LNG WRAP-UP

NARUC LNG GROUP

Thursday, July 02, 2015

The LNG Working Group is sponsoring Mary Usovicz' presentation on Sunday 6/12 during the Staff Subcommittee on Gas' meetings. Mary, a Senior Vice President of Business Development at TRC Companies, Inc., will talk about the opportunities for small scale LNG in power generation and beyond.

EPA's <u>Assessment of the Potential Impacts of Hydraulic Fracturing for Oil and Gas on Drinking Water</u>

<u>Resources</u> "...did not find evidence that these [fracking] mechanisms have led to widespread, systemic impacts on drinking water resources in the United States" (Executive summary:

http://www2.epa.gov/sites/production/files/2015-06/documents/hf es erd jun2015.pdf)

Previous issues of the LNG Wrap-Up can be found on the LNG Working Group's page at the following link: http://www.naruc.org/Grants/programs.cfm?page=60

DOMESTIC NEWS (NORTH AMERICA)

FERC-Related (2015)

(6/1) Corpus Christi Liquefaction LLC and Cheniere Corpus Christi Pipeline, LP filed a request to initiate the pre-filing environmental review process for the proposed Stage 3 expansion at the terminal in Corpus Christi, TX.

http://elibrary.ferc.gov/idmws/common/opennat.asp ?fileID=13893661

(6/11) As a result of the US Dep't of Interior's request for additional information regarding an alternative pipeline route, the FERC revised its Environmental Review schedule for the Jordan Cove Energy Project LP

http://elibrary.ferc.gov/idmws/common/opennat.asp ?fileID=13901559

(6/15) Freeport LNG files an application to increase the total LNG production capacity at the Quintana Island, TX facility to 2.14 Bcf/day.

http://elibrary.ferc.gov/idmws/common/opennat.asp ?fileID=13907165

(6/22) FERC issued an order denying rehearing Sierra Club's request for rehearing of Sabine Pass' expansion authorization.

http://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13910672

(6/24) FERC has issued a notice of its intent to prepare an EIS for the proposed Port Arthur LNG export terminal project and interconnected pipeline near Port Arthur, Texas.

http://elibrary.ferc.gov/idmws/common/opennat.asp ?fileID=13911413

(6/26) FERC released the Environmental Review Schedule for the Golden Pass LNG export terminal. file:///C:/Users/andreas.thanos.ENV/Downloads/20 150626-3013(30667901).pdf

Montreal, QC (5/28/15) GE Capital Canada and Shell Canada signed an agreement to facilitate the trucking industry's move from diesel to LNG. <a href="http://www.genewsroom.com/press-releases/ge-capital-canada-announces-agreement-shell-facilitate-trucking-industry%E2%80%99s-shift?ca-cid=CA 2015 SM LI shellpressrelease

Lincoln, NE (5/29) Nebraska's Clean-burning Motor Fuel Development Act (LB581), which was introduced on 1/21/15, was signed into law today by Gov. Ricketts. The law offers rebates of up to \$4,500 for the conversion of a vehicle to either LNG or CNG.

http://nebraskalegislature.gov/FloorDocs/104/PDF/Intro/LB581.pdf

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Calgary, AB (6/1/15) British Columbia-based AltaGas DCLNG, filed an application to export the equivalent of app. 365/Bcf of LNG for a 25 year period, from a terminal off Kitimat, B.C. <a href="https://docs.neb-one.gc.ca/ll-eng/llisapi.dll/fetch/2000/90466/94153/552726/2787647/2787648/2787224/Application for a Licence to Export Liquefied Natural Gas - A4Q3S5.pdf?nodeid=2787524&vernum=-2

<u>Cleveland, OH</u> (6/1/15) Chart Industries has entered into an agreement to acquire Massachusetts-based vaporizer manufacturer, Thermax. Chart Industries manufactures cryogenic equipment used in the production, storage and distribution of liquefied natural gas (LNG) and industrial gases.

http://www.chartindustries.com/News-Events/News/Chart-Industries-to-Acquire-Thermax

Washington, D.C./Oslo, Norway (6/2/15)

According to Admiral Paul Zukunft, Commandant of the U.S. Coast Guard, the United States is facing a ship shortage for LNG exports.

http://www.foxbusiness.com/industries/2015/06/02/coast-guard-says-us-faces-ship-shortage-for-gasexports/

<u>Baltimore, MD</u> (6/2/15) Opponents of Dominion's Cove Point liquefaction project are seeking a halt in construction until their appeal is heard. http://www.baltimoresun.com/features/green/blog/b al-Ing-project-opponents-seek-emergency-halt-to-

construction-20150602-story.html

<u>San Diego, CA</u> (6/3/15) Australia-based Woodside Petroleum Ltd. And Sempra LNG signed a memorandum of understanding for the potential development of Port Arthur LNG in Texas. http://sempra.mediaroom.com/index.php?s=19080 &item=137051

Honolulu, HI (6/3/15) Consistently low oil prices are causing Hawaiian Electric to delay LNG shipments by 2 years.

http://www.bizjournals.com/pacific/news/2015/06/03/hawaiian-electric-codelays-235m-lng-project-for.html

Toronto, ON (6/4/15) The Financial Post reports that according to the International Energy Agency, Prospects for [Canadian] LNG projects have deteriorated and no plant is expected to be operational by 2020.

http://business.financialpost.com/news/energy/canadian-lng-prospects-have-darkened-says-international-energy-agency? lsa=85c2-c722

<u>Houston, TX</u> (6/10/15) Cheniere has agreed to partner with Parallax Enterprises to develop up to 10 million tones/year through Parallax' projects -- Live Oak LNG and Louisiana LNG.

http://phx.corporateir.net/phoenix.zhtml?c=101667&p=irolnewsArticle&ID=2058362

Anchorage, AK (6/10) The Alaska Journal of Commerce reports that Alaska Governor Bill Walker is considering buying out TransCanada Corp.'s 25% share of the proposed Alaska LNG pipeline that would transport North Slope gas supplies to the proposed liquefaction and export terminal near Nikiski, Alaska.

http://www.alaskajournal.com/Alaska-Journal-of-Commerce/June-Issue-2-2015/Walker-pitches-TransCanada-buyout/

Houston, TX (6/10) Cheniere announced plans for increased export capacity that will bring the company's aggregate nominal production capacity to app. 60 mpta by 2025. http://phx.corporate-ir.net/phoenix.zhtml?c=101667&p=irol-newsArticle&ID=2058362

<u>Vancouver, B.C.</u> (6/11/15) The Petronas-led joint venture announced its commitment to build the \$11.4 billion Pacific NorthWest LNG facility near Prince Rupert, B.C.

http://pacificnorthwestlng.com/2015/06/pacificnorthwest-lng-announces-final-investment-decision/

Hamilton, Bermuda (6/11) Golar LNG announced today the formation of a 50/50 joint venture with Stolt-Nielsen Limited to pursue opportunities in small-scale LNG production and distribution. http://www.golarlng.com/index.php?name=seksjon/Stock_Exchange_Releases/Press_Releases.html&pressrelease=1927712.html

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<u>Prince Rupert, B.C.</u> (6/12) TransCanada announced that, following Petronas' conditional goahead, it expects to start construction of the \$4.1 B.C. pipeline this year.

http://www.transcanada.com/news-releases-article.html?id=1957905&t=

<u>Washington, D.C.</u> (6/12) In a brief order, the U.S. Court of Appeals for the District of Columbia Circuit denied an emergency motion by environmental groups for a stay of the FERC order authorizing construction of the Cove Point export terminal. http://www.lnglawblog.com/wp-content/uploads/2015/06/DCPorder.pdf

<u>Washington, D.C.</u> (6/15) Port Arthur LNG filed an application with the US DOE to export 517 Bcf/year to non-FTA countries.

http://energy.gov/sites/prod/files/2015/06/f23/15_96 _Ing_nfta.pdf

Miami, FL (6/15) Carnival Corp. announced that it finalized its contract with Meyer Werft for the construction of 4 "next-generation" cruise ships, powered at sea by LNG. http://phx.corporate-ir.net/phoenix.zhtml?c=200767&p=irol-newsArticle&ID=2059101

Ottawa, ON (6/17) LNG Canada Development, Inc. received conditional environmental approval from the Canadian government for the Kitimat, B.C. proposed export facility. Press

Release: http://news.gc.ca/web/article-

en.do?nid=988489

<u>Decision</u>: http://www.ceaaacee.gc.ca/050/documenteng.cfm?document=101851

Ottawa, ON (6/20) The "Port of Prince Rupert Liquefied Natural Gas Facilities Regulations" which seek to establish "a coordinated regulatory approach between the federal and provincial governments ... to ensure that ... LNG projects are designed, constructed and maintained in a safe manner protecting the environment and safety of Canadians" were published in the Canada Gazette. http://gazette.gc.ca/rp-pr/p1/2015/2015-06-20/html/reg4-eng.php

Honolulu, HI (6/23/15) As a result of Hawaii setting a goal of achieving 100% renewable energy by 2045 causes uncertainty re Hawaiian Electric's plan to build a bulk LNG terminal.

http://www.bizjournals.com/pacific/news/2015/06/23/hawaiian-electrics-plan-to-build-lng-terminal.html?ana=twt

St. John, N.B. (6/23/15) A tax agreement between St. John and Irwin, Repsol's partner in Canaport, is being reviewed by St. John councilors. http://www.cbc.ca/news/canada/new-brunswick/saint-john-seeks-full-disclosure-over-canaport-lng-tax-deal-1.3123855

Robbinston, ME (6/25) According to the Bangor Daily News, Downeast LNG has signed an agreement with CB&I to construct the dual purpose terminal in Robbinston, ME.

http://bangordailynews.com/2015/06/25/business/downeast-Ing-signs-on-engineering-firm-for-proposed-gas-terminal/

<u>Washington, D.C.</u> (6/26) The Panama Canal Authority will conduct a feasibility study regarding to the construction of an LNG import terminal and related infrastructure at the Canal.

http://www.ustda.gov/news/pressreleases/2015/LA C/Panama/PR_062615/Press-Release-USTDA-Supports-Study-on-LNG-Terminal-with-Panama-Canal-Authority_062615.asp

Washington, D.C. (6/26) The U.S. Department of Energy (DOE) has issued a "Final Opinion and Order" authorizing Sabine Pass to export 503.3 Bcf/year of LNG for 20 years from proposed liquefaction Trains 5 and 6 to be located at the export terminal under construction in Cameron Parish, LA.

http://www.energy.gov/sites/prod/files/2015/06/f24/ord3669.pdf

Kelowna & Surrey, B.C. (6/27) Canada's FortisBC is expanding its liquefaction facility to supply LNG as a bridge fuel to Hawaiian electric Co.

http://www.bizjournals.com/pacific/news/2015/06/27/canadian-firm-gearing-up-for-hawaiian-electric-lng.html

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<u>Calgary, AB</u> (6/29) Canada's National Energy Board is seeking input as it considers natural gas export licenses of up to 40 years. http://www.nebone.gc.ca/bts/ctrg/qnnb/xprtsndmprt/2015-06-29nbl-eng.pdf

Kitimat, B.C. (6/29) TransCanada's Coastal GasLink Pipeline Project signed project agreements with Wet'suwet'en First Nation, Skin Tyee Nation, Nee-Tahi-Buhn Band, Yekooche First Nation, Doig River First Nation, and Halfway River First Nation, all of northern B.C. <a href="http://www.transcanada.com/news-releases-article.html?id=1962652&t="http://www.transcanada.com/news-releases-article.html?id=1962652&t="http://www.transcanada.com/news-releases-article.html?id=1962652&t="http://www.transcanada.com/news-releases-article.html?id=1962652&t="http://www.transcanada.com/news-releases-article.html?id=1962652&t="http://www.transcanada.com/news-releases-article.html?id=1962652&t="https://www.transcanada.com/news-releases-article.html?id=1962652&t="https://www.transcanada.com/news-releases-article.html?id=1962652&t="https://www.transcanada.com/news-releases-article.html?id=1962652&t="https://www.transcanada.com/news-releases-article.html?id=1962652&t="https://www.transcanada.com/news-releases-article.html?id=1962652&t="https://www.transcanada.com/news-releases-article.html?id=1962652&t="https://www.transcanada.com/news-releases-article.html?id=1962652&t="https://www.transcanada.com/news-releases-article.html"https://www.transcanada.com/news-releases-article.html?id=1962652&t="https://www.transcanada.com/news-releases-article.html"https://www.transcanada.com/news-releases-article.html

<u>Calgary, AB</u> (6/30) Quicksilver Resources Canada Inc., a subsidiary of Fort Worth-based Quicksilver Resources, gets NEB approval for LNG export license. <a href="https://docs.neb-one.gc.ca/ll-eng/llisapi.dll/fetch/2000/90466/94153/552726/2491310/2491202/2791657/Letter_Decision-Quicksilver Resources Canada Inc.-A4R1C0.pdf?nodeid=2791658&vernum=-2

INTERNATIONAL NEWS

Berlin, Germany/Vilnius, Lithuania (6/3/15)

Despite having reduce its dependence on Russian gas by building an LNG terminal, Lithuania is still dependent on Russia for about 80% of its gas imports. However, according to the head of Lietuvos Energija the country has until the end of 2016 to make a final decision on its Gazprom agreement.

http://in.reuters.com/article/2015/06/03/electricity-europe-lietuvos-idINL5N0YO3RY20150603

Moscow, Russia (6/8/15) Russia is entering LNG bunkering. LNG-Gorskaya has contracted for 3 Russian-made LNG bunkering vessels each capable of carrying 1.9 million gallons of LNG. http://hhpinsight.com/marine/2015/06/russian-contracts-for-lng-bunker-vessels/.

<u>Tokyo, Japan</u> (6/9/15) Insufficient data points (less than two trades) kept Japan's METI from publishing spot-LNG price data for May 2015. http://www.meti.go.jp/english/statistics/sho/slng/result/pdf/201505-e.pdf

<u>Gibraltar</u> (6/10/15) The government of Gibraltar's pursuit of LNG for power generation and bunkering has helped highlight the internal political differences between itself and the opposition in the country of almost 30,000..

https://www.gibraltar.gov.gi/new/sites/default/files/press/2015/Press%20Releases/395-2015.pdf

Singapore (6/11/15) In an effort to achieve greater transparency in physical spot trading of LNG in the vicinity of Singapore, the Singapore Exchange has unveiled its price index for LNG.

EMC link: https://www.emcsg.com/n1415,106.html Article: http://business.asiaone.com/news/sgx-unveils-lng-price-index

<u>Tokyo, Japan</u> (6/12/15) According to data collected by Reuters, LNG use for generation in May 2015, was 7% lower than in May 2014. Of all fuels, only fuel oil saw an increase. http://af.reuters.com/article/energyOilNews/idAFL3 NOYY1PQ20150612

St. Petersburg, Russia (6/18) Gazprom, announced that Shell and its long-time gas buyers in Europe - Germany's E.ON and Austria's OMV had agreed to build two new Nord Stream gas pipelines under the Baltic sea to Germany. http://www.gazprom.com/press/news/2015/june/article229578/

<u>Dodoma, Tanzania</u> (6/19) Tanzania will decide on the future of a proposed \$15 billion LNG export facility by 2018.

http://www.bloomberg.com/news/articles/2015-06-19/tanzania-sees-decision-on-15-billion-lng-project-in-three-years

<u>Doha, Qatar</u> (6/21/15) The state-controlled Qatar National Bank announced that according to its assessment Qatar has enough natural gas reserves to maintain production at current levels for 138 years.

http://www.qnb.com/cs/ContentServer?c=QNBNews_C&locale=1338474029767&p=1344242846789&pagename=QNBQatar%2FQNBLayout&cid=1355405119389

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Cairo, Egypt (6/22) Egypt finalized its agreement with BP for delivery of 16, instead of the initially agreed upon 21, LNG cargoes.

http://af.reuters.com/article/investingNews/idAFKB N0P216620150622?sp=true

Moscow, Russia (6/26) Gazprom's Alexander Medvedev, announced that his company may participate in LNG-related projects with Iran once sanctions are lifted.

http://www.reuters.com/article/2015/06/26/usrussia-gazprom-iran-lngidUSKBN0P60VE20150626

Bielsko-Biala, Poland (6/29) Andrzej Czerwinski, Poland's newly appointed Treasury Minister is scheduled to meet with Saipem officials to ensure that delivery of the Baltic Sea LNG terminal is on schedule.

http://af.reuters.com/article/energyOilNews/idAFL5 N0ZF1ZT20150629

Bergen, Norway (6/29) Bergen-based Bergen Viking, a chemical and product tanker, having been retrofitted with Rolls Royce LNG-burning engines returned to service. http://www.rollsrovce.com/news/press-releases/vr-2015/pr-29-06-15-rr-completes-Ing-retrofit-of-bergen-viking.aspx

Milano, Italy (6/30) Italy's ENI signed agreements to sell 1.4 million tonnes of LNG per annum from an Indonesian deepwater project to state-run Petramina. http://www.eni.com/en IT/media/pressreleases/2015/06/Eni SPAs agreement LNG with Pertamina_for_Jangkrik.shtml

Tallinn, **Estonia** (6/30) The operator of the Port of Tallinn approved the construction of a €20 million LNG bunkering terminal with a scheduled completion date in early 2017. http://www.balticcourse.com/eng/good_for_business/?doc=107732

ANALYSIS-OPINION-OTHER

London, U.K. (6/1/15) "Sliding Gas Prices May Slow LNG Projects From U.S. to Africa" discussion by Anna Shiryaevska and Isis Almeda of Bloomberg on the possible impact of the current energy prices on LNG projects.

http://www.bloomberg.com/news/articles/2015-06-01/sliding-gas-prices-may-slow-lng-projects-from-us-to-africa

Launceston, Australia (6/2/15) "Japan's nuclear plan is bad news for LNG, coal" Opinion by Clyde Russell, of Reuters on how Japan's plan to increase nuclear generation to 20-22% of the mix may affect the LNG market.

http://uk.reuters.com/article/2015/06/02/columnrussell-japan-energy-idUKL3N0YO1XY20150602

Houston, TX (6/4/15) ABS issued the LNG Bunkering: Technical and Operational Advisory which explores the benefits, challenges and solutions associated with fueling LNG-powered

http://ww2.eagle.org/content/dam/eagle/publication s/2015/LNG Bunkering%20Advisory.pdf

Williamsport, PA (6/22/15) "Exporting PA natural gas, oil to Europe advocated' Discussion by John Beague on the benefits of exporting Pennsylvaniaproduced natural gas.

http://www.pennlive.com/midstate/index.ssf/2015/0 6/exporting pennsylvania natural.html

Singapore (6/22) "Lack of Demand to delay Australian LNG projects" Singapore-based energy forecaster, Fereidun Fesharaki, discusses the future of proposed LNG projects globally. http://www.smh.com.au/business/energy/lack-ofdemand-to-delay-australian-Ing-projects-20150622ghu1xu

Links to some companies mentioned in this issue

AltaGas www.altagas.ca/ Pacific NorthWest

Parallax Energy **FortisBC** Carnival Corporation

Meyer Werft TransCanada

Stolt-Nielsen Limited ENI

Quicksilver Resources

www.pacificnorthwestlng.com/ www.parallaxenergy.com/

www.www.fortisbc.com/ www.carnivalcorp.com

www.meyerwerft.de/en/meyerwerft_de/

www.transcanada.com/ www.stolt-nielsen.com/

www.eni.com/en_IT/home.html

www.qrinc.com/

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