Oil and Gas News Briefs Compiled by Larry Persily May 8, 2017

Australian LNG plant operator will try U.S. tolling model

(Bloomberg; May 5) - Woodside Petroleum, operator of Australia's oldest LNG plant, is seeking inspiration from the U.S. Gulf Coast. The North West Shelf venture in Dampier will allow third-parties to pay a capacity ["tolling"] fee for the plant to liquefy their gas, Woodside Managing Director Peter Coleman said May 5 in Perth. The plant, operating since 1989, will have spare capacity by the mid-2020s to handle new production. Its five liquefaction trains can produce 16.9 million metric tons of LNG per year.

The financial model is similar to U.S. plants, led by Cheniere Energy's Sabine Pass, La., terminal, which contract out their liquefaction capacity, leaving clients to handle buying the feed gas and selling the LNG. So-called "tolling agreements" are a break from the decades-old past in Australia and the rest of the global LNG market, where companies traditionally combined exploration, pipelines and liquefaction into multibillion-dollar projects, with partners owning everything from the gas molecules to the export jetties.

"If you look at similar tolls in, for example, the Gulf of Mexico, which range anywhere from \$2.75 to \$3.75 [per million Btu] for processing, we believe North West Shelf can beat those numbers," Coleman said. The tolling option, which Coleman said could start up by the end of June, would offer capacity to companies with untapped gas reserves offshore northwest Australia that may choose to pay for liquefaction services rather than build their own LNG plant. The North West Shelf project is a partnership between operator Woodside, BHP Billiton, BP, Chevron, Shell, Mitsubishi Corp. and Mitsui & Co.

U.S. Gulf booming with LNG projects; Canada still waiting

(Financial Post; Canada; May 4) – Tucked behind a row of stilted homes in the grassy marshland of South Texas is proof of the U.S. rush into liquefied natural gas. Once finished in late 2018, the \$13 billion Freeport LNG plant will liquefy 2.1 billion cubic feet of gas a day for export. Like other LNG projects in the area, Freeport was initially built as a regasification plant to do the opposite: turn imported LNG into gas for domestic use. "The world just slowly flipped on us," said Freeport president Sigmund Cornelius.

By the time that project was completed in 2008, new drilling technologies and fracking had unlocked massive volumes of U.S. oil and gas, turning global markets upside down. A frenzied jockeying followed for position in the fast-emerging LNG trade. The U.S. will bring online 5.5 bcf a day of new LNG export capacity between 2016-2020, accounting

for roughly 10 percent of global supply. Cheniere Energy's Sabine Pass, La., facility shipped its first gas in February 2016, with Freeport and four more under construction.

The rapid expansion will eventually make the U.S. the third-largest exporter of LNG, behind Qatar and Australia. Notably absent from the list is Canada. Of the 20-odd LNG facilities proposed in British Columbia alone, only one small project is moving ahead. The larger ones are delaying final investment decisions — while its neighbor is realizing its LNG ambitions. Perhaps the most obvious U.S. advantage is the vast network of gas pipelines and regasification plants in Texas and Louisiana, which gave developers a leg-up in cost. A comparably relaxed regulatory system in the U.S. allows projects to move ahead quicker, and Texans are more accommodating of oil and gas projects.

Shell says floating Australia LNG project will come online in 2018

(Natural Gas World; May 4) - Shell's floating gas production, liquefaction and storage vessel Prelude will come on stream in Australia in 2018, Chief Financial Officer Jessica Uhl told journalists on a conference call May 4. By most benchmarks, that means the project is delayed from its scheduled 2017 launch. The company said work on Prelude — with capacity to produce 3.6 million tonnes of LNG per year and 36,000 barrels a day at peak of condensate and gas liquids — was almost complete, declining to give details.

A spokeswoman said Shell would not comment on the timeline, but noted that Prelude must leave the South Korean shipyard for western Australian waters this year to avoid the hurricane season. Most reports by press and analysts had given 2017 as the startup for operations, although Shell had never confirmed that date. The 1,600-foot-long vessel lacks its own propulsion, and will be towed to the offshore gas field, anchored, and will connect to the seabed with flexible piping through an 85-foot-diameter onboard rotating turret to allow secure operations during rough seas.

In addition to Shell, with a 67.5 percent share, Japanese oil and gas explorer and producer Inpex holds a 17.5 percent stake in the project. Korea Gas and Taiwan's CPC share the 15 percent balance. The project's cost has been reported at \$12 billion, though Shell has not confirmed that estimate.

Tokyo Gas buys 30% stake in small U.S. natural gas producer

(Reuters; May 8) - Japan's biggest city gas supplier Tokyo Gas said May 8 it has acquired a 30 percent stake in a subsidiary of Castleton Commodities International, its first equity investment in a U.S. upstream company. Tokyo Gas did not reveal the price for the stake in Castleton Resources, which owns and operates over 160,000 net acres of leasehold in East Texas with access to the Cotton Valley and Haynesville Shale and has a net production of about 238 million cubic feet equivalent per day of natural gas.

Tokyo Gas will not receive gas offtake from the project but Castleton Resources will sell the output, Tokyo Gas officials said. "By taking an equity stake, we can get a variety of insight and we aim to expand our business in the natural gas value chain," said Isao Hosoya, senior general manager of global business development at Tokyo Gas.

Ballot measure vote May 16 to block LNG project in Oregon

(The Oregonian; May 6) - The Jordan Cove LNG project has produced one of the most expensive and divisive ballot measure campaigns ever on the southern Oregon coast. Backers of the proposed liquefied natural gas export terminal in Coos Bay have put an unprecedented amount of money into an effort to torpedo the ballot measure that threatens the project. The \$359,000 donated to the "no" campaign is the most ever for a ballot measure in Coos County — about \$9 for each of 41,613 registered voters.

The May 16 election will mark the latest chapter in a 12-year fight that has pitted neighbor against neighbor, jobs versus the environment, and property rights against property taxes. The stakes are high for Jordan Cove LNG and its parent company, Calgary-based Veresen, which have donated all but \$1,000 of the \$359,000 gathered to fight the measure. Federal regulators denied the company's application last year, but Veresen has since reapplied.

"Our financial interest in this is to make sure that this unconstitutional measure does not see the light of day," said Jordan Cove spokesman Michael Hinrichs. Backers of the measure have raised just \$12,000. The measure cites several community rights, including self-government and a "sustainable energy future." But its main thrust would be to ban development of "non-sustainable energy systems" and bulk transportation of fossil fuels in the county. County commissioners have lined up against the measure, calling it overreaching, poorly written and almost certainly unconstitutional.

Oregon senators remind Trump that FERC will decide LNG project

(Portland Business Journal; May 3) - Oregon's U.S. senators fired off a letter to President Donald Trump on May 3, letting him know that as much as he might want to see a liquefied natural gas export terminal and pipeline built in Oregon, it's not the White House's call. Sens. Ron Wyden and Jeff Merkley, both Democrats, were responding to April 20 remarks by Gary Cohn, director of the National Economic Council.

Cohn said, "The first thing we're going to do is we're going to permit an LNG export facility in the Northwest" — a reference to Jordan Cove LNG, an export terminal proposed for Coos Bay, and a 232-mile feeder pipeline. Not so fast, Wyden and Merkley replied in their letter to Trump. "As you should know, the White House is not responsible

for permitting natural gas facilities and pipelines — that responsibility rests with the Federal Energy Regulatory Commission," they wrote.

FERC rejected Jordan Cove last year, saying the developer hadn't demonstrated a need for the project, which faced overwhelming opposition from landowners along the route. The developer, Calgary-based Veresen, is not giving up. It has reapplied and submitted a modified proposal to FERC. Trump could have an opportunity to shape the commission as it takes up the new proposal. The five-member presidentially appointed board only has two members and another member is set to leave in June.

Project applications stack up as FERC lacks a quorum

(Bloomberg; May 5) - By the time Midwesterners fire up their furnaces this fall, the \$2 billion Nexus pipeline is supposed to be pumping natural gas to heat homes from frosty Ohio to frostier Ontario. But six months out, the 255-mile line exists only on paper. Until President Donald Trump fills vacancies on the Federal Energy Regulatory Commission, Nexus and other energy projects are in limbo, unable to secure permits to begin work. For Nexus, each lost week threatens the project's ability to meet winter demands.

Nexus is just part of at least \$50 billion worth of ventures slowed or stalled while FERC awaits presidential appointments. For the first time in FERC's 40-year-history, the agency does not have enough commissioners for a quorum to vote on project applications. At least a half-dozen pipelines valued at \$12 billion face imminent delays, while projects valued at \$38 billion are slogging through an approval process that's slow in the best of times. An additional \$25 billion of proposed developments just beginning the application process also could be slowed if the situation persists late into the year.

Trump inherited a commission with three Democrats on the job and two Republican vacancies — and decided to shake things up. He lost one commissioner and lost a quorum, but has not nominated any replacements. That means no pipeline approvals. No decisions on contested utility mergers. No clearance for liquefied natural gas terminals. Nominees are expected in the coming weeks, but that would be only the beginning of what could be a months-long process that requires Senate confirmation.

Australian gas producer blames government for supply problems

(The West Australian; May 3) - Oil and gas producer Santos said governments are to blame for Australian East Coast gas supply problems. Prime Minister Malcolm Turnbull recently announced measures allowing the federal government to restrict the export of liquefied natural gas to protect domestic supply. Santos CEO Kevin Gallagher said a reliable and affordable domestic gas supply is essential for households and businesses, but a successful LNG export industry is also important. "The domestic supply issue is not the fault of the LNG projects at Gladstone," Gallagher said at the company's annual meeting. "It is the result of a complete failure of regulation in the wholesale gas market and actions by state and territory governments to ban or restrict exploration and production." If Santos gets the go-ahead for its Narrabri gas project in New South Wales, among others, there will be no talk of an East Coast gas shortage, Gallagher said. Narrabri is about 500 miles south of the LNG export terminals.

Santos Chairman Peter Coates said there is no shortage of gas, but a shortage of uniform government policy and support for the orderly development of new supplies. The Narrabri coal-bed methane discovery is estimated at almost 3 trillion cubic feet of gas. The export market underpinned the multibillion-dollar development of Queensland LNG projects, but without those export sales the gas would still be in the ground and unavailable to the domestic market, Coates said.

Japan conducts successful offshore methane hydrates experiment

(EnergyWire; May 5) - Japan has conducted a successful experiment with methane hydrates, the cage-like lattices of seafloor ice that contain trapped molecules of methane. The Japan Oil, Gas and Metals National Corp. announced this it was flaring gas from a drillship after methane started flowing from its new test well off the coast of central Japan. The country had conducted a partially successful test of offshore methane hydrates in 2013.

The announcement comes as the resource-poor country looks to exploit a revolutionary energy source and make it technically viable. A Japanese study estimates at least 40 trillion cubic feet of methane hydrates off the country's coast. Japan has been aiming to launch private-sector commercial production of methane hydrates in about a decade from now, but many obstacles remain. Japan's government has budgeted about \$180 million for the latest offshore production experiments.

Bangladesh waives taxes, import duties for first LNG import terminal

(The Financial Express; Bangladesh; May 5) - The Bangladesh government has waived duties for the country's first floating liquefied natural gas import terminal, now being built by U.S.-based Excelerate Energy for Moheshkhali Island in the Bay of Bengal. The National Board of Revenue, in a notification last week, announced waiver of the value-added tax, advance VAT and supplementary duty to assist in implementation of the project, said a senior official of the Ministry of Power, Energy and Mineral Resources.

The revenue board also waived import duties on equipment for the LNG terminal, the official said. The ministry expressed its intention to complete the project and start LNG imports in early 2018. Bangladesh inked the final deals with Excelerate in July 2016 for

construction of the floating receiving, storage and regasification facility. Excelerate will charge US\$0.49 per 1,000 cubic feet of gas for its services under the agreement.

The facility will have the capacity to supply about 500 million cubic feet of gas per day. The capacity could be increased to about 700 million cubic feet a day. Bangladesh is now reeling under an acute natural gas shortage with daily average output of about 2.7 bcf against demand for more than 3.3 bcf a day, according to state-run Petrobangla. Rapid industrialization is forcing Petrobangla to ration gas supplies to industries, power plants, compressed natural gas filling stations and households.

Oil majors look to apply U.S. shale lessons in Argentina

(Wall Street Journal; May 4) - About 5,000 miles from oil towns in West Texas, some of the world's biggest oil companies are trying to do what they failed to do with U.S. shale: Get in first and early. Shell, ExxonMobil and others are making another go at taking the shale industry global, starting with a grand experiment in a desolate swath of western Argentina. This sprawling piece of Patagonia, known as Vaca Muerta ("dead cow)," potentially has as much oil and gas as the biggest basins in Texas or North Dakota.

Replicating the U.S. fracking boom elsewhere has taken on fresh urgency in an era of low oil prices. Outmaneuvered in the U.S. by smaller companies, Exxon, Shell, Chevron and others see Argentina as one of their best opportunities to expand shale, which generally can be ramped up or down with prices. The Vaca Muerta has long been a focus of explorers, and a business-friendly government is fueling optimism that the region could finally take off. But hurdles remain and costs are much higher than the U.S. — Exxon told analysts it costs two to three times more to drill a well in the Vaca Muerta.

Still, Exxon is expected this year to move from experimental pilot to development in the region, taking a step toward investments that former CEO Rex Tillerson last year said could exceed \$10 billion in the coming decades. Chevron has made investments of over \$1 billion in Argentine shale projects, and BP is in the country through a joint venture. Yet companies want to take it slow because they have been burned before. Previous shale wildcatting attempts in Europe, Russia and China have been stymied by a cocktail of poor drilling results, politics, regulatory hurdles and the dramatic drop in oil prices.

U.S. Gulf of Mexico oil production sets record, growth continues

(Reuters; May 4) - As rapid growth in U.S. shale production threatens to upend attempts by OPEC to balance oil markets, a more unsung sector of the U.S. industry is also hitting new output highs — the offshore Gulf of Mexico. While attention and investment is focused on shale, the Gulf is the among the most prolific oil source in the United States, producing more than Alaska, the West Coast and Rocky Mountains combined. The region churned out a record 1.76 million barrels per day of crude in January, trailing only Texas onshore production, which includes the growing Permian Basin.

"The business can compete with tight onshore oil any day," said Richard Morrison, regional president for the Gulf of Mexico for BP, speaking at the annual Offshore Technology Conference in Houston. The Gulf region is expected to add another 190,000 barrels per day before the end of the year, according to the U.S. Energy Information Administration. Growth should continue, according to consultancy RBN Energy, which expects production to rise by 300,000 barrels in 2018 from current levels.

Unlike shale, where price immediately governs production, Gulf production has proved relatively resistant to fluctuations in prices, fueled by projects approved several years ago. For Gulf production to ramp up further, however, producers will have to accept the idea that shale might keep oil prices lower for longer, with little chance to bust out of the \$45 to \$55 range. Gulf output is also being driven by so-called tie-backs — subsea lines that connect to existing projects, said RBN Energy. These less-costly underwater lines offer companies a chance to connect additional wells to active platforms.

U.S. oil output rebound frustrates OPEC's effort to boost prices

(Bloomberg; May 5) - OPEC's plan to boost oil prices by cutting production has fizzled, yet the cartel has little choice but to stick with it. Crude has surrendered all of its gains since the Organization of Petroleum Exporting Countries first agreed to output cuts in November. While OPEC has made cuts, a rebound in U.S. shale output and stubbornly high stockpiles show the world's three-year crude glut isn't shifting. Even signals from Saudi Arabia and Russia that they will prolong supply cuts have not stopped the rout.

Yet OPEC has limited room to maneuver when it meets May 25 in Vienna to discuss the production deal, which it is almost certain to continue because the alternatives look even worse. If it were to deepen the cutbacks, even more U.S. shale supplies might come along to fill the gap, according to UBS Group. Abandoning the OPEC policy and restoring output would inflict the economic pain of crude below \$40, Citigroup predicts.

"The risk of a higher cutback is that it could trigger too strong an increase in prices and support U.S. shale," said Giovanni Staunovo at UBS in Zurich. "If they change strategy, Saudi Arabia would lose face. You can't say you want lower inventories, and after a few months give up." With OPEC showing near-perfect compliance in delivering its pledged 1.2 million-barrel-a-day production cut and an extension looking likely, the group has little ammunition left in its battle to raise prices. Meanwhile, U.S. output has roared back, growing by 523,000 barrels a day this year to its highest level in almost two years.