Oil and Gas News Briefs Compiled by Larry Persily March 26, 2015

Australia's LNG economics could be negative for years, analyst says http://www.theaustralian.com.au/business/mining-energy/no-returns-on-lng-for-years-

global-energy-expert-warns/story-fnp6xelk-1227275545210

(The Australian; March 24) - Australia's new generation of liquefied natural gas projects are unlikely to generate a return on investment for the foreseeable future, one of the world's foremost energy experts has warned. Fereiden Fesharaki, founder and chairman of consultancy FACTS Global Energy, said the knock-on effect of falling oil prices on LNG would be most keenly felt by Australian projects currently being brought into production.

"The LNG business will be heavily impacted, particularly for Australia where all these expensive projects have come on," Fesharaki told the Credit Suisse Asian Investment Conference in Hong Kong. "They will not be seeing a return on investment for many years to come." Almost \$200 billion has been spent or committed to developing new LNG projects around Australia in recent years, with the wave of construction set to move Australia ahead of Qatar for the title of the world's biggest LNG producer.

But the wave of developments has driven up construction costs, while several of those projects are now either complete or nearing completion just as LNG prices are dropping sharply. "You people in the financial community are very forgiving, as soon as cash flow starts coming in you forget about real economics," Fesharaki told the conference. "Cash flow will come in this year and next year and everyone will be happy families, but the real economics of these projects are negative for many years to come."

Mozambique makes progress on LNG, but concerns remain

http://www.theafricareport.com/Southern-Africa/mozambiques-gas-fired-development.html

(The Africa Report; March 23) - Mozambique's future as a liquefied natural gas exporter has moved closer following agreement on fiscal and operational terms for foreign investment in the LNG projects. Consortiums led by Anadarko and Italy's Eni are considering development of the offshore Rovuma Basin. Approval of the special regime by Mozambique authorities has set stability provisions preventing fiscal terms from being changed for 30 years, although the terms can be renegotiated after 10 years.

Recoverable reserves for Area 1 and Area 4 of the offshore basin, held by Anadarko's and Eni's consortiums, stand at 120 trillion cubic feet of gas, according to energy

analysts. Both groups are working through engineering but neither has made an investment decision to proceed. Agreement on fiscal terms, however, removes a major source of uncertainty at a time when concerns over market timing, falling energy prices and Mozambique's difficult operating conditions are in danger of stalling the projects.

Mozambique is trying to lock in investment as the downside of the commodity cycle leads investors to pull back from energy exploration and development in high-risk areas, particularly Africa. Already, companies have concerns about Mozambique's regulatory regime, political economy and operational risks. These worries relate to aspects of the country's petroleum law, passed in August 2014, which reserves 25 percent of gas production for the domestic market to promote industrial development.

LNG could repeat supply overbuild of iron ore and coal producers

http://www.reuters.com/article/2015/03/23/us-column-russell-Ing-idUSKBN0MJ0TH20150323

(Reuters' columnist; March 23) - Is liquefied natural gas the next iron ore or coal, destined for an extended period of weak prices amid a shift from market deficit to structural oversupply? Asian LNG prices seem to have already weakened and not just because of lower seasonal demand amid a warmer-than-usual northern winter. Spotmarket prices are below \$8 per million Btu, a level not seen since 2010 and well below the peak of \$20.50 reached in February 2014.

It's true that LNG was driven lower by the collapse in oil prices as well as the warmer winter, but these factors are unable to explain all of the decline. What has changed is the wave of new supply, and this is likely to become more pronounced in the next few years as even more new supply comes into the market. It's here that LNG starts to resemble iron ore and coal. Both these commodities experienced fairly rapid increases in supply as miners were encouraged by high prices and strong demand growth.

They also bought into predictions that Chinese demand would continue to rise strongly for decades as the world's most populous nation industrialized. But the prices of iron ore and coal have collapsed in recent years as new capacity far outweighed demand. This has led to a structural oversupply of iron ore and coal, which is likely to persist for several years given the modest outlook for demand growth and the resilience of supply.

Floating LNG vessels seen as future for offshore Australia fields
http://interfaxenergy.com/gasdaily/article/15620/flng-could-prove-lifesaver-for-australian-lng

(Interfax Natural Gas Daily; March 24) - Floating LNG production, liquefaction and storage vessels are seen as a potential savior for Western Australia's gas export sector

in the face of rising costs, environmental constraints and the remote location of its offshore fields — with at least three FLNG proposals in lieu of land-based facilities.

The growing interest comes as the construction of Shell's Prelude plant — the first to use the oil major's proprietary floating liquefaction system — is well underway in South Korea, according to Technip, the contractor on the project in partnership with Samsung. Speaking at an oil and gas conference in Perth in March, Technip Oceania's managing director Sam Allen said FLNG "may well be a lifesaver for Australian LNG in general."

Additional FLNG plants have already been proposed for Australia's northwest waters. Most FLNG projects are likely to be developed by major international oil companies, rather than Australian companies, because of the "quantum of investment required," said Brent Steedman, in the energy and natural resources sector at KPMG Australia.

According to a recent report by Engineers Australia, the technology is best suited to large stranded gas fields, typically far from existing onshore processing facilities. The disadvantages of FLNG are that the technology is still unproven; there are questions whether it can meet its operating standards and technical requirements; whether it can withstand a big storm; and the extent of its cost savings compared with onshore plants.

Shell assumes maybe 20% of B.C. LNG projects will be built by 2025 http://www.reuters.com/article/2015/03/25/shell-Ing-canada-idUSL6N0WR5J420150325

(Reuters; March 25) - Shell expects only a fraction of liquefied natural gas export projects approved by the Canadian government to go ahead in the next decade, an executive said March 25. Canada has the potential to become one of the world's top LNG exporters, but projects have yet to begin construction as every one of them awaits final investment decisions.

"At Shell we assume that only 15 to 20 percent of the approved projects will materialize by 2025," said Markus Hector, Shell's general manager of global LNG. Speaking at a gas sector event hosted by the High Commission of Canada in London, Hector said the low success rate was partly due to the scale of the infrastructure projects and the competition for people with the skills to build them.

Shell is the lead partner in a consortium planning the LNG Canada facility on British Columbia's northern coast and is not expected to make a final investment decision until at least 2016. "We are progressing the project, it's in the development phase."

Gas line to proposed B.C. LNG plant caught in climate change politics http://ca.b2.mk/news/?newsid=Vs5

(Financial Post; Canada; March 23) - Liquefied natural gas export projects are emerging as a new battleground for those opposed to fossil fuel development as a dispute between B.C. utility FortisBC and the district of Squamish heats up. FortisBC filed a petition March 10 with the province's Supreme Court against the district of Squamish after the municipality rejected the company's application to study the feasibility for a short natural gas pipeline to a proposed LNG export plant north of Vancouver.

"It's fair to say, from a utility perspective, we have never come up against this type of opposition," said Trevor Bourdeau, spokesperson for FortisBC, as people have linked some of the developments to the larger debate on climate change. "There is a lot of misinformation floating out there on how gas is produced in B.C. This gives us a great opportunity to talk about regulations that are in place, such as protection of groundwater — there has never been a case of water contamination from hydraulic fracturing."

The permits are necessary for FortisBC to conduct feasibility work on its \$520 million Eagle Mountain pipeline for its customer Woodfibre LNG, which is proposing a small liquefied natural gas export project in the area. In its petition to the court, FortisBC said the decision to deny the permit was "unreasonable and must be set aside." Last November, Squamish elected Patricia Heintzman as its new mayor in part due to her opposition to LNG projects. She was one of four that voted to deny the permit.

<u>Sempra starts process for proposed LNG export plant in Texas</u> http://www.platts.com/latest-news/natural-gas/houston/sempra-seeks-ferc-pre-filing-review-for-port-21186668

(Platts; March 23) – San Diego-based Sempra Energy has asked the Federal Energy Regulatory Commission to initiate a pre-filing review for the company's proposed Port Arthur LNG liquefaction and export facility in Texas, the company said March 23. The site is the same as proposed by Sempra for an import terminal almost 10 years ago.

The export project is designed to include two gas liquefaction trains with a total export capability of 10 million metric tons per year of LNG (about 1.4 billion cubic feet of gas per day); two storage tanks; marine facilities for vessel berthing and loading; natural gas liquids and refrigerant storage; feed gas pre-treatment; truck loading and unloading areas; and combustion turbine generators for self-generation of electrical power.

The FERC pre-filing is the latest step in securing permits for the project. On March 20, Port Arthur LNG filed an export permit application with the Department of Energy. Sempra already is building an export terminal at Hackberry, La. The company said the Texas project "is contingent on completing the required commercial agreements, securing all necessary permits and approvals, obtaining financing and incentives, reaching a final investment decision and other factors associated with the investment."

Another LNG export plant proposed for Texas coast

http://fuelfix.com/blog/2015/03/23/brownsville-eyed-for-lng-export-plant/

(Houston Chronicle; March 23) - A Woodlands, Texas-based company has asked the federal government for permission to build a liquefied natural gas export plant in Brownsville, joining a growing group of companies hoping to capitalize on a flood of cheap U.S. natural gas. The project by NextDecade is under initial review by the Federal Energy Regulatory Commission, one of the first steps required before construction can begin, the company announced March 23.

Privately owned NextDecade has proposed building six liquefaction trains capable of producing 27 million metric tons of LNG per year on a 1,000-acre site along the Brownsville Ship Channel. Plans call for dividing the Rio Grande LNG project in phases, with the first phase expecting to cost about \$8 billion. The company intends to announce its final investment decision once the project has been fully cleared by federal and state regulators, NextDecade said, possibly by 2017.

LNG proponents see possibilities in Philadelphia

http://www.philly.com/philly/business/20150322_Phila_again_ponders_allure_of_liquefied_natural_gas.html

(Philadelphia Inquirer; March 22) - Despite the Philadelphia city council's rejection nine years ago of a liquefied natural gas terminal, the city is once again flirting with the money-making allure of the fuel. Several entrepreneurs are promoting plans to increase LNG production at the Philadelphia Gas Works plant in Port Richmond, hoping to capitalize on growing interest in creating an energy hub linked to the Marcellus Shale natural gas boom.

The most ambitious plan floated publicly is a \$2.1 billion proposal to expand the plant's capacity to export LNG to Europe. Philadelphia Gas Works has produced LNG for more than 40 years to store gas for distribution on the coldest winter days. Other proposals are being shopped to city officials, including one that would expand LNG production on a smaller scale aimed at a growing domestic market for LNG as a clean-burning replacement for fuel oil and diesel in trucking, shipping and remote power generation.

Philip Rinaldi, chief executive of Philadelphia Energy Solutions' South Philadelphia oil-refinery complex, belittled the LNG export business at the recent city council hearing, calling it an "extremely expensive" way to chase international markets. "I think that's a crazy business, I have to tell you," Rinaldi said.

Federal agencies delay work on EIS for offshore LNG import terminal

http://www.app.com/story/news/local/new-jersey/2015/03/25/federal-agencies-delay-lngs-port-ambrose-application/70453984/

(Asbury Park Press; NJ; March 25) - An application for a deep-water port and natural gas pipeline off the New Jersey / New York coast has been delayed by federal agencies due to an overwhelming amount of public comments. "The purpose of the suspension is to allow the U.S. Coast Guard and the Maritime Administration time to assess public comments and get them into the final environmental impact study," said Curtis Borland, legal counsel for the Coast Guard.

The agencies received more than 10,000 public comments on the proposed Port Ambrose project to anchor LNG tankers offshore, where they would connect with a permanent buoy to offload their cargoes for delivery by a 21-mile undersea pipeline for onshore distribution to help meet growing demand for gas in the region underserved by pipelines.

The EIS was to be finished early April, but the clock has stopped until the agencies can process all comments. The suspension is indefinite. Environmental groups opposed to the project said they rallied people to comment on the project. Federal agencies are also requesting amendments to the pipeline's proposed depth under the seabed and a financial statement from the company proving it has the financial ability to build the project.

Maryland legislation would delay fracking, hold drillers strictly liable http://www.washingtonpost.com/local/md-politics/as-fracking-becomes-a-possibility-in-maryland-lawmakers-try-to-stall-it/2015/03/24/77de97ae-d22d-11e4-a62f-ee745911a4ff_story.html

(Washington Post; March 24) - The Maryland House of Delegates passed legislation 93-45 on March 24 that would forbid natural gas drilling in the western part of the state for three years, while the Senate approved a bill 29-17 that would hold drilling companies financially responsible if things go wrong. Each bill generated hours of debate and is far from becoming law. Even if approved by the other chamber, either or both bills could be vetoed by Gov. Larry Hogan, who has called such drilling "an economic gold mine."

For years, Maryland officials have weighed the potential benefits and risks of hydraulic fracturing, which injects high-pressured liquids into underground rock formations to extract natural gas. The practice, known as fracking, could provide much-needed jobs in the state while tapping a cleaner source of energy. But there are many unknowns about fracking, and opponents say it could lead to contaminated water, earthquakes and other environmental problems.

The House bill would forbid the state from issuing fracking permits for three years so that a panel could study potential health and environmental impacts. Some lawmakers

argued against the bill, saying the future of the region's economy depends on fracking. "This issue has been studied to death," said Delegate Haven N. Shoemaker Jr. "We need to quit fracking around and bring jobs to Western Maryland." The Senate bill would hold companies financially liable if their fracking causes injury, death or loss of property.

Boston-area LNG terminal operator says it can meet region's needs http://www.bostonglobe.com/business/2015/03/22/with-increase-Ing-supplies-does-

http://www.bostonglobe.com/business/2015/03/22/with-increase-Ing-supplies-does-region-really-need-new-pipelines/mrRbwgaiKwYuAJoGXDiPMN/story.html#

(Boston Globe; March 23) - Opponents of proposed natural gas pipelines that would crisscross Massachusetts may have a new ally: a multinational importer of liquefied natural gas. As Massachusetts Gov. Charlie Baker tries to organize a summit of New England governors to address regional energy needs — including the hotly contested issue of building natural gas pipelines — Distrigas of Massachusetts says its LNG facility in Everett is more than capable of meeting the rising demand for natural gas.

Distrigas, owned by France's GDF Suez, questions the need for two multibillion-dollar pipeline projects proposed by other energy suppliers and vehemently opposed by neighbors and environmental groups. "We already have the infrastructure in place," Frank Katulak, CEO of Distrigas, said of his company's terminal, where giant LNG ships from around the world dock and convert their cargo into gas for distribution across the region. The proposed pipelines would deliver Marcellus Shale gas to the region.

"We absolutely are an alternative to new pipelines. There's no need for major changes or new fees to pay for new pipelines," Katulak said. The terminal, Distrigas officials said, is running at about 50 percent capacity. But pipeline companies and utilities backing them contest Katulak's assertion that LNG can fully alleviate supply shortages caused by pipeline constraints. At best, other energy suppliers say, LNG is a backup source for the increasing demand for gas to heat homes and generate electricity in the region.

Nova Scotia energy official says LNG projects depend on gas supply http://thechronicleherald.ca/novascotia/1276441-lng-plans-tied-to-supply

(Chronicle Herald News; Halifax, Nova Scotia; March 24) - The fate of four proposed liquefied natural gas export projects in Nova Scotia essentially comes down to the ability to secure gas supply, said Nova Scotia's deputy minister of energy. Murray Coolican appeared before the legislature's resources committee March 24 to discuss geoscience research and potential growth for offshore production.

During his remarks, Coolican said his department is doing everything it can to help the four proposals for LNG terminals, but ultimately "it depends on their ability to access gas from the (Canadian) West Coast, from the United States and the offshore." New

pipelines or additional capacity to existing lines would be needed to bring gas hundreds of miles and more from those production fields to the Atlantic province.

Korean shipyard lays keel for first Yamal LNG tanker

http://worldmaritimenews.com/archives/155537/construction-begins-on-scfs-arctic-Ing-carrier/

(World Maritime News; March 24) - Korean shipbuilder Daewoo Shipbuilding & Marine Engineering has laid the keel for the first liquefied natural gas tanker ordered by Russia's Sovcomflot Group for transport of production from the Yamal LNG project. The vessel is intended to be used for training crews for Arctic LNG carriers and for practicing navigation in severe ice conditions in the Arctic seas.

The vessel will be operated under a long-term charter between Sovcomflot and Yamal LNG. The ship will be 984 feet long with a beam of 164 feet, with enough steel and power to sail safely through the ice-covered Northern Sea Route. Tanker construction is scheduled for completion in 2016. Yamal LNG, which is under construction in the Russian Arctic, includes partners Novatek (60 percent), Total (20 percent) and China National Petroleum Corp. (20 percent). Novatek has said start-up could come by 2018.

The tanker will be able to operate in ice up to almost 7 feet thick, with a cruising speed of up to 19.5 knots — though not nearly that fast in sea ice.

China imported record volume of pipeline gas in February

http://www.platts.com/latest-news/natural-gas/hongkong/chinas-feb-pipeline-gas-imports-rise-52-on-year-27245710

(Platts; March 25) - China imported a record high 123 billion cubic feet of natural gas via pipelines in February, 52 percent higher than the same month last year, detailed data from the General Administration of Customs showed March 24. The jump was mainly due to a 47.6 percent increase in inflows from Turkmenistan to more than 100 bcf.

China National Petroleum Corp. is responsible for importing gas from state-owned Turkmengas under a long-term deal. CNPC also imports gas from Myanmar. Taking into account LNG imports in February of almost 80 bcf of gas, China's total gas imports were 32.6 percent ahead of a year ago, although the volumes were down slightly from January. Domestic gas production in China was almost double its total imports of pipeline gas and LNG, though rising demand continues to require more imported gas.

U.S. drillers respond to low oil prices with new technologies

http://www.cnbc.com/id/102529774

(The Associated Press; March 24) - OPEC and lower global oil prices delivered a one-two punch to drillers in North Dakota and Texas who brought the U.S. one of the biggest booms in the history of the global oil industry. Now they are fighting back. Companies are leaning on new techniques and technology to get more oil out of every well they drill, and furiously cutting costs in an effort to keep U.S. oil competitive with much lower-cost oil flowing out of the Middle East, Russia and elsewhere.

"Everybody gets a little more imaginative, because they need to," says Hans-Christian Freitag, vice president of technology at drilling services company Baker Hughes. Drilling in shale is costly because the rock must be fractured to get oil to flow, so drillers have to find ways to get more oil out of each well, pushing down the per-barrel cost. Experts estimate shale drillers pull up just 5 percent to 8 percent of oil in place. "We're leaving behind a large amount of hydrocarbons, and that's quite unacceptable," Freitag said.

Engineers have adapted some of the best sensor technology and mathematical models, developed first for deep offshore drilling, to see into the rock better. As they drill, they use imaging technology to find natural cracks in the rock that they can then use as a target when they fracture the rock, to leverage natural highways for oil and gas. After they fracture the rock, they can map the new cracks. That way they can know how close they can drill another well to get more oil without sapping production from the first well.