

LNG ALLIES > DEC. 01, 2016

LNG Export Projects Update

LNG ALLIES AND OEM MEMBERS

■ Corpus Christi

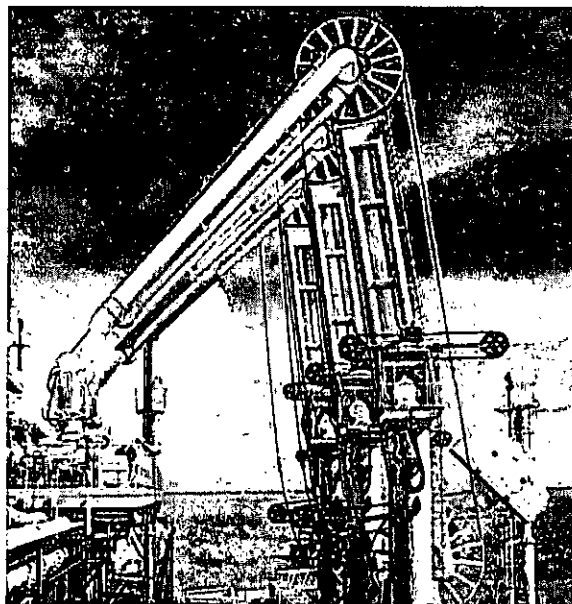
The U.S. Court of Appeals for the D.C. Circuit issued a judgment (Nov. 4) denying Sierra Club's appeal of the Federal Energy Regulatory Commission's orders approving Cheniere Energy's Corpus Christi LNG export project in Corpus Christi, Texas. Citing its earlier opinion regarding the Freeport LNG terminal, the Court stated that: (1) FERC's National Environmental Policy Act (NEPA) analysis did not have to address the indirect effects of the anticipated export of natural gas because the Department of Energy, not FERC, has sole authority to license the export of any natural gas; (2) as to the cumulative effects, FERC's NEPA cumulative-impact analysis properly only considered the effect of the current project along with any other actions in the same geographic area as the project; and (3) as to Sierra Club's arguments regarding greenhouse gas emissions, the Court stated that it has already considered and rejected identical arguments.

■ Delfin LNG

Fairwood LNG reports that the U.S. Maritime Administration (MARAD) published a *Federal Register* notice (Nov. 28) related to the final environmental impact study (FEIS) for the Delfin LNG floating liquefaction and export facility to be located offshore of Cameron Parish, Louisiana. MARAD and the U.S. Coast Guard are the co-lead federal agencies reviewing the Delfin project. Under the Deepwater Port Act, a record of decision from MARAD is required on or before March 14, 2017. Public hearings on the FEIS were held on Dec. 13 (Cameron, Louisiana) and Dec. 14 (Beaumont, Texas).

■ Port Arthur LNG

Sempra Energy announced (Nov. 29) that it has filed a formal application with FERC seeking authorization to site, construct, and operate the proposed Port Arthur LNG liquefaction facility along the Sabine-Neches Waterway in Southeast Texas. The FERC application covers two natural gas liquefaction trains capable of



producing 13.5 mtpa, three LNG storage tanks, natural gas liquids and refrigerant storage, feed gas pre-treatment facilities, two berths, and associated marine and loading facilities. A separate application was filed with FERC seeking authorization to construct natural gas pipelines to deliver gas to the project. Sempra signed a project development agreement with Woodside Energy in Feb. 2016 that provides a framework for the sharing of costs related to the development, technical design, permitting and marketing of the proposed liquefaction project.

■ Sabine Pass

Cheniere Energy received authorization (Nov. 8) from FERC to introduce feed gas and refrigerants to begin commissioning of Train 3 at Cheniere's Sabine Pass liquefaction and export project in Louisiana. According to an article published by Argus (Nov. 14): "Shell has a 20-year contract for up to 3.5 mtpa [from Sabine Pass when Train 1] starts long-term operations this month and an additional 2.0 mtpa from trains 2-4. Shell has been able to buy up to 3.5 mtpa from Train 1 since May under a pre-commercial arrangement."

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PROJECTS UNDER CONSTRUCTION

■ Elba Island

On Nov. 1, Kinder Morgan began construction of the Elba Island liquefaction and export facility in Savannah, Georgia. The company elected to move forward on the project even though the authorization granted by FERC on June 1, 2016, remains subject to a request for "rehearing" requested by the Sierra Club and a license has not yet (but is expected) to be issued by DOE to export the LNG to nations that do not have free trade agreements (FTAs) with the United States. Construction is expected to be complete by the end of 2018 when all 10 of the project's moveable modular liquefaction systems (from Shell) are online, producing an aggregate 2.5 mtpa.

PROJECTS LICENSED / NOT UNDER CONSTRUCTION

■ Magnolia LNG

DOE (Nov. 30) approved the request by Magnolia LNG to export LNG to non-FTA nations. The DOE decision follows FERC's rejection (Nov. 23) of the Sierra Club's request for rehearing of the order issued by FERC on April 15 to Magnolia granting authority to site, construct, and operate an 8.0 mtpa LNG liquefaction and export terminal in Calcasieu Parish, Louisiana. Magnolia LNG is a subsidiary of LNG Ltd.

PROJECTS IN FORMAL FERC / DOE REVIEW

■ Jordan Cove

Jordan Cove LNG wrote to FERC (Nov. 3) asking the agency to expeditiously rule on the request for rehearing

of the March 11, 2016, order denying Jordan Cove's applications to construct a liquefaction and export terminal at Coos Bay, Oregon, and the interconnected pipeline. FERC's order rejected the applications for lack of market support. In the request, the company stated that FERC's continued delay in ruling on rehearing has prevented further progress on negotiating binding agreements with potential project customers and on obtaining easement rights for the pipeline.

PROJECTS IN FERC PRE-FILING

■ Driftwood LNG

In a news release (Nov. 28), Tellurian Investments announced that GE Oil & Gas has made a \$25 million preferred equity investment in the company. Tellurian's president and CEO Meg Gentle said, "This investment represents another step forward in the development of Driftwood LNG, where we are working together with GE to design the lowest cost liquefaction for the global market." Driftwood LNG is in the engineering design and pre-filing phase (FERC approved Driftwood LNG's pre-filing request on June 6). Tellurian expects construction on Driftwood LNG to begin in 2018 and the project to become operational in 2022.

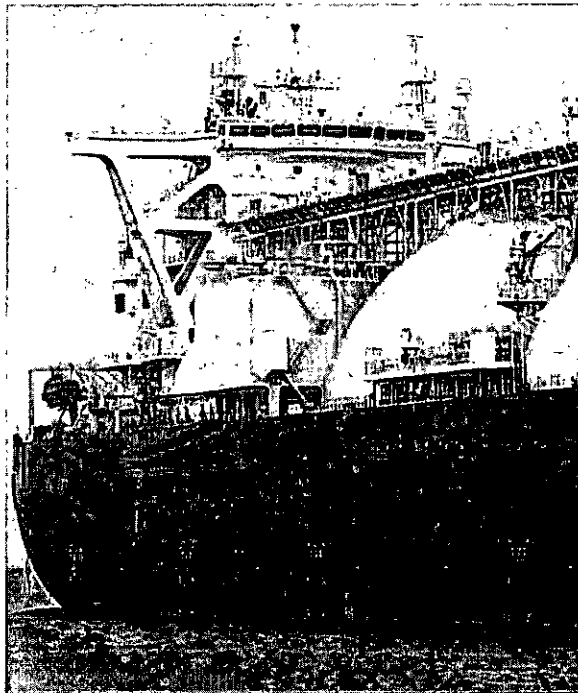


ABOUT US

LNG Allies is a nonprofit organization working to expedite and maximize U.S. liquefied natural gas exports to create a more liquid global natural gas marketplace, enhance the energy security of America's allies, and improve economic and environmental conditions worldwide.

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- Ben Zingman, Communications Advisor



LNG Allies—News & Insight

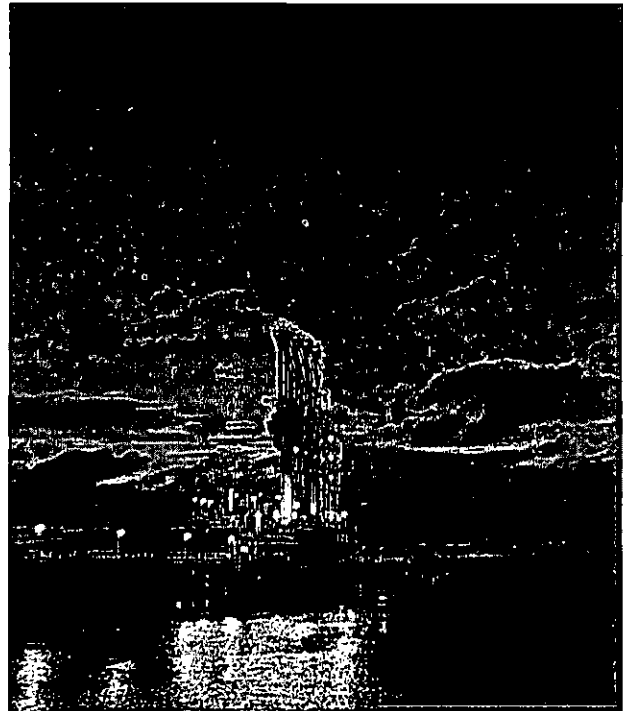
RECENT LNG DEVELOPMENTS

Congress is now in recess for the Thanksgiving holiday, with both chambers scheduled to reconvene early during the week of Nov. 28 to pass another stop-gap government funding bill and to address a few other matters. One item still on the agenda is the legislation that would set a new statutory deadline on the Department of Energy's review of applications to export LNG to non-FTA nations.

The LNG legislation has—as you know—been included within both versions of the energy bill and is thus pending before a joint House-Senate energy conference committee. The LNG provisions have also been included in the House version of the National Defense Authorization Act (NDAA) and are under consideration by the NDAA conference committee as well.

Here is an update on recent developments:

- On Mon. Nov. 14, seven ambassadors from Central and Eastern Europe sent joint letters to congressional leaders, calling on them to “continue working towards the goal of enacting LNG legislation still in 2016.” The effort was spearheaded by the Embassy of Poland and the letters were signed by ambassadors from the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, and Slovak Republic. Links: [Letter](#), [Polish Embassy Release](#), Articles: [Politico](#) (subscription), [Oil & Gas Journal](#), [Natural Gas Intel](#) (subscription), [Kallanish](#), [Energy Tomorrow](#).
- On Tue. Nov. 15, three congressional LNG champions—Sen. John Barrasso (R-Wyoming), Rep. Bill Johnson (R-Ohio), and Rep. Jim Bridenstine (R-Oklahoma)—spoke at the “Fly-In for LNG Certainty” event sponsored by LNG Allies and Our Energy Moment. Also speaking were: Ambassadors Rolandas Kriščiūnas (Lithuania) and Josip Joško Paro (Croatia); DCMs Maciej Pisarski (Poland), Peter Zelenák (Slovakia), and Zsolt Hetesy (Hungary); and Randall Reese, General Manager of the Sabine-Neches Navigation District. The event was open to the press and several stories were subsequently filed:



[Oil & Gas Journal](#), [E&E Daily](#) (subscription), [Kallanish Energy](#), [S&P Global](#).

- Also, on Nov. 15 (and through the rest of last week) LNG project sponsors and others met with members of the House and Senate to encourage action on the LNG provisions. From all accounts, these meetings went very well. However, the final fate of the LNG legislation ultimately depends upon: (1) whether the energy or NDAA bills are completed before the 114th Congress adjourns *sine die*; and (2) if the LNG provisions are included within either/both bills.
- On Friday, Nov. 18, *Morning Consult* (a media and technology company providing original reporting and email briefings to more than 200,000 government and industry leaders) published an LNG opinion piece. Like the letter from the seven ambassadors, the Op-Ed urged Congress to complete action on the LNG legislation this year. It is reprinted at the end of this newsletter.

OUTLOOK/PERSPECTIVE

I know that it can be difficult to keep up with the back-and-forth developments that typically occur at the end of a legislative session, and this year is no exception. In fact, the 2016 election results have made it especially tough to follow the congressional "ping-pong balls." Therefore, I urge you to consider the following perspective (mine alone):

The LNG provisions have earned bipartisan support over the last two years, and we now have many champions in both parties and both chambers who want to see these provisions enacted this year. The most helpful thing we can do is to remind our congressional friends of our trust in them and our support for the difficult decisions that they must make in the coming weeks. Of course, it is also worth reminding them that U.S. LNG exports are worth fighting for now. Enhancing the regulatory review process can and will deliver economic, security, and environmental benefits to the United States and its allies, starting at the moment of enactment. We should, therefore, seize this opportunity if we can and not wait to act until 2017.

That being said, we need to give our champions the flexibility to work towards a favorable outcome without dictating specific tactics or legislative vehicles. There may be several ways to get the LNG provisions over the finish line and I'm convinced that the odds of a favorable result are still good. Nonetheless, please continue to make your views known to your congressional contacts. If you support the LNG legislation, then let them hear from you!



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OP-ED: LNG LEGISLATION STILL MATTERS!

By Fred H. Hutchison

Sometimes on the public policy battlefield it makes sense to lay down your non-lethal weapons (such as bulletted one-pagers and email-tracked vehicles) and declare victory. However, with regard to the LNG legislation, that time has not yet come (despite the Nov. 8 election results).

For reasons outlined below, the U.S. LNG export community and America's allies—especially in Central and Eastern Europe—continue to urge the 114th Congress to "soldier on."

Observers of global natural gas markets could logically ask: Why bother? Haven't U.S. LNG exports already started? And, hasn't the federal government already sanctioned several large export projects?

Yes, it is true that LNG cargoes have been flowing from Cheniere Energy's Sabine Pass liquefaction project since February, and five other projects are under construction. It is also true that the Federal Energy Regulatory Commission (FERC) and the U.S. Department of Energy (DOE) have been working methodically through applications to build LNG projects (FERC jurisdiction) and export U.S. natural gas (DOE jurisdiction).

The principal problem with the present situation is that it is "open-ended" and therefore lacks the certainty that a statutory deadline would impose. As a result, final LNG decisions at DOE are taking five to eleven months longer than otherwise necessary.

Legislation to set such a deadline (and expedite judicial review of LNG decisions) has passed the U.S. Senate and House of Representatives and awaits final resolution during the lame duck session. And, the Obama administration has said that it could/would be able to live with such changes to current law.

U.S. LNG exporters support the pending legislation for the obvious reason that it would streamline and shorten a regulatory process that is expensive, time-consuming, and (in most instances) an absolute prerequisite to obtain final project financing.

America's allies continue to support the legislation for a less obvious reason. They understand that nearly all of the liquefaction capacity at the six U.S. projects under



construction was sold several years ago to major (mostly Asian) utilities and large international commodity traders.

It is the next phase of U.S. projects—those still awaiting their regulatory approvals—that represent an opportunity for gas consumers in Central and Eastern Europe (and elsewhere) to buy U.S. LNG under the most favorable long-term conditions.

This explains why ambassadors from Poland, Czech Republic, Slovakia, Hungary, Lithuania, Latvia, and Estonia wrote to the Congressional leadership on Nov. 14 saying that “legislative action to expedite LNG exports to America’s European allies remains a timely and significant issue,” and expressing their hope “that the bipartisan effort, which has been gaining momentum steadily over the past few years, will see final resolution [in 2016].” Congress should heed their plea.

The United States stands on the threshold of becoming a true energy superpower. As a result of the shale energy revolution, we have tremendous quantities of low-cost natural gas.

How much is “tremendous?”

The 2016 Annual Energy Outlook (AEO), just released by the U.S. Energy Information Administration, estimates that the U.S. natural gas supply “is adequate to meet growth in both export and domestic markets,” through 2040, with prices “remaining relatively low,” i.e. \$5.00 per million Btu or less (in constant 2015 dollars), over the next quarter century.

Other studies (e.g. Potential Gas Committee, 2015) have also found that we have enough low-cost natural gas to meet our domestic needs for many decades and sufficient excess to supply nations in Central and Eastern Europe that—as the seven ambassadors noted—are located in “a region long dominated by an external state-controlled gas supplier, ready to use energy as a political weapon.”

By expediting and maximizing LNG exports, we can create thousands of good paying American jobs and help our European allies increase their energy security.

This is truly a win-win window of opportunity, and the logical next step is to enact the LNG legislation as America’s allies and the U.S. LNG export community have long advocated.

[This Op-Ed originally appeared in Morning Consult on Nov. 18, 2016, and is reprinted here with permission.]

TEXT OF CEE LETTER TO CONGRESSIONAL LEADERS

“As envoys from Central and Eastern Europe (CEE), we strongly appreciate the cooperation with the United States on energy security in Europe. The conflict in Ukraine confirmed the role of Europe’s energy security and especially the CEE region as an important pillar of transatlantic relations. The cooperation with the United States is crucial to ensure the long-term energy security in Europe. We also welcome the fact that the position of V4 and B3 countries and the U.S. on a number of energy issues is alike and we see a need for Washington’s further engagement in the CEE region.

“We are pleased that liquefied natural gas (LNG) from the United States is now being exported from Louisiana and that the first U.S. LNG cargoes have already reached Europe. These exports result in greater liquidity to the global natural gas market and have the potential to provide diversity of sources, suppliers and routes thus to a greater energy security in our part of Europe, a region for long dominated by an external state-controlled gas supplier, ready to use energy as a political weapon. U.S. LNG exports will also contribute to reducing vulnerability of the CEE countries. In this regard, we are writing to congratulate the U.S. Congress for steadfastly supporting LNG exports and to communicate our continuing interest in the ongoing legislative efforts to bring greater certainty to the U.S. Department of Energy’s (DOE) regulatory review process.

“With LNG import terminals now in operation in Świnoujście, Poland, and Klaipėda, Lithuania—and the requisite interconnectors either in place or under development—our region has the capability to receive U.S. natural gas. However the regulatory path for granting the LNG export licenses to countries, which do not have free trade agreements with the U.S., remains complex. It puts burden on U.S. companies to apply for additional licenses.

“For this reason, legislative action to expedite LNG exports to America’s European allies remains a timely and significant issue. Thus, we hope that the bipartisan effort, which has been gaining momentum steadily over the past



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few years, will see final resolution during the current session of Congress. We request you to continue working towards the goal of enacting LNG legislation still in 2016.

"We are convinced that the U.S. LNG exports to CEE would be a game changer for the region. It would send a strong geopolitical signal, enhancing competition on the regional market, while at the same time decreasing dependence on the dominant gas supplier and thus increasing the energy security of the CEE.

"Thank you for your continuing interest in the energy security of Central and Eastern Europe."

To download the signed letter: [Click Here](#)

NEWS RELEASE FROM POLISH EMBASSY

"Energy cooperation and energy security are among the most important elements of transatlantic cooperation. LNG has begun to play an increasingly important role in the rapidly changing energy market, and has a chance to change the current, dominant model of supply, which is currently based on long-term gas pipeline contracts indexed to oil prices. Thanks to the shale revolution, the United States will soon become one of the largest gas exporters in the world. For Europe, LNG provides an opportunity for real diversification of routes and sources of supply.

"Central and Eastern European States inherited from the Cold War a gas pipeline system dominated by a single supplier who did not hesitate to use its privileged position in the region to dictate terms of cooperation. Those countries have, however made great progress in recent years in creating conditions for alternative supply routes, investing heavily in infrastructure. Operational LNG terminals in Klaipeda, Lithuania and Swinoujscie, Poland, have created a real opportunity to import LNG from any direction, including the USA. Gas deliveries can currently reach not only the Baltic States and the Visegrád Group countries, but also Ukraine and Southern Europe through cross-border interconnectors. Nonetheless to make LNG imports possible, the development of export infrastructure in the United States is necessary.

"In a letter dated November 14, 2016, addressed to the leaders of the U.S. Congress, seven Ambassadors of the Visegrád Group and the Baltic States thanked Members of Congress for their cooperation in the area of energy

security and their interest in Central and Eastern Europe. Ambassadors of the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland and Slovakia pointed out that the development of LNG exports will increase liquidity in the global market and create an opportunity for diversification of sources, suppliers and routes. This in turn will contribute to the increased energy security of the region, which for a long time has been dominated by a state-owned entity, which has been used as a foreign policy tool of one country.

"The Ambassadors congratulated members of Congress on the recent bipartisan support for the exports of LNG, highlighting the importance of legislative efforts that aim to introduce greater certainty to the U.S. Department of Energy's regulatory review process. In the view of the European diplomats, legislative action to expedite LNG exports to America's European allies remains a timely and significant issue.

"In a letter addressed to the Senate Majority Leader Hon. M. McConnell, Speaker of the House of Representatives Hon. P. Ryan, Senate Minority Leader Hon. H. Reid and House Minority Leader Hon. N. Pelosi, the Ambassadors stressed that the exports of LNG from the U.S. will reduce the vulnerability of CEE countries to gas supply disruptions. They indicated the importance of legislative actions, which would accelerate the process of issuing LNG export licenses to European countries. The Ambassadors expressed their hope that bipartisan support for this cause, which has been gaining momentum steadily over the past few years, will be reflected in a final resolution during the current session of Congress.

"The Ambassadors expressed confidence that the U.S. LNG exports to CEE states would be a game changer as well as a strong, geopolitical signal, which would enhance competition in the market, while reducing dependence on the dominant supplier and thus increasing the region's energy security."

To view the full release on the Polish embassy's website: [Click Here](#)



LNG Export Projects Update

LNG ALLIES AND OEM MEMBERS

■ Cameron LNG

Sempra Energy (Cameron's 51.3% majority owner) announced (Sept. 13) that Joseph A. Householder is now Corporate Group President of Infrastructure Businesses. Reporting to Sempra Energy CEO Debra L. Reed, he will oversee Sempra's midstream, LNG, renewable energy, and Mexican operations.

■ Sabine Pass

Cheniere Energy said (Sept. 16) that it had "taken control" of Sabine Pass Train 2 from Bechtel. The turnover (on Sept. 15) was, Cheniere said, "being done in coordination with a previously planned outage to improve the performance of the flare systems at Sabine Pass, as well as to perform scheduled maintenance to Train 1 and other facilities." Under a sale and purchase agreement (SPA) with Gas Natural Fenosa, the date of first commercial delivery for Train 2 is expected to occur in August 2017 upon which the SPA's 20-year term commences. In other news, Cheniere Energy President and CEO Jack Fusco announced (Sept. 19) his new executive leadership team. Michael Wortley, is now Executive Vice President and Chief Financial Officer, "responsible for guiding long-term financial strategy and increasing financial transparency," and Anatol Feygin is Executive Vice President and Chief Commercial Officer, "responsible for optimizing... assets and margin capture by focusing on continued innovation and underwriting new liquefaction capacity." Other appointments include: Tom Bullis, Executive Vice President and Chief Administrative Officer; Ed Lehotsky, Senior Vice President, Engineering and Construction; and Doug Shanda, Senior Vice President, Operations.

■ Corpus Christi

Cheniere Energy's latest progress report (Aug. 22) for the Corpus Christi liquefaction project indicates that: engineering has progressed to 98.7%; procurement has progressed to 55.5%; EPC contractor Bechtel's direct



hire construction through July was 10.4%; and the total project has progressed to 39.5% complete. In a related matter, Transcontinental Gas Pipe Line (Transco) filed an application (Aug. 16) with the Federal Energy Regulatory Commission (FERC) to construct and operate the "Gulf Connector Expansion Project," which would provide 400,000 dry tons/day of firm transportation service to Corpus Christi Liquefaction and 75,000 tons/day of firm transportation service to Osaka Gas Trading & Export. The Gulf Connector Expansion Project will interconnect with the Cheniere Corpus Christi Pipeline.

PROJECTS UNDER CONSTRUCTION

■ Cove Point LNG

At the Barclays CEO Energy-Power Conference (Sept. 8) Dominion Resources said that it's Cove Point (Lusby, Maryland) Liquefaction project had reached completion as follows: (1) engineering is 99% complete; (2) procurement is 99% complete; (3) the project, overall,

has reached a completion point of 71%. There are currently some 1,800 construction personnel on site.

■ Freeport LNG

The Gulf Connector Expansion Project (see the Corpus Christi entry above) will also interconnect with Gulf South's Coastal Bend Header Project to provide Osaka with transportation service to the Freeport LNG export terminal under construction in Brazoria County, Texas.

PROJECTS LICENSED BUT NOT IN CONSTRUCTION

■ Lake Charles LNG

Energy Transfer's Lake Charles LNG export project in Louisiana filed a request (Sept. 13) to increase its export authorization. The U.S. Department of Energy (DOE) previously licensed the facility to export up to 15 million metric tons per year (mtpa) to both free trade agreement (FTA) and non-FTA nations. Lake Charles asked DOE to increase the authorization to allow for the export of additional LNG produced under "optimized conditions." Although Energy Transfer owns the Lake Charles LNG import terminal and the export project, both the company and Shell must make separate final investment decisions (FIDs) on the facility. FERC authorized construction of the \$10.9 billion project last December, but Shell in July indefinitely delayed an FID.

PROJECTS IN FORMAL FERC/DOE REVIEW

■ Calcasieu LNG

Venture Global LNG, Inc., announced that it has closed a fifth round of equity investment, raising an additional \$15 million and bringing the total raised to date

to over \$280 million. The proceeds will fund the company's proposed 10 mtpa Calcasieu Pass LNG facility at the intersection of the Calcasieu Ship Channel and the Gulf of Mexico, and the proposed 20 mtpa Plaquemines LNG facility in Plaquemines Parish, Louisiana, on the Mississippi River 30 miles south of New Orleans.

■ Rio Grande LNG

NextDecade announced (Sept. 8) that DOE has authorized the export of LNG from the firm's proposed Rio Grande LNG facility to FTA countries. Responding to an application filed in December 2015, the DOE order authorized the export of up to 27 Mtpa of LNG (equivalent to approximately 3.6 Bcf/d natural gas) for a 30-year term. In November 2015, NextDecade announced it had signed non-binding agreements for 14 mtpa of LNG with customers across Asia and Europe. Since then, that number has grown to 30 mtpa. NextDecade said that it expects to receive FERC approval for Rio Grande LNG in 2017 with initial LNG exports shipping by the end of 2020.

PROJECTS IN FERC PRE-FILING

■ Alaska LNG

The State of Alaska, acting through the Alaska Gasline Development Corp. (AGDC) and ConocoPhillips announced (Sept. 22) that they have signed a memorandum of understanding regarding negotiations to form a joint venture to market LNG from the proposed Alaska LNG project. According to the press release, AGDC and ConocoPhillips also intend to solicit the other major North Slope producers (ExxonMobil and BP) in the formation of the joint venture.

■ Driftwood LNG

Tellurian Investments (parent of Driftwood LNG) announced (Aug. 31) that Meg Gentle has joined the firm as President, CEO, and a member of the Board of Directors. Gentle has also made a \$10 million private investment in Tellurian. Gentle recently left Cheniere Energy, where she served as Executive Vice President of Marketing. Tellurian also announced (Sept. 26) that R. Keith Teague has joined the company as Executive Vice President and Chief Operating Officer. Teague also recently left Cheniere.



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LNG Export Projects Update

THE LEAD: LNG LEGISLATIVE ENDGAME NEARS

Congress is currently on an extended summer break, which lasts through Labor Day, Sept. 5. This hiatus provides an opportune opportunity to reflect upon where the LNG exports legislation stands before the 114th Congress enters the legislative "homestretch."

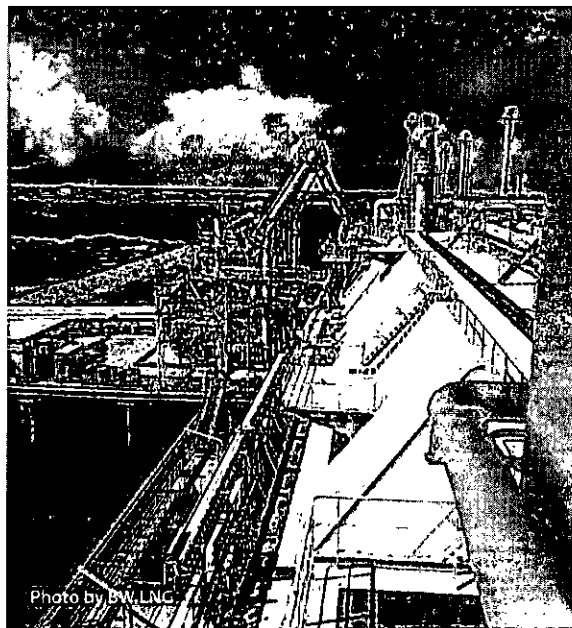
As you are aware, bills have been pending for several years to bring greater certainty to the process by which the U.S. Department of Energy (DOE) reviews applications to export U.S. liquefied natural gas (LNG) to nations that do not have a free trade agreement with the United States. (LNG exports to free trade agreement nations are automatically deemed in the "public interest," but exports to non-FTA nations must undergo a formal public interest review.)

In recent months, the House of Representatives and the Senate have both passed LNG exports language as part of broader energy bills. If enacted the LNG provisions would set a new statutory deadline on DOE's non-FTA licensing process. The principal (small) variant in the bills is when such a deadline would be set... the House favors a 60-day deadline after the requisite final environmental documentation is complete and the Senate a 45-day deadline. If such a deadline had been in place, the most recent major non-FTA application (the one for Lake Charles LNG) should have been accelerated by eight or nine months.

Outlook

A joint House-Senate conference committee is expected to meet this Fall to reconcile the differences in the energy bills. In addition, the House included the LNG exports language in its version of the National Defense Authorization Act (NDAA) for fiscal year 2017, which opens a path for possible consideration of the LNG issue by the NDAA House-Senate conference committee as well.

This being an election year, the House will return on Sept. 6 and work until Sept. 30. The Senate has the same return date, but remains in session for a week longer, until



Oct. 7. Both chambers will then recess until after the Nov. 8 elections, returning for a post-election (colorfully—and somewhat inexplicably—called the "lame duck") session that will likely stretch from mid-November into December.

Some observers are saying that there may not be sufficient time to complete work on the energy bill or the NDAA during the abbreviated legislative window in September. *Nonetheless, an effort must be made to do just that.*

After all, the LNG language has gathered increasing bipartisan momentum at each stage of the legislative process and the Obama administration has said that it could and would comply with a new statutory deadline (aka an accelerated non-FTA decision-making timeline) should Congress pass one.

The legislative endgame is near, and all who want to see the U.S. LNG licensing process improved must work towards final resolution this year. Otherwise, Congress must start over from scratch in 2017, since all bills not enacted into law expire when the 114th Congress adjourns *sine die*.

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Let's not lose any more time! American LNG export projects compete in an increasingly fierce global natural gas market and our regulatory regime should—as much as possible—support and enhance the competitive position of U.S. LNG export companies and the thousands of jobs they create/support.

LNG ALLIES AND OEM MEMBERS

■ Cameron LNG

Cameron LNG received DOE authorization (July 18) to export an additional 1.41 billion cubic feet of natural gas per day (Bcfd) from its proposed liquefaction expansion project (Trains 4 & 5) to non-FTA nations. (With this order, Cameron LNG's authorized export capacity will be 24.92 million tons per annum (mtpa) or 3.53 Bcfd.) Earlier this year (May 5), Cameron LNG received approval from FERC to site, construct and operate the proposed expansion project, which will include up to two additional liquefaction trains and a fifth LNG storage tank. The expansion project will be located next to the Cameron LNG facilities under construction in Hackberry, Louisiana. Cameron LNG is a joint venture owned by affiliates of Sempra Energy, ENGIE, Mitsui & Co., and Japan LNG Investment (a joint venture formed by affiliates of Mitsubishi Corp. and Nippon Yusen Kabushiki Kaisha). Construction of Trains 1-3 is currently underway, with operations slated to commence in 2018. According to a Sempra Energy news release (July 18), "the proposed expansion project is subject to completing the required commercial agreements, securing all necessary consents and approvals, obtaining financing, and reaching a final investment decision, among other things."



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- Fred H. Hutchison, Executive Director > fh@lngallies.com

■ Sabine Pass

The first shipment of LNG from the lower 48 U.S. states to China arrived on Aug. 22, thanks to the recently expanded Panama Canal. The shipment was chartered by Royal Dutch Shell, the company confirmed to *The Wall Street Journal*. The cargo, from Cheniere Energy's Sabine Pass export facility in Louisiana, was delivered to the Yantian Port on in southern China and was purchased by China National Offshore Oil Corp. as part of a long-term contract, according to *S&P Global Platts*. Also, in its most recent FERC progress report (Aug. 22), Cheniere stated that it expects that the first shipment from Train 2 at Sabine Pass will occur, "before the end of August." Finally, Cheniere filed a request with FERC (Aug. 12) to "introduce fuel gas in order to begin commissioning activities for Train 3... at the earliest date possible, but no later than Aug. 19, 2016."

■ Corpus Christi

Cheniere Energy subsidiary Corpus Christi Liquefaction filed a progress report (July 22) with FERC covering construction progress at its project near Corpus Christi, Texas. Engineering has progressed to 98.4%, procurement to 50.6%, and Bechtel's direct hire construction to 8.8%. Thus, the total project is now 36.6% complete.

■ Delfin LNG

The U.S. Maritime Administration (MARAD) released (July 11) its Draft Environmental Impact Statement (DEIS) for Delfin LNG's application to construct and operate a deepwater LNG export terminal and inter-connected pipeline. The Delfin LNG export terminal would be located some 37.4 to 40.8 nautical miles off the coast of Cameron Parish, Louisiana. Delfin LNG—a subsidiary of Fairwood LNG—plans to liquefy and then export natural gas onboard up to four floating liquefaction vessels moored at the deepwater port. On Aug. 10-11, MARAD and the U.S. Coast Guard held open house meetings in Cameron, Louisiana, and Belmont, Texas, where support for the project was expressed.

PROJECTS UNDER CONSTRUCTION

■ Cove Point LNG

In its second quarter earnings release (Aug. 3) Dominion Resources stated that: "The Cove Point Liquefaction project is now 67 percent complete and continues on



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time and on budget for a late 2017 in-service date." The facility was built originally to receive LNG, but is being converted by Dominion to export LNG as well.

■ Freeport LNG

FERC issued an order (July 7) authorizing Freeport LNG to increase the authorized maximum peak daily LNG production at its liquefaction and export terminal facility under construction on Quintana Island in Brazoria County, Texas. The facility was authorized to increase production from 1.8 Bcf/day to 2.14 Bcf/day, reflecting the facilities' actual capabilities. Freeport did not propose any new facilities or construction activities.

PROJECTS IN FORMAL FERC / DOE REVIEW

■ Annova LNG

Annova LNG (an Exelon subsidiary) filed a formal application with FERC (July 13) to construct and operate a mid-scale liquefaction and LNG export terminal on the Brownsville Ship Channel in Cameron County, Texas. The project will include six liquefaction trains, each with a nameplate capacity of 1.0 mtpa, for an aggregate nameplate capacity of 6.0 mtpa and a maximum output at optimal operating conditions of 6.95 mtpa. The facility will receive natural gas supply from a proposed third party-owned and operated intrastate pipeline running from Kingsville to Brownsville, Texas.

■ Lake Charles LNG

DOE (July 29) granted Lake Charles LNG authority to export 15 mtpa (2.0 Bcf/day) of LNG over 20 years to non-FTA nations from the company's proposed LNG export terminal in Calcasieu Parish, Louisiana. Regarding environmental issues associated with the export application, DOE adopted FERC's Final Environmental Impact Statement for the project which concluded that construction and operation would result in adverse environmental impacts but most impacts would be reduced to less-than-significant levels. Also, FERC denied (June 30) the Sierra Club's request for rehearing of the FERC order authorizing construction and operation of the Lake Charles LNG export terminal, rejecting the argument that FERC's National Environmental Policy Act analysis of the project was flawed because it ignored indirect effects related to upstream natural gas production, greenhouse gas emissions, and domestic gas-to-coal switching.

PROJECTS IN FERC PRE-FILING

■ Downeast LNG

FERC dismissed (Aug. 17) the request by Downeast LNG to use the FERC pre-filing progress for a proposed LNG import/export project in Robbinston, Maine. The application was rejected "without prejudice," enabling Downeast to file a new application—if it so chooses—in the future "when it is in a position to commit to actively pursuing development and authorization of its project." FERC stated that the application had been dismissed because—with the exception of one new and one revised resource report—there had "been no other demonstrable progress on the development of the environmental information needed to prepare an eventual application to be submitted to [FERC] since at least October 2015."

■ Driftwood LNG

Driftwood LNG, a subsidiary of Tellurian Investments, filed two draft resource reports with FERC (July 6) as part of the pre-filing review for the company's proposed LNG export terminal on the west bank of the Calcasieu River near Carlyss, Louisiana. When complete, the project will include five liquefaction plants capable of producing up to 26 mtpa of LNG for export, a 96-mile pipeline, and marine facilities to accommodate three LNG carriers. Driftwood anticipates filing its formal application in March 2017 and will request that the necessary authorizations be issued no later than March 2018. The company plans to begin construction by Q2 2018 and estimates a 7-year construction schedule, with the first plant becoming operational in the fourth year.



A New Era of U.S. Energy Leadership

By Fred H. Hutchison*

A little after the stroke of noon on Jan. 20, 2017, Donald J. Trump will place his hand on a historic Bible, face U.S. Supreme Court Chief Justice John G. Roberts, Jr., and take the oath of office as the 45th President of the United States of America. As this is written (about two weeks after the election), the full implications of a Trump presidency remain impossible to ascertain, but one can make some educated guesses about what the new president and the next Congress are likely to do with respect to energy and climate policy matters.

Election Results and Implications

The federal government of the United States has three “separate but equal” branches, all of which have been dramatically affected by the 2016 elections:

- **Executive Branch.** Not only has President-elect Trump won the right to live in the White House and run the largest global “enterprise” from the Oval Office but also the authority to hire/fire some 4,000 men and women to implement his domestic and foreign priorities. Although it will take many months to recruit, vet, and—for the 1,270 most important appointees—secure Senate confirmation, “Team Trump” can begin to shape U.S. energy policy even before the Inaugural Day parade has ended. Topping the agenda for the new administration is “rolling-back” the many energy and climate regulations that the Obama administration put in place over the last eight years. (More on that below.)
- **Legislative Branch.** In addition to winning the White House, the Republican party maintained its majorities in both chambers of Congress, although the Republican margin in the U.S. Senate was cut by two seats (from 54/46 to 52/48) and the majority in the U.S. House of Representatives was reduced by six seats (with the Republican/Democrat ratio changing from 246/186 to 241/194). While to the uninitiated it might appear that the Republicans now have a “blank check” (since they control the House, Senate, and presidency), the practical reality is quite different. Because the Senate operates under long-standing “filibuster” rules, a 60-vote margin is still needed to end debate/approve legislation and to confirm Supreme Court nominations. (The House does not have similar rules.)
- **Judicial Branch.** The president has sole authority to choose the judges for the federal judiciary (district, appeals, and supreme courts primarily), but these nominations must be submitted to the Senate for that body’s “advice and consent” (aka “confirmation”). During the 113th Congress (2013-2014), the Democrat majority—led by Sen. Harry Reid (Nevada)—changed Senate rules to permit a simple majority (51 senators) to confirm nominees below the Supreme Court level. The Republican majority in the 114th Congress (2015-2016)—led by Sen. Mitch McConnell (Kentucky)—kept this rule in place. This means that President Trump’s federal district and appeals court nominees will only need 51 votes for confirmation. (Since the Senate has 100 members, in situations where there is a 50-50 tie, the Vice President casts the deciding vote). However, Supreme Court justices will remain subject to the 60-vote threshold, unless Senate Republicans change that rule in early 2017. With one Supreme Court vacancy at present, the stakes are already very high. Since the death of conservative Justice Antonin Scalia in February 2016, the court is now comprised of four “liberal” justices, three “conservative” justices and one—Justice Anthony M. Kennedy—who is considered the “swing” vote. President-elect

Trump is expected to name a conservative replacement for Scalia, thus returning the Supreme Court to the balance that existed for many years, namely a court closely divided, leaning right, and with the crucial vote resting in the hands of Justice Kennedy. However, during the four/eight-year tenure of the Trump administration, the president could replace three more aging justices (Justice Ruth Bader Ginsberg is 80 and Justices Stephen G. Breyer and Kennedy are both 78), thereby ensuring a “conservative” court for twenty years or more. The energy and climate implications of this possibility are—to say the least—profound since the Supreme Court is the final arbiter of whether executive and/or legislative branch decisions are “Constitutional” (i.e. in accordance with the U.S. Constitution).

Regulatory Rollback

One reason why the Supreme Court situation is so important is that President-elect Trump has expressed interest in “rolling back” regulations imposed by the Obama administration on the U.S. energy industry. Many of those regulations were promulgated by the U.S. Environmental Protection Agency (EPA) under what is best described as a “liberal” interpretation of America’s basic environment statutes, such as the Clean Air Act and the Clean Water Act.

Premising what I am about to say with the disclaimer that I am not an attorney, most legal practitioners acknowledge that federal regulations that were “finalized” years ago could be more difficult to change than rules more recently developed. An example of the former is the rule promulgated by EPA in 2011 to limit mercury emissions (and other air “toxins”) from coal and oil-fired electric powerplants. An example of the latter is the Clean Power Plan (CPP), which was finalized by EPA in 2015 but is now under judicial review by the D.C. Circuit Court of Appeals. (The Supreme Court has prohibited the EPA from implementing the CPP until the appeals court has issued its decision.) Other regulations that are likely to be revisited by the Trump administration include those pertaining to oil and gas development on federal lands (about one third of the nation’s land is controlled by the U.S. government) and those offshore zones that are also under federal jurisdiction.

As one might expect, the Obama administration’s political leaders are furiously finalizing rules aimed at preserving President Obama’s climate and ‘clean energy’ legacy. However, there is a little-used U.S. law—the Congressional Review Act—that could permit Congress and President-elect Trump to invalidate any Obama administration regulations (including non-energy related rules) submitted after May 2016. According to the Congressional Research Service this mechanism requires only a majority vote in both the House of Representatives and the Senate and could, therefore, provide a way in early 2017 for the Republicans to eliminate many of the Obama administration’s “midnight” initiatives.

COP21/Climate Change

Beyond his interest in scaling-back Obama-era regulations, President-elect Trump also said during the campaign that he wants to “pull the United States out” of the climate agreement reached during the COP21 meeting in Paris in 2015. The COP21 agreement “came into force” on Nov. 4, 2016, which was 30 days after the required number of signatory nations (55) representing the requisite threshold percentage of greenhouse gas emissions (55%) ratified the agreement. There are formal means for the United States to withdraw from the COP-21 agreement within one year after President-elect Trump takes office (by

pulling the United States out of the underlying treaty) or at the end of his first term (by using the “four-year exit” mechanism within COP21 itself). However, if the President-elect wants to avoid the political firestorm (both at home and abroad) that would likely follow a formal U.S. withdrawal from COP21, he could just not implement/defend the Clean Power Plan (CPP), which is the principal mechanism whereby the United States plans to meet its COP21 obligations. Ironically, all of this may be more symbolic than substantive. Under current market conditions—with natural gas and some renewables now cheaper than coal—the United States has already met the CPP’s 2024 goal for reducing carbon dioxide emissions and the CPP’s 2030 target for cutting coal use. The United States is, therefore, “on track” to meet its’ COP21 commitments whether the country remains a signatory party to the Paris agreement or not.

Potential Areas of “Opportunity”

Since the NGOs that I lead are primarily interested in expediting and maximizing U.S. energy exports—with a particular focus on liquefied natural gas (LNG)—the remainder of this article will address areas where the Trump administration and a Republican-led Congress could support America’s nascent energy export industry:

- **LNG Export Authorizations.** U.S. LNG exporters must obtain approvals from two federal agencies to export natural gas. The existing regulatory process—as revised by the U.S. Department of Energy (DOE) in 2014—in essence requires the two reviews to be completed sequentially with the DOE delaying its final authorization (to export the gas molecules) until after the agency with jurisdiction over the siting of the LNG facility (generally the Federal Energy Regulatory Commission “FERC”) has issued its final “order” to proceed and resolved any “appeals” of that order. Bills pending before Congress would speed up that process (by five to eleven months) by requiring DOE to reach a final “molecule” export decision within a few weeks after FERC releases its final environmental documentation on the project itself. (See sidebar). Because of the bipartisan momentum already achieved, we are optimistic that 114th Congress will enact such a requirement in 2016, but if Congress fails to do so, or should President Obama refuse to sign such a change into law, then the Trump administration could act unilaterally in 2017. (This is possible because the present DOE regulatory framework was created through executive branch rule-making without direct congressional involvement.)
- **Energy Infrastructure Permitting.** A related, but broader issue, concerns the growing campaign by U.S. environmental groups in slowing—by any means possible—major oil and gas infrastructure projects as a way to keep fossil fuels “in the ground.” Of course, LNG export projects are primary targets, but the keep-it-in-the-ground folks are also working hard to slow/stop interstate pipeline and other midstream projects that likewise fall under FERC jurisdiction. This opposition has expanded to the point where FERC meetings are now often closed to the public because of disruptions and FERC commissioners have even had protestors at their homes! Undoubtedly, those who support the timely development of new U.S. energy infrastructure will see the wisdom of joining with the Trump administration and sympathetic members of Congress to protect and enhance the FERC infrastructure review process. Likely focal points will be making sure that the agency has a full complement of commissioners and sufficient staff/budgetary resources to meet its critical energy infrastructure obligations.

- **Credit Enhancements.** While current and prospective U.S. LNG exporters have labored to secure their FERC and DOE authorizations, another problem has emerged recently. For nearly two years, there have been almost no long-term LNG sales and purchase agreements involving U.S. projects, and this situation has been particularly problematic for those companies that require non-recourse (off-balance sheet) financing to build their projects. However, the current “buyers’ market” will not last indefinitely, and many experts are predicting that global LNG demand will outstrip supply in the early 2020s. Since new LNG projects can take as long as five years to complete after a final investment decision, U.S. natural gas exporters must line up offtake agreements in the early years of the Trump administration (i.e. 2017-2018) in order to beat other nations’ LNG projects to market. A proactive approach by the U.S. Overseas Private Investment Corporation (OPIC), the Export-Import Bank of the United States (EXIM Bank), and similar organizations could possibly help bring smaller and less creditworthy customers to the table, thereby expanding the pool of “bankable” offtakers for U.S. LNG exports. While the EXIM Bank (for example) has typically avoided providing support for “commodities,” it is hard to argue that LNG—which requires billion dollar liquefaction facilities to manufacture—is demonstrably different from other manufactured products (e.g. steel).

As mentioned at the outset, it is far too early to make definitive predictions about what the next few years will bring. However, there can be no doubt that we are entering a new era. U.S. exports of LNG, crude oil, and natural gas liquids are beginning in earnest and a Republican-controlled government will take office in January. This confluence of events is likely to create conditions that will elevate the United States to a new position of global energy leadership.

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*Fred H. Hutchison is Executive Director of LNG Allies and Our Energy Moment, two nonprofit U.S. LNG export organizations based in Washington, DC.

Sidebar: Simple Statutory Change Would Expedite U.S. LNG Reviews

Section 3 of the U.S. Natural Gas Act prohibits the export of natural gas—including liquefied natural gas (LNG)—to a foreign country without prior approval from the U.S. Department of Energy (DOE):

- Applications to export U.S. LNG to nations with Free Trade Agreements with the United States that “include the national treatment of natural gas” must be granted “without modification or delay.”
- However, applications to export U.S. LNG to nations without FTAs are subject to a “public interest” review and are approved by DOE if judged “not to be inconsistent with the public interest.”

Under revised regulations adopted in August 2014, DOE now waits to complete the non-FTA public interest review until after the lead agency responsible for facility licensing—usually the Federal Energy Regulatory Commission (FERC)—has rendered its final “order” and after any “requests for rehearing” of that order have been substantively addressed.

DOE has been approving non-FTA applications reasonably quickly after the requests for rehearing have been resolved. However, in almost all cases DOE has sufficient data to complete its non-FTA public interest review at an earlier date, such as when the environmental studies pursuant to the National Environmental Policy Act of 1969 (NEPA) have been finalized.

Legislation which passed the House of Representatives in 2015 (H.R. 8) and the Senate in 2016 (S. 2012) would expedite DOE action on non-FTA permit applications by setting a new statutory time limit. The House bill would set a 60-day and the Senate bill a 45-day deadline. A joint House-Senate conference is currently considering the LNG provisions as part of a broader energy bill.

In Jan. 2015, at a Senate Energy and Natural Resources Committee hearing on an earlier bill (S. 33), Christopher A. Smith, DOE’s Assistant Secretary for Fossil Energy, indicated that DOE could and would comply with a new statutory deadline if Congress passed one.

Why enact such a deadline? If a 45-day deadline had been in force at the time, all of the recent major non-FTA applications could have been approved five to eleven months faster:

- Cheniere Energy’s Corpus Christi LNG project could have received its non-FTA license on/about Nov. 22, 2014, instead of May 12, 2015, 171 days faster.
- Dominion’s Cove Point project could have had its non-FTA license on/about June 29, 2014, instead of May 7, 2015, 332 days faster.
- Cheniere Energy’s Sabine Pass (Trains 5 and 6) project could have received its non-FTA license on/about Jan. 26, 2015, instead of June 26, 2015, 151 days faster.
- Energy Transfer’s Lake Charles LNG project could have had its non-FTA license on/about Sept. 28, 2015, instead of July 12, 2016, 288 days faster.

While 151 to 332 days (five to eleven months) may not seem so long, setting a deadline on DOE non-FTA decisions could make a difference for many U.S. LNG export projects that are completing the regulatory review process while trying to secure customers, finalize engineering, and arrange project financing.

LNG Legislation Still Matters

By Fred H. Hutchison

Sometimes on the public policy battlefield it makes sense to lay down your non-lethal weapons (such as bulleted one-pagers and email-tracked vehicles) and declare victory. However, with regard to the LNG legislation, that time has not yet come (despite last week's electoral results).

For reasons outlined below, the U.S. LNG export community and America's allies—especially in Central and Eastern Europe—continue to urge the 114th Congress to “soldier on.”

Observers of global natural gas markets could logically ask: Why bother? Haven't U.S. LNG exports already started? And, hasn't the federal government already sanctioned several large export projects?

Yes, it is true that LNG cargoes have been flowing from Cheniere Energy's Sabine Pass liquefaction project since February, and five other projects are now under construction. It is also true that the Federal Energy Regulatory Commission (FERC) and the U.S. Department of Energy (DOE) have been working methodically through applications to build LNG projects (FERC jurisdiction) and export U.S. natural gas (DOE jurisdiction).

The principal problem with the present situation is that it is “open-ended” and therefore lacks the certainty that a statutory deadline would impose. As a result, final LNG decisions at DOE are taking five to eleven months longer than otherwise necessary.

Legislation to set such a deadline (and expedite judicial review of LNG decisions) has passed the U.S. Senate and House of Representatives and awaits final resolution during the lame duck session. And, the current administration has said that it could/would be able to live with such changes to current law.

U.S. LNG exporters support the pending legislation for the obvious reason that it would streamline and shorten a regulatory process that is expensive, time-consuming, and (in most instances) an absolute prerequisite to obtain final project financing.

America's allies continue to support the legislation for a less obvious reason. They understand that nearly all of the liquefaction capacity at the six U.S. projects under construction was sold several years ago to major (mostly Asian) utilities and large international commodity traders.

It is the next phase of U.S. projects—those still awaiting their regulatory approvals—that represent an opportunity for gas consumers in Central and Eastern Europe (and elsewhere) to buy U.S. LNG under the most favorable long-term conditions.

This explains why ambassadors from Poland, Czech Republic, Slovakia, Hungary, Lithuania, Latvia, and Estonia wrote to the Congressional leadership on Nov. 14 saying that “legislative action to expedite LNG exports to America's European allies remains a timely and significant issue,” and expressing their hope

“that the bipartisan effort, which has been gaining momentum steadily over the past few years, will see final resolution [in 2016].” Congress should heed their plea.

The United States stands on the threshold of becoming a true energy superpower. As a result of the shale energy revolution, we have tremendous quantities of low-cost natural gas.

How much is “tremendous?”

The 2016 Annual Energy Outlook (AEO), just released by the U.S. Energy Information Administration, estimates that the U.S. natural gas supply “is adequate to meet growth in both export and domestic markets,” through 2040, with prices “remaining relatively low,” i.e. \$5.00 per million Btu or less (in constant 2015 dollars), over the next quarter century.

Other studies (e.g. Potential Gas Committee, 2015) have also found that we have enough low-cost natural gas to meet our domestic needs for many decades and sufficient excess to supply nations in Central and Eastern Europe that—as the seven ambassadors noted—are located in “a region long dominated by an external state-controlled gas supplier, ready to use energy as a political weapon.”

By expediting and maximizing LNG exports, we can create thousands of good paying American jobs and help our European allies increase their energy security.

This is truly a win-win window of opportunity, and the logical next step is to enact the LNG legislation as America’s allies and the U.S. LNG export community have long advocated.

*Fred H. Hutchison is Executive Director of LNG Allies and Our Energy Moment.

LNG Legislative Endgame Nears

By Fred H. Hutchison

Congress is currently on an extended summer break, which lasts through Labor Day, Sept. 5. This hiatus provides an opportune opportunity to reflect upon where the LNG exports legislation stands before the 114th Congress enters the legislative "homestretch."

As readers of *Congress Blog* are well aware, bills have been pending for several years to bring greater certainty to the process by which the U. S. Department of Energy (DOE) reviews applications to export U. S. liquefied natural gas (LNG) to nations that do not have a free trade agreement with the United States. (LNG exports to free trade agreement nations are automatically deemed in the "public interest," but exports to non-FTA nations must undergo a formal public interest review.)

In recent months, the House of Representatives and the Senate have both passed LNG exports language as part of broader energy bills. If enacted the LNG provisions would set a new statutory deadline on DOE's non-FTA licensing process.

The principal (small) variant in the bills is when such a deadline would be set... the House favors a 60-day deadline after the requisite final environmental documentation is complete and the Senate a 45-day deadline. If such a deadline had been in place, the most recent major non-FTA application (the one for Lake Charles LNG) might have been accelerated by eight or nine months.

A joint House-Senate conference committee is expected to meet this Fall to reconcile the differences in the energy bills. In addition, the House included the LNG exports language in its version of the National Defense Authorization Act (NDAA) for fiscal year 2017, which opens a path for possible consideration of the LNG issue by the NDAA House-Senate conference committee as well.

This being an election year, the House will return on Sept. 6 and work until Sept. 30. The Senate has the same return date, but remains in session for a week longer, until Oct. 7. Both chambers will then recess until after the Nov. 8 elections, returning for a post-election (colorfully—and somewhat inexplicably—called the "lame duck") session that will likely stretch from mid-November into December.

Some observers are saying that there may not be sufficient time to complete work on the energy bill or the NDAA during the abbreviated legislative window in September. Nonetheless, an effort must be made to do just that.

After all, the LNG language has gathered increasing bipartisan momentum at each stage of the legislative process and the Obama administration has said that it could and would comply with a new statutory deadline (aka an accelerated non-FTA decision-making timeline) should Congress pass one.

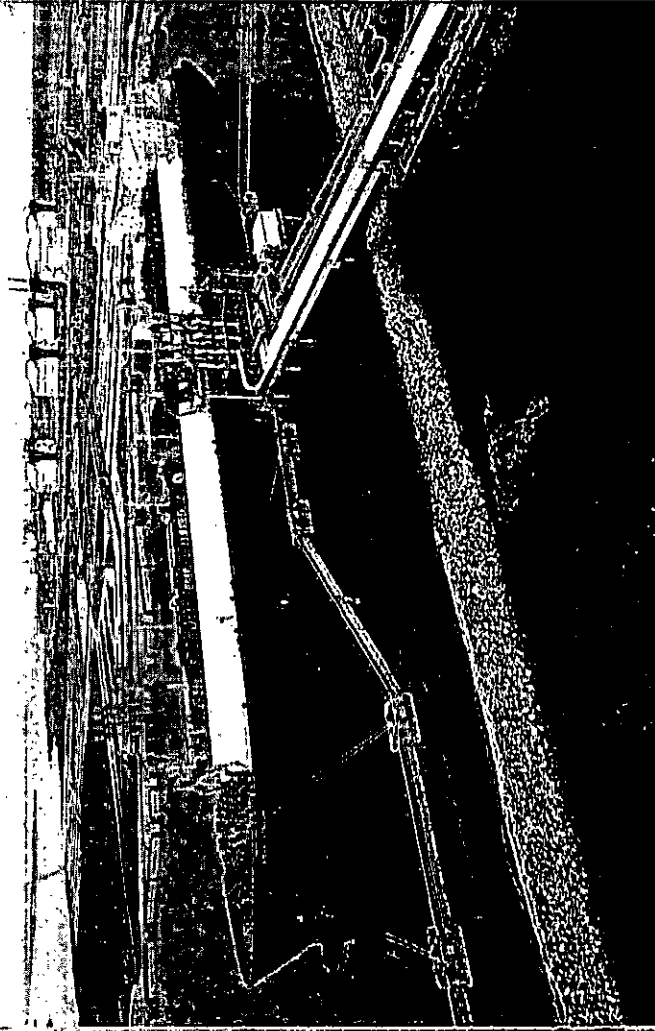
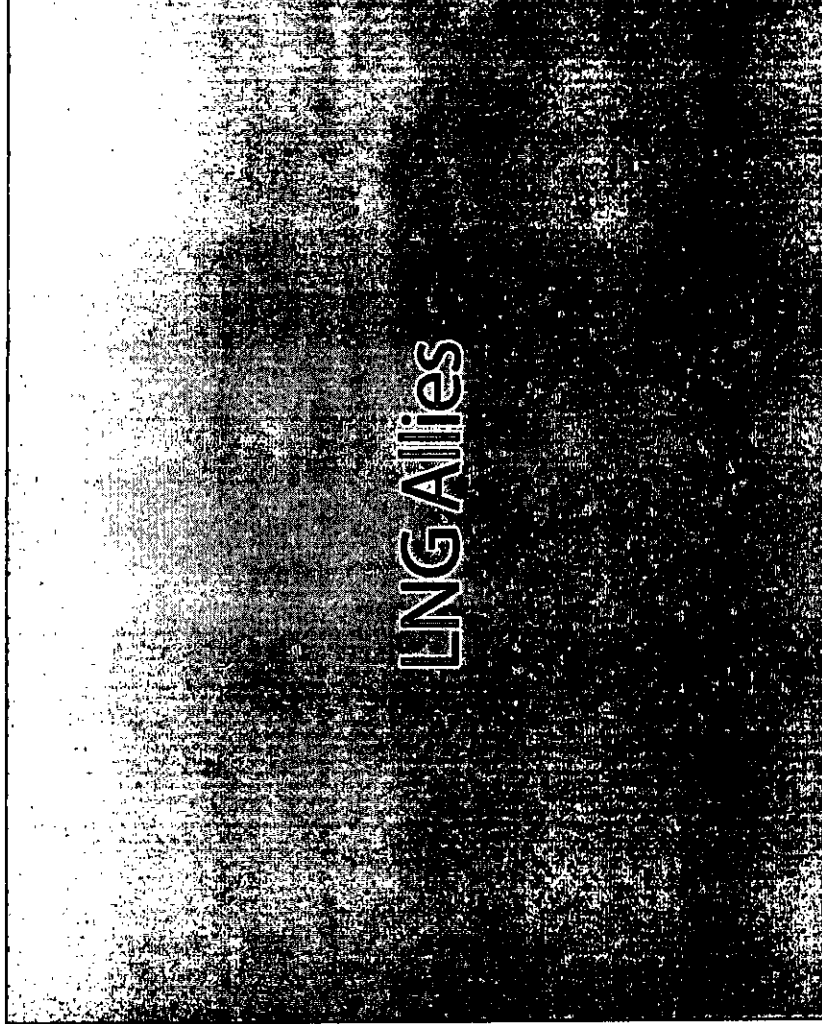
The legislative endgame is near, and all who want to see the U. S. LNG licensing process improved must work towards final resolution this year. Otherwise, Congress must start over from scratch in 2017, since all bills not enacted into law expire when the 114th Congress adjourns sine die.

Let's not lose any more time. American LNG export projects compete in an increasingly fierce global natural gas market and our regulatory regime should—as much as possible—support and enhance the competitive position of U. S. LNG export companies and the thousands of jobs they create/support.

Fred H. Hutchison is Executive Director of LNG Allies and Our Energy Moment

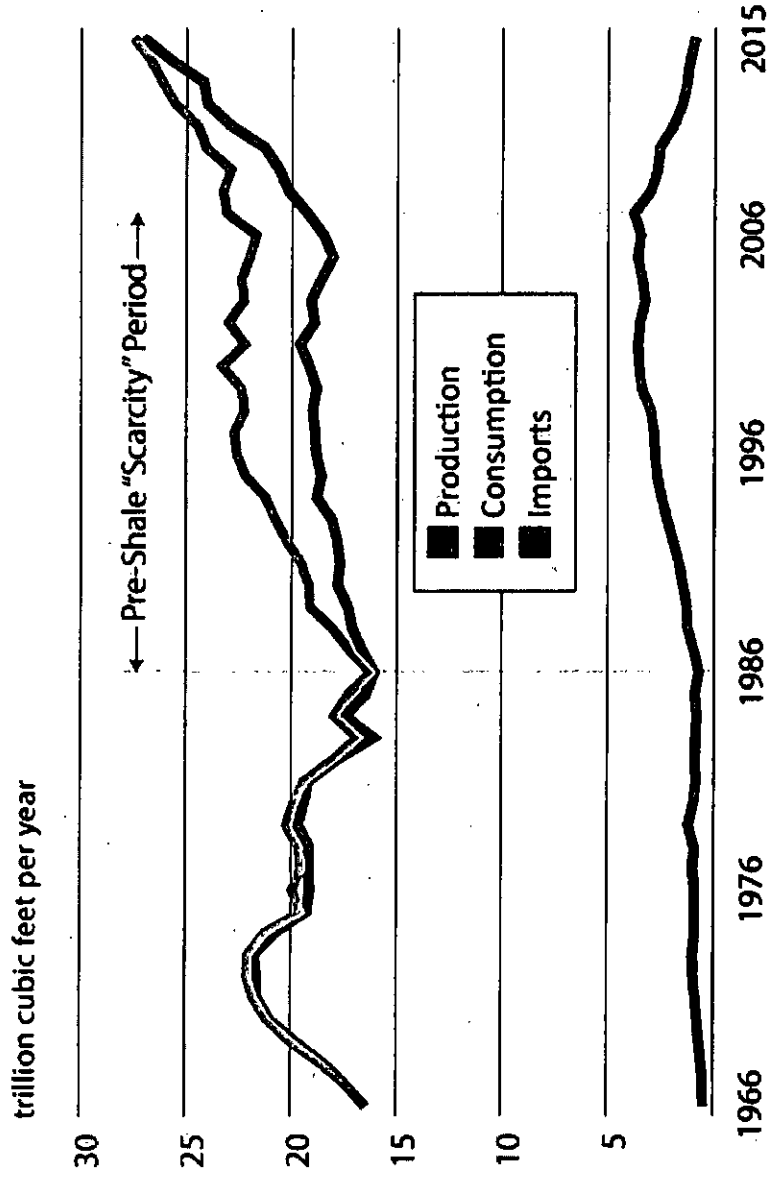
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U.S. LNG Exports: The Wave has Begun



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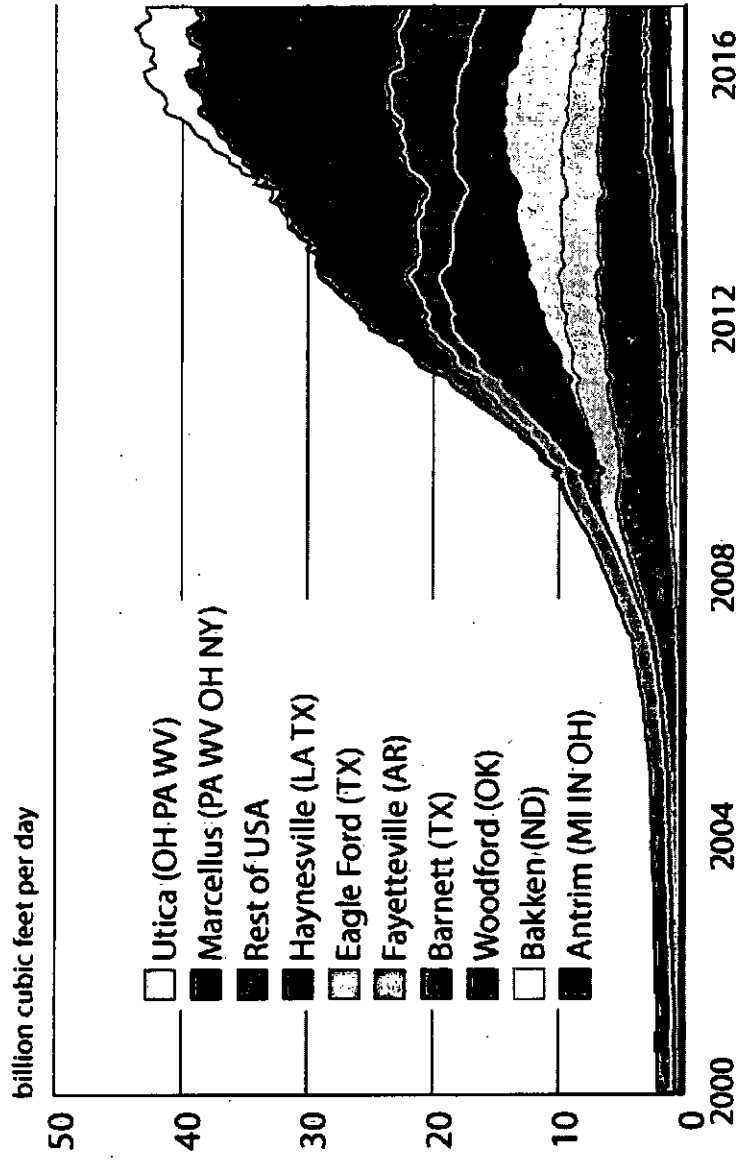
U.S. Natural Gas Production, Consumption, Imports



Source: EIA Monthly Energy Review (July 2016)

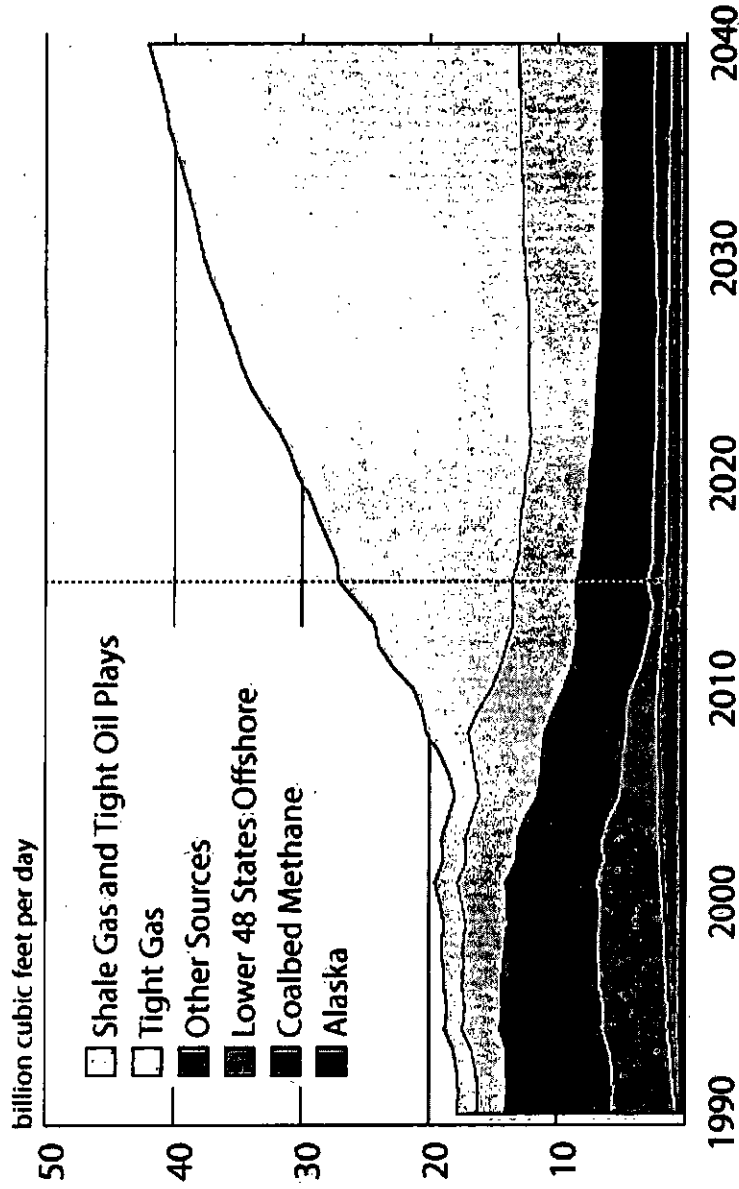
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U.S. Dry Shale Gas Production



Source: EIA Natural Gas Weekly Update, Feb. 9, 2017 (Data to Dec. 2016) ©LNG Allies, 2017

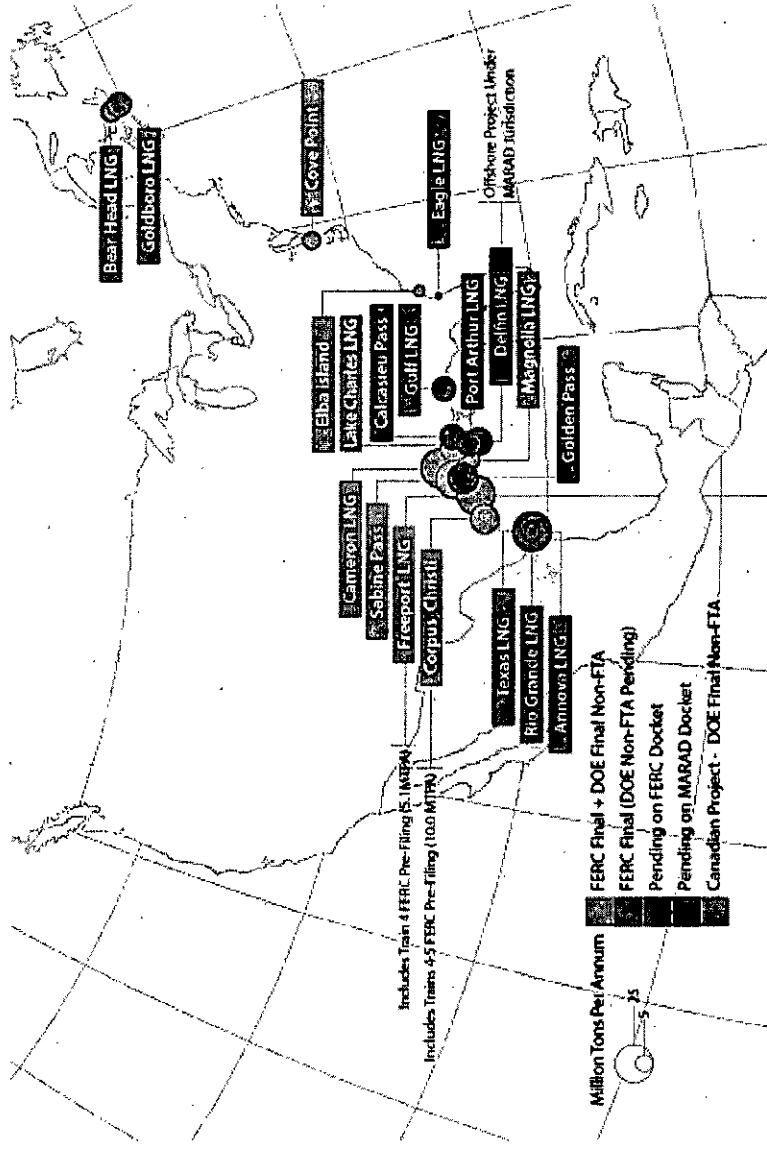
U.S. Dry Shale Gas Production by Source



Source: EIA Annual Energy Outlook - 2016

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Major No. American LNG Export Projects (1)



Source: LNG Allies (Feb. 3, 2017)

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Major U.S. LNG Export Projects

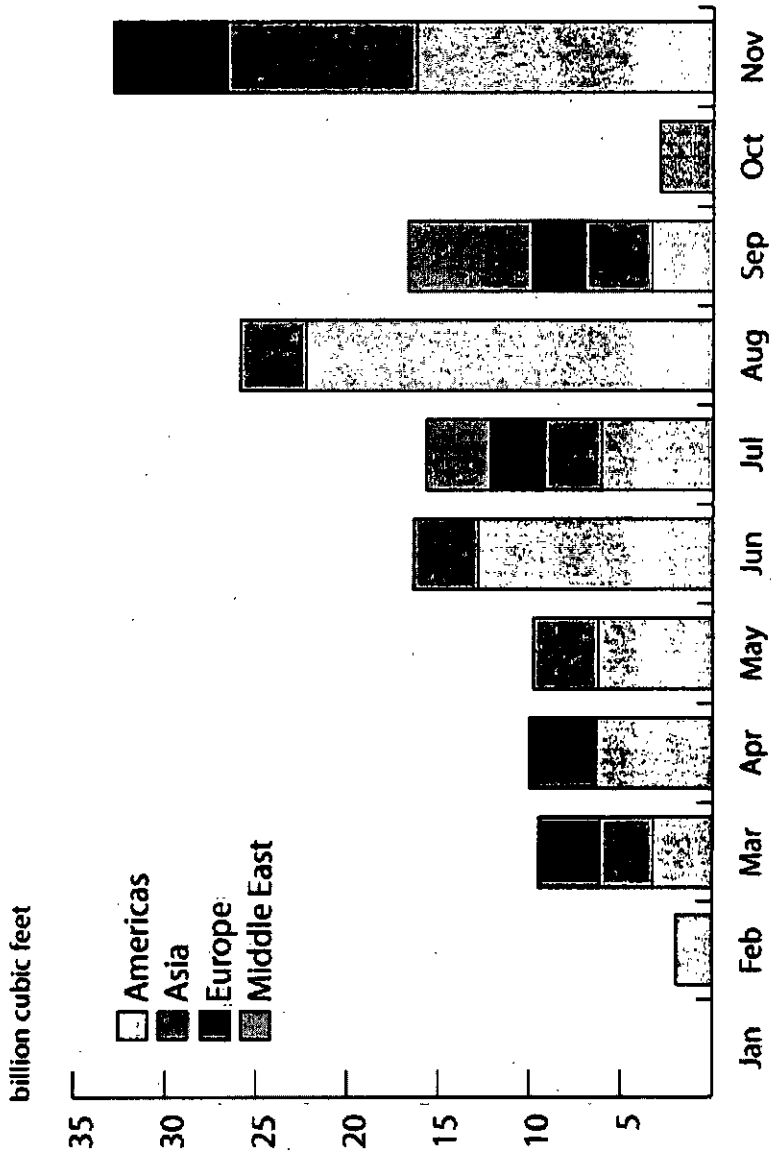
Project Stage	Projects	MTPA	Bcm/yr	Bcf/day
Operating/Under Construction:	6	70.9	97.7	10.0
Permitted - (USA)	3	56.9	78.5	7.7
Permitted (Canada, U.S. Gas)	2	18.0	24.8	2.4
Formal Environmental Review	7	71.0	97.9	10.0
Pre-Environmental Review	6	111.9	154.4	16.1
Total	24	328.7	453.3	46.3

Notes: (1) Projects = individual projects. (2) Additional trains for existing projects not included in the project count, but in the MTPA, Bcm/year, and Bcf/day totals. (3) Two Nova Scotia projects permitted to export U.S. natural gas.

Source: Federal Energy Regulatory Commission & LNG Allies (Feb. 13, 2017)

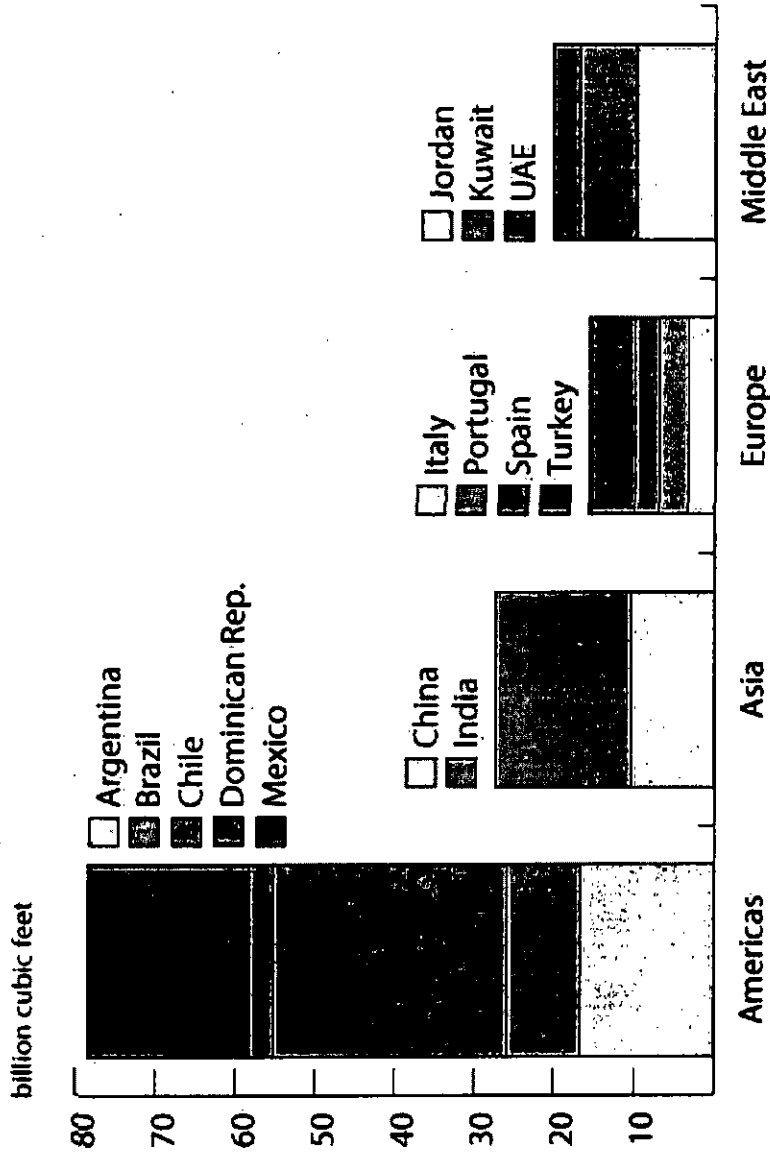
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U.S. Seaborne LNG Exports by Region in 2016



Source: DOE U.S. LNG Monthly (through Nov. 2016) ©LNG Allies, 2017

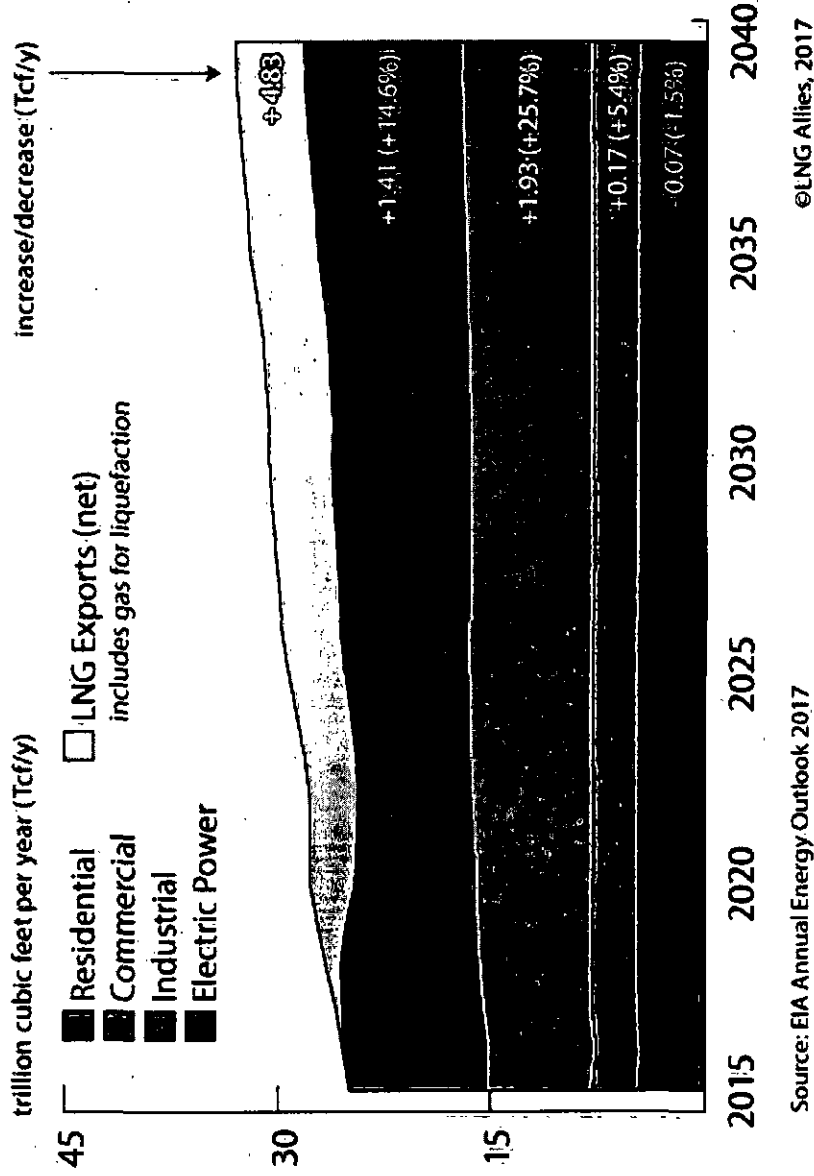
U.S. LNG Export Destinations in 2016



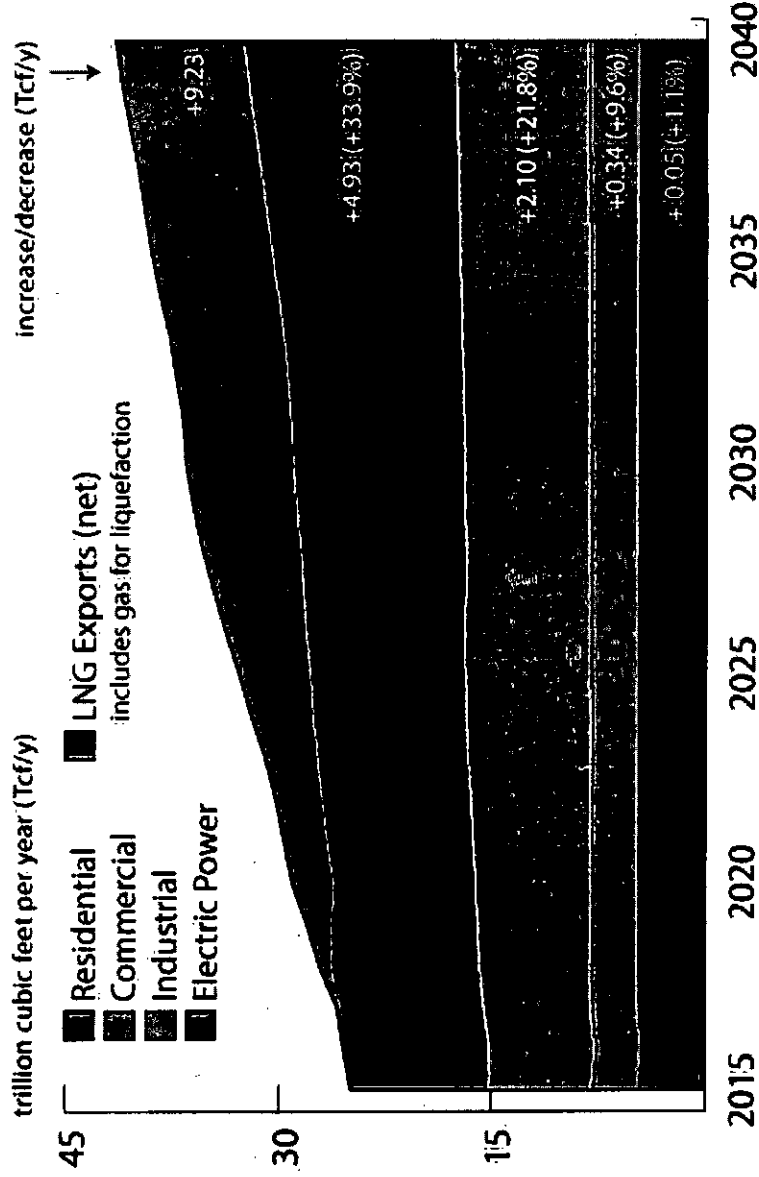
Source: DOE U.S. LNG Monthly (through Nov. 2016)

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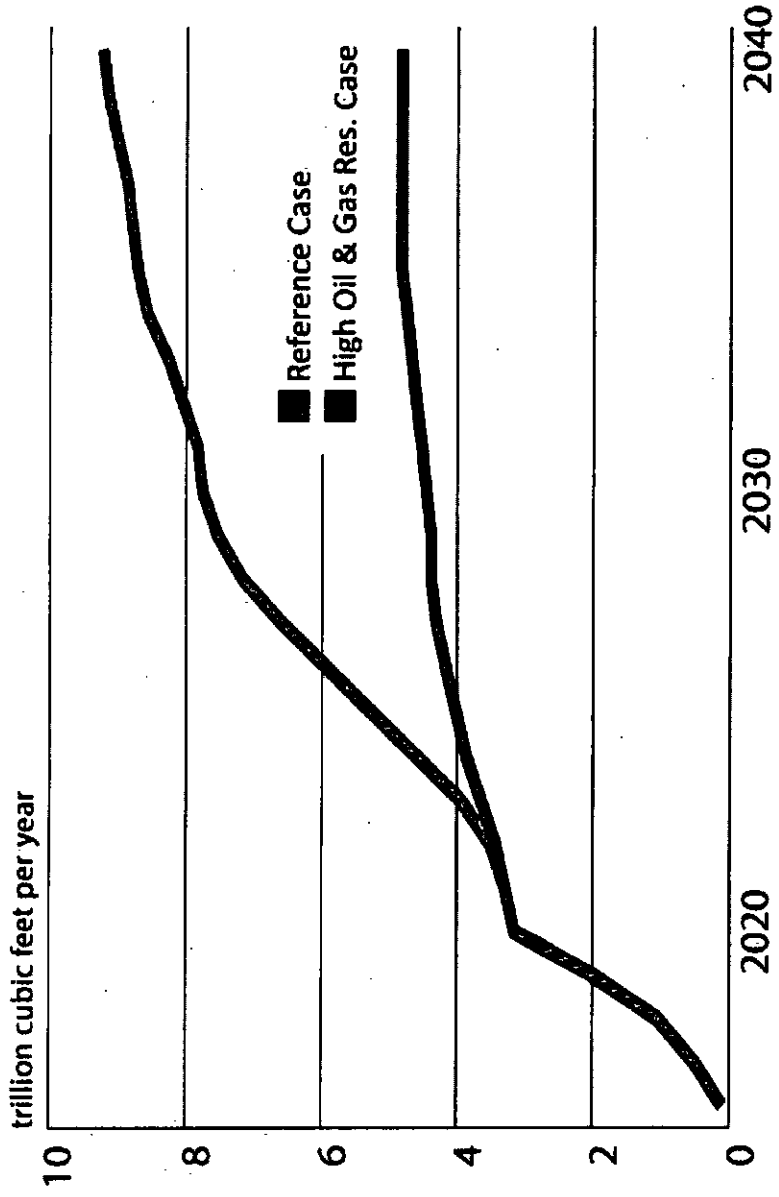
U.S. Natural Gas Consumption AEO-17 Reference Case



U.S. Natural Gas Consumption AEO-17 High Resource



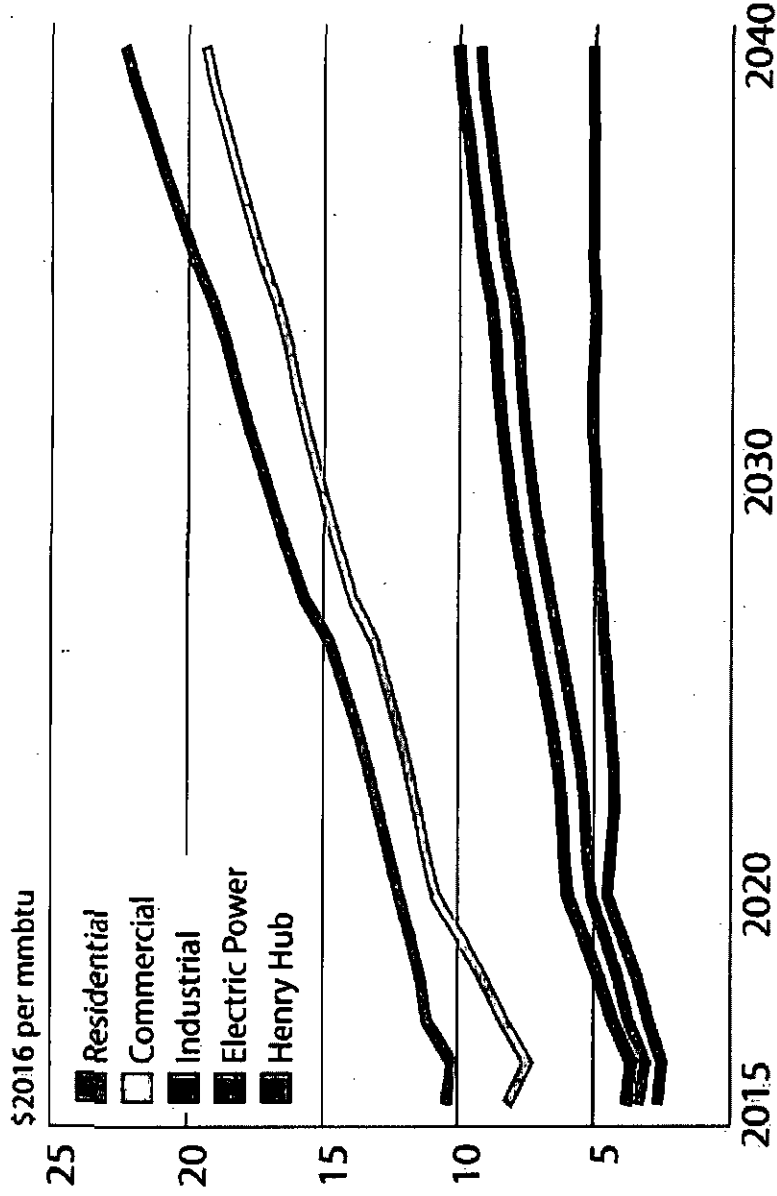
U.S. Liquefied Natural Gas Exports (Net)



Source: EIA Annual Energy Outlook - 2017

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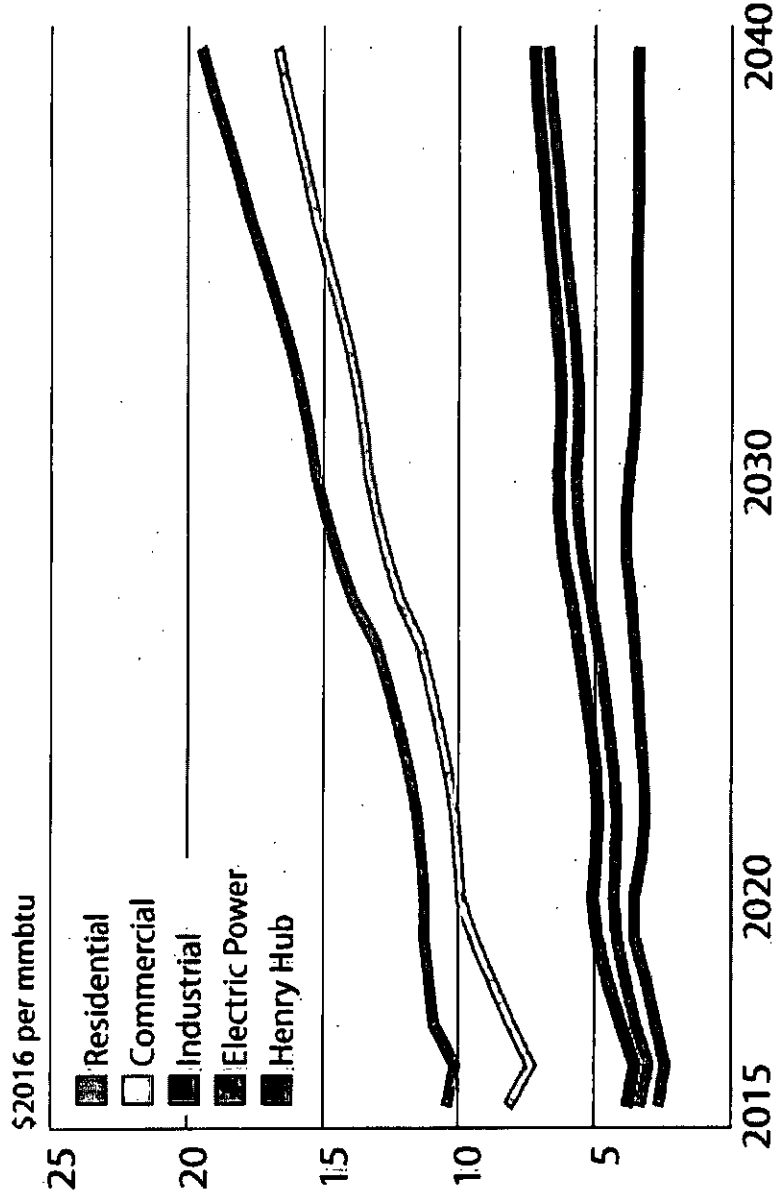
U.S. Natural Gas Price Projections (Reference Case)



Source: EIA Annual Energy Outlook - 2017

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U.S. Natural Gas Price Projections (High Resource Case)



Source: EIA Annual Energy Outlook - 2017

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FRED H. HUTCHISON — EXECUTIVE DIRECTOR

Fred H. Hutchison is president of Franklin-Hamilton, Inc. and executive director of LNG Allies and Our Energy Moment. An advocate, communicator, and entrepreneur, he has been a government and public relations generalist for more than four decades and is a trusted advisor to private and public sector leaders around the world.

His subject matter expertise includes energy, technology, forestry, food/agriculture, and scientific research. Educated as a civil engineer at the Massachusetts Institute of Technology (MIT), he was legislative assistant for energy and natural resources for Sen. Frank Church (D-Idaho) for six years.

He is a national magazine contributor and an elected member of the American Society of Journalists and Authors, the professional association of independent nonfiction writers.

PROFESSIONAL HIGHLIGHTS AND ACCOMPLISHMENTS

- Founder and manager of LNG Allies, a nonprofit organization working to expedite and maximize U.S. liquefied natural gas exports to create a more liquid global natural gas marketplace, enhance the energy security of America's allies, and improve economic and environmental conditions worldwide. (www.lngallies.com)
- Manager of Our Energy Moment, a nonprofit organization educating governmental decision-makers, opinion leaders, stakeholders, and the public about economic, environmental, and geostrategic benefits arising from America's transformation to a natural gas-exporting nation. (www.ourenergymoment.org)
- Created "Energy Allies" project for American Petroleum Institute to educate and energize Washington diplomatic community in support of efforts to lift the U.S. crude oil export ban (enacted on Dec. 18, 2015).
- Assembled federal advocacy/communications team that for 12 years successfully supported deans and directors of agriculture and natural resources at America's 75 land-grant universities, acting through the Association of Public and Land-grant Universities, (APLU). (www.land-grant.org)
- Helped APLU create the National Institute of Food and Agriculture (NIFA) and increase NIFA land-grant research and extension funding by more than \$400 million from 2003 to 2014.
- Handled media relations for six national cybersecurity conferences (first at White House) for The Institute of Internal Auditors.
- Designed and executed an integrated media/government affairs program for Iceland's Minister of Fisheries.
- Managed day-to-day affairs of Space Station Associates (coalition of International Space Station contractors).
- Conducted a multi-year written communications campaign to all members of Congress on behalf of 20 trade associations representing more than 7,500 family-owned wood products companies.
- Obtained numerous targeted appropriations and/or grants for renewable energy producers (primarily geothermal and advanced biofuels).
- Secured passage of the largest ever private relief bill ever enacted to compensate contractor who finished U.S. Science Pavilion at 1962 Seattle World's Fair with his own funds and waited 18 years for payment.
- Drafted portions of National Forest Management Act, Public Rangelands Improvement Act, Endangered American Wilderness Act, and entirety of Central Idaho Wilderness Act.
- Drew boundaries of Frank Church Wilderness, the largest National Forest Wilderness area in lower 48 states.

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ABOUT US — VISION, MISSION, PROGRAMS

LNG Allies, Inc. is a nonprofit corporation operating as a "business league" within the meaning of Section 501(c)(6) of the Internal Revenue Code. As stated in the Articles of Incorporation, the purposes of the organization include, but are not limited to: (1) promoting the common interests of its members and the energy industry as a whole; and (2) encouraging free trade in energy resources between the United States and its allies.

***Our vision** is to become the voice of the U.S. LNG export industry. **Our mission** is to expedite and maximize U.S. LNG exports to create a more liquid global natural gas marketplace, enhance the energy security of America's allies, and improve economic and environmental conditions worldwide.*

We conduct energy and economic research; prepare informational materials; and host, organize, and/or sponsor meetings, conferences, seminars, and other educational events. LNG Allies supports the U.S. LNG export industry¹ and the upstream/midstream companies benefiting from such exports. *Now in our third year, our programs are tested and proven:*

- *We work closely with an expanding coalition of foreign governments* now numbering more than 20. This diplomatic effort educates ministers, ambassadors, energy attachés, and leaders of state-owned energy companies about the many economic, environmental, and geostrategic benefits of U.S. liquefied natural gas.
- *We encourage and enable the representational efforts of our diplomatic partners* — both those that are formal members of the LNG Allies "Council of Embassies" and those less formally "allied" with us. This helps to ensure that their voices resonate within the halls of Congress, the highest levels of the administration, and in newsrooms/ editorial suites across the nation.
- *We are building a global network of friends, supporters, and customers of U.S. liquefied natural gas exports.* This network of "allies" is growing rapidly as we articulate the positive news of the U.S. natural gas renaissance through one-one-one meetings, at our own events, and at major conferences/meetings organized by others.
- *We organize high-value, by-invitation-only international events* that bring LNG exporters/upstream companies together with LNG importers and major commercial customers. Our events are (generally) free of charge to the buy-side participants and are held at mutually convenient times and locations.
- *We provide useful, well-researched, and attractive materials* that inform the global business community, our diplomatic supporters, and U.S. government decision-makers about the state of the U.S. LNG industry. We also maintain a robust website and a vibrant Twitter feed.
- *We run a highly-regarded Capitol Hill breakfast seminar series* where U.S. and foreign government leaders and others detail the myriad benefits of U.S. energy exports. These well attended networking seminars bring together congressional members/staff, embassy personnel, industry representatives, association and nonprofit leaders, and energy/political reporters. The breakfasts are free of charge and comply with the relevant government event attendance rules. (These seminars will resume in late 2016 or early 2017.)

1. Including Eastern Canadian projects planning to export gas sourced from the United States.

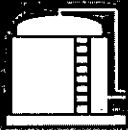


GLOBAL ENERGY/LNG CONFERENCES AND EVENTS 2017

Event (Organizer)	Dates	Location	URL
Atlantic Council Global Energy Forum	Jan. 12-13	Abu Dhabi	www.bit.ly/2hKLtpq
Central & Eastern Eur. Gas Conf. (DMG)	Feb. 15-16	Zagreb	www.theceegas.com
LNG Summit - United States	Feb. 23-24	Houston, TX	www.lng-usa.com
MIT Energy Conference	March 3-4	Cambridge, MA	www.mitenergyconference.org
CERA Week 2017	March 6-10	Houston, TX	www.ceraweek.com
Latin America LNG Summit (Argus)	March 15-17	Rio de Janeiro	www.bit.ly/2idX97K
LNG Supplies for Asian Markets (CC)	March 15-16	Singapore	www.lng-conference.com
Gastech 2017 (DMG)	April 4-7	Tokyo	www.gastechevent.com
World Bank / IMF Spring Meetings	April 21-23	Washington	www.imf.org/external/am
Mexican Energy Forum (Energy Dialogues)	April 25-26	Mexico City	www.energy-dialogues.com/mef
Global LNG Summit / Flame (Informa)	May 8-11	Amsterdam	www.bit.ly/1UyeG71
Canada LNG (DMG)	May 16-18	Vancouver, BC	www.canadalngexport.com
North America Oil & Gas (Kallanish)	May 23-24	Pittsburgh, PA	www.kallanishenergy.com
Clean Energy Ministerial	June 6-8	Beijing	www.cleanenergyministerial.org
LNG Fuels Summit (CWC)	June 13-15	Amsterdam	www.lngfuelsummit.com
America's LNG Summit (CWC)	June 20-23	Houston, TX	www.lngamericas.cwclng.com
EIA Energy Conference	June 26-27	Washington	www.eia.gov/conference/2017
Oil & Gas Africa (DMG)	July 11-13	Cape Town	www.africaogp.com
LNGgc (Informa)	Sept. 19-21	London	www.bit.ly/2jXkfQa
Asia Pacific LNG Summit (CWC)	Sept. 19-22	Singapore	www.asiapacific.cwclng.com
North American Gas Forum (ED)	Sept. 24-26	Washington	www.energy-dialogues.com/nagf
Shale Insight 2017	Sept. 27-28	Pittsburgh, PA	www.shaleinsight.com
GIIGNL General Assembly	Oct. 8-11	Brussels	www.giignl.org
World Bank / IMF Annual Meetings	Oct. 13-15	Washington	www.imf.org/external/am
Budapest LNG Summit	Oct. 17-18	Budapest	
Louisiana Gulf Coast Oil Exposition	Oct. 24-26	Lafayette, LA	www.lagcoe.com/home-expo
Natural Gas for High Horsepower Summit	Oct. (TBD)	Jacksonville, FL (?)	www.hhpsummit.com
UNFCCC COP 23	Nov. 6-23	Bonn	
World LNG Summit (CWC)	Nov. 28 - Dec. 2	Lisbon	www.world.cwclng.com
LNG Producer-Consumer Conference	TBD	Tokyo	www.lng-conference.org
Baltic Energy Summit (EEL Events)	TBD	Vilnius	www.eelevents.co.uk
Baltic Energy Forum (Verslo žinios)	TBD	Vilnius	www.konferencijos.vz.lt/bef/en

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U.S. LNG Export Projects* Overview

State / LNG Export Project	Sponsor(s)	B / G	Mtpa	Bcf/d	Initial Export Target Date ²	Status of LNG Contracts
LA - Sabine Pass (Trains 1-4)	Cheniere Energy	B	18.0	2.2	2016	Fully Subscribed
LA - Cameron LNG (Trains 1-3)	Sempra and Partners	B	15.0	1.7	H1 2018	Fully Subscribed
TX - Freeport LNG (Trains 1-3)	Freeport LNG	B	16.1	1.8	Q3 2018	Fully Subscribed
MD - Cove Point LNG	Dominion Resources	B	5.8	0.8	Q4 2017	Fully Subscribed
TX - Corpus Christi (Trains 1-3)	Cheniere Energy	G	15.0	1.8	H2 2018	T1 & T2 Fully Subscribed
LA - Sabine Pass (Trains 5-6)	Cheniere Energy	B	9.0	1.3	2019	T5 Fully Subscribed
LA - Cameron LNG (Trains 4-5)	Sempra and Partners	B	10.0	1.4		Unknown
LA - Lake Charles LNG*	Energy Transfer, Shell (BG)	B	14.3	2.0		Unknown
LA - Magnolia LNG	LNG Ltd.	G	8.0	1.1		Partially Subscribed
GA - Elba Island	Kinder Morgan	B	2.5	0.4	Q2 2018	Fully Subscribed
TX - Golden Pass Products	Qatar Petroleum, ExxonMobil	B	15.6	2.0		Unknown
LA - Delfin LNG (Offshore)	Fairwood LNG	B/P	12.0	2.0		Unknown
MS - Gulf LNG	Kinder Morgan and Partners	B	10.0	1.5		Unknown
LA - Calcasieu Pass	Venture Global LNG	G	10.0	1.4		Partially Subscribed
TX - Texas LNG Brownsville	Texas LNG	G	4.0	0.6		Unknown
TX - Rio Grande LNG	NextDecade	G	27.0	3.5		Unknown
TX - Annova LNG	Exelon	G	7.0	0.9		Unknown
TX - Port Arthur LNG	Sempra, Woodside	G	10.0	1.4		Unknown
FL - Eagle LNG	Eagle LNG Partners (Ferus)	G	1.0	0.1		Unknown
AK - Alaska LNG	State of Alaska and Partners	G	20.0	3.0		Unknown
TX - Freeport LNG (Train 4)	Freeport LNG	B	5.1	0.7		Unknown
TX - Corpus Christi (Trains 4-5)	Cheniere Energy	G	10.0	1.4		Unknown
LA - Plaquemines LNG	Venture Global LNG	G	20.0	2.8		Unknown
LA - G2 LNG	G2 LNG	G	14.0	1.8		Unknown
LA - Driftwood LNG	Tellurian	G	26.0	4.0		Unknown
OR - Jordan Cove LNG	Veresen	G	6.8	1.0		Unknown
LA - SCT&E LNG	SCT&E LNG	G	12.0	1.6		Unknown
TX - Port Comfort LNG	Lloyds Energy	G	9.0	1.3		Unknown

FERC Final + DOE Final Non-FTA
FERC Final (DOE Non-FTA Pending)
Pending on FERC Docket
Pending on MARAD Docket
In FERC "Pre-Filing" Process
Other Significant US Projects

Information current as of Feb. 10, 2017. Notes:

* This list omits certain small projects (less than 1.0 mtpa) and projects that have made little or no progress in the FERC pre-filing process. (The full list is here: <http://1.usa.gov/13ybYY6>.)

1. B = Brownfield Project. G = Greenfield Project. B/P = Existing offshore pipeline and existing land-based facilities.
2. Target export dates for projects that have not yet taken Final Investment Decision (FID) are not listed.
3. Train 3 at Corpus Christi and Train 6 at Sabine Pass have not taken FID.
4. Lake Charles LNG is owned by Energy Transfer. However, both Energy Transfer and Shell (the sole offtaker) must take FID. Shell has postponed its FID decision.



U.S. LNG Export Projects SM Key Dates

State/LNG Export Project	FERC/MARAD Filing Date	EIS/EA	Final EIS/EA Date	90-Day Auth. Deadline	FERC/MARAD Approval	Final DOE Non-FTA
LA - Sabine Pass (Trains 1-4)	31 Jan 2011	EA	22 Dec 2011	21 Mar 2012	16 Apr 2012	07 Aug 2012
LA - Cameron LNG (Trains 1-3)	07 Dec 2012	EIS	30 Apr 2014	29 Jul 2014	19 Jun 2014	10 Sep 2014
TX - Freeport LNG (Trains 1-3)	31 Aug 2012	EIS	16 Jun 2014	14 Sep 2014	30 Jul 2014	14 Nov 2014
MD - Cove Point LNG	01 Apr 2013	EA	15 May 2014	13 Aug 2014	29 Sep 2014	07 May 2015
TX - Corpus Christi (Trains 1-3)	31 Aug 2012	EIS	08 Oct 2014	06 Jan 2015	30 Dec 2014	12 May 2015
LA - Sabine Pass (Trains 5-6)	30 Sep 2013	EA	12 Dec 2014	12 Mar 2015	06 Apr 2015	26 Jun 2015
LA - Cameron LNG (Trains 4-5)	28 Sep 2015	EA	12 Feb 2016	12 May 2016	05 May 2016	15 Jul 2016
LA - Lake Charles LNG	25 Mar 2014	EIS	14 Aug 2015	12 Nov 2015	17 Dec 2015	29 Jul 2016
LA - Magnolia LNG	30 Apr 2014	EIS	16 Nov 2015	14 Feb 2016	15 Apr 2016	30 Nov 2016
GA - Elba Island	10 Mar 2014	EA	05 Feb 2016	05 May 2016	01 Jun 2016	16 Dec 2016
TX - Golden Pass Products	07 Jul 2014	EIS	29 Jul 2016	27 Oct 2016	21 Dec 2016	
LA - Delfin LNG (Offshore)	08 May 2015	EIS	21 Nov 2016		14 Mar 2017	
MS - Gulf LNG	19 Jun 2015	EIS				
LA - Calcasieu Pass	04 Sep 2015	EIS				
TX - Texas LNG Brownsville	31 Mar 2016	EIS				
TX - Rio Grande LNG	05 May 2016	EIS				
TX - Annova LNG	13 Jul 2016	EIS				
TX - Port Arthur LNG	29 Nov 2016	EIS				
FL - Eagle LNG	31 Jan 2017	EIS				
AK - Alaska LNG	12 Sep 2014	EIS				
TX - Freeport LNG (Train 4)	03 Jun 2015	EA				
TX - Corpus Christi (Trains 4-5)	09 Jun 2015	EA				
LA - Plaquemines LNG	18 Jun 2015	EIS				
LA - G2 LNG	23 Dec 2015	EIS				
LA - Driftwood LNG	11 May 2016	EIS				
OR - Jordan Cove LNG	10 Feb 2017					
LA - SCT&E LNG						
TX - Port Comfort LNG						

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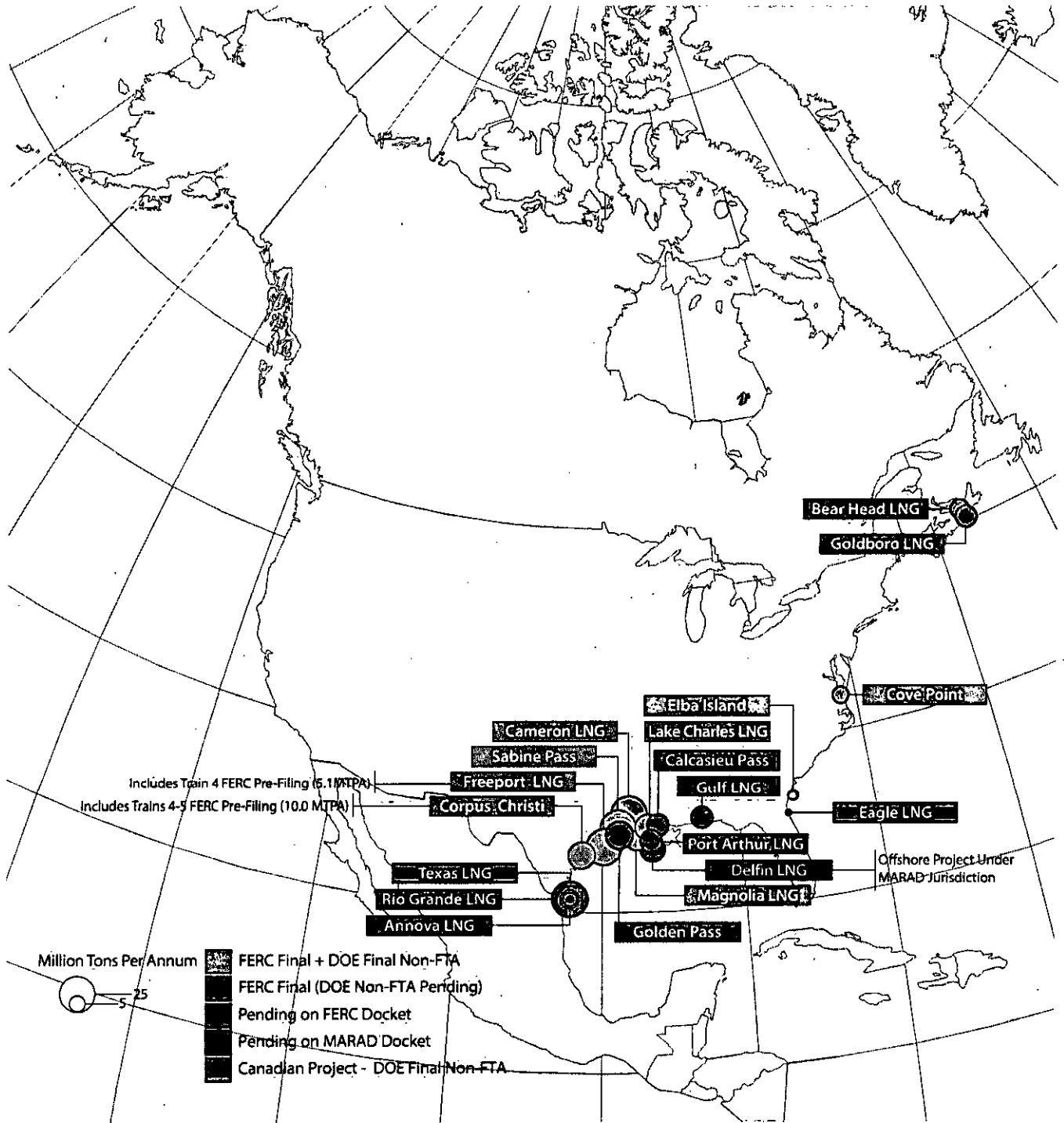
Information current as of Feb. 10, 2017. Notes:

- * This list omits certain small projects (less than 1.0 mtpa) and projects that have made little or no progress in the FERC pre-filing process. (The full list is here: <http://1.usa.gov/13ybYY6>.)
- 1. Under the Deepwater Port Act, MARAD must issue a Record of Decision to approve, approve with conditions, or deny Delfin LNG's deepwater port license application on or prior to March 14, 2017.



U.S. LNG Export Projects

Location Map (1)



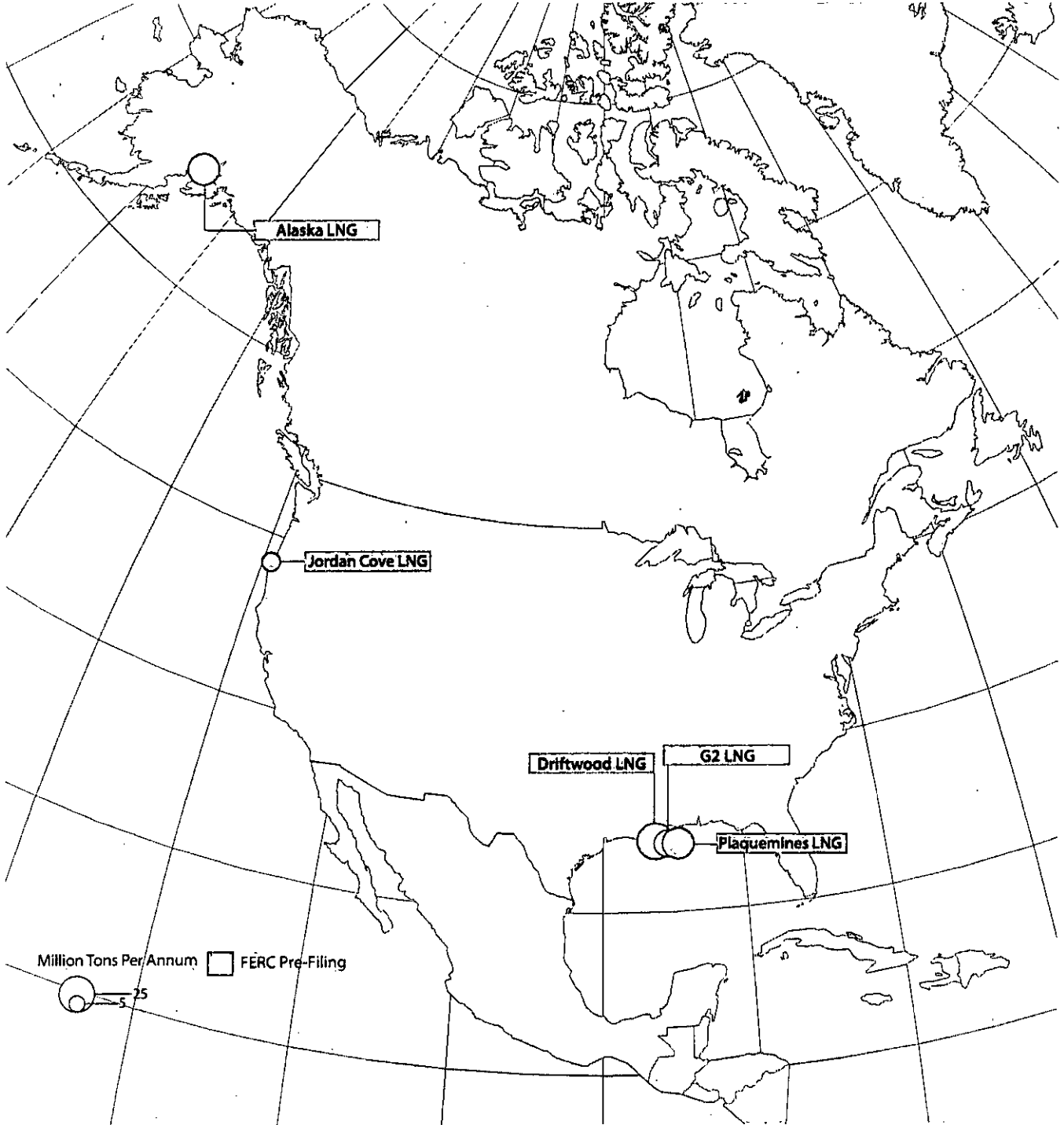
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U.S. LNG Export Projects

Location Map (2)



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