm," Ahmad Adly Alias, vice president of Petronas' LNG Trading & Marketing, said at the Asia Oil & Gas Conference on May 9.

In China, Petronas plans to work with a partner to sell smaller cargoes to meet the demand of small buyers, Ahmad said. Producers that used to sell LNG on long-term contracts have to be more flexible on their terms, he said. Petronas will soon start negotiating with customers in Japan, its biggest buyer, as some contracts will expire next year and some buyers are looking to reduce their purchase volumes.

Smaller, emerging LNG markets offer option as long-term deals expire

(Platts; May 10) - Malaysian state-owned oil and gas company Petronas is looking to divert LNG volumes from Japan to emerging, smaller markets that rely on floating storage and regasification units as supply contracts with Japanese utilities are due to expire next year without an extension agreement in place, a company executive said.

"We are looking at all these emerging markets as a home for those volumes," vice president for LNG trading and marketing Ahmad Adly Alias said on the sidelines of the 19th Asia Oil and Gas Conference in Kuala Lumpur on May 9. Among the contracts nearing expiration is the 7.4-million-metric-ton-per-year deal with Japanese utilities JERA and Tokyo Gas, which is due to expire in 2018.

"Obviously, we would like to renew those contracts, but we have options," Ahmad said, adding that is why Petronas is getting into the spot market. Petronas sold 30 to 40 cargoes through spot and short-term deals in 2016, and expects its share of spot-trade volumes to continue to rise as growing supply, new market participants, and increasing availability of ships boosts liquidity in global LNG markets.

Petronas expects second floating LNG production unit at work in 2020

(Reuters; May 7) – Malaysia's state-owned oil and gas firm Petronas said May 7 its second floating liquefied natural gas production facility will be operational in 2020. Petronas loaded its first cargo from the Petronas Floating LNG (PFLNG) 1 in East Malaysia last month, becoming the first company to produce LNG from a floating production unit. The second one under construction, PFLNG 2, will enable liquefaction, production and offloading of gas in the Rotan field, 150 miles off the East Malaysian state of Sabah. It is set to have a processing capacity of 1.5 million tonnes per year.

Adnan Zainal Abidin, Petronas' acting vice president for LNG assets, development and production, said the company has received interest from other industry players for using both the facilities. "We are in discussions with a number of third-parties that are interested to have our floaters at their locations." Adnan said.

Adnan declined to disclose the cost of the development. PFLNG 1 will reach its designed capacity of 1.2 million tonnes a year by June, and will be stationed at Kanowit in East Malaysia for five years. Malaysia's floating LNG production facilities are about one-third the capacity of a 1,600-foot-long behemoth under construction in South Korea for Shell, which will anchor it offshore an Australia gas field — now scheduled for 2018.

<u>Developer plans to borrow from Chinese banks for Africa LNG project</u>

(Reuters; May 8) - British oil and gas explorer Ophir Energy plans to borrow \$1.2 billion from Chinese banks to back development of its Fortuna floating liquefied natural gas export project in Equatorial Guinea. The buyer of the LNG and the project's financial structure should be announced by the end of this month, Ophir CEO Nick Cooper said May 8. The choice of Chinese banks reflects the unwillingness of Western institutions to back African oil and gas projects, Cooper said at an industry conference in Amsterdam.

"We're close to closing that out," he said of the loan deals. Fortuna FLNG will be Africa's first deepwater floating liquefaction facility, with production capacity of 2.2 million tonnes per year and an estimated start-up in 2020. Italy's Eni is advancing its own FLNG project in waters off Mozambique. The two small-scale African projects are expected to be the only multibillion-dollar LNG projects to be given the go-ahead globally this year, as low oil and gas prices have made companies rethink their investment plans.

Shipping company Golar LNG, also a partner in Fortuna FLNG with oil services firm Schlumberger via a joint venture, will build, own and deliver the FLNG vessel for Ophir. The vessel is an LNG tanker that Golar is fitting out with liquefaction equipment. Conversions like these are highly price competitive against traditional and more costly onshore liquefaction plants. The Fortuna field offshore Africa's Central West Coast holds an estimated 3.4 trillion cubic feet of gas.

South Korean presidential candidates support cleaner fuels

(Platts; May 7) - Whatever the election result, South Korea is likely to see a boost in LNG imports at the expense of coal-fired and nuclear power generation capacity as major candidates' top pledges remain focused on addressing public concerns over worsening air pollution. It has emerged as a key issue in the presidential election, set for May 9, to replace former President Park Geun-hye, who was impeached in March over a corruption scandal involving large family-run business conglomerates.

All three main candidates pledged to reduce coal-fired and nuclear power capacity to address the country's public health concerns, and increase gas-fired power production and renewable energy resources to offset the supply shortfall. The candidates' pledges come as South Korea has increasingly suffered from high concentrations of fine dust in the air. (The winner, Moon Jae-In, backed the strongest measures, promising to reverse the country's plans to build new coal-fired power plants and nuclear reactors).

South Korea runs more than 50 coal-fired power plants that supply about 40 percent of the country's electricity, followed by nuclear (30 percent), liquefied natural gas (25 percent), oil (3 percent), and renewable sources such as hydropower, solar, wind and fuel cells (2 percent).

Western sanctions on Russia cost Exxon more than others

(Wall Street Journal; May 8) - ExxonMobil is suffering from sanctions on Russia. The same can't be said for other big Western companies, or for Russian oil production. The sanctions, imposed by the U.S. and European Union in 2014 after Russia's annexation of the Crimea region of Ukraine, were meant to limit Russia's pursuit of new technology

for extracting oil and gas. The measures specifically targeted deepwater drilling planned in the Black Sea, Arctic operations and the use of fracking technology in Siberia.

The terms were a blow to Exxon because drilling in those areas was at the heart of a landmark deal the company struck a few years before to partner with Russia's state oil firm Rosneft. At the same time, some of Exxon's European rivals are moving ahead with projects in Russia, many under partnerships begun before the sanctions. BP was allowed to keep its nearly 20 percent stake in Rosneft, which contributed \$590 million to BP's net earnings in 2016.

Italy's Eni is preparing to drill a Black Sea well later this year in partnership with Rosneft and also plans to explore Arctic waters. The EU allowed partnerships in place at the time of sanctions to continue. Other European companies proceeding in Russia include Norway's Statoil, which has a pre-existing venture with Rosneft that will require drilling similar to modern fracking in the U.S. Statoil also continues oil drilling in Siberia. France's Total, together with a Russian partner subject to sanctions, is building an LNG export plant in the Arctic, a project that advanced by turning to China for financing.

"If the ultimate objective was to curb Russian industry, it isn't clear that's taken place," said Bill Arnold, a former Shell exec and U.S. Export-Import Bank senior vice president.