

**UNITED STATES OF AMERICA
DEPARTMENT OF ENERGY
OFFICE OF FOSSIL ENERGY**

2018 LNG Export Study

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COMMENTS OF CHENIERE ENERGY, INC.

In response to the Notice issued by the Office of Fossil Energy within the Department of Energy (“DOE/FE”) on June 12, 2018,¹ Cheniere Energy, Inc. (“Cheniere”) submits the following comments on *Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports* (“2018 LNG Export Study” or the “Study”) prepared by NERA Economic Consulting.

As explained below, Cheniere agrees with the results of the 2018 LNG Export Study and supports the overarching findings that LNG exports yield broad economic benefits to the United States across a variety of future scenarios. Indeed, for Cheniere, the positive economic impacts of LNG exports are not just a matter of economic theory. In the years since DOE/FE’s first LNG export study, Cheniere has constructed and launched operations in respect of four liquefaction trains at the Sabine Pass Liquefaction project (“SPL”). Cheniere is also in the process of constructing a fifth train at SPL and three trains at the Corpus Christi LNG Terminal (“CCL”), with additional infrastructure in the development phase.

These projects have created approximately 9,000 direct construction jobs at peak construction over a period of several years, and more than 1,000 permanent, full-time, direct jobs. In addition, the construction and operation of SPL and CCL has and will generate tens of thousands of indirect jobs across America. To date, Cheniere has sourced natural gas for SPL

¹ Study on Macroeconomic Outcomes of LNG Exports, 83 Fed. Reg. 27,314 (June 12, 2018).

from dozens of producers located in Texas, Louisiana, Arkansas, Pennsylvania, Ohio, West Virginia, Oklahoma, Illinois, and Kentucky. Providing a market for domestic production also stimulates demand for natural gas infrastructure. Jobs have been created developing and constructing natural gas pipelines, as well as in the market for steel and other products in the natural gas infrastructure supply chain.

Liquefaction projects also require a wide variety of manufactured parts and components, many of which can be sourced from domestic manufacturers. To date, Cheniere has procured components from 1,590 U.S. manufacturers in 46 states. Thus, at its facilities, through its procurement of domestic natural gas, and across its manufacturing supply chain, Cheniere has seen first-hand the broad economic benefits of LNG exports to the American economy.

Cheniere also applauds DOE/FE for selecting a study design that will allow for greater flexibility with regard to its regulatory process going forward. The 2018 LNG Export Study extends 30 years into the future, unlike previous studies which had a horizon of twenty years. The findings therefore establish an evidentiary basis for DOE/FE to make public interest determinations and export authorizations for 30-year terms. After consideration of the 2018 LNG Export Study and all relevant comments, DOE/FE should grant new non-Free Trade Agreement country authorizations for 30-year terms and should initiate a consolidated proceeding to add an additional 10-year term to existing 20-year authorizations.²

The 2018 LNG Export Study Reaffirms the Economic Benefits of LNG Exports

Prior to the 2018 LNG Export Study, DOE/FE had already developed a large body of analysis demonstrating the substantial macroeconomic benefits of LNG exports to the United

² A proceeding with this purpose could also consider conforming changes that would bring Free Trade Agreement country authorizations up to the same 30-year term as non-Free Trade Agreement country authorizations.

States. The two-part 2012 study included analysis from both the U.S. Energy Information Administration (“EIA”)³ and NERA Economic Consulting (“NERA”).⁴ In 2014, EIA performed an additional analysis, examining new scenarios and higher export volumes. And, in 2015, DOE/FE published a study prepared jointly by the Center for Energy Studies at Rice University’s Baker Institute and Oxford Economics.⁵ Although these studies came from different authors and varied in their methodology, they all confirmed the same fundamental conclusion: LNG exports lead to vast macroeconomic benefits for the United States. The studies sponsored by DOE/FE and performed by EIA received additional confirmation from a range of private studies performed by the Brookings Institution,⁶ Deloitte,⁷ IHS,⁸ IHS Energy,⁹ and ICF International.¹⁰

The 2018 LNG Export Study builds on that body of work. In doing so, the Study employs a refined approach that is well-suited to the present context in which DOE/FE has already issued 29 final long-term authorizations totaling 21.35 Bcf/day. The 2018 LNG Export

³ EIA, *Effect of Increased Natural Gas Exports on Domestic Energy Markets* (Jan. 2012), available at https://energy.gov/sites/prod/files/2013/04/f0/fe_eia_lng.pdf.

⁴ NERA Economic Consulting, *Macroeconomic Impacts of LNG Exports from the United States* (Dec. 2012) available at https://energy.gov/sites/prod/files/2013/04/f0/nera_lng_report.pdf.

⁵ Adrian Cooper et al., *The Macroeconomic Impact of Increasing U.S. LNG Exports* (Oct. 2015) available at https://www.energy.gov/sites/prod/files/2015/12/f27/20151113_macro_impact_of_lng_exports_0.pdf.

⁶ Charles Ebinger et al., Energy Security Initiative at Brookings Institution, *Liquid Markets: Assessing the Case for U.S. Exports of Liquefied Natural Gas* (May 2012), available at https://www.brookings.edu/wp-content/uploads/2016/06/0502_lng_exports_ebinger.pdf.

⁷ Deloitte, *Made in America: The economic impact of LNG exports from the United States* (2011), available at <http://www2.deloitte.com/content/dam/Deloitte/us/Documents/energy-resources/us-er-made-in-america.pdf>.

⁸ IHS, *The Economic and Employment Contributions of Unconventional Gas Development in State Economies* (June 2012), available at http://marcelluscoalition.org/wp-content/uploads/2012/06/State_Unconv_Gas_Economic_Contribution_Main.pdf.

⁹ IHS Economics, *Supplying the Unconventional Revolution: Sizing the unconventional oil and gas supply chain* (Sept. 2014), available at http://www.eeia.org/post/IHS_UnconvSupplyChainStudy_Sept2014_ExecSum.pdf.

¹⁰ ICF International, *U.S. LNG Exports: Impacts on Energy Markets and the Economy* (May 15, 2013), <http://www.api.org/~media/Files/Policy/LNG-Exports/API-LNG-Export-Report-by-ICF.pdf>.

Study includes 54 different scenarios to reflect a range of market uncertainties and for each probability-weighted scenario uses a market-determined level of LNG export volumes. In contrast to past studies that analyzed a prescribed range of export volumes, the 2018 LNG Export Study provides a complete analysis of the macroeconomic impacts of unconstrained, market-determined export volumes.

Across this wide range of scenarios, the 2018 LNG Export Study found unambiguous macroeconomic benefits to the United States. With respect to U.S. consumer welfare, the 2018 LNG Export Study found that consumer welfare increases in the scenarios with higher LNG exports. The table below highlights the point, illustrating eight of the most likely scenarios in 2040, which in turn show substantial increases in consumer welfare between the scenarios with low LNG exports and those with high LNG exports. Although much of the differential in consumer welfare flows from the oil and gas resource case assumption (LOGR, Reference, HOGR), the table below shows that consumer welfare is positively associated with higher LNG export volumes *within* each oil and gas resource case:

Table 10: Consumer Welfare for the More Likely Scenarios in 2040¹¹

	LNG Exports (Bcf/day)	Consumer Welfare (2016\$ Billion)
Low_Ref_Ref_Ref	0.1	\$30,006
Low_Ref_Low_Ref	9.9	\$30,011
Low_Ref_Low_High	23.4	\$30,018
Ref_Ref_Ref_Ref	12.9	\$30,252
Ref_Ref_Ref_High	24.0	\$30,255
Ref_Ref_Low_Ref	29.6	\$30,260
High_Ref_Ref_Ref	23.3	\$31,320
High_Ref_Ref_High	30.7	\$31,323

¹¹ NERA Economic Consulting, *Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports* at 67 (June 7, 2018) (“2018 LNG Export Study”).

With respect to gross domestic product (“GDP”), the 2018 LNG Export Study also found substantial benefits. The study concluded: “In all scenarios with common assumptions about U.S. natural gas supply and demand, there is greater gain in GDP as the LNG export volume increases. An important implication of this result is that if the market is allowed to determine exports, changes in global markets that bring forth increased LNG exports will also lead to an increase in overall economic activity leading to higher GDP.”¹²

Thirty Year Time Horizon

DOE/FE has established a practice of granting long-term LNG export authorizations for terms of 20 years. This practice traces back to the 2012 macroeconomic study, which looked 20 years in to the future. In Order No. 3282, DOE/FE denied Freeport LNG’s request for a 25-year term, explaining that “because the NERA study contains projections over a 20-year period beginning from the date of first export, we believe that caution recommends limiting this conditional authorization to no longer than a 20-year term beginning from the date of first export.”¹³

The 2018 LNG Export Study extends for 30 years, and shows macroeconomic benefits to the United States over the entire period.¹⁴ The 2018 LNG Export Study, therefore, provides ample basis for DOE/FE to begin issuing export authorizations with 30-year terms. There would be substantial benefits for the LNG industry in receiving 30-year authorizations. Cheniere, for example, has received interest from certain LNG buyers who desire contracts that extend beyond 20 years, which may be inhibited if the seller lacks export authority over the

¹² *Id.* at 67 – 68.

¹³ *Freeport LNG Expansion, L.P. and FLNG Liquefaction, LLC*, DOE/FOE Order No. 3282 at 114 (May 17, 2013) (citation omitted).

¹⁴ 2018 LNG Export Study at App. F.

entire proposed contract tenor. Further, once projects enter operation, the flexibility to extend contracts beyond the initial 20-year term will take on increasing importance. The bottom line is that, for foreign buyers deciding between U.S. LNG and alternative long-term sources, longer authorization periods may prove decisive.

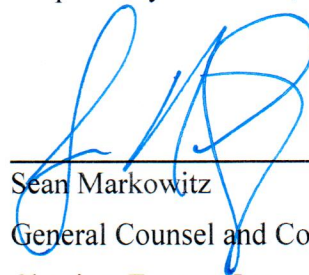
If and when DOE/FE determines that the 2018 LNG Export Study supports granting export authorizations with 30-year terms, the question will be how DOE/FE should handle existing 20-year authorizations that have been granted under the limitations of older macroeconomic studies. DOE/FE may presume that existing authorization holders would want their authorizations to be extended to the full 30-year study period. Failing to do so would place existing authorization holders at a competitive disadvantage to new authorization holders.

DOE/FE would have a number of procedural options to effect this change. Cheniere recommends strongly that DOE/FE pursue a procedural path that would not require the holders of each of the 29 existing export authorizations to submit new applications in 29 separate proceedings resulting in 29 different orders. Instead, to ensure timely action and the most efficient use of its own resources, DOE/FE should consider a consolidated proceeding. For example, DOE/FE could initiate a consolidated proceeding on its own motion to consider a “supplemental order” that would add an additional 10-year term to each already-granted 20-year authorization.¹⁵ Considering the extension of all existing authorizations in a single proceeding is logical because the public interest question in each case is identical. Although parties or commenters in such a proceeding would be free to raise facility-specific issues, those issues would be unlikely to be a central focus, as DOE/FE has already reviewed and ruled upon the

¹⁵ Section 3 of the Natural Gas Act gives DOE broad authority to issue new orders that supplement the terms of existing orders. *See* 15 U.S.C. § 717b(a) (DOE “may from time to time, after opportunity for hearing, and for good cause shown, make such supplemental order in the premises as it may find necessary or appropriate.”).

local environmental and land use impacts for each existing authorization holder's facility. Further, a supplemental order in line with the above would be eligible for a categorical exclusion under the National Environmental Policy Act.¹⁶

Respectfully submitted,



Sean Markowitz
General Counsel and Corporate Secretary
Cheniere Energy, Inc.

¹⁶ See 10 C.F.R. Part 1021, Subpart D Appx. B, Exclusion B.5.7.