

UNITED STATES OF AMERICA
DEPARTMENT OF ENERGY
OFFICE OF FOSSIL ENERGY AND CARBON MANAGEMENT

_____)
VISTA PACIFICO LNG, S.A.P.I. DE C.V.) DOCKET NO. 20-153-LNG
_____)

ORDER GRANTING LONG-TERM AUTHORIZATION
TO RE-EXPORT U.S.-SOURCED NATURAL GAS
IN THE FORM OF LIQUEFIED NATURAL GAS
FROM MEXICO TO NON-FREE TRADE AGREEMENT NATIONS

VPLNG MID-SCALE PROJECT

DOE/FECM ORDER NO. 4929

DECEMBER 20, 2022

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FREQUENTLY USED ACRONYMS

AEO	Annual Energy Outlook
Bcf/d	Billion Cubic Feet per Day
Bcf/yr	Billion Cubic Feet per Year
CPP	Clean Power Plan
DAN	Centro Mexicano para la Defensa del Medio Ambiente, A.C.
DOE	U.S. Department of Energy
EA	Environmental Assessment
ECA	Energía Costa Azul, S. de R.L. de C.V.
EIA	U.S. Energy Information Administration
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
FE	Office of Fossil Energy (prior to July 4, 2021)
FECM	Office of Fossil Energy and Carbon Management
FERC	Federal Energy Regulatory Commission
FONSI	Finding of No Significant Impact
FTA	Free Trade Agreement
GDP	Gross Domestic Product
GHG	Greenhouse Gas
LCA	Life Cycle Analysis
LNG	Liquefied Natural Gas
Mcf	Thousand Cubic Feet
MMBtu	Million British Thermal Units
mtpa	Million Metric Tons per Annum
NEPA	National Environmental Policy Act
NERA	NERA Economic Consulting
NETL	National Energy Technology Laboratory
NGA	Natural Gas Act
Tcf	Trillion Cubic Feet

I. INTRODUCTION

On November 18, 2020, Vista Pacifico LNG, S.A.P.I. de C.V. (Vista Pacifico) filed an application (Application)¹ with the Department of Energy’s (DOE) Office of Fossil Energy and Carbon Management (formerly the Office of Fossil Energy)² under section 3 of the Natural Gas Act (NGA).³ Vista Pacifico supplemented the Application with additional documentation on November 23, 2020.⁴ Vista Pacifico states that it is submitting the Application in connection with the development of one of two sets of proposed liquefaction and export terminal facilities to be located in Topolobampo, Sinaloa, Mexico.⁵ The Application in this proceeding pertains to the “VPLNG Mid-Scale Project.”⁶

Vista Pacifico requests long-term, multi-contract authorization to export domestically produced natural gas from the United States to Mexico, and after liquefaction in Mexico, to deliver and consume a portion of the liquefied natural gas (LNG) in Mexico and to re-export⁷ the LNG as follows:

- (i) To use approximately 40 billion cubic feet (Bcf/yr) (0.11 Bcf per day (Bcf/d)) of natural gas in Mexico as “fuel for pipeline transportation or liquefaction in Mexico;”⁸

¹ Vista Pacifico LNG, S.A.P.I. de C.V., Application for Long-Term, Multi-Contract Authorization to Export Natural Gas to Mexico and to Export Liquefied Natural Gas from Mexico to Free Trade Agreement and Non-Free Trade Agreement Nations, Docket No. 20-153-LNG (Nov. 18, 2020) [hereinafter App.].

² The Office of Fossil Energy (FE) changed its name to the Office of Fossil Energy and Carbon Management on July 4, 2021.

³ 15 U.S.C. § 717b. The authority to regulate the imports and exports of natural gas, including liquefied natural gas, under section 3 of the NGA has been delegated to the Assistant Secretary for FECM in Redelegation Order No. S4-DEL-FE1-2022, issued on June 13, 2022.

⁴ Letter from Brett A. Snyder, Counsel for Vista Pacifico, to Amy Sweeney, DOE, Additional Documentation, Docket No. 20-153-LNG (Nov. 23, 2020) (notice of filing of purchase option).

⁵ App. at 5.

⁶ *Id.*

⁷ For purposes of this Order, “re-export” means to ship or transmit U.S.-sourced natural gas in its various forms (gas, compressed, or liquefied) subject to DOE’s jurisdiction under the NGA, 15 U.S.C. § 717b, from one foreign country (*i.e.*, a country other than the United States) to another foreign country.

⁸ App. at 3.

- (ii) To use approximately 200 Bcf/yr (0.55 Bcf/d) of natural gas in the proposed VPLNG Mid-Scale Project, where the U.S.-sourced natural gas will be liquefied, then re-exported as LNG by vessel to:
 - a. Any country with which the United States has entered into a free trade agreement (FTA) requiring national treatment for trade in natural gas (FTA countries), under NGA section 3(c);⁹ and
 - b. Any other country with which trade is not prohibited by U.S. law or policy (non-FTA countries), under NGA section 3(a).¹⁰

Thus, for purposes of this Order, Vista Pacifico requests a non-FTA authorization for “only the volume being re-exported from Mexico as LNG (200 Bcf/y).”¹¹

In the Application, Vista Pacifico states that the U.S.-sourced natural gas will be exported to Mexico at the United States-Mexico border via existing and, potentially, future cross-border natural gas pipelines.¹² Vista Pacifico further states that the proposed VPLNG Mid-Scale Project will be located in Topolobampo, in the municipality of Ahome, in the northwestern part of the Mexican state of Sinaloa, approximately 500 miles south of the United States-Mexico border on the Gulf of California.¹³ Once constructed, the VPLNG Mid-Scale Project will be capable of receiving, processing, and liquefying the U.S.-sourced natural gas, storing the resulting LNG, and loading the LNG onto ocean-going LNG carriers for re-export to other countries.¹⁴

Vista Pacifico requests this authorization for a term beginning on the earlier of the date of first commercial export or seven years from the date the authorization is granted, and extending

⁹ 15 U.S.C. § 717b(c). The United States currently has FTAs requiring national treatment for trade in natural gas with Australia, Bahrain, Canada, Chile, Colombia, Dominican Republic, El Salvador, Guatemala, Honduras, Jordan, Mexico, Morocco, Nicaragua, Oman, Panama, Peru, Republic of Korea, and Singapore. FTAs with Israel and Costa Rica do not require national treatment for trade in natural gas.

¹⁰ 15 U.S.C. § 717b(a); *see* App. at 3-4.

¹¹ App. at 4 n.4.

¹² *Id.* at 3; *see also id.* 5 & n.7; *see infra* § IV.C.

¹³ *Id.* at 5.

¹⁴ *Id.*; *see infra* § IV.B.

through December 31, 2050.¹⁵ Additionally, Vista Pacifico seeks the authorization on its own behalf and as agent for other entities that will hold title to the natural gas at the time it is exported to Mexico and/or re-exported as LNG to other countries, respectively.¹⁶

On April 9, 2021, DOE granted the FTA portion of the Application, as required by NGA section 3(c). Accordingly, under Order No. 4688,¹⁷ Vista Pacifico is authorized to export U.S.-sourced natural gas by pipeline from the United States to Mexico and, after liquefaction in Mexico, to re-export the U.S.-sourced natural gas in the form of LNG by vessel from the proposed VPLNG Mid-Scale Project to FTA countries, in a total volume equivalent to 240 Bcf/yr of natural gas.¹⁸

DOE published a notice of the non-FTA portion of the Application in the *Federal Register* on December 8, 2020 (Notice of Application).¹⁹ The Notice of Application called on interested persons to submit protests, motions to intervene, notices of intervention, and comments by February 8, 2021.²⁰ DOE did not receive any filings by the deadline set forth in the Notice of Application. However, on November 28, 2022—more than 1 year and nine months after the February 8, 2021 deadline—Sierra Club submitted a motion to intervene opposing Vista Pacifico’s Application, together with a protest of the Application filed jointly with Centro

¹⁵ App. at 4, 11; *see also* U.S. Dep’t of Energy, Extending Natural Gas Export Authorizations to Non-Free Trade Agreement Countries Through the Year 2050; Notice of Final Policy Statement and Response to Comments, 85 Fed. Reg. 52,237 (Aug. 25, 2020) [hereinafter 2050 Policy Statement]. Additionally, DOE notes that, effective January 12, 2021, long-term export authorizations contain authority to export the same approved volume of LNG pursuant to transactions with terms of less than two years, including commissioning volumes, on a non-additive basis. *See* U.S. Dep’t of Energy, Including Short-Term Export Authority in Long-Term Authorizations for the Export of Natural Gas on a Non-Additive Basis; Policy Statement, 86 Fed. Reg. 2,243 (Jan. 12, 2021).

¹⁶ *See* App at 4, 12.

¹⁷ *Vista Pacifico LNG, S.A.P.I. de C.V.*, DOE/FE Order No. 4688, Docket No. 20-153-LNG, Order Granting Long-Term Authorization to Export Natural Gas to Mexico and to Other Free Trade Agreement Nations (Apr. 9, 2021).

¹⁸ *Id.* at 11 (Ordering Para. A) (granting FTA authorization through December 31, 2050).

¹⁹ *Vista Pacifico LNG, S.A.P.I. de C.V.*, Application for Long-Term, Multi-Contract Authorization to Export Domestically Produced Natural Gas Through Mexico to Non-Free Trade Agreement Countries After Liquefaction to Liquefied Natural Gas; Notice of Application, 85 Fed. Reg. 79,003 (Dec. 8, 2020) [hereinafter Notice of App.].

²⁰ DOE finds that the requirement for public notice of applications in 10 C.F.R. Part 590 is applicable only to non-FTA applications under NGA section 3(a).

Mexicano para la Defensa del Medio Ambiente, A.C., referred to as DAN.²¹ Vista Pacifico submitted an Answer in Opposition to the Sierra Club and DAN Motion to Intervene and Protest of Sierra Club and DAN on December 13, 2022.²² As explained below, DOE finds that Sierra Club and DAN fail to show good cause for their late filing, and therefore DOE dismisses both the motion to intervene and protest as out of time.²³

Before reaching a final decision on a non-FTA application under NGA section 3(a), DOE must also comply with the National Environmental Policy Act (NEPA).²⁴ On July 12, 2022, DOE issued a Notice of Environmental Assessment (Notice of EA), in which DOE explained its determination that, consistent with E.O. 14008, *Tackling the Climate Crisis at Home and Abroad*,²⁵ and its obligations under NEPA, it was appropriate to evaluate the potential environmental impacts of Vista Pacifico's requested authorization to re-export U.S.-sourced natural gas in the form of LNG to non-FTA countries in a volume equivalent to 200 Bcf/yr of natural gas.²⁶ In the Notice of EA, DOE identified four topics for analysis, but stated that the list was not intended to predetermine any analysis and was subject to change.²⁷

²¹ Sierra Club, *et al.*, Motion to Intervene of Sierra Club and Protest of Sierra Club and Centro Mexicano para la Defensa del Medio Ambiente, A.C., Docket No. 20-153-LNG (Nov. 28, 2022) [hereinafter Sierra Club Motion to Intervene and Protest of Sierra Club and DAN].

²² Vista Pacifico LNG, S.A.P.I. de C.V., Answer in Opposition to Motion to Intervene of Sierra Club and Protest of Sierra Club and Centro Mexicano para la Defensa del Medio Ambiente, A.C., Docket No. 20-153-LNG (Dec. 13, 2022) [hereinafter Vista Pacifico Answer in Opposition].

²³ See *infra* §§ VIII.A, XI (Ordering Para. M); see also 10 C.F.R. §§ 590.303(d), 590.304(e).

²⁴ 42 U.S.C. § 4321 *et seq.*

²⁵ E.O. 14008 sets forth policies to address climate change, specifically to “organize and deploy the full capacity of [Federal] agencies to combat the climate crisis.” Exec. Order No. 14008 of Jan. 27, 2021, Tackling the Climate Crisis at Home and Abroad, 86 Fed. Reg. 7,619 (Feb. 1, 2021),

<https://www.federalregister.gov/documents/2021/02/01/2021-02177/tackling-the-climate-crisis-at-home-and-abroad>.

E.O. 14008 further requires the “Federal Government [to] drive assessment, disclosure, and mitigation of climate pollution and climate-related risks in every sector” of the U.S. economy. *Id.*

²⁶ See *Vista Pacifico LNG, S.A.P.I. de C.V.*, Notice of Environmental Assessment, Docket No. 20-153-LNG (July 12, 2022), at 5 [hereinafter Notice of EA]. Vista Pacifico subsequently filed a response to the Notice of EA. See *Vista Pacifico LNG, S.A.P.I. de C.V.*, Response to Notice of Environmental Assessment, Docket No. 20-153-LNG (Aug. 2, 2022).

²⁷ See Notice of EA at 5-6 (identifying the following four topics of analysis: (1) production of U.S.-sourced natural gas, (2) cross-border natural gas pipelines, (3) Mexico's environmental review, and (4) greenhouse gas (GHG) emissions).

On September 29, 2022, DOE provided the draft EA to potentially affected states and tribes for a 15-day comment period that concluded on October 14, 2022.²⁸ DOE received one comment on the draft EA from the Texas Commission on Environmental Quality (Texas CEQ).²⁹ DOE issued the final EA on October 28, 2022 [hereinafter EA],³⁰ and responded to Texas CEQ's comment as part of the EA.³¹

The EA evaluated the Proposed Action of granting Vista Pacifico's Application (authorizing re-exports of 200 Bcf/yr of natural gas in the form of LNG) and a No Action Alternative in which the requested authorization would not be granted.³² Specifically, the EA analyzed the following potential impacts on the affected environment: (1) incremental production of U.S.-sourced natural gas, (2) incremental cross-border pipeline transportation of natural gas, (3) marine transportation of LNG, and (4) GHG emissions and climate change.³³ The EA also incorporated the Marine Transport Technical Support Document (Technical Support Document) previously prepared by DOE to consider the potential effects associated with transporting natural gas, including LNG, on marine vessels.³⁴

²⁸ See *infra* § VII; Notice of EA at 6; see also U.S. Dep't of Energy, Vista Pacifico LNG, S.A.P.I. de C.V. Environmental Assessment – VPLNG Mid-Scale Project, DOE/EA-2192, at 20, 22-24, 27 (Oct. 28, 2022), <https://www.energy.gov/sites/default/files/2022-10/FINAL%20Environmental%20Assessment%20-%20Ener%C3%ADa%20Costa%20Azul%2010-28-22.pdf> [hereinafter EA].

²⁹ See EA at 27 (Appendix D).

³⁰ See *supra* note 28.

³¹ See EA at 27 (Appendix D).

³² See *id.* at 2-3. For the No Action Alternative, DOE assumed that the VPLNG Mid-Scale Project “would not be built and the potential environmental impacts from the Project would not occur.” *Id.* at 3. DOE observed, however, that “it is likely that some or all of the demand for LNG that the Project is intended to serve would be met by other LNG facilities.” *Id.*

³³ See *id.* at 8-19. Additionally, the EA provided a summary of Mexico's environmental review process for the public's information, but it did not analyze potential environmental impacts associated with elements of the proposed Project that would occur within the sovereign territory of Mexico or any other country. See *id.* at 3-5; see also *infra* § VII.C.

³⁴ U.S. Dep't of Energy, Technical Support Document, Notice of Final Rulemaking, National Environmental Policy Act Implementing Procedures (10 C.F.R. Part 1021) (Nov. 2020), https://www.energy.gov/sites/prod/files/2020/12/f81/10-cfr-1021-ng-td-2020-11_0.pdf [hereinafter Technical Support Document]. DOE prepared the Technical Support Document in connection with a NEPA rulemaking pertaining to authorizations issued under NGA section 3. See U.S. Dep't of Energy, National Environmental Policy Act Implementing Procedures, 85 Fed. Reg. 78,197 (Dec. 4, 2020); see also *infra* § II.D.

DOE has reviewed the non-FTA portion of the Application, DOE's economic and environmental studies, the EA, and the most recent long-term projections from the U.S. Energy Information Administration (EIA), among other evidence discussed below. DOE notes that, while Vista Pacifico is already authorized to re-export U.S.-sourced natural gas as LNG from the proposed VPLNG Mid-Scale Project at its maximum liquefaction capacity to FTA countries, this Order will provide Vista Pacifico with the flexibility to allow its proposed Project to serve non-FTA countries. These re-exports can diversify global LNG supplies and improve energy security for U.S. allies and trading partners. Based on the substantial administrative record, DOE has determined that it has not been shown that Vista Pacifico's proposed re-exports of LNG to non-FTA countries will be inconsistent with the public interest, as would be required to deny the Application under NGA section 3(a).

Additionally, DOE has reviewed the EA under NEPA and is issuing a Finding of No Significant Impact (FONSI) as Appendix B to this Order. The FONSI adopts the EA (DOE/EA-2192) and incorporates by reference other DOE documents described below.³⁵

Based on this record, DOE grants the non-FTA portion of the Application in the full volume requested: 200 Bcf/yr of natural gas, or 0.55 Bcf/d.³⁶ This authorization is subject to the Terms and Conditions and Ordering Paragraphs set forth herein.

Concurrently with this Order, DOE is issuing an amendment to an existing long-term authorization, DOE/FECM Order No. 4365-B, granted to Vista Pacifico's affiliate, Energía Costa Azul, S. de R.L. de C.V. (ECA).³⁷ Under Order No. 4365-B, ECA is now authorized to

³⁵ See *infra* § VIII.C.1 and Appendix B.

³⁶ See *infra* §§ IX-XI.

³⁷ *Energía Costa Azul, S. de R.L. de C.V.*, DOE/FE Order No. 4365, Docket No. 18-145-LNG, Opinion and Order Granting Long-Term Authorization to Re-Export U.S.-Sourced Natural Gas in the Form of Liquefied Natural Gas from Mexico to Non-Free Trade Agreement Countries (ECA Large-Scale Project) (Mar. 29, 2019), *amended by* DOE/FE Order No. 4365-A (Dec. 10, 2020) (extending export term), *further amended by* DOE/FECM Order No. 4365-B (Dec. 20, 2022) (increasing export volume).

re-export U.S.-sourced natural gas in the form of LNG by vessel to non-FTA countries in a volume equivalent to 636 Bcf/yr of natural gas.³⁸ The volumes approved in this Order and ECA's amendment (Order No. 4365-B) are 0.55 Bcf/d and 0.44 Bcf/d, respectively. Together, these orders bring DOE's cumulative total of approved non-FTA exports of LNG from the lower-48 states to 47.06 Bcf/d of natural gas.³⁹ This cumulative total includes 6.32 Bcf/d of U.S.-sourced natural gas authorized for re-export in the form of LNG from Mexico and Canada to non-FTA countries.

DOE is continuing to monitor market developments closely as the impact of successive authorizations of LNG exports (and re-exports) unfolds. DOE also acknowledges that proposals to re-export U.S.-sourced natural gas in the form of LNG from Mexico or Canada to non-FTA countries raise public interest considerations that are not present for domestic exports of LNG. In the case of re-exports, the U.S. economy does not receive a significant portion of the benefits DOE has recognized for LNG exported directly from the United States, particularly with respect to the jobs and infrastructure investment associated with construction and operation of liquefaction facilities. Additionally, as noted in the EA, long-term consequences may arise from the fact that foreign infrastructure is not directly subject to U.S. environmental laws.⁴⁰ For these reasons, DOE will carefully consider the development of this market segment.⁴¹

³⁸ *See id.*

³⁹ Final non-FTA orders that were later vacated are not included in this total volume. *See infra* § VIII.E (identifying long-term orders vacated to date). Additionally, DOE has issued one final long-term order authorizing exports of LNG produced from sources from a proposed facility to be constructed in Alaska to non-FTA countries. *See Alaska LNG Project LLC*, DOE/FE Order No. 3643-A, Docket No. 14-96-LNG, Final Opinion and Order Granting Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations (Aug. 20, 2020), *reh'g granted in part*, DOE/FE Order No. 3642-B (Apr. 15, 2021) (rehearing ongoing). The Alaska volume is not included in the volumes discussed herein, which involve the export of LNG produced from the lower-48 states. Because there is no natural gas pipeline interconnection between Alaska and the lower-48 states, DOE generally views those LNG export markets as distinct.

⁴⁰ *See EA* at 16-17.

⁴¹ *See supra* §§ VIII.B.2, D.

II. BACKGROUND

A. DOE's LNG Export Studies

1. 2012 EIA and NERA Studies

In 2011, DOE engaged EIA and NERA Economic Consulting (NERA) to conduct a two-part study of the economic impacts of U.S. LNG exports, which together was called the “2012 LNG Export Study.” The first part, performed by EIA and published in January 2012, assessed how specified scenarios of increased natural gas exports could affect domestic energy markets. Specifically, EIA examined how prescribed levels of natural gas exports (at 6 Bcf/d and 12 Bcf/d) above baseline cases could affect domestic energy markets.

The second part, performed by NERA under contract to DOE, evaluated the macroeconomic impact of LNG exports on the U.S. economy. NERA used a general equilibrium macroeconomic model of the U.S. economy with an emphasis on the energy sector and natural gas. The 2012 NERA Study projected that, across all scenarios studied—assuming either 6 Bcf/d or 12 Bcf/d of LNG export volumes—the United States would experience net economic benefits from allowing LNG exports.

In December 2012, DOE published a notice of availability of the 2012 LNG Export Study in the *Federal Register* for public comment.⁴² DOE subsequently responded to the public comments in connection with the LNG export proceedings identified in that notice.⁴³

⁴² See U.S. Dep't of Energy, Notice of Availability of 2012 LNG Export Study and Request for Comments, 77 Fed. Reg. 73,627 (Dec. 11, 2012), http://energy.gov/sites/prod/files/2013/04/f0/fr_notice_two_part_study.pdf.

⁴³ See, e.g., *Freeport LNG Expansion L.P., et al.*, DOE/FE Order No. 3282, Docket No. 10-161-LNG, Order Conditionally Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Freeport LNG Terminal on Quintana Island, Texas to Non-Free Trade Agreement Nations, at 56-109 (May 17, 2013).

2. 2014 and 2015 LNG Export Studies

By May 2014, in light of the volume of LNG exports to non-FTA countries then authorized by DOE and the number of non-FTA export applications still pending, DOE determined that an updated study was warranted to consider the economic impacts of exporting LNG from the lower-48 states to non-FTA countries. DOE announced plans to undertake new economic studies to gain a better understanding of how higher levels of U.S. LNG exports—at levels between 12 and 20 Bcf/d of natural gas—would affect the public interest.⁴⁴

DOE commissioned two new macroeconomic studies. The first, *Effect of Increased Levels of Liquefied Natural Gas Exports on U.S. Energy Markets*, was performed by EIA and published in October 2014 (2014 LNG Export Study or 2014 Study).⁴⁵ The 2014 Study assessed how specified scenarios of increased natural gas exports could affect domestic energy markets. At DOE's request, this 2014 Study served as an update of EIA's January 2012 study of LNG export scenarios and used baseline cases from EIA's *Annual Energy Outlook 2014* (AEO 2014).⁴⁶

The second study, *The Macroeconomic Impact of Increasing U.S. LNG Exports*, was performed jointly by the Center for Energy Studies at Rice University's Baker Institute and Oxford Economics under contract to DOE (together, Rice-Oxford) and published in October 2015 (2015 LNG Export Study or 2015 Study).⁴⁷ The 2015 Study was a scenario-based

⁴⁴ See U.S. Dep't of Energy, Office of Fossil Energy, Request for an Update of EIA's January 2012 Study of Liquefied Natural Gas Export Scenarios, <https://www.energy.gov/fe/downloads/request-update-eia-s-january-2012-study-liquefied-natural-gas-export-scenarios> (May 29, 2014) (memorandum from FE to EIA).

⁴⁵ U.S. Energy Info. Admin., *Effect of Increased Levels of Liquefied Natural Gas Exports on U.S. Energy Markets* (Oct. 2014), <https://www.eia.gov/analysis/requests/fe/pdf/lng.pdf>.

⁴⁶ Each Annual Energy Outlook (AEO) presents EIA's long-term projections of energy supply, demand, and prices. It is based on results from EIA's National Energy Modeling System (NEMS) model.

⁴⁷ Center for Energy Studies at Rice University Baker Institute and Oxford Economics, *The Macroeconomic Impact of Increasing U.S. LNG Exports* (Oct. 29, 2015), http://energy.gov/sites/prod/files/2015/12/f27/20151113_macro_impact_of_lng_exports_0.pdf.

assessment of the macroeconomic impact of levels of U.S. LNG exports, sourced from the lower-48 states, under different assumptions including U.S. resource endowment, U.S. natural gas demand, international LNG market dynamics, and other factors. The 2015 Study considered export volumes ranging from 12 to 20 Bcf/d of natural gas, as well as a high resource recovery case examining export volumes up to 28 Bcf/d of natural gas. The analysis covered the time period 2015 to 2040.

In December 2015, DOE published a Notice of Availability of the 2014 and 2015 Studies in the *Federal Register*, and invited public comment on those Studies.⁴⁸ DOE subsequently responded to the public comments in connection with the LNG export proceedings identified in that notice.⁴⁹

3. 2018 LNG Export Study

a. Overview

At the time DOE commissioned the 2018 LNG Export Study in 2017, 25 non-FTA applications were pending before DOE.⁵⁰ In light of both the volume of LNG requested for export in those pending applications and the cumulative volume of non-FTA exports then-authorized (equivalent to 21.35 Bcf/d of natural gas), DOE determined that a new macroeconomic study was warranted.⁵¹ Accordingly, DOE, through its support contractor

⁴⁸ U.S. Dep't of Energy, *Macroeconomic Impacts of LNG Exports Studies; Notice of Availability and Request for Comments*, 80 Fed. Reg. 81,300, 81,302 (Dec. 29, 2015).

⁴⁹ *See, e.g., Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 3792, Docket No. 15-63-LNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Sabine Pass LNG Terminal Located in Cameron Parish, Louisiana, to Non-Free Trade Agreement Nations, at 66-121 (Mar. 11, 2016).

⁵⁰ *See* U.S. Dep't of Energy, *Study on Macroeconomic Outcomes of LNG Exports; Notice of Availability of the 2018 LNG Export Study and Request for Comments*, 83 Fed. Reg. 27,314 (June 12, 2018) (identifying 25 docket proceedings) [hereinafter 2018 Study Notice].

⁵¹ Additionally, as of the date of the 2018 Study, DOE had authorized a cumulative total of LNG exports to FTA countries under NGA section 3(c) in a volume of 59.33 Bcf/d of natural gas. These FTA volumes were not additive to the authorized non-FTA volumes.

KeyLogic Systems, Inc., commissioned NERA to conduct the 2018 LNG Export Study. DOE published the 2018 LNG Export Study (or 2018 Study) on its website on June 7, 2018,⁵² and concurrently provided notice of the availability of the Study, as discussed below.⁵³

Like the four prior economic studies, the 2018 LNG Export Study examined the impacts of varying levels of LNG exports on domestic energy markets. However, the 2018 LNG Export Study differed from DOE's earlier studies in the following ways:

- (i) Included a larger number of scenarios (54 scenarios) to capture a wider range of uncertainty in four natural gas market conditions than examined in the previous studies;
- (ii) Included LNG exports in all 54 scenarios that are market-determined levels, including the three alternative baseline scenarios that are based on the projections in EIA's *Annual Energy Outlook 2017* (AEO 2017);⁵⁴
- (iii) Examined unconstrained LNG export volumes beyond the levels examined in the previous studies;
- (iv) Examined the likelihood of those market-determined LNG export volumes; and
- (v) Provided macroeconomic projections associated with several of the scenarios lying within the more likely range of exports.⁵⁵

b. Methodology and Scenarios

In its Response to Comments published in the *Federal Register* in December 2018, DOE provided a detailed discussion of the methodology and scenarios used in the 2018 Study, including NERA's Global Natural Gas Model (GNGM) and New ERA models.⁵⁶ The 2018 Study developed 54 scenarios by identifying various assumptions for domestic and international supply

⁵² See NERA Economic Consulting, *Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports* (June 7, 2018), <https://www.energy.gov/sites/prod/files/2018/06/f52/Macroeconomic%20LNG%20Export%20Study%202018.pdf> [hereinafter 2018 LNG Export Study or 2018 Study].

⁵³ See 2018 Study Notice.

⁵⁴ U.S. Energy Info. Admin., *Annual Energy Outlook 2017* (with projections to 2050) (Jan. 5, 2017), <https://www.eia.gov/outlooks/archive/aeo17/> [hereinafter AEO 2017].

⁵⁵ See 2018 Study Notice, 83 Fed. Reg. at 27,316.

⁵⁶ See U.S. Dep't of Energy, Study on Macroeconomic Outcomes of LNG Exports; Response to Comments Received on Study, 83 Fed. Reg. 67,251 (Dec. 28, 2018) [hereinafter 2018 Study Response to Comments].

and demand conditions to capture a wide range of uncertainty in natural gas markets. The scenarios included three baseline cases based on EIA's AEO 2017 projections (the most recent EIA projections available at the time), with varying assumptions about U.S. natural gas supply.⁵⁷

The three cases for U.S. natural gas supply derived from AEO 2017 were:

- i. AEO 2017's Reference case, which provided a central estimate of U.S. natural gas production;
- ii. High Oil and Gas Resource and Technology (HOGRT) case, which provided more optimistic resource development estimates than the Reference case; and
- iii. Low Oil and Gas Resource and Technology (LOGRT) case, which provided less optimistic resource development estimates than the Reference case.⁵⁸

Alternative scenarios added other assumptions about future U.S. and international demand for natural gas. The three cases for U.S. natural gas demand were:

- i. AEO 2017's Reference case, which provided a central estimate of U.S. natural gas demand;
- ii. A Robust Economic Growth case, which provided a high estimate for U.S. natural gas demand driven by higher levels of gross domestic product (GDP) growth; and
- iii. A Renewables Mandate case, which provided a low estimate for U.S. natural gas demand driven by the imposition of a stringent renewables mandate.⁵⁹

International assumptions were based on EIA's *International Energy Outlook 2017* (IEO 2017) and the International Energy Agency's (IEA) *World Energy Outlook 2016* (WEO 2016).

As noted above, the 2018 Study also examined the likelihood of conditions leading to various export scenarios. This unique feature provided not only quantification of the effects to

⁵⁷ 2018 Study Response to Comments, 83 Fed. Reg. at 67,256 (stating that the differences in the natural gas production levels across these cases arose from varying assumptions around unproven offshore resources, onshore shale gas resources, tight gas resources, and conventional and tight oil associated gas resources, as well as the costs of producing these resources).

⁵⁸ *See id.*

⁵⁹ *See* 2018 Study Response to Comments, 83 Fed. Reg. at 67,256.

the U.S. natural gas market and its overall economy under each of the scenarios outlined, but also an assessment of the probability of each of these scenarios, and thus the probability of the natural gas and macroeconomic outcomes associated with each scenario.⁶⁰

In developing this aspect of the Study, NERA first developed estimates of the probabilities for the level of U.S. supply and demand, as well as supply and demand in the rest of the world.⁶¹ DOE and KeyLogic, Inc. contacted a set of independent experts recommended by DOE (referred to as the peer reviewers) to obtain their probability assignments for these same four metrics. After receiving feedback from the peer reviewers, NERA reevaluated the original probability assignments to arrive at the final probabilities. These peer-reviewed probabilities of uncertainties surrounding developments in the international and domestic natural gas markets were, in turn, combined to develop the 54 export scenarios and their associated macroeconomic impacts.

c. Study Results

The 54 scenarios in the 2018 Study provided a wide range of results. NERA chose to focus on a subset of more likely outcomes, given DOE's assumptions about the probabilities associated with U.S. natural gas production, demand, and supply, as well as demand for natural gas in the rest of the world. NERA's key results included the following:

- The more likely range of LNG exports in the year 2040 was judged to range from 8.7 to 30.7 Bcf/d of natural gas.
- U.S. natural gas prices ranged from \$5 to approximately \$6.50 per million British thermal unit (MMBtu) in 2040 (in constant 2016 dollars) under Reference case supply assumptions. These central cases had a combined probability of 47%.

⁶⁰ *See id.*

⁶¹ *See id.*

- Levels of GDP were most sensitive to assumptions about U.S. supply of natural gas, with high supply driving higher levels of GDP. For each of the supply scenarios, higher levels of LNG exports in response to international demand consistently led to higher levels of GDP. GDP achieved with the highest level of LNG exports in each group exceeded GDP with the lowest level of LNG exports by \$13 to \$72 billion in 2040 (in constant 2016 dollars). The increase in GDP associated with higher LNG exports was attributed to investment in the liquefaction process, export revenues, resource income, and additional wealth transfer in the form of tolling or liquefaction charges.⁶²

- About 80% of the increase in LNG exports was satisfied by increased U.S. production of natural gas, with positive effects on labor income, output, and profits in the natural gas production sector.

- Industry subsectors of the economy that relied heavily on natural gas for energy and as a feedstock continued to exhibit robust growth even at higher LNG export levels, albeit at slightly slower rates of increase than cases with lower LNG export levels.

- All scenarios within the more likely range of results were welfare-improving for the average U.S. household.⁶³

- Even the most extreme scenarios of high LNG exports outside the more likely probability range (exhibiting a combined probability of less than 3%) showed higher overall economic performance in terms of GDP, household income, and consumer welfare than lower export levels associated with the same domestic supply scenarios.⁶⁴

d. DOE Proceeding

⁶² See 2018 Study at 67.

⁶³ See 2018 Study Response to Comments, 83 Fed. Reg. at 67,264, 67,266.

⁶⁴ See *id.* at 67,255.

On June 12, 2018, DOE published a notice of availability of the 2018 LNG Export Study and a request for comments.⁶⁵ The purpose of the notice of availability was “to enter the 2018 LNG Export Study into the administrative record of the 25 pending non-FTA export proceedings [identified in the notice] and to invite comments on the Study for consideration in the pending and future non-FTA application proceedings.”⁶⁶ DOE received 19 comments on the 2018 LNG Export Study from a variety of sources, including participants in the natural gas industry, industrial users, environmental organizations, and individuals.⁶⁷ Of those, nine comments supported the Study,⁶⁸ eight comments opposed the 2018 Study and/or exports of LNG,⁶⁹ one comment took no position,⁷⁰ and one comment was non-responsive.⁷¹

DOE summarized and responded to these comments in the Response to Comments document, published on December 28, 2018.⁷² As explained in the Response to Comments, DOE determined that none of the eight comments opposing the 2018 Study provided sufficient evidence to rebut or otherwise undermine the 2018 Study.⁷³

DOE incorporates into the record of this proceeding the 2018 LNG Export Study, the 2018 Study Notice, the public comments received on the 2018 Study, and the 2018 Study

⁶⁵ See 2018 Study Notice.

⁶⁶ *Id.* at 27,315.

⁶⁷ The public comments are posted on the DOE website at <https://fossil.energy.gov/app/docketindex/docket/index/10>.

⁶⁸ Supporting comments were filed by the Marcellus Shale Coalition; the Center for Liquefied Natural Gas (CLNG); the Pennsylvania Chamber of Business and Industry; the American Petroleum Institute (API); Cheniere Energy, Inc.; Jordan Cove Energy Project L.P. (JCEP); LNG Allies; NextDecade Corp.; and Anonymous. The Anonymous comment is comprised of five comments filed by the same anonymous author.

⁶⁹ Opposing comments were filed by Patricia Weber; Oil Change International; Food & Water Watch; Industrial Energy Consumers of America (IECA); Oregon Wild; Sierra Club; Deb Evans and Ron Schaaf (the Evans Schaaf Family); and Jody McCaffree (individually and as executive director of Citizens for Renewables/Citizens Against LNG). Oil Change International and Food & Water Watch filed identical comments.

⁷⁰ Comment of John Young.

⁷¹ Comment of Vincent Burke.

⁷² See 2018 Study Response to Comments, 83 Fed. Reg. at 67,260-72.

⁷³ See *id.* at 67,272.

Response to Comments—which together constitute the full proceeding for the 2018 LNG Export Study.

e. DOE Conclusions

Based upon the record in the 2018 Study proceeding, DOE determined that the 2018 Study provides substantial support for non-FTA applications within the export volumes considered by the 2018 Study—ranging from 0.1 to 52.8 Bcf/d of natural gas.⁷⁴ The principal conclusion of the 2018 LNG Export Study is that the United States will experience net economic benefits from the export of domestically produced LNG.⁷⁵

DOE highlighted a number of key findings from the 2018 Study, including that “[i]ncreasing U.S. LNG exports under any given set of assumptions about U.S. natural gas resources and their production leads to only small increases in U.S. natural gas prices;” increased exports will improve the U.S. balance of trade and GDP; “a large share of the increase in LNG exports is supported by an increase in domestic natural gas production;” and “[n]atural gas intensive [industries] continue to grow robustly at higher levels of LNG exports, albeit at slightly lower rates of increase than they would at lower levels.”⁷⁶

DOE also observed that EIA’s projections in *Annual Energy Outlook 2018* (AEO 2018) showed market conditions that will accommodate increased exports of natural gas.⁷⁷ DOE concluded that, when compared to prior AEO Reference cases—including AEO 2017’s Reference case used in the 2018 Study—the AEO 2018 Reference case projected increases in

⁷⁴ See *id.*

⁷⁵ See *id.*

⁷⁶ *Id.* at 67,273 (citations to 2018 LNG Export Study omitted).

⁷⁷ U.S. Energy Info. Admin., *Annual Energy Outlook 2018* (with projections to 2050) (Feb. 6, 2018) <https://www.eia.gov/outlooks/archive/aeo18/> [hereinafter AEO 2018].

domestic natural gas production in excess of what is required to meet projected increases in domestic consumption.⁷⁸

For all of these reasons, DOE found that “the 2018 LNG Export Study is fundamentally sound and supports the proposition that exports of LNG from the lower-48 states, in volumes up to and including 52.8 Bcf/d of natural gas, will not be inconsistent with the public interest.”⁷⁹ DOE stated, however, that it will consider each application to export LNG as required under the NGA and NEPA based on the administrative record compiled in each individual proceeding.⁸⁰

B. DOE’s Environmental Studies

On June 4, 2014, DOE issued two notices in the *Federal Register* proposing to evaluate different environmental aspects of the LNG production and export chain. First, DOE announced that it had conducted a review of existing literature on potential environmental issues associated with unconventional natural gas production in the lower-48 states. The purpose of this review was to provide additional information to the public and to inform DOE’s public interest evaluation on potential environmental impacts of unconventional natural gas exploration and production activities, including hydraulic fracturing. DOE published its draft report for public review and comment, entitled *Draft Addendum to Environmental Review Documents Concerning Exports of Natural Gas from the United States* (Draft Addendum).⁸¹ DOE received public comments on the Draft Addendum, and on August 15, 2014, issued the final Addendum with its response to the public comments contained in Appendix B.⁸²

⁷⁸ 2018 Study Response to Comments, 83 Fed. Reg. at 67,273.

⁷⁹ *Id.* (citing 2018 LNG Export Study at 63 & Appendix F to the Study).

⁸⁰ *See* 2018 Study Response to Comments, 83 Fed. Reg. at 67,273.

⁸¹ U.S. Dep’t of Energy, Draft Addendum to Environmental Review Documents Concerning Exports of Natural Gas From the United States, 79 Fed. Reg. 32,258 (June 4, 2014). DOE announced the availability of the Draft Addendum on its website on May 29, 2014.

⁸² U.S. Dep’t of Energy, Addendum to Environmental Review Documents Concerning Exports of Natural Gas From the United States, 79 Fed. Reg. 48,132 (Aug. 15, 2014) [hereinafter Addendum]; *see also*

Second, DOE commissioned the National Energy Technology Laboratory (NETL), a DOE applied research laboratory, to conduct an analysis calculating the life cycle greenhouse gas (GHG) emissions for LNG exported from the United States. DOE commissioned this life cycle analysis (LCA) to inform its public interest review of non-FTA applications, as part of its broader effort to evaluate different environmental aspects of the LNG production and export chain.

DOE sought to determine how domestically produced LNG exported from the United States compares with (i) regional coal (or other LNG sources) for electric power generation in Europe and Asia from a life cycle GHG perspective, and (ii) natural gas sourced from Russia and delivered to the same markets via pipeline. In June 2014, DOE published NETL's report entitled, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States* (2014 LCA GHG Report or 2014 Report).⁸³ DOE also received public comments on the LCA GHG Report and responded to those comments in prior orders.⁸⁴ DOE has relied on the 2014 Report in its review of all subsequent applications to export LNG to non-FTA countries.

In 2018, DOE commissioned NETL to conduct an update to the 2014 LCA GHG Report, entitled *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas From the*

<https://www.energy.gov/fecm/addendum-environmental-review-documents-concerning-exports-natural-gas-united-states>.

⁸³ U.S. Dep't of Energy, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas From the United States*, 79 Fed. Reg. 32,260 (June 4, 2014) [hereinafter 2014 LCA GHG Report]. DOE announced the availability of the LCA GHG Report on its website on May 29, 2014.

⁸⁴ See, e.g., *Magnolia LNG, LLC*, DOE/FE Order No. 3909, Docket No. 13-132-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Proposed Magnolia LNG Terminal to be Constructed in Lake Charles, Louisiana, to Non-Free Trade Agreement Nations, at 95-121 (Nov. 30, 2016) (description of LCA GHG Report and response to comments).

United States: 2019 Update (LCA GHG Update or 2019 Update).⁸⁵ As with the 2014 Report, the LCA GHG Update compared life cycle GHG emissions of exports of domestically produced LNG to Europe and Asia with alternative fuel sources (such as regional coal and other imported natural gas) for electric power generation in the destination countries. Although core aspects of the analysis—such as the scenarios investigated—were the same as the 2014 Report, the LCA GHG Update contained the following three changes:

- Incorporated NETL’s most recent characterization of upstream natural gas production, set forth in NETL’s April 2019 report entitled, *Life Cycle Analysis of Natural Gas Extraction and Power Generation* (April 2019 LCA of Natural Gas Extraction and Power Generation);⁸⁶
- Updated the unit processes for liquefaction, ocean transport, and regasification characterization using engineering-based models and publicly available data informed and reviewed by existing LNG export facilities, where possible; and
- Updated the 100-year global warming potential (GWP) for methane (CH₄) to reflect the current Intergovernmental Panel on Climate Change’s Fifth Assessment Report.⁸⁷

In all other respects, the LCA GHG Update was unchanged from the 2014 Report.⁸⁸

The LCA GHG Update demonstrated that the conclusions of the 2014 LCA GHG Report remained the same. Specifically, the 2019 Update concluded that the use of U.S. LNG exports for power production in European and Asian markets will not increase global GHG emissions from a life cycle perspective, when compared to regional coal extraction and consumption for

⁸⁵ Nat’l Energy Tech. Lab., *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States: 2019 Update* (DOE/NETL 2019/2041) (Sept. 12, 2019), <https://www.energy.gov/sites/prod/files/2019/09/f66/2019%20NETL%20LCA-GHG%20Report.pdf> [hereinafter 2019 Update].

⁸⁶ Nat’l Energy Tech. Lab., *Life Cycle Analysis of Natural Gas Extraction and Power Generation* (DOE/NETL-2019/2039) (Apr. 19, 2019), <https://www.netl.doe.gov/energy-analysis/details?id=3198>.

⁸⁷ See U.S. Dep’t of Energy, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas From the United States; Notice of Availability of Report Entitled Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas From the United States: 2019 Update and Request for Comments*, 84 Fed. Reg. 49,278, 49,279 (Sept. 19, 2019).

⁸⁸ See U.S. Dep’t of Energy, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas From the United States: 2019 Update – Response to Comments*, 85 Fed. Reg. 72, 75 (Jan. 2, 2020) [hereinafter DOE Response to Comments on 2019 Update].

power production.⁸⁹ On this basis, DOE found that the 2019 Update supports the proposition that exports of LNG from the lower-48 states will not be inconsistent with the public interest.⁹⁰ Additional details are discussed below,⁹¹ and in DOE's Response to Comments on the 2019 Update.

With respect to the Addendum, the 2014 LCA GHG Report, and the 2019 LCA GHG Update, DOE takes all public comments into consideration in this decision and makes those comments, as well as the underlying studies, part of the record in this proceeding.

C. Judicial Decisions Upholding DOE's Non-FTA Authorizations

In 2015 and 2016, Sierra Club petitioned the U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit) for review of five long-term LNG export authorizations issued by DOE under the standard of review discussed below. Sierra Club challenged DOE's approval of LNG exports from projects proposed or operated by the following authorization holders: Freeport LNG Expansion, L.P., *et al.*; Dominion Cove Point LNG, LP (now Cove Point LNG, LP⁹²); Sabine Pass Liquefaction, LLC (Sabine Pass); and Cheniere Marketing, LLC and Corpus Christi Liquefaction, LLC (together, CMI). The D.C. Circuit subsequently denied four of the five petitions for review: one in a published decision issued on August 15, 2017 (*Sierra Club I*),⁹³ and three in a consolidated, unpublished opinion issued on November 1, 2017 (*Sierra Club*

⁸⁹ *See id.* at 78, 85.

⁹⁰ *See id.* at 86.

⁹¹ *See infra* § VIII.C.3.

⁹² *See Cove Point LNG, LP (formerly Dominion Energy Cove Point LNG, LP)*, DOE/FE Order Nos. 3019-C, *et al.*, Docket Nos. 11-115-LNG, *et al.*, Order Granting Request to Amend Authorizations to Import or Export Liquefied Natural Gas to Reflect Corporate Name Change (Dec. 2, 2020).

⁹³ *Sierra Club v. U.S. Dep't of Energy*, 867 F.3d 189 (D.C. Cir. 2017) [hereinafter *Sierra Club I*] (denying petition for review of the LNG export authorization issued to Freeport LNG Expansion, L.P., *et al.*).

II).⁹⁴ Sierra Club did not seek further judicial review of either decision. In January 2018, Sierra Club voluntarily withdrew its fifth and remaining petition for review.⁹⁵

In *Sierra Club I*, the D.C. Circuit concluded that DOE had complied with both NGA section 3(a) and NEPA in issuing the challenged non-FTA authorization to Freeport LNG Expansion, L.P. and its related entities (collectively, Freeport). DOE had granted the Freeport application in 2014 in a volume equivalent to 0.4 Bcf/d of natural gas, finding that Freeport's proposed exports were in the public interest under NGA section 3(a). DOE also considered and disclosed the potential environmental impacts of its decision under NEPA. Sierra Club petitioned for review of the Freeport authorization, arguing that DOE fell short of its obligations under both the NGA and NEPA. The D.C. Circuit rejected Sierra Club's arguments in a unanimous decision.⁹⁶

First, the Court rejected Sierra Club's NEPA argument concerning the indirect effects of export-induced natural gas production.⁹⁷ The Court found that DOE "offered a reasoned explanation as to why it believed the indirect effects pertaining to increased [natural] gas production were not reasonably foreseeable."⁹⁸ In particular, the Court recognized that DOE had described upstream natural gas impacts generally,⁹⁹ while affirming DOE's explanation that particularized impacts are highly location-dependent, and could not be attributed to any given export application.¹⁰⁰ The Court thus held that, "[u]nder our limited and deferential review, we

⁹⁴ *Sierra Club v. U.S. Dep't of Energy*, 703 Fed. App'x 1 (D.C. Cir. 2017) [hereinafter *Sierra Club II*] (denying petitions for review in Nos. 16-1186, 16-1252, and 16-1253 of the LNG export authorizations issued to Dominion Cove Point LNG, LP; Sabine Pass; and CMI, respectively).

⁹⁵ See *Sierra Club v. U.S. Dep't of Energy*, No. 16-1426, Per Curiam Order (D.C. Cir. 2018) (granting Sierra Club's unopposed motion for voluntary dismissal).

⁹⁶ *Sierra Club I*, 867 F.3d at 192.

⁹⁷ *Id.* at 197-199.

⁹⁸ *Id.* at 198.

⁹⁹ *Id.* at 201 ("Generalizing the impacts does not necessarily mean minimizing them; and here, the Addendum candidly discussed significant risks associated with increased gas production.").

¹⁰⁰ *Id.* at 198-199.

cannot say that the Department failed to fulfill its obligation under NEPA by declining to make specific projections about environmental impacts stemming from specific levels of export-induced [natural] gas production.”¹⁰¹

Second, the Court rejected Sierra Club’s challenge to DOE’s examination of the potential “downstream” GHG emissions resulting from the indirect effects of exports—*i.e.*, those resulting from the transport and usage of U.S. LNG abroad.¹⁰² The Court pointed to DOE’s 2014 LCA GHG Report, finding there was “nothing arbitrary” about the scope of DOE’s analysis of GHG emissions in that Report.¹⁰³

Third, in reviewing Sierra Club’s claims under the NGA, the Court held that “Sierra Club has given us no reason to question the Department’s judgment that the [Freeport] application is not inconsistent with the public interest.”¹⁰⁴ In particular, because Sierra Club “repeats the same argument it made to support its NEPA claim—namely, that the Department arbitrarily failed to evaluate foreseeable indirect effects of exports,”¹⁰⁵ which the Court “already rejected” under NEPA—the Court determined that “Sierra Club offers no basis for reevaluating the scope of [DOE]’s evaluation for purposes of the Natural Gas Act.”¹⁰⁶

Subsequently, in the consolidated *Sierra Club II* opinion issued on November 1, 2017, the D.C. Circuit ruled that “[t]he court’s decision in [*Sierra Club I*] largely governs the resolution of the [three] instant cases.”¹⁰⁷ Upon its review of the remaining “narrow issues” in those cases, the Court again rejected Sierra Club’s arguments under the NGA and NEPA, and upheld DOE’s actions in issuing the non-FTA authorizations in those proceedings.¹⁰⁸

¹⁰¹ *Id.* at 201.

¹⁰² *Sierra Club I*, 867 F.3d at 201.

¹⁰³ *Id.* at 202.

¹⁰⁴ *Id.* at 203.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Sierra Club II*, 703 Fed. App’x at *2.

¹⁰⁸ *Id.*

The D.C. Circuit’s decisions in *Sierra Club I* and *II* continue to guide DOE’s review of applications to export LNG to non-FTA countries. Moreover, consistent with the Court’s treatment of the 2014 LCA GHG Report and the Addendum as part of DOE’s “hard look” review under NEPA,¹⁰⁹ DOE is incorporating these studies—as well as the 2019 LCA GHG Update—into the NEPA record in this proceeding.¹¹⁰

D. DOE’s Marine Transport Technical Support Document

Among the transportation scenarios modeled in the 2014 LCA GHG Report and 2019 Update, DOE considered how emissions associated with the ocean transport of U.S. LNG in tankers contribute to total life cycle GHG emissions.¹¹¹

Additionally, in 2020, DOE conducted a NEPA rulemaking pertaining to authorizations issued under NGA section 3.¹¹² As relevant here, DOE revised its NEPA procedures that provide for a categorical exclusion if neither an environmental impact statement (EIS) nor an EA is required—specifically, by promulgating a revised categorical exclusion B5.7, *Export of natural gas and associated transportation by marine vessel*.¹¹³

In that rulemaking, DOE conducted “a detailed review of technical documents regarding potential effects associated with marine transport of LNG.”¹¹⁴ These documents were identified in an accompanying Marine Transport Technical Support Document.¹¹⁵ On the basis of the data referenced in the Technical Support Document, DOE concluded that “the transport of natural gas by marine vessels adhering to applicable maritime safety regulations and established shipping

¹⁰⁹ *Sierra Club I*, 867 F.3d at 197 (“For our purposes, we will consider the supplemental materials to be part of the agency’s environmental review.”).

¹¹⁰ See *infra* §§ VII.C, VIII.C, and Appendix B (Finding of No Significant Impact).

¹¹¹ See, e.g., DOE Response to Comments on 2019 Update, 85 Fed. Reg. at 75, 77, 78 n.69; see also 2019 Update at 17-18 & Appendix B.3.

¹¹² See U.S. Dep’t of Energy, National Environmental Policy Act Implementing Procedures, Final Rule, 85 Fed. Reg. 78,197 (Dec. 4, 2020) [hereinafter NEPA Implementing Procedures].

¹¹³ See *id.*; see also 10 C.F.R. Part 1021, Subpt. D, App. B, Categorical Exclusion B5.7.

¹¹⁴ NEPA Implementing Procedures, 85 Fed. Reg. at 78,199.

¹¹⁵ See *id.* at 78,198 n.16 (citing U.S. Dep’t of Energy, Technical Support Document, Notice of Final Rulemaking, National Environmental Policy Act Implementing Procedures (10 C.F.R. Part 1021) (Nov. 2020)).

methods and safety standards normally does not pose the potential for significant environmental impacts.”¹¹⁶ In light of Vista Pacifico’s proposed transport of LNG via ocean-going carrier to non-FTA countries in this proceeding, DOE is supplementing the record with the Technical Support Document, as set forth below.¹¹⁷

III. PUBLIC INTEREST STANDARD

Section 3(a) of the NGA sets forth the standard of review for the non-FTA portion of the Application:

[N]o person shall export any natural gas from the United States to a foreign country or import any natural gas from a foreign country without first having secured an order of the [Secretary of Energy¹¹⁸] authorizing it to do so. The [Secretary] shall issue such order upon application, unless after opportunity for hearing, [she] finds that the proposed exportation or importation will not be consistent with the public interest. The [Secretary] may by [the Secretary’s] order grant such application, in whole or in part, with such modification and upon such terms and conditions as the [Secretary] may find necessary or appropriate.¹¹⁹

DOE, as affirmed by the D.C. Circuit, has consistently interpreted NGA section 3(a) as creating a rebuttable presumption that a proposed export of natural gas is in the public interest.¹²⁰

Accordingly, DOE will conduct an informal adjudication and grant a non-FTA application unless

¹¹⁶ *Id.* at 78,200; *see also id.* at 78,202.

¹¹⁷ *See infra* §§ VII.C.5, VIII.C.1.

¹¹⁸ The Secretary’s authority was established by the Department of Energy Organization Act, 42 U.S.C. § 7151(b), which transferred jurisdiction over import and export authorizations from the Federal Power Commission to the Secretary of Energy; *see also id.* § 7172(f).

¹¹⁹ 15 U.S.C. § 717b(a).

¹²⁰ *See Sierra Club I*, 867 F.3d at 203 (“We have construed [NGA section 3(a)] as containing a ‘general presumption favoring [export] authorization.’”) (quoting *W. Va. Pub. Serv. Comm’n v. U.S. Dep’t of Energy*, 681 F.2d 847, 856 (D.C. Cir. 1982)).

DOE finds that the proposed exportation will not be consistent with the public interest.¹²¹ Before reaching a final decision, DOE must also comply with NEPA.¹²²

Although NGA section 3(a) establishes a broad public interest standard and a presumption favoring export authorizations, the statute does not define “public interest” or identify criteria that must be considered in evaluating the public interest. DOE’s prior decisions have looked to certain principles established in its 1984 Policy Guidelines.¹²³ The goals of the Policy Guidelines are to minimize federal control and involvement in energy markets and to promote a balanced and mixed energy resource system. The Guidelines provide that:

The market, not government, should determine the price and other contract terms of imported [or exported] natural gas The federal government’s primary responsibility in authorizing imports [or exports] will be to evaluate the need for the gas and whether the import [or export] arrangement will provide the gas on a competitively priced basis for the duration of the contract while minimizing regulatory impediments to a freely operating market.¹²⁴

While the Policy Guidelines explicitly discuss only natural gas imports, in 1999 DOE held in Order No. 1473 that the same Policy Guidelines should be applied to natural gas export applications.¹²⁵

¹²¹ See *id.* (“there must be ‘an affirmative showing of inconsistency with the public interest’ to deny the application” under NGA section 3(a)) (quoting *Panhandle Producers & Royalty Owners Ass’n v. Econ. Regulatory Admin.*, 822 F.2d 1105, 1111 (D.C. Cir. 1987)). As of August 24, 2018, qualifying small-scale exports of natural gas to non-FTA countries are deemed to be consistent with the public interest under NGA section 3(a). See 10 C.F.R. § 590.102(p) and 590.208(a); see also U.S. Dep’t of Energy, Small-Scale Natural Gas Exports; Final Rule, 83 Fed. Reg. 35,106 (July 25, 2018).

¹²² See *Sierra Club I*, 867 F.3d at 192.

¹²³ U.S. Dep’t of Energy, New Policy Guidelines and Delegations Order Relating to Regulation of Imported Natural Gas, 49 Fed. Reg. 6684 (Feb. 22, 1984) [hereinafter 1984 Policy Guidelines].

¹²⁴ *Id.* at 6685.

¹²⁵ *Phillips Alaska Natural Gas Corp., et al.*, DOE/FE Order No. 1473, Docket No. 96-99-LNG, Order Extending Authorization to Export Liquefied Natural Gas from Alaska (Apr. 2, 1999), at 14 (citing *Yukon Pacific Corp.*, DOE/FE Order No. 350, Order Granting Authorization to Export Liquefied Natural Gas From Alaska, 1 FE ¶ 70,259, at 71,128 (1989)).

In Order No. 1473, DOE stated that it was guided by DOE Delegation Order No. 0204-111.¹²⁶ That delegation order directed the regulation of exports of natural gas “based on a consideration of the domestic need for the gas to be exported and such other matters as the Administrator [of the Economic Regulatory Administration] finds in the circumstances of a particular case to be appropriate.”¹²⁷

Although DOE Delegation Order No. 0204-111 is no longer in effect,¹²⁸ DOE has identified a range of factors that it evaluates when reviewing an application for export authorization. Specifically, DOE’s review of export applications focuses on: (i) the domestic need for the natural gas proposed to be exported, (ii) whether the proposed exports pose a threat to the security of domestic natural gas supplies, (iii) whether the arrangement is consistent with DOE’s policy of promoting market competition, and (iv) any other factors bearing on the public interest as determined by DOE, such as international and environmental impacts. To conduct this review, DOE looks to record evidence developed in the application proceeding.

IV. DESCRIPTION OF REQUEST

As relevant here, Vista Pacifico is requesting long-term, multi-contract authorization to re-export U.S.-sourced natural gas in the form of LNG in a volume equivalent to 200 Bcf/yr of natural gas from the proposed VPLNG Mid-Scale Project to non-FTA countries.¹²⁹ Additional information is set forth below.

¹²⁶ See *id.* at 13 & n.45.

¹²⁷ DOE Delegation Order No. 0204-111 (Feb. 22, 1984), at 1 (¶ (b)); see also 1984 Policy Guidelines, 49 Fed. Reg. at 6690 (incorporating DOE Delegation Order No. 0204-111). In February 1989, the Assistant Secretary for Fossil Energy assumed the delegated responsibilities of the Administrator of the Economic Regulatory Administration. See Applications for Authorization to Construct, Operate, or Modify Facilities Used for the Export or Import of Natural Gas, 62 Fed. Reg. 30,435, 30,437 n.15 (June 4, 1997) (citing DOE Delegation Order No. 0204-127, 54 Fed. Reg. 11,436 (Mar. 20, 1989)).

¹²⁸ DOE Delegation Order No. 0204-111 was later rescinded by DOE Delegation Order No. 00-002.00 (¶ 2) (Dec. 6, 2001), and DOE Redelegation Order No. 00-002.04 (¶ 2) (Jan. 8, 2002).

¹²⁹ Vista Pacifico App. at 3-4 & n.4; see also *id.* at 9, 50.

A. Description of Applicant

Vista Pacifico is a Mexico variable-capital, limited liability company with its principal place of business in Mexico City (Colonia Juárez), Mexico.¹³⁰ In the Application, Vista Pacifico states that it is owned by subsidiaries of Infraestructura Energetica Nova, S.A.B. de C.V. (IEnova) and Sempra Energy, a publicly-traded California corporation.¹³¹ Since the time the Application was filed, Vista Pacifico and other affiliates of Sempra Energy have filed Statements of Change in Control on April 30, 2021 (as supplemented on May 3 and May 19, 2021)¹³² and on February 22, 2022.¹³³ Most recently, on May 3, 2022, DOE issued Order No. 4815, approving the change in control described in the February 22, 2022 Statement of Change in Control.¹³⁴

In the February 22, 2022 Statement of Change in Control, Vista Pacifico states that it is owned 50% by IEnova and 50% by Sempra LNG Holding, LP.¹³⁵ In turn, 99.92% of the shares in IEnova are indirectly owned by one of Sempra Energy's U.S. subsidiaries, Sempra Infrastructure Partners, LP (Sempra Infrastructure), and the remainder are owned by unrelated entities.¹³⁶ Sempra LNG Holding, LP is wholly owned by Sempra Global Holdings, LP, which in turn is wholly owned by Sempra Infrastructure. Sempra Infrastructure is owned by Sempra Energy with non-controlling minority equity interests by KKR Pinnacle Investor, L.P., a

¹³⁰ *Id.* at 8.

¹³¹ *Id.*

¹³² Cameron LNG, LLC, *et al.*, Statement of Change in Control, FE Docket Nos. 11-145-LNG, *et al.* (Apr. 30, 2021) *supplemented by* Cameron LNG, LLC, *et al.*, Supplement to Statement of Change in Control, Docket Nos. 11-145-LNG, *et al.* (May 3, 2021); *further supplemented by* Cameron LNG, LLC, *et al.*, Supplemental Service to Statement of Change in Control, Docket Nos. 11-145-LNG, *et al.* (May 19, 2021).

¹³³ *See* Cameron LNG, LLC, *et al.*, Statement of Change in Control, Docket Nos. 11-145-LNG, *et al.* (Feb. 22, 2022) [hereinafter Feb. 22, 2022 Statement].

¹³⁴ *Cameron LNG, LLC, et al.*, DOE/FECM Order No. 4815, Docket Nos. 11-145-LNG, *et al.*, Order Approving Change in Control (May 3, 2022).

¹³⁵ Feb. 22, 2022 Statement at 7.

¹³⁶ *Id.*

subsidiary of KKR & Co. Inc., and Black Silverback ZC 2022 LP, a wholly owned indirect subsidiary of the Abu Dhabi Investment Authority (ADIA).¹³⁷

Vista Pacifico states that its owner and operator, Sempra Infrastructure, has “significant experience operating LNG facilities in both the United States and Mexico.”¹³⁸ Vista Pacifico states that Sempra Infrastructure developed and is the majority owner of the currently operational Cameron LNG liquefaction and export facility in Hackberry, Louisiana. Sempra Infrastructure is also developing the Port Arthur LNG project in Jefferson County, Texas.¹³⁹ Additionally, Vista Pacifico states that Sempra Infrastructure is the owner of the existing Energía Costa Azul regasification terminal, which has been operational for more than 10 years in Baja California, Mexico, and where Sempra Infrastructure is also developing liquefaction and export facilities.¹⁴⁰ According to Vista Pacifico, Sempra Infrastructure “will bring its extensive experience in operating LNG projects to bear in its development of the Vista Pacifico LNG facility and to realize the myriad benefits of the proposed exports” requested in the Application.¹⁴¹

B. The VPLNG Mid-Scale Project

Vista Pacifico states that the VPLNG Mid-Scale Project is proposed to be located at a site for which IEnova holds an option to purchase.¹⁴² The 370.66-acre site is located in the town of Topolobampo, Sinaloa, Mexico.¹⁴³ Vista Pacifico states that the major components to be constructed as part of the VPLNG Mid-Scale Project include

¹³⁷ See *id.* at 2, 4-5, 7; see also *id.* at Appendix B (“Post-Transaction Organizational Structure”); *Cameron LNG, LLC, et al.*, DOE/FECM Order No. 4815, at 4-5.

¹³⁸ Vista Pacifico Answer in Opposition, *supra* note 22, at 10.

¹³⁹ See *id.* DOE previously has issued long-term export authorizations to Cameron LNG and Port Arthur LNG, see *infra* § VIII.E.

¹⁴⁰ See Vista Pacifico Answer in Opposition at 10. As discussed herein, DOE is issuing an amendment to ECA’s long-term export authorization concurrently with the issuance of this Order.

¹⁴¹ *Id.* at 10.

¹⁴² *Id.* at 9, 13. Vista Pacifico filed this purchase option under seal with DOE, see *supra* note 4.

¹⁴³ Vista Pacifico App. at 5, 9. A map of the Project’s proposed location is attached to the Application as Appendix D.

- One liquefaction train capable of producing up to four million metric tons per annum (mtpa) of LNG with a gas pre-treatment unit;
- A LNG storage tank with a capacity of 180,000 cubic meters (m³);
- A marine jetty;
- Ground flare equipment; and
- Piping and other facilities to permit the interconnection of the Project to pipeline infrastructure.¹⁴⁴

Vista Pacifico states that feed gas will be supplied through the Mexican pipeline grid.¹⁴⁵ Vista Pacifico further states that new or modified utilities and offsite facilities will be provided for the VPLNG Mid-Scale Project, as required.¹⁴⁶

According to Vista Pacifico, the location of the proposed VPLNG Mid-Scale Project along the coast of Sinaloa, Mexico, will permit the Project to transport U.S.-sourced natural gas to markets in Asia while avoiding transits through the Panama Canal, as well as to markets in South America and other global markets.¹⁴⁷

In its October 2022 Semi-Annual Report, Vista Pacifico states that it has continued to make progress on permitting, commercial and marketing activities in connection with its proposed Project.¹⁴⁸ Specifically, Vista Pacifico states that, on January 31, 2022, its parent company, Sempra Infrastructure, announced that it had signed a non-binding memorandum of understanding with Mexico's Federal Electricity Commission (CFE) for the development of proposed projects, including the VPLNG Mid-Scale Project.¹⁴⁹ On July 21, 2022, Sempra

¹⁴⁴ *Id.* at 13.

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ App. at 13-14.

¹⁴⁸ Vista Pacifico LNG, S.A.P.I. de C.V., Semi-Annual Report, Docket No. 20-153-LNG (Oct. 1, 2022), <https://www.energy.gov/sites/default/files/2022-10/VPLNGSemiAnnualDOEProjectStatusReportOct2022.pdf> [hereinafter Vista Pacifico Semi-Annual Report].

¹⁴⁹ *See id.*

Infrastructure and CFE executed an Interim Agreement “that outlines the path forward for the Vista Pacifico LNG Terminal, including the Project’s configuration to advance engineering efforts.”¹⁵⁰ Vista Pacifico adds that it “is diligently working with the federal authorities to permit the liquefaction facility in Mexico.”¹⁵¹ Vista Pacifico estimates that, “[b]ased on the anticipated timing of receipt of necessary authorizations and the current project schedule ... it will begin exports from the VPLNG Mid-Scale Project as soon as 2027.”¹⁵²

C. Project Pipelines

Vista Pacifico states that it plans to export natural gas by pipeline from the United States through existing and, potentially, future additional cross-border pipeline facilities interconnecting the United States and Mexico.¹⁵³ Vista Pacifico states that the VPLNG Mid-Scale Project is well-positioned to access numerous existing pipelines in proximity to the Project.¹⁵⁴ According to Vista Pacifico, the export capacity through existing cross-border pipeline facilities between the United States and Mexico is approximately 14.83 Bcf/d of natural gas. Vista Pacifico states that its requested authorization, in a volume of 0.55 Bcf/d of natural gas, represents a “fraction” of this cross-border pipeline capacity.¹⁵⁵

Vista Pacifico further states that the combined cross-border capacity of the 42-inch Comanche Trail Pipeline and Trans-Pecos Pipeline in West Texas—which interconnect to the Mexican pipeline facilities of San Isidro/Samalayuca and Gasucto Ojinaga, respectively—totals 2.4 Bcf/d.¹⁵⁶ According to Vista Pacifico, the Sierrita Pipeline in Arizona has a capacity of 0.627 Bcf/d and interconnects at the border to the Gasucto Aguaprieta/Sonora system in

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

¹⁵² *Id.*

¹⁵³ App. at 5-6 & n.8.

¹⁵⁴ *Id.* at 16.

¹⁵⁵ *Id.* at 17.

¹⁵⁶ *Id.*

Mexico.¹⁵⁷ Vista Pacifico states that the physical capacity at just these three cross-border locations is approximately 3.03 Bcf/d, “which is well above the 0.546 Bcf/d Non-FTA [re-export] volume requested in this Application.”¹⁵⁸ In Appendix D to the Application, Vista Pacifico identifies these and other cross-border facilities “that have already been built and placed into service ... or proposed and/or authorized by the FERC [Federal Energy Regulatory Commission] prior to and independent of the export applications of the VPLNG Mid-Scale Project.”¹⁵⁹

Additionally, Vista Pacifico asks DOE to grant the requested authorization without imposing restrictions on the border-crossing pipeline facilities—specifically, that DOE (i) not limit the locations at which Vista Pacifico may export natural gas from United States to a “specific set of border-crossing pipeline facilities”; (ii) not tie the quantity of natural gas that may be exported under the authorization to the capacity of any particular cross-border pipeline facilities; and (iii) not require Vista Pacifico to file additional applications if new U.S. pipelines are constructed in the future that would transport natural gas under the requested exported authorization.¹⁶⁰

D. Source of Natural Gas

Vista Pacifico states that plans for the natural gas supply arrangements to provide feed gas for the VPLNG Mid-Scale Project are still in development.¹⁶¹ Vista Pacifico asserts that, due to the configuration of the U.S. and Mexican pipeline grids, natural gas necessary to serve as feedstock for the Project “can be sourced from multiple production basins and purchased at

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

¹⁵⁹ App. at 5 n.7; *see also id.* at Appendix D

¹⁶⁰ *Id.* at 4-5; *see also id.* at 10, 40-50.

¹⁶¹ App. at 18 (Vista Pacifico is “considering several [natural] gas supply options ... that could connect in Mexico to any existing or future cross-border facilities along the U.S./Mexican border.”).

various liquid points throughout the United States, exported from existing and future border-crossing facilities across the U.S./Mexican border, and transported by pipelines in Mexico to the planned Vista Pacifico Mid-Scale Project.”¹⁶² Vista Pacifico further states that natural gas for the VPLNG Mid-Scale Project “may be purchased in the United States and then exported by VPLNG or an affiliate or it may be purchased in Mexico after it has been exported by a third party.”¹⁶³

In sum, given the integrated nature of the U.S. and Mexican pipeline system, Vista Pacifico states the Project “will have access to a wide range of natural gas supply and transportation options,”¹⁶⁴ and consequently “it is uncertain where the [natural] gas used by the VPLNG Mid-Scale Project will originate.”¹⁶⁵ Vista Pacifico adds that, as a result of these supply options, the VPLNG Mid-Scale Project “will be able to respond to shifts in the economics and production profiles of different [natural] gas production areas.”¹⁶⁶

E. Business Model

Vista Pacifico requests this authorization on its own behalf and as agent for other entities that will hold title to the LNG at the time of re-export. Vista Pacifico states that, when acting as agent, it will register with DOE each LNG title holder for which it seeks to re-export LNG as agent, and will comply with other registration requirements as set forth in recent DOE orders.¹⁶⁷

In the Application, Vista Pacifico states that it is currently in discussions with customers regarding the proposed commercial structure of the VPLNG Mid-Scale Project, such as “whether the facilities will sell LNG under sales purchase agreements, provide liquefaction services under

¹⁶² *Id.* at 6; *see also id.* at 14.

¹⁶³ *Id.* at 6 n.8.

¹⁶⁴ *Id.* at 11.

¹⁶⁵ *Id.* at 17.

¹⁶⁶ *Id.*

¹⁶⁷ App. at 12.

tolling agreements, etc.”¹⁶⁸ Vista Pacifico further states that, to date, it has not entered into long-term export agreements or finalized supply arrangements for the VPLNG Mid-Scale Project, but that it will file all long-term, binding contracts associated with the re-export of LNG from the Project once executed, in accordance with DOE’s established policy.¹⁶⁹

In its October 2022 Semi-Annual Report, Vista Pacifico states that, on March 31, 2022, its parent company, Sempra Infrastructure, announced that it signed a Memorandum of Understanding with TotalEnergies, which “contemplates TotalEnergies potentially contracting for approximately one-third of the long-term export production of the VPLNG Mid-Scale Project, as well as TotalEnergies’ potential participation as a minority equity investor in the VPLNG Mid-Scale Project.”¹⁷⁰

F. Environmental Review

Vista Pacifico states that, because the proposed Project will be constructed and operated in Mexico, DOE’s review of the Application is subject to a categorical exclusion under NEPA.¹⁷¹ Vista Pacifico points to categorical exclusion B5.7 of DOE/FE’s regulations (10 C.F.R. Part 1021, Subpart D, Appendix B5),¹⁷² which was in effect at the time the Application was filed, but which DOE subsequently amended.¹⁷³ DOE notes that the current categorical exclusion B5.7, *Export of natural gas and associated transportation by marine vessel*, applies to “[a]pprovals or disapprovals of new authorizations or amendments of existing authorizations to export natural

¹⁶⁸ *Id.* at 21.

¹⁶⁹ *See id.* at 12, 21.

¹⁷⁰ Vista Pacifico LNG, S.A.P.I. de C.V., Semi-Annual Report, Docket No. 20-153-LNG, at 2 (Oct. 1, 2022), <https://www.energy.gov/sites/default/files/2022-10/VPLNGSemiAnnualDOEProjectStatusReportOct2022.pdf> [hereinafter Vista Pacifico Semi-Annual Report].

¹⁷¹ *Id.* at 34-35.

¹⁷² App. at 35.

¹⁷³ *See* U.S. Dep’t of Energy, National Environmental Policy Act Implementing Procedures; Final Rule, 85 Fed. Reg. 78,197 (Dec. 4, 2020) (effective Jan. 4, 2021).

gas under section 3 of the Natural Gas Act and any associated transportation of natural gas by marine vessel.”¹⁷⁴

Vista Pacifico further states that the VPLNG Mid-Scale Project and any pipeline facilities that may be constructed in Mexico are subject to review and approval by Mexican agencies under the state and federal laws of that nation.¹⁷⁵ According to Vista Pacifico, the Mexican permitting process includes a “thorough environmental review under Mexico state and federal legislation similar to the review conducted by U.S. agencies under NEPA.”¹⁷⁶ In addition to describing the Mexican permitting process in its Application,¹⁷⁷ Vista Pacifico includes Appendix B to the Application entitled, “Permitting Overview for Pipeline and Liquefaction Projects in Mexico.”¹⁷⁸ Appendix B provides more detail about the Mexican permitting process for natural gas pipeline and liquefaction projects in that country. As noted above, Vista Pacifico states that it is “diligently working with the federal authorities to permit the liquefaction facility in Mexico.”¹⁷⁹

V. APPLICANT’S PUBLIC INTEREST ANALYSIS

Vista Pacifico asserts that its requested non-FTA authorization is consistent with the public interest under section 3(a) of the NGA, citing the abundant and robust supply of U.S. natural gas as well as the benefits associated with increased trade in U.S. natural gas.¹⁸⁰

Vista Pacifico states that demand for U.S. natural gas will continue to be outpaced by the growth of available supply.¹⁸¹ Vista Pacifico thus contends that the current supply of U.S.

¹⁷⁴ 10 C.F.R. Part 1021, Subpt. D, App. B, Categorical Exclusion B5.7; *see also infra* § II.D (DOE’s Marine Transport Technical Support Document).

¹⁷⁵ App. at 18.

¹⁷⁶ *Id.* at 19.

¹⁷⁷ *See id.* at 18-21.

¹⁷⁸ *See id.* at Appendix B.

¹⁷⁹ *See* Vista Pacifico Semi-Annual Report at 2.

¹⁸⁰ *See* App. at 22-32.

¹⁸¹ *Id.* at 27.

natural gas is “more than sufficient ... to accommodate both domestic demand and the exports proposed in this Application throughout the term of the requested authorization.”¹⁸²

In support of this position, Vista Pacifico cites EIA’s *Annual Energy Outlook 2020* (AEO 2020).¹⁸³ Vista Pacifico states that natural gas production grew from 21.3 trillion cubic feet (Tcf) in 2010 to 34.0 Tcf in 2019, and that this growth trend is expected to continue over the next several decades.¹⁸⁴ Vista Pacifico points to the significant increase in AEO 2020’s estimates of shale gas production through 2040 as compared to EIA’s projections in 2015. Vista Pacifico asserts that domestic demand for natural gas will grow at an annual rate of 0.5% from 2019 to 2050, while domestic production of dry gas during the same time period is projected to grow at an annual rate of 0.9%.¹⁸⁵

Pointing to DOE’s LNG export studies (discussed *supra* § II.A), Vista Pacifico next contends that exports of LNG will not result in adverse economic impacts to U.S. consumers.¹⁸⁶ In particular, Vista Pacifico states that DOE’s 2018 LNG Export Study demonstrates that gross domestic product (GDP) grows as U.S. LNG exports increase, without resulting in significant price impacts to U.S. consumers.¹⁸⁷ Vista Pacifico thus maintains that “[a]bundant natural gas supplies exist to serve the VPLNG Mid-Scale Project without adversely affecting the availability of competitively-priced natural gas for U.S. consumption during the proposed term of the requested authorization.”¹⁸⁸

¹⁸² *Id.* at 25.

¹⁸³ *Id.* at 15 (citing U.S. Energy Info. Admin., *Annual Energy Outlook 2020* (with projections to 2050) (Jan. 29, 2020), <https://www.eia.gov/outlooks/archive/aeo20/pdf/AEO2020%20Full%20Report.pdf> [hereinafter AEO 2020]); *see also id.* at 27-28.

¹⁸⁴ *See id.* at 26.

¹⁸⁵ *App.* at 27-28.

¹⁸⁶ *Id.* at 28.

¹⁸⁷ *See id.* at 29.

¹⁸⁸ *Id.* at 9.

Vista Pacifico further states that the proposed re-exports will favorably influence the U.S. balance of trade, resulting in a wealth transfer to the United States.¹⁸⁹ Vista Pacific adds that LNG exports from the United States provide “important geopolitical benefits by diversifying global energy supply,” thus improving energy security for U.S. allies and trading partners.¹⁹⁰

Finally, Vista Pacifico states that the proposed re-exports of LNG “can help countries move away from less environmentally friendly fuels” by displacing coal consumption in power generation and deterring the construction of additional coal-fired generation capacity.¹⁹¹

VI. CURRENT PROCEEDING BEFORE DOE

A. Late-Filed Sierra Club Motion to Intervene and Protest of Sierra Club and DAN

On November 28, 2022, Sierra Club filed a motion to intervene and joint protest with DAN opposing the Application. This filing was submitted more than 21 months after the February 8, 2021 deadline for the submission of motions to intervene, protests, and comments set forth in the Notice of Application published in the *Federal Register* on December 8, 2020.¹⁹²

Sierra Club and DAN do not acknowledge the February 8, 2021 deadline or seek to provide an explanation for their late submission.¹⁹³ Rather, in the section of the filing entitled “Intervention,” Sierra Club states:

DOE’s rules do not articulate any particular standard for timely intervention, and as such, intervention should be granted liberally. DOE merely requires would-be-intervenors to set out ‘the facts upon which [their] claim of interest is based’ and ‘the position taken by the movant.’ 10 C.F.R. § 590.303(b)-(c).¹⁹⁴

¹⁸⁹ *Id.* at 33 (citing 2018 LNG Export Study at 64); *see also id.* at 9.

¹⁹⁰ *Id.* at 33; *see also id.* at 9.

¹⁹¹ App. at 34.

¹⁹² *See* Notice of App., 85 Fed. Reg. 79,003; *see supra* § I.

¹⁹³ *See* Sierra Club Motion to Intervene and Protest of Sierra Club and DAN, at 1-4.

¹⁹⁴ *Id.* at 2.

Sierra Club further asserts that its “interests are based on the impact the proposed additional exports will have on its members and mission.”¹⁹⁵ Specifically, Sierra Club maintains that its members will be harmed by an increase in natural gas production and air pollution, GHG emissions, and impacts from climate change associated with Vista Pacifico’s proposed exports.¹⁹⁶ Sierra Club adds that it has “many members throughout the southwest, including within the Permian Basin region and other areas that will likely be impacted by increased [natural] gas production.”¹⁹⁷

In the section of the filing entitled “Protest,” Sierra Club and DAN present economic, infrastructure, and environmental arguments opposing the Application. First, Sierra Club and DAN assert that “increasing LNG exports will cause real and significant increases in domestic [natural] gas prices.”¹⁹⁸ Arguing that “domestic [natural] gas prices remain exceptionally high as a result of LNG exports,” Sierra Club and DAN contend that DOE must address, among other things, “the demonstrated connection between LNG exports and domestic prices, in its public interest analysis.”¹⁹⁹ They also maintain that “DOE has never grappled with the distributional impacts of LNG exports” which, in their view, will be “exacerbate[d]” by increased prices of domestic natural gas.²⁰⁰

Turning to infrastructure, Sierra Club and DAN assert that, “[w]hile the overall pipeline capacity may exist” to transport the proposed volume of LNG from the United States to the VPLNG Mid-Scale Project,²⁰¹ “DOE must demonstrate that no additional pipeline capacity is needed before it approves this project” or include in a NEPA review the construction of

¹⁹⁵ *Id.* at 3.

¹⁹⁶ *See id.*

¹⁹⁷ *Id.*

¹⁹⁸ *Id.* at 5.

¹⁹⁹ Sierra Club Motion to Intervene and Protest of Sierra Club and DAN, at 6.

²⁰⁰ *Id.* at 9.

²⁰¹ *Id.* at 11.

additional pipelines or pipeline upgrades necessary to carry the full volume requested by Vista Pacifico.²⁰²

Addressing environmental issues, particularly “indirect effects,” Sierra Club and DAN argue that DOE violated NEPA by conducting the EA, rather than an environmental impact statement (EIS), in evaluating Vista Pacifico’s requested authorization.²⁰³ In particular, they assert that DOE violated NEPA by arbitrarily concluding that the impacts of the proposed exports and re-export would be insignificant, such that an EIS was not required.²⁰⁴

B. Vista Pacifico’s Answer in Opposition to Sierra Club Motion to Intervene and Protest of Sierra Club and DAN

On December 13, 2022, Vista Pacifico submitted an Answer in Opposition to Sierra Club’s Motion to Intervene and Sierra Club and DAN’s Protest, pursuant to 10 C.F.R. §§ 590.303(e) and 590.304(f).²⁰⁵ Vista Pacifico first asserts that DOE should reject Sierra Club’s “late-filed motion to intervene that has been filed almost two years after the close of the intervention period for the Application.”²⁰⁶ Vista Pacifico states that Sierra Club has “disregard[ed] each aspect” of DOE’s regulation pertaining to timely intervention, 10 C.F.R. § 590.303(d), by failing to make its filing within the time fixed in DOE’s notice, not attempting to demonstrate the “requisite good cause” for its “extremely late filing,” and making “no attempt to address the impacts of its late-filed intervention.”²⁰⁷ Vista Pacifico adds that granting Sierra Club’s motion to intervene at this late stage will be “highly prejudicial to Vista Pacifico and disruptive to the proceedings.”²⁰⁸

²⁰² *Id.* at 13.

²⁰³ *See id.*

²⁰⁴ *Id.*

²⁰⁵ *See* Vista Pacifico Answer in Opposition at 1.

²⁰⁶ *Id.* at 3.

²⁰⁷ *Id.* at 4.

²⁰⁸ *Id.* at 4-5.

Vista Pacifico makes substantially the same arguments in asserting that Sierra Club and DAN “fail to acknowledge that their protest is late-filed or to make any attempt to show the requisite good cause for accepting their protest.”²⁰⁹ Vista Pacifico notes that Sierra Club received an “admonition” from DOE “just five months ago” in a different LNG export proceeding concerning the requirement for Sierra Club to timely file a protest.²¹⁰ Further, according to Vista Pacifico, entertaining Sierra Club’s and DAN’s arguments at this time would disrupt this proceeding and interfere with DOE’s ability to develop a record upon which it can render a final decision, among other concerns.²¹¹

Next, Vista Pacifico asserts that, “even putting aside these procedural infirmities,” Sierra Club’s and DAN’s public interest and NEPA-related arguments are unsupported or misleading.²¹² For example, Vista Pacifico states that Sierra Club’s and DAN’s arguments about higher energy prices during the winter of 2021-22 “ignore the complexity of the domestic and global [natural] gas markets and the fact that various factors have had acute effects on [natural] gas prices over the past year”—such as “the global energy crisis precipitated by Russia’s invasion of Ukraine and cuts to Russian-supplied [natural] gas to Europe.”²¹³ Vista Pacifico contends that, in selectively focusing on this time period, Sierra Club and DAN “cherry picked data to serve their arguments while ignoring broader natural gas price trends.”²¹⁴

Vista Pacifico also addresses Sierra Club’s and DAN’s arguments concerning distributional impacts, existing pipeline capacity for the incremental volume of natural gas at

²⁰⁹ *Id.* at 5.

²¹⁰ *Id.* (citing *Magnolia LNG, LLC*, DOE/FECM Order No. 3909-D, Docket No. 13-132-LNG, Order Denying Request for Rehearing of Order Amending Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations, at 7 (June 24, 2022)).

²¹¹ See Vista Pacifico Answer in Opposition at 6.

²¹² *Id.* at 6, 11.

²¹³ *Id.* at 11.

²¹⁴ *Id.*

issue, and DOE’s preparation of the EA under NEPA.²¹⁵ Vista Pacifico maintains, for example, that the EA “did in fact consider the indirect effects of the proposed exports, including potential impacts of the proposed action associated with natural gas production, natural gas pipeline transportation, marine transport of LNG, and life cycle GHG emissions.”²¹⁶ In sum, Vista Pacifico contends that, if DOE permits the late-filed protest, “Sierra Club’s and DAN’s arguments are meritless and should be rejected.”²¹⁷

VII. DOE’S ENVIRONMENTAL ASSESSMENT

A. Notice of EA

DOE determined that, to analyze the environmental effects of Vista Pacifico’s requested authorization to export U.S.-sourced LNG to non-FTA countries, it was appropriate to prepare an EA under NEPA.²¹⁸ In a Notice of EA issued on July 12, 2022, DOE stated that it would prepare the EA in accordance with CEQ regulations at 40 C.F.R. Parts 1500-1508 and DOE’s NEPA implementing procedures at 10 C.F.R. Part 1021.²¹⁹ DOE identified the following four topics for analysis in the EA (which it stated were subject to change):²²⁰

(1) Production of U.S.-Sourced Natural Gas: The potential environmental impacts associated with unconventional natural gas exploration and production activities in the lower-48 states, using DOE’s *Addendum to Environmental Review Documents Concerning Exports of Natural Gas from the United States*²²¹ already in the record for this proceeding;

(2) Cross-Border Pipelines: The utilization of the cross-border pipeline facilities in the states of Arizona, Texas, and California that interconnect the United States and Mexico and that Vista Pacifico may utilize for its U.S. natural gas supply, taking into account any environmental review for such pipelines previously

²¹⁵ See *id.* at 15-20.

²¹⁶ *Id.* at 19.

²¹⁷ Vista Pacifico Answer in Opposition at 20.

²¹⁸ See Notice of EA, *supra* § I.

²¹⁹ See *id.* at 6.

²²⁰ See *id.* at 5-6.

²²¹ See *supra* § II.B (citing the Addendum).

conducted by the Federal Energy Regulatory Commission (FERC) under NGA section 7;²²²

(3) Mexico’s Environmental Review: Because the proposed VPLNG Mid-Scale Project will be constructed and operated in Mexico, a description of Mexico’s environmental review process for the construction and operation of liquefaction terminals and related facilities;²²³ and

(4) GHG Emissions: The global nature of GHG emissions associated with re-exporting U.S.-sourced LNG from Mexico from a life cycle perspective, using DOE’s two life cycle GHG reports already in the record for this proceeding.²²⁴

Pursuant to 10 C.F.R. § 1021.301(c), DOE provided the Notice of EA to the cross-border host states of Arizona, Texas, and California, and to all tribes on or within 100 kilometers of the U.S. border in those three states.²²⁵

B. Draft EA

On September 29, 2022, DOE provided the draft EA to the three cross-border host states and potentially affected tribes for a 15-day comment period that concluded on October 14, 2022.²²⁶ DOE received one comment on the draft EA from the Texas Commission on Environmental Quality (Texas CEQ).²²⁷ The Texas CEQ’s comments addressed air quality, surface and groundwater quality, and the management of industrial and hazardous waste associated with natural gas pipelines to be connected to the proposed VPLNG Mid-Scale Project.²²⁸

²²² 15 U.S.C. § 717f; *see supra* § IV.C (discussing the cross-border pipelines).

²²³ DOE stated that this description of Mexico’s environmental review process will be included in the EA for completeness. In Appendix B to the Application, Vista Pacifico provides an overview of the Mexican Government’s process for reviewing and approving the construction and operation of natural gas pipelines and liquefaction facilities located in Mexico.

²²⁴ *See* Notice of EA at 6 (citations omitted).

²²⁵ *See id.*

²²⁶ *See* U.S. Dep’t of Energy, Vista Pacifico LNG, S.A.P.I. de C.V. Environmental Assessment – VPLNG Mid-Scale Project, DOE/EA-2192, at 20, 22-24, 27 (Oct. 28, 2022), <https://www.energy.gov/sites/default/files/2022-10/FINAL%20Environmental%20Assessment%20-%20Vista%20Pacifico%2010-28-22.pdf> [hereinafter EA]. The tribes and states are listed in EA § 3.1 and § 3.2, respectively.

²²⁷ *See* EA at 27 (Appendix D) (summarizing comment from Texas CEQ and DOE’s response).

²²⁸ *See id.*

C. Final EA

DOE issued the final EA on October 28, 2022.²²⁹ DOE explained that the purpose of the EA was to evaluate the Proposed Action of granting Vista Pacifico’s requested authorization to re-export U.S.-sourced natural gas in the form of LNG from the proposed VPLNG Mid-Scale Project to non-FTA countries in a volume of 200 Bcf/yr of natural gas, as well as a No Action Alternative in which the requested authorization would not be granted.²³⁰

1. Scope of EA

The environmental impacts subject to analysis in the EA were “limited to those direct and indirect impacts that would occur in the United States and those that affect the global commons, such as global climate change that results from emissions of [GHGs].”²³¹ NEPA does not require an analysis of those environmental impacts that occur within another sovereign nation that result from actions approved by that sovereign nation.²³² Accordingly, DOE expressly did not analyze potential environmental impacts associated with the proposed VPLNG Mid-Scale Project that would occur within Mexico or other countries—including the potential local and regional impacts of pipeline transportation of natural gas within Mexico to the proposed Project, the construction and operation of the Project in Mexico (including LNG terminal operations), and terminal operations, transport, and use of LNG within the receiving country.²³³

2. Summary of Mexico’s Environmental Review Process

While outside the scope of DOE’s analysis, the EA provided information about Mexico’s review process under Mexican state and federal laws for the proposed Project and any pipeline

²²⁹ See EA, *supra* note 226.

²³⁰ EA at 2-3. The EA stated, however, that even if the Application is not granted, “it is likely that some or all of the demand . . . that the Project is intended to serve would be met by other LNG facilities” due to continued global demand for LNG. *Id.* at 3.

²³¹ *Id.*

²³² *Id.* (citing Exec. Order No. 12,114 (Jan. 4, 1979)).

²³³ *Id.*

facilities that may be constructed in Mexico.²³⁴ In Table 2, for example, the EA identified the agencies in Mexico with potential jurisdiction over the activities proposed within Mexico and their respective environmental, cultural, and safety assessments.²³⁵

3. Incremental Natural Gas Production

In the EA, DOE stated that the natural gas to be liquefied and exported by the proposed VPLNG Mid-Scale Project would first have to be produced from natural gas wells in the lower-48 United States.²³⁶ DOE further noted that a “significant majority” of natural gas produced in the United States is from unconventional resources.²³⁷ DOE determined that the “most likely impacts associated with natural gas production would ... relate to Project-induced incremental production of those resources.”²³⁸ DOE therefore incorporated by reference its *Addendum to Environmental Review Documents Concerning Imports of Natural Gas from the United States* (Addendum), discussed *supra* § II.B.²³⁹

Citing the Addendum, DOE observed that there are potential environmental issues associated with unconventional natural gas production that need to be carefully managed, especially with respect to emissions of volatile organic compounds and methane, and the potential for groundwater contamination. DOE stated, however, that it does not have the ability to determine which specific natural gas resources would be produced to serve the proposed VPLNG Mid-Scale Project.²⁴⁰

²³⁴ See *id.* at 4-5.

²³⁵ See EA at 4.

²³⁶ See *id.* at 8.

²³⁷ *Id.*

²³⁸ *Id.* at 5.

²³⁹ See *supra* note 82, citing Addendum, <https://www.energy.gov/fecm/addendum-environmental-review-documents-concerning-exports-natural-gas-united-states>.

²⁴⁰ See EA at 8.

DOE also determined that, if natural gas were produced in the lower-48 states for a different North American project, any potential impacts related to incremental natural gas production would similarly occur in the No Action Alternative.²⁴¹ Therefore, the EA concluded that the No Action Alternative “would ... not have a currently identifiable environmental advantage” over the Proposed Action.²⁴²

4. Incremental Cross-Border Pipeline Transportation of Natural Gas

Vista Pacifico proposes to utilize any cross-border pipeline or combination of pipelines that are currently operational or may become operational. The EA observed that natural gas transported on behalf of the proposed VPLNG Mid-Scale Project would increase utilization of pipelines, and therefore has the potential to cause incremental impacts in emissions related to pipeline operations.²⁴³

First, DOE noted that “there is nearly 15 billion cubic feet per day (Bcf/d) of existing physical cross-border pipeline capacity between the United States and Mexico, including nearly 7 Bcf/d of capacity in California, Arizona, and West Texas, and approximately 8 Bcf/d in South Texas.”²⁴⁴ In Figure 1, the EA identified this “significant and growing natural gas pipeline supply infrastructure.”²⁴⁵ The EA also summarized other details of these pipelines in appendices to the EA, and incorporated by reference the documents in the FERC dockets for the regulatory review of the identified cross-border natural gas pipelines.²⁴⁶

Next, DOE considered potential environmental impacts from natural gas pipeline transportation in the lower-48 states that could be caused by the proposed Project’s natural gas

²⁴¹ *See id.*

²⁴² *Id.*

²⁴³ *Id.* at 6.

²⁴⁴ *Id.*

²⁴⁵ *Id.*

²⁴⁶ EA at 6, 9.

demand (equal to about 0.87% of U.S. pipeline system throughput in 2020).²⁴⁷ The EA concluded that, because the incremental pipeline throughput associated with Vista Pacifico’s requested authorization “would not increase the flow of natural gas to levels above those permitted by FERC and/or state regulatory authorities,” the natural gas flow caused by the proposed Project’s incremental export demand “would ... not be expected to cause environmental effects that exceed permitted levels.”²⁴⁸

The EA also considered the safety of natural gas pipelines—specifically, potential impacts “associated with the operation of these pipelines that might be incrementally greater with marginally higher throughput due to the Project’s demand.”²⁴⁹ Based on data from the Pipeline and Hazardous Materials Safety Administration (PHMSA) for U.S. counties associated with border-crossing locations,²⁵⁰ DOE determined that the pipeline incidence rate from January 2010 to July 2022 “would equate to the accidental emission of less than one-one thousandth of one percent of total exported gas during this period, well below current estimates of average methane emissions associated with upstream production and transport across the U.S. natural gas infrastructure.”²⁵¹

Turning to the No Action Alternative, DOE stated that, if the VPLNG Mid-Scale Project were not constructed, any potential local or regional impacts associated with incremental pipeline transportation of natural gas for the Project would not occur.²⁵² Alternately, if other incremental LNG production capacity were constructed in North America using natural gas from the lower-48 states, local or regional impacts would be similar to natural gas supplied to the

²⁴⁷ *See id.* at 9.

²⁴⁸ *Id.*

²⁴⁹ *Id.*

²⁵⁰ *Id.* at 11.

²⁵¹ *Id.* at 11-12.

²⁵² EA at 12.

Project (although perhaps at different locations in the United States). In this scenario, the EA concluded that “the No Action Alternative would not have a currently identifiable environmental advantage over the Proposed Action.”²⁵³

5. Marine Transportation of LNG

Re-exports of U.S.-sourced LNG from the proposed Project in Mexico to non-FTA countries would occur via ocean transport.²⁵⁴ In the EA, DOE determined that the “potentially affected environment” for the marine transportation of LNG includes “resources that could be impacted by a release of the LNG cargo, in liquid or gaseous form, as well as routine shipping-related risks, such as fuel leaks and engine emissions.”²⁵⁵ Specifically, these resources include the ocean environment and the atmosphere in the area around LNG vessels at sea.²⁵⁶

In 2020, as part of its NEPA rulemaking revising categorical exclusion B5.7, DOE conducted a detailed review of technical documents evaluating potential effects associated with marine transport of LNG.²⁵⁷ These documents were identified in an accompanying Marine Transport Technical Support Document,²⁵⁸ which DOE incorporated by reference in the EA. The EA pointed to DOE’s conclusion in the rulemaking: “the transport of natural gas by marine vessels ... normally does not pose the potential for significant environmental impacts,” provided the transport adheres to applicable maritime safety regulations and standards.²⁵⁹

Under the No Action Alternative, DOE determined that, if the VPLNG Mid-Scale Project were not constructed, “some or all of the volume of LNG the Project would have exported could

²⁵³ *Id.*

²⁵⁴ *Id.* at 7.

²⁵⁵ *Id.*

²⁵⁶ *See id.*

²⁵⁷ *See supra* § II.D.

²⁵⁸ *See id.*

²⁵⁹ EA at 12-13 (citing U.S. Dep’t of Energy, National Environmental Policy Act Implementing Procedures, Final Rule, 85 Fed. Reg. 78,197, 78,200 (Dec. 4, 2020)).

be supplied to markets from other sources.”²⁶⁰ The EA thus concluded that any marine transport impacts under the No Action Alternative “would be similar to those identified in the Marine Transport Technical Support Document.”²⁶¹

6. GHG Emissions and Climate Change

In the EA, DOE observed that rising atmospheric GHG concentrations are significantly altering global climate systems with the potential for long-term impacts on human society and the environment.²⁶² DOE further explained that the region of influence for GHGs differs from other resource areas considered in the EA, since concerns about GHG emissions are primarily related to climate change, which is both global and cumulative in nature.²⁶³

In addressing potential GHG impacts associated with the requested authorization, DOE stated that the findings of its two LCA studies—the 2014 LCA GHG Report and the 2019 Update, discussed *supra* § II.B (and referred to as the “GHG Studies” in the EA)—are applicable in evaluating the GHG emissions from the proposed VPLNG Mid-Scale Project.²⁶⁴

Specifically, DOE determined that the proposed VPLNG Mid-Scale Project is comparable to the representative LNG Project analyzed in the 2014 LCA GHG Report and the 2019 Update. DOE thus found it reasonable to apply the two LCA studies in reviewing the life cycle GHG emissions from the proposed VPLNG Mid-Scale Project.²⁶⁵ DOE also assumed that marine shipments of LNG from the proposed Project would have similar attributes to shipments

²⁶⁰ *Id.* at 13.

²⁶¹ *Id.*

²⁶² *Id.* at 7.

²⁶³ *See id.*

²⁶⁴ *See id.* at 13 (stating that, although the EA does not include a “Project-specific calculation of emissions” from construction and operation of the proposed Project, DOE “finds that its study of Life Cycle GHG emissions provide sufficient consideration of these emissions”).

²⁶⁵ EA at 14.

from the representative LNG Project in the U.S. Gulf Coast analyzed in the LCA studies, including a focus on exports to Asian markets.²⁶⁶

Additionally, DOE determined that differences in GHG emissions between the representative LNG Project located in the U.S. Gulf Coast (analyzed in the two LCA studies) and the proposed VPLNG Mid-Scale Project located in Mexico primarily would result from: (1) any difference in natural gas pipeline transport distance between U.S. producing basins and the liquefaction plants and differences in emission rates between Mexican pipelines and U.S. pipelines; (2) differences in the emission rates associated with liquefaction in Mexico versus the United States; and (3) the difference in nautical distance traveled by a LNG tanker between liquefaction plants and Shanghai, China.²⁶⁷

Based on this analysis, DOE assumed that pipeline emissions in Mexico would be the same as from pipelines located in the United States (the same assumption that DOE made in the 2014 LCA GHG Report and the 2019 Update for pipeline emissions in all countries), while describing possible sources of difference.²⁶⁸ DOE also determined that “it [is] reasonable that, on a per-unit-volume-of-LNG-produced basis, GHG emissions from the proposed Mexican plants and the Gulf Coast plant modeled in the [2014 LCA GHG Report and the 2019 Update] would be similar.”²⁶⁹ Finally, as to marine transport-related GHG emissions, DOE determined that exports from the proposed VPLNG Mid-Scale Project would have a reduction in overall emissions of between 3% and 7% (as compared to the representative LNG Project located in the U.S. Gulf Coast) due to the shorter tanker travel route from Mexico to markets in Asia.²⁷⁰

²⁶⁶ *See id.*

²⁶⁷ *See id.* at 15; *see generally id.* at 15-19.

²⁶⁸ *See id.* at 16-17.

²⁶⁹ *Id.* at 18 (emphasis in original).

²⁷⁰ *See id.* at 19 (noting, however, that if the VPLNG Mid-Scale Project were to export LNG to other markets, such as Europe, shipping distances would be longer, and marine transport-related emissions would be commensurately greater).

Addressing the No Action Alternative, DOE stated that “other LNG production capacity could be constructed in the United States or another country to serve some or all of the LNG demand the Project is intended to serve.”²⁷¹ Therefore, the EA concluded that “it [is] not unreasonable to assume that GHG emissions would be broadly similar [to exports from the proposed VPLNG Mid-Scale Project], and, given the global nature of climate change, would have similar incremental impacts.”²⁷²

7. Response to Comment

DOE responded to Texas CEQ’s comment in Appendix D of the EA.²⁷³ As to air quality, DOE agreed with Texas CEQ that “the reasonably foreseeable direct and indirect air emissions associated with the Vista Pacifico project in Texas would be *de minimis*.”²⁷⁴ Addressing potential impacts from surface and groundwater contamination, DOE stated that it “does not anticipate that the proposed action would appreciably increase the potential for such [contamination] events because of the relatively small additional volume of natural gas that would flow through the pipeline system.”²⁷⁵ With respect to Texas CEQ’s comments on both water quality and the management of industrial and hazardous waste, DOE observed that the construction and operation of natural gas pipelines are subject to relevant federal and/or state regulations.²⁷⁶

VIII. DISCUSSION AND CONCLUSIONS

In reviewing the non-FTA portion of Vista Pacifico’s Application, DOE has considered its obligations under NGA section 3(a) and NEPA. To accomplish these purposes, DOE has

²⁷¹ EA at 19.

²⁷² *Id.*

²⁷³ *See id.* at 27 (Appendix D).

²⁷⁴ *Id.*

²⁷⁵ *Id.*

²⁷⁶ *Id.*

examined a wide range of information addressing environmental and non-environmental factors, including but not limited to:

- Vista Pacifico’s Application;
- The EA prepared for the Application;
- The Draft Addendum, comments received in response to the Draft Addendum, and the final Addendum;
- The 2014 LCA GHG Report and the 2019 LCA GHG Update, including comments submitted in response to those documents;
- The 2018 LNG Export Study, including comments received in response to that Study; and
- The Marine Transport Technical Support Document, prepared by DOE as part of its 2020 NEPA rulemaking, including comments received in response to the 2020 NEPA rulemaking and the Marine Transport Technical Support Document.

A. Procedural Matters

Sierra Club seeks to intervene in this proceeding to oppose Vista Pacifico’s Application, and both Sierra Club and DAN seek to protest the Application, in a submission filed 21 months after the deadline established in the *Federal Register* for such filings. As noted above, Sierra Club and DAN do not provide an explanation for waiting nearly two years after the time period prescribed by DOE for such submissions. Instead, as to Sierra Club’s motion to intervene, Sierra Club states that “DOE’s rules do not articulate any particular standard for timely intervention,” and thus “intervention should be granted liberally.”²⁷⁷

DOE finds that Sierra Club’s position as to the timeliness of its filing is factually incorrect and does not establish good cause for granting the motion. We begin by noting that Sierra Club cites DOE’s regulation for intervention, 10 C.F.R. § 590.303, but asserts that this regulation “merely requires” Sierra Club to set forth the facts supporting its motion and its

²⁷⁷ Sierra Club Motion to Intervene and Protest of Sierra Club and DAN, at 1.

position.²⁷⁸ This is not accurate. DOE’s regulation at 10 C.F.R. § 590.303(d) speaks directly to the “standard for timely intervention,” stating that “[m]otions to intervene may be filed at any time following the filing of an application, but no later than the date fixed for filing such motions or notices in the applicable [FECM] notice or order, unless a later date is permitted by the Assistant Secretary for good cause shown and after considering the impact of granting the late motion of the proceeding.”²⁷⁹ DOE’s regulations contain similar language for the timely filing of protests in 10 C.F.R. § 590.304(e),²⁸⁰ which Sierra Club and DAN likewise do not acknowledge. The Notice of Application issued by DOE in this proceeding specified a deadline of 4:30 p.m. Eastern time on February 8, 2021, and made clear to the public that DOE would be considering the potential economic and environmental impacts of Vista Pacifico’s Application.²⁸¹

Further, Sierra Club’s prior actions belie its claim that “DOE’s rules do not articulate any particular standard for timely intervention.”²⁸² Over the last decade, Sierra Club has timely filed a motion to intervene and protest in numerous LNG export proceedings on or before the deadline established in DOE’s notice of application for each proceeding—including the week after it submitted its filing in this proceeding.²⁸³ Additionally, in a prior proceeding, Sierra Club expressly stated that its filing was “out of time” and asked DOE to accept its “late intervention,”

²⁷⁸ *Id.* at 1-2 (citing 10 C.F.R. § 590.303(b)-(c)).

²⁷⁹ 10 C.F.R. § 590.303(d) (emphasis added).

²⁸⁰ *See Id.* § 590.304(e) (“Protests may be filed at any time following the filing of an application, but no later than the date fixed for filing protests in the applicable FE notice or order, unless a later date is permitted by the Assistant Secretary for good cause shown.”).

²⁸¹ *See* Notice of Application, 85 Fed. Reg. at 79,003-04.

²⁸² Sierra Club Motion to Intervene and Protest of Sierra Club and DAN, at 1.

²⁸³ *See, e.g.*, Sierra Club, Motion to Intervene and Protest of NFE Altamira FLNG’s Request for Export and Re-Export Authorization, Docket No. 22-110-LNG (Dec. 5, 2022) (pending motion to intervene and protest filed on December 5, 2022, the deadline established by DOE in the notice of application, 87 Fed. Reg. 60,667, 60,668 (Oct. 6, 2022)).

citing 10 C.F.R. § 590.303(d).²⁸⁴ Currently, Sierra Club is in litigation against DOE in the U.S. Court of Appeals for the District of Columbia Circuit in two different cases in which Sierra Club’s compliance with the deadline established by DOE in the *Federal Register* to submit a protest and motion to intervene in response to a LNG export application is the central issue.²⁸⁵ These examples—all in LNG export proceedings like this one—demonstrate that Sierra Club was on notice of DOE’s regulations pertaining to timely interventions and protests, as well as DOE’s practice of establishing the deadline for such submissions in the notice of application published in the *Federal Register*.

Sierra Club and DAN also do not provide any facts to demonstrate that they had “good cause” for failing to file the motion and protest within the time prescribed, as required by both sections 10 C.F.R. §§590.303(d) and 590.304(e).²⁸⁶ Nor does Sierra Club seek to address “the impact of granting the late motion [on] the proceeding” referenced in section 590.303(d). Sierra Club and DAN thus provide no grounds for DOE to consider the late filing.

Finally, we emphasize again that, in unnecessarily delaying the issuance of final agency action, late filings are both unfairly prejudicial to the applicant (and any other parties) and disruptive to DOE’s interests in administrative efficiency and fairness. As DOE previously observed, “at some point, the opportunity for interested persons to intervene as parties in a proceeding must close” to “ensure that the resolution of a proceeding and the issuance of a final order are not unduly delayed by inattentiveness or intentional delay.”²⁸⁷ Here, the 21-month

²⁸⁴ See, e.g., Sierra Club, Motion to Intervene Out of Time, Protest, and Comments, Docket No. 11-111-LNG, at 1 (April 18, 2012) (filing submitted 16 months after the deadline established in the notice of application, which DOE rejected as out of time).

²⁸⁵ See *Sierra Club v. U.S. Dep’t of Energy*, Case No. 22-12-17 (D.C. Cir.) (pending) (Magnolia LNG proceeding); *Sierra Club v. U.S. Dep’t of Energy*, Case No. 22-12-18 (D.C. Cir.) (pending) (Golden Pass LNG proceeding).

²⁸⁶ See *id.* at 5-6.

²⁸⁷ *Golden Pass LNG Terminal LLC*, Docket No. 12-156-LNG, Order Denying Request for Rehearing of Order Amending Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations, at 7 (June 24, 2022) (internal quotation and citation omitted).

delay far surpasses other late filings rejected by DOE in LNG export proceedings.²⁸⁸ We thus conclude that accepting Sierra Club's motion to intervene and the joint protest at this time would be prejudicial to Vista Pacifico,²⁸⁹ contrary to DOE precedent, and disruptive to this proceeding and DOE's administrative process.²⁹⁰

For these reasons, we dismiss Sierra Club's and DAN's filing in its entirety.²⁹¹ Because this dismissal is on procedural grounds, we do not address the merits of Sierra Club's and DAN's arguments.

B. Non-Environmental Issues

1. Significance of the 2018 LNG Export Study

DOE commissioned the 2018 LNG Export Study and invited public comments on the Study.²⁹² DOE analyzed this material in its Response to Comments, published in the *Federal Register* on December 28, 2018. Based on the 2018 LNG Export Study, DOE concluded that the United States will experience net economic benefits from the issuance of authorizations to export domestically produced LNG.²⁹³ The 2018 Study further supports the proposition that exports of LNG from the lower-48 states, in volumes up to and including 52.8 Bcf/d of natural gas, will not be inconsistent with the public interest.²⁹⁴ As noted herein, DOE's cumulative volume of approved non-FTA exports from the lower-48 states as of today—47.06 Bcf/d of natural gas—is

²⁸⁸ See *id.* at 7-8 (discussing motions to intervene or protests filed 16 and 18 months after DOE's deadline in LNG export proceedings, which DOE rejected as out of time).

²⁸⁹ ECA Answer in Opposition, at 6.

²⁹⁰ See *id.* at 6; see also, e.g., *Magnolia LNG, LLC*, DOE/FECM Order No. 3909-D, at 8 (DOE rejecting Sierra Club's late-filed protest due to concerns about fairness, due process, and administrative efficiency), cited in ECA Answer in Opposition, at 6.

²⁹¹ See 10 C.F.R. §§ 590.303, 590.304; see also *infra* § XI (Ordering Para. M).

²⁹² See *supra* § II.A.3.

²⁹³ See 2018 Study Response to Comments, 83 Fed. Reg. at 67,272.

²⁹⁴ See *id.* at 67,273.

within this upper volume. The cumulative total of U.S. and Mexico LNG export capacity, using U.S.-sourced natural gas, that is currently operating or under construction totals 20.53 Bcf/d.²⁹⁵

The assumptions underlying the 2018 Study’s findings remain consistent with more recent assessments of current and future natural gas supply, demand, and prices. We take administrative notice of EIA’s recent authoritative projections, set forth in the *Annual Energy Outlook 2022* (AEO 2022), issued on March 3, 2022.²⁹⁶ DOE has assessed AEO 2022 to evaluate any differences from AEO 2017, which formed the basis for the 2018 LNG Export Study. The AEO 2017 Reference case without the Clean Power Plan (CPP)²⁹⁷ shows net LNG exports of 12.5 Bcf/d of natural gas in 2050, compared with the AEO 2022 Reference case that shows net LNG exports of 15.9 Bcf/d in 2050.²⁹⁸

EIA’s projections in AEO 2022 continue to show market conditions that will accommodate increased exports of natural gas. When compared to the AEO 2017 Reference case without the CPP, the AEO 2022 Reference case projects increases in domestic natural gas production—well in excess of what is required to meet projected increases in domestic consumption. For example, for the year 2050, the AEO 2022 Reference case anticipates 7.1%

²⁹⁵ See U.S. Energy Info. Admin., *U.S. Liquefaction Capacity* (Aug. 22, 2022), <https://www.eia.gov/naturalgas/U.S.liquefactioncapacity.xlsx> (showing a total of 20.09 Bcf/d calculated by adding Column N in “Existing & Under Construction” worksheet). Additionally, DOE takes administrative notice that, in 2020, ECA Liquefaction, S. de R.L. de C.V. reached a final investment decision (FID) for the development, construction, and operation of the ECA Mid-Scale Project Phase 1, to be located in Baja California, Mexico (0.44 Bcf/d). See “Sempra Energy Announces FID for Landmark Energía Costa Azul LNG Export Project” (Nov. 17, 2020), <https://www.sempra.com/sempra-energy-announces-fid-landmark-energia-costa-azul-lng-export-project>.

²⁹⁶ U.S. Energy Info. Admin., *Annual Energy Outlook 2022* (with projections to 2050) (Mar. 3, 2022), https://www.eia.gov/outlooks/aeo/pdf/AEO2022_Narrative.pdf.

²⁹⁷ AEO 2017 included two versions of the Reference case—one with, and one without, the implementation of a rulemaking by the U.S. Environmental Protection Agency (EPA) called the Clean Power Plan. EPA repealed the CPP in 2019. In this Order, we refer only to the AEO 2017 Reference case without the CPP. The AEO 2022 Reference case does not include the CPP, so the comparisons between AEO 2017 and AEO 2022 are consistent in that regard.

²⁹⁸ The AEO Reference cases take into account the amount of U.S. LNG export capacity operating or under construction at the time of publication. The Reference cases have not included re-exports to date, but they do include net exports to Mexico via pipeline volume listed separately. See *infra* § VIII.B.4 (Table 1).

more natural gas production, and less than 1% growth in natural gas consumption in the lower-48 states, than the AEO 2017 Reference case without the CPP. Under the AEO 2022 Reference case, EIA projects that, by 2050, “approximately 25% more natural gas will be produced than consumed in the United States.”²⁹⁹ Based on these projections, the AEO 2022 Reference case is even more supportive of exports than the AEO 2017 Reference case without the CPP.

For these reasons, both the 2018 Study and AEO 2022 support our finding that Vista Pacifico’s proposed re-exports in a volume of 200 Bcf/yr of natural gas will not be inconsistent with the public interest.

2. Vista Pacifico’s Application

Upon review of the Application, DOE finds that several factors identified in the Application, as well as in the 2018 LNG Export Study, support a grant of Vista Pacifico’s authorization under NGA section 3(a).

First, Vista Pacifico points to DOE’s 2018 LNG Export Study, as well as DOE’s older LNG export studies and EIA data, in asserting that the United States has significant natural gas resources available to meet both projected future domestic needs and demand for the proposed re-exports. We agree. Specifically, we find that, based on the 2018 Study and AEO 2022, over the long-term timeline of this authorization, there is likely to be robust domestic supply conditions that are more than adequate to satisfy both domestic needs and exports (or re-exports) of LNG, including those proposed in the Application.³⁰⁰

Second, as noted above, the 2018 LNG Export Study indicates that exports of LNG will generate net economic benefits to the broader U.S. economy.³⁰¹ The 2018 Study consistently

²⁹⁹ See AEO 2022 at 26.

³⁰⁰ See, e.g., 2018 Study Response to Comments, 83 Fed. Reg. at 67,262; *supra* at § VIII.B.1.

³⁰¹ 2018 Study Response to Comments, 83 Fed. Reg. at 67,272.

shows macroeconomic benefits to the U.S. economy across the range of scenarios, as well as positive annual growth across the energy intensive sectors of the economy.³⁰² U.S. households benefit from the additional wealth transferred into the United States, which increases the value of the dollar and reduces prices of other imported goods.³⁰³ Further, households will receive labor income when they work and income from the capital and resources they own from natural gas-related activities, providing U.S. consumers with additional income to spend on goods and services.³⁰⁴

Because, however, the 2018 Study assumes that LNG exports would occur from the United States— not from Mexico, as is the case here,³⁰⁵ DOE acknowledges that some of the benefits and outcomes outlined in that Study would be reduced or different in the case of the proposed VPLNG Mid-Scale Project. Specifically, in the calculation of economic benefits, the 2018 Study assumes that the representative liquefaction plant is owned and operated by a domestic firm, and there is an assumed investment cost of \$5 billion for each Bcf/d of liquefaction capacity constructed.³⁰⁶ In the case of Vista Pacifico’s Application for a re-export volume of 0.55 Bcf/d, however, the benefit of the estimated value of Vista Pacifico’s approximately \$2.75 billion in infrastructure investment would occur in Mexico, not in the United States.³⁰⁷ Nonetheless, the economic benefits from the production and initial sale of the natural gas from U.S. suppliers to Vista Pacifico or its offtakers would benefit the United States, as considered in the 2018 Study.

³⁰² See *id.* at 67,268-69 (citing 2018 LNG Export Study at 67, 70).

³⁰³ See *id.* at 67,266 (citing 2018 LNG Export Study at 64).

³⁰⁴ See *id.* at 67,259 (citing 2018 LNG Export Study at 73).

³⁰⁵ See 2018 LNG Export Study at 93.

³⁰⁶ See *id.*

³⁰⁷ This estimated value is calculated by multiplying the volume requested in Vista Pacifico’s Application, 0.55 Bcf/d, by the estimated investment value of a liquefaction plant in the 2018 LNG Export Study of \$5 billion per Bcf/d of liquefaction capacity. The actual project cost is likely to be influenced by numerous factors, such as the conditions of the project site, the proximity to pipeline networks, the price of raw materials, and labor costs.

Third, over the term of the authorization, the proposed re-exports of LNG to non-FTA countries will improve the United States' ties with its allies and trade partners and make a positive contribution to the United States' trade balance. Other benefits of this international trade are discussed below. For these reasons, we find that Vista Pacifico's proposed re-exports of LNG are consistent with U.S. policy.

Accordingly, based on the 2018 Study and the more recent data in AEO 2022, DOE finds that the market will be capable of sustaining the level of re-exports requested in Vista Pacifico's Application over the authorization term without negative economic impacts, including domestic price impacts (discussed below).

3. Pipeline Routes

With respect to the pipelines associated with its proposed exports and re-exports, Vista Pacifico asks DOE to issue the requested authorization without imposing physical restrictions on the export points, and without requiring a supplemental authorization if new or expanded U.S. pipelines become available for Vista Pacifico's potential use.³⁰⁸ This request is consistent with existing DOE authorizations, which do not impose any physical limits on the southbound border-crossing facilities to be used and are not conditioned on the need for a supplemental authorization in the future.³⁰⁹

For example, in Order No. 4365 issued to Vista Pacifico's affiliate ECA in 2019, DOE explained that the natural gas pipeline trade between the United States and Mexico is robust, such that multiple border-crossing points are currently available for ECA's use. Additionally,

³⁰⁸ App. at 40; *see also id.* at 5-6, 17-18, 41-50.

³⁰⁹ *See, e.g., Energia Costa Azul, S. de R.L. de C.V.*, DOE/FE Order No. 4365, Docket No. 18-145-LNG, Opinion and Order Granting Long-Term Authorization to Re-Export U.S.-Sourced Natural Gas in the Form of Liquefied Natural Gas from Mexico to Non-Free Trade Agreement Countries (ECA Large-Scale Project), at 32-33 (Mar. 29, 2019) (amendments omitted).

DOE agreed with ECA that the existing cross-border pipeline capacity between the United States and Mexico far exceeds the volume of natural gas requested for re-export.³¹⁰ We find that the same facts apply with respect to Vista Pacifico’s requested volume of re-exports in this proceeding (0.55 Bcf/d).³¹¹ In particular, we note that Appendix B of the EA provides information about the existing cross-border facilities in the states of California, Arizona, and Texas that may be used to transport natural gas from the United States to the proposed VPLNG Mid-Scale Project.³¹² Together, these pipelines have a total cross-border capacity of approximately 14.83 Bcf/d, which greatly exceeds Vista Pacifico’s requested volume of 0.55 Bcf/d.³¹³ For these reasons, DOE finds that it is not necessary to impose conditions related to pipelines in this Order.

4. Price Impacts

The 2018 LNG Export Study projects the economic impacts of LNG exports in a range of scenarios, including scenarios that exceed the cumulative volume of approved non-FTA exports from the lower-48 states to date (equivalent to a total of 47.06 Bcf/d of natural gas with the issuance of this Order and Order No. 4365-B being issued concurrently to ECA). The 2018 Study found that “[i]ncreasing U.S. LNG exports under any given set of assumptions about U.S. natural gas resources and their production leads to only small increases in U.S. natural gas prices[.]”³¹⁴

³¹⁰ See *id.* at 32-33 (distinguishing DOE’s analysis of U.S.-Mexican cross-border pipeline capacity with its prior analysis of cross-border pipeline capacity from the northeastern United States to Canada).

³¹¹ See App. at 17-18; see also U.S. Energy Info. Admin., *Today in Energy*, “FERC approves new natural gas pipeline projects to increase U.S. exports” (May 24, 2022), available at <https://www.eia.gov/todayinenergy/detail.php?id=52478>.

³¹² See EA at 25 (Appendix B); see also *id.* at 6-7, 26 (Appendix C) (identifying natural gas pipeline border crossing locations in California, Arizona, and Texas).

³¹³ See *id.* at 25; see also App. at 17-18.

³¹⁴ 2018 Study Response to Comments, 83 Fed. Reg. at 67,258 (citing 2018 LNG Export Study at 55).

Additionally, DOE has analyzed price projections in AEO 2022 to evaluate any differences from AEO 2017, which formed the basis for the 2018 LNG Export Study. The AEO 2022 Reference case projects market conditions in the lower-48 states that include higher production and demand for natural gas coupled with lower prices. Specifically, the AEO 2022 Reference case projects that, “[d]espite LNG export growth and increased domestic demand for natural gas ... the Henry Hub price will remain below \$4/MMBtu throughout the projection period in most cases.”³¹⁵ For the year 2050, the AEO 2022 Reference case projects an average Henry Hub natural gas price that is lower than the AEO 2017 Reference case without the CPP by 43%. Table 1 below shows these comparisons.

Table 1: Year 2050 Reference Case Comparisons in AEO 2017 Reference Case Without the CPP and AEO 2022 Reference Case

	AEO 2017 Reference Case Without the CPP	AEO 2022 Reference Case
Lower-48 Dry Natural Gas Production (Bcf/d)	107.9	115.6
Total Natural Gas Consumption (Bcf/d)	92.4	93.2
Electric Power Sector Consumption (Bcf/d)	31.8	31.4
<u>Net Exports to Mexico via Pipeline</u> (Bcf/d)	3.4	6.9
<u>Net LNG Exports</u> (Bcf/d)	12.5	15.9
LNG Exports – Total (Bcf/d)	12.7	16.1

³¹⁵ AEO 2022 at 30.

Henry Hub Spot Price (\$/MMBtu) (Note 1)	\$6.27 (2021\$)	\$3.59 (2021\$)
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Note 1: Prices adjusted to 2021\$ with the AEO 2017 projection of a Gross Domestic Product price index.

For these reasons, and as explained in DOE’s Response to Comments on the 2018 Study, we find that the likely long-term impact of the re-exports requested by Vista Pacifico will not render those re-exports inconsistent with the public interest.³¹⁶

5. Benefits of International Trade

We have also considered the international consequences of our decision. As discussed above, we review applications to export (or re-export) LNG to non-FTA nations under section 3(a) of the NGA. The foreign policy and trade impacts to the United States of such exports are factors bearing on that review.

An efficient, transparent international market for natural gas with diverse sources of supply provides both economic and strategic benefits to the United States and our allies. By authorizing additional re-exports of U.S.-sourced LNG to non-FTA countries, including to U.S. allies, this Order will enable Vista Pacifico to help mitigate energy security concerns once it begins re-exports.³¹⁷ More generally, to the extent U.S. exports diversify global LNG supplies and increase the volumes of LNG available globally, these re-exports will improve energy security for many U.S. allies and trading partners. We note that, like all authorizations for the

³¹⁶ See 2018 Study Response to Comments, 83 Fed. Reg. at 67,267-69 (DOE’s response to comments on natural gas price impacts).

³¹⁷ We note that Europe has been the primary destination of U.S. LNG in recent months. In July 2022, for example, more than half of all United States LNG exports went to Europe. See U.S. Dep’t of Energy, *LNG Monthly* (Sept. 2022), <https://www.energy.gov/sites/default/files/2022-09/LNG%20Monthly%20July%202022.pdf>; see also U.S. Energy Info. Admin., *Today in Energy* (Feb. 22, 2022), <https://www.eia.gov/todayinenergy/detail.php?id=51358>. We expect that relatively high LNG demand in Asia and Europe will support continued U.S. LNG exports. See, e.g., U.S. Energy Info. Admin., *Today in Energy* (Apr. 20, 2022), <https://www.eia.gov/todayinenergy/detail.php?id=52118>.

export of natural gas, no re-export will be permitted to a country for which exports are otherwise restricted by U.S. law or policy, and such restrictions are enforceable against Vista Pacifico by virtue of the fact that its majority owner, Sempra Energy, is a U.S. company subject to the jurisdiction of the United States.³¹⁸ Therefore, we find that authorizing Vista Pacifico's re-exports of U.S.-sourced LNG from Mexico will advance the public interest for reasons that are distinct from and additional to the economic benefits identified in the 2018 LNG Export Study and DOE's prior macroeconomic studies.

C. Environmental Issues

In reviewing the potential environmental impacts of Vista Pacifico's proposal to re-export U.S.-sourced LNG to non-FTA countries, DOE has considered both its obligations under NEPA and its obligation under NGA section 3(a) to ensure that the proposal is not inconsistent with the public interest.

1. Issuance of an Environmental Assessment

DOE prepared an EA for the requested authorization and is issuing a Finding of No Significant Impact (FONSI) as Appendix B to this Order. The FONSI adopts and incorporates by reference DOE's EA (DOE/EA-2192). It also incorporates by reference the Addendum, the 2014 LCA GHG Report, the 2019 LCA GHG Update, and the Marine Transport Technical Support Document. Based on this record, the FONSI determines that granting the non-FTA portion of Vista Pacifico's Application will not have a significant effect on the human environment. The issuance of the EA and FONSI support a determination that no further environmental review of the Application is necessary.

³¹⁸ See *supra* § IV.A (Description of Applicant); see *infra* § XI (Ordering Paras. B & D).

2. Environmental Impacts Associated with Induced Production of Natural Gas

The current rapid development of natural gas resources in the United States likely will continue, with or without the export of natural gas to non-FTA nations.³¹⁹ Nevertheless, a decision by DOE to authorize re-exports of U.S.-sourced LNG from Mexico to non-FTA nations could accelerate that development by some increment. As discussed above, the Addendum reviewed the academic and technical literature covering the most significant issues associated with unconventional natural gas production, including impacts to water resources, air quality, GHG emissions, induced seismicity, and land use.

The Addendum shows that there are potential environmental issues associated with unconventional natural gas production that need to be carefully managed, especially with respect to emissions of volatile organic compounds and methane, and the potential for groundwater contamination. These environmental concerns do not lead us to conclude, however, that the increase in re-exports to non-FTA nations requested by Vista Pacifico should be prohibited. A denial of these re-exports under NGA section 3(a) based on the environmental impacts associated with induced production would be too blunt an instrument to address these environmental concerns efficiently. Moreover, such a finding would cause the United States to forego entirely the economic and international benefits discussed herein.

DOE believes the public interest is also served by addressing these environmental concerns through federal, state, or local regulation. We note that environmental regulators have imposed requirements on natural gas production and transportation to balance benefits and burdens, and have continued to update these regulations as technological practices and scientific understanding evolve. In the future, U.S. pipeline operators may be subject to regulatory

³¹⁹ Addendum at 2.

emission limits,³²⁰ with those pipelines that do not meet regulatory limits subject to a waste emissions charge established in the Inflation Reduction Act of 2022.³²¹ However, DOE recognizes that these regulatory requirements will apply only to the U.S. production and transportation system, and not the Mexican pipeline or liquefaction facilities used to support re-export in this case. Additionally, some companies in the natural gas industry, including Sempra Energy (Vista Pacifico’s majority owner), have begun implementing measures to advance the quantification, monitoring, reporting and verification (or QMRV) of GHG emissions.³²²

For these reasons, we conclude that the environmental concerns associated with natural gas production from the lower-48 states do not establish that Vista Pacifico’s requested authorization is inconsistent with the public interest. We further note that the D.C. Circuit in *Sierra Club I* rejected Sierra Club’s arguments regarding the Addendum. In particular, the Court found that DOE offered a reasoned explanation as to why it believed the location-specific indirect effects pertaining to increased “export-induced” natural gas production “were not reasonably foreseeable” under NEPA.³²³ The Court’s conclusions and reasoning guide our review in this proceeding.³²⁴

3. Greenhouse Gas Impacts Associated with U.S. LNG Exports

Commenters on the Addendum, 2014 LCA GHG Report, 2019 LCA GHG Update, and 2018 LNG Export Study (as well as DOE’s earlier economic studies) expressed concern that

³²⁰ See Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review, 86 Fed. Reg. 63,110 (Nov. 15, 2021).

³²¹ Inflation Reduction Act of 2022, Pub. L. No. 117-169, § 60113 (2022).

³²² See, e.g., Sempra, “Sempra Infrastructure and RWE Sign Heads of Agreement for U.S. LNG Supply” (May 25, 2022), <https://www.sempra.com/sempra-infrastructure-and-rwe-sign-heads-agreement-us-lng-supply>. Sempra Energy is also a founding member of Veritas, a GTI Energy Differentiated Gas Measurement and Verification Initiative that is working to measure and verify companies’ methane emissions reductions. See Veritas, “Accelerating actions to reduce methane leakage across natural gas systems,” <https://www.gti.energy/veritas-a-gti-methane-emissions-measurement-and-verification-initiative/> (last viewed Dec. 19, 2022).

³²³ *Sierra Club I* at 198-199.

³²⁴ *Id.*; see *supra* § II.C.

exports of U.S. LNG may have a negative effect on the total amount of energy consumed in foreign nations and on global GHG emissions.

As explained above, both the 2014 LCA GHG Report and the 2019 Update estimated the life cycle GHG emissions of U.S. LNG exports to Europe and Asia, compared with certain other fuels used to produce electric power in those importing countries.³²⁵ The 2019 Update was based on the most current available science, methodology, and data from the U.S. natural gas system to assess GHG emissions associated with exports of U.S. LNG produced in the lower-48 states.³²⁶

The conclusions of the 2019 Update are consistent with those of the 2014 LCA GHG Report.³²⁷ While acknowledging uncertainty, the LCA GHG Update shows that, to the extent U.S. LNG exports are preferred over coal in LNG-importing nations, U.S. LNG exports are likely to reduce global GHG emissions on a per-unit of energy consumed basis for power production.³²⁸ Furthermore, to the extent U.S. LNG exports are preferred over other forms of imported natural gas, they are likely to have only a small impact on global GHG emissions.³²⁹

The 2019 LCA GHG Update (like the 2014 Report) does not provide information on whether authorizing exports of U.S. LNG to non-FTA nations will increase or decrease GHG emissions on a global scale.³³⁰ Recognizing that there is a global market for LNG, exports of U.S. LNG will affect the global price of LNG, which, in turn, will affect energy systems in numerous countries. DOE further acknowledges that regional coal and imported natural gas are not the only fuels with which U.S.-sourced LNG will compete. U.S. LNG exports (or re-exports)

³²⁵ See *supra* § II.B.

³²⁶ DOE Response to Comments on 2019 Update, 85 Fed. Reg. at 85.

³²⁷ *Id.*

³²⁸ *Id.*

³²⁹ *Id.*

³³⁰ *Id.* at 81.

may also compete with renewable energy, nuclear energy, petroleum-based liquid fuels, coal imported from outside East Asia or Western Europe, indigenous natural gas, synthetic natural gas derived from coal, and other resources. However, the net global GHG emission impacts of increased exports will be affected by the market dynamics in importing countries over the coming decades, as well as the potential interventions of numerous foreign governments in those markets. To model the net change that a given amount of U.S. LNG exports would have on global GHG emissions would require projections of how each of these fuel sources would be affected in each LNG-importing nation.³³¹ In responding to comments on the 2019 Update, DOE explained that the uncertainty associated with estimating each of these factors would likely render such an analysis too speculative to inform the public interest determination in DOE's non-FTA proceedings.³³² Based on the evidence in this proceeding, DOE is unable to conclude that the re-export of U.S.-sourced LNG associated with Vista Pacifico's Application will increase global GHG emissions in a material or predictable way.³³³

Finally, we note that the D.C. Circuit held in *Sierra Club I* that there was "nothing arbitrary about the Department's decision" under NEPA to compare emissions from exported U.S. LNG to emissions of coal or other sources of natural gas.³³⁴ The Court's decision in *Sierra Club I* guided DOE's development of the 2019 Update.

D. Other Considerations

The conclusion of the 2018 LNG Export Study is that the United States will experience net economic benefits from the export of domestically produced LNG in volumes up to and

³³¹ *Id.*

³³² DOE Response to Comments on 2019 Update, 85 Fed. Reg. at 81.

³³³ *See id.* at 86.

³³⁴ *Sierra Club I*, 867 F.3d at 202 (finding that "Sierra Club's complaint 'falls under the category of flyspecking'") (citation omitted).

including 52.8 Bcf/d of natural gas. Nonetheless, DOE’s decision in this Order is not premised on an uncritical acceptance of that Study. Certain public comments received on the 2018 Study identify significant uncertainties and even potential negative impacts from LNG exports. The economic impacts of higher natural gas prices and potential increases in natural gas price volatility are two of the factors that we view most seriously.

DOE notes that, although Henry Hub natural gas prices have nearly doubled from their historic lows in 2020 to 2021 and have periodically exceeded \$7.00/MMBtu in 2022,³³⁵ prices are projected to average below \$4.00/MMBtu throughout the projection period in the AEO 2022 Reference Case in real dollars.³³⁶ At these levels, nominal U.S. natural gas prices are expected to average at levels lower than, or in line with, domestic natural gas prices beginning in approximately 2009, even without the historical prices being adjusted for inflation. Yet, DOE also has taken into account factors that could mitigate these impacts, such as current market trends showing that domestic supply is expected to continue exceeding domestic consumption for the foreseeable future and data indicating that the natural gas industry would increase natural gas supply in response to increasing export demand.³³⁷ Further, we note continuing uncertainty that all or even most of the proposed LNG export projects will ever be realized because of the time, difficulty, and expense of commercializing, financing, and constructing LNG export terminals, as well as the uncertainties and competition inherent in the global market for LNG.³³⁸

³³⁵ Henry Hub prices averaged \$2.03/MMBtu in 2020 and \$3.89/MMBtu in 2021. See U.S. Energy Info. Admin., Table, “Henry Hub Natural Gas Spot Price (Dollars per Million Btu)” (Dec. 7, 2022) (viewing annual history), <https://www.eia.gov/dnav/ng/hist/rngwhhdA.htm>. Certain same-month year-on-year differences in 2020 and 2021 were starker, with Henry Hub prices at \$1.91/MMBtu in February 2020 and \$5.35/MMBtu in February 2021. See *id.* (viewing monthly history).

³³⁶ See AEO 2022 at 17, 30.

³³⁷ See *infra* § VIII.B.4 (Table 1).

³³⁸ See *infra* § VI.D (identifying long-term orders vacated to date).

More generally, DOE continues to subscribe to the principle set forth in our 1984 Policy Guidelines³³⁹ that, under most circumstances, the market is the most efficient means of allocating natural gas supplies. However, agency intervention may be necessary to protect the public in the event there is insufficient domestic natural gas for domestic use, or as a result of other facts or circumstances beyond those presented here. Given these possibilities, DOE recognizes the need to monitor continuously whether this authorization remains in the public interest and to monitor market developments closely as the impact of successive authorizations of LNG exports (and re-exports) unfolds.³⁴⁰

E. Conclusion

DOE has reviewed the evidence in the record and relevant precedent in earlier non-FTA export decisions and has not found an adequate basis to conclude that Vista Pacifico's proposed re-exports of U.S.-sourced natural gas from Mexico for delivery to non-FTA countries will be inconsistent with the public interest.

With today's issuance of this Order and ECA's amendment to its existing non-FTA order (Order No. 4365-B), and the vacatur of previous long-term non-FTA export authorizations,³⁴¹ there are currently 41 final non-FTA authorizations from the lower-48 states in a cumulative volume of exports totaling 47.06 Bcf/d of natural gas, or approximately 17.2 Tcf per year, as

³³⁹ 1984 Policy Guidelines, 49 Fed. Reg. 6684.

³⁴⁰ See *supra* § VIII.B.2.

³⁴¹ To date, DOE has vacated seven long-term non-FTA authorizations (none over the objection of the authorization holder) in the following proceedings: *Jordan Cove Energy Project L.P.*, Docket No. 12-32-LNG (Apr. 22, 2022); *Air Flow North America Corp.*, Docket No. 14-206-LNG (Dec. 30, 2021); *Emera CNG, LLC*, Docket No. 13-157-CNG (Oct. 20, 2021); *Annova LNG Common Infrastructure, LLC*, Docket No. 19-34-LNG (Apr. 23, 2021); *Floridian Natural Gas Storage Co., LLC*, Docket No. 15-38-LNG (Oct. 22, 2020); *Carib Energy (USA) LLC*, Docket No. 11-141-LNG (Nov. 17, 2020); *Flint Hills Resources, LP*, Docket No. 15-168-LNG (Feb. 5, 2019).

follows:³⁴² Sabine Pass Liquefaction, LLC (2.2 Bcf/d),³⁴³ Cameron LNG, LLC (1.7 Bcf/d),³⁴⁴ FLEX I (1.4 Bcf/d),³⁴⁵ FLEX II (0.4 Bcf/d),³⁴⁶ Cove Point LNG, LP (0.77 Bcf/d),³⁴⁷ Cheniere Marketing, LLC and Corpus Christi Liquefaction, LLC (2.1 Bcf/d),³⁴⁸ Sabine Pass Liquefaction, LLC Expansion Project (1.38 Bcf/d),³⁴⁹ American LNG Marketing LLC (0.008 Bcf/d),³⁵⁰ Bear Head LNG Corporation and Bear Head LNG (USA), LLC (0.81 Bcf/d),³⁵¹ Pieridae Energy

³⁴² Any number discrepancies are due to rounding. Additionally, this cumulative volume of non-FTA exports from the lower-48 states does not include export volumes granted pursuant to DOE's regulations for small-scale exports of natural gas. See 10 C.F.R. §§ 590.102(p), 208(a); U.S. Dep't of Energy, Office of Fossil Energy and Carbon Management, Long Term Applications Received by DOE to Export Domestically Produced LNG, CNG, CGL from the Lower-48 States, at 12 (as of Dec. 16, 2022), <https://www.energy.gov/fecm/articles/summary-lng-export-applications-lower-48-states> (identifying small-scale applications and status).

³⁴³ *Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 2961-A, Docket No. 10-111-LNG, Final Opinion and Order Granting Long-Term Authorization to Export Liquefied Natural Gas from Sabine Pass LNG Terminal to Non-Free Trade Agreement Nations (Aug. 7, 2012).

³⁴⁴ *Cameron LNG, LLC*, DOE/FE Order No. 3391-A, Docket No. 11-162-LNG, Final Opinion and Order Granting Long-Term Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Cameron LNG Terminal in Cameron Parish, Louisiana, to Non-Free Trade Agreement Nations (Sept. 10, 2014).

³⁴⁵ *Freeport LNG Expansion, L.P., et al.*, DOE/FE Order No. 3282-C, Docket No. 10-161-LNG, Final Opinion and Order Granting Long-Term Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Freeport LNG Terminal on Quintana Island, Texas, to Non-Free Trade Agreement Nations (Nov. 14, 2014) (FLEX I Final Order).

³⁴⁶ *Freeport LNG Expansion, L.P., et al.*, DOE/FE Order No. 3357-B, Docket No. 11-161-LNG, Final Opinion and Order Granting Long-Term Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Freeport LNG Terminal on Quintana Island, Texas, to Non-Free Trade Agreement Nations (Nov. 14, 2014) (FLEX II Final Order).

³⁴⁷ *Cove Point LNG, LP*, DOE/FE Order No. 3331-A, Docket No. 11-128-LNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Cove Point LNG Terminal in Calvert County, Maryland, to Non-Free Trade Agreement Nations (May 7, 2015), *reh'g denied*, DOE/FE Order No. 3331-B (Apr. 18, 2016), *amended by* DOE/FE Order No. 3331-C (Aug. 4, 2017), *further amended by* DOE/FE Order No. 3331-D (Dec. 2, 2020).

³⁴⁸ *Cheniere Marketing, LLC and Corpus Christi Liquefaction, LLC*, DOE/FE Order No. 3638, Docket No. 12-97-LNG, Final Order and Opinion Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Proposed Corpus Christi Liquefaction Project to Be Located in Corpus Christi, Texas, to Non-Free Trade Agreement Nations (May 12, 2015).

³⁴⁹ *Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 3669, Docket Nos. 13-30-LNG, 13-42-LNG, & 13-121-LNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Sabine Pass LNG Terminal Located in Cameron Parish, Louisiana, to Non-Free Trade Agreement Nations (June 26, 2015).

³⁵⁰ *American LNG Marketing LLC*, DOE/FE Order No. 3690, Docket No. 14-209-LNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas in ISO Containers Loaded at the Proposed Hialeah Facility Near Medley, Florida, and Exported by Vessel to Non-Free Trade Agreement Nations (Aug. 7, 2015).

³⁵¹ *Bear Head LNG Corp. and Bear Head LNG (USA)*, DOE/FE Order No. 3770, Docket No. 15-33-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export U.S.-Sourced Natural Gas by Pipeline to Canada for Liquefaction and Re-Export in the Form of Liquefied Natural Gas to Non-Free Trade Agreement Countries (Feb. 5, 2016).

(USA) Ltd.,³⁵² Sabine Pass Liquefaction, LLC Design Increase (0.56 Bcf/d),³⁵³ Cameron LNG, LLC Design Increase (0.42 Bcf/d),³⁵⁴ Cameron LNG, LLC Expansion Project (1.41 Bcf/d),³⁵⁵ Lake Charles Exports, LLC (2.0 Bcf/d),³⁵⁶ Lake Charles LNG Export Company, LLC,³⁵⁷ Carib Energy (USA), LLC (0.004),³⁵⁸ Magnolia LNG, LLC (1.23 Bcf/d),³⁵⁹ Southern LNG Company, L.L.C. (0.36 Bcf/d),³⁶⁰ the FLEX Design Increase (0.34 Bcf/d),³⁶¹ Golden Pass LNG Terminal

³⁵² *Pieridae Energy (USA) Ltd.*, DOE/FE Order No. 3768, Docket No. 14-179-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export U.S.-Sourced Natural Gas Natural Gas by Pipeline to Canada for Liquefaction and Re-Export in the Form of Liquefied Natural Gas to Non-Free Trade Agreement Countries (Feb. 5, 2016).

³⁵³ *Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 3792, Docket No. 15-63-LNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Sabine Pass LNG Terminal Located in Cameron Parish, Louisiana, to Non-Free Trade Agreement Nations (Mar. 11, 2016).

³⁵⁴ *Cameron LNG, LLC*, DOE/FE Order No. 3797, Docket No. 15-67-LNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Cameron Terminal Located in Cameron and Calcasieu Parishes, Louisiana, to Non-Free Trade Agreement Nations (Mar. 18, 2016).

³⁵⁵ *Cameron LNG, LLC*, DOE/FE Order No. 3846, Docket No. 15-90-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from Trains 4 and 5 of the Cameron LNG Terminal Located in Cameron and Calcasieu Parishes, Louisiana, to Non-Free Trade Agreement Nations (July 15, 2016).

³⁵⁶ *Lake Charles Exports, LLC*, DOE/FE Order No. 3324-A, Docket No. 11-59-LNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Lake Charles Terminal in Calcasieu Parish, Louisiana, to Non-Free Trade Agreement Nations (July 29, 2016).

³⁵⁷ *Lake Charles LNG Export Co., LLC*, DOE/FE Order No. 3868, Docket No. 13-04-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Lake Charles Terminal in Calcasieu Parish, Louisiana to Non-Free Trade Agreement Nations (July 29, 2016).

³⁵⁸ *Carib Energy (USA) LLC*, DOE/FE Order No. 3937, Docket No. 16-98-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas in ISO Containers Loaded at Designated Pivotal LNG, Inc. Facilities and Exported by Vessel to Non-Free Trade Agreement Nations in Central America, South America, or the Caribbean (Nov. 28, 2016).

³⁵⁹ *Magnolia LNG, LLC*, DOE/FE Order No. 3909, Docket No. 13-132-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Proposed Magnolia LNG Terminal to be Constructed in Lake Charles, Louisiana, to Non-Free Trade Agreement Nations (Nov. 30, 2016), *reh'g denied*, Order No. 3909-A (Apr. 2, 2018), *amended by* Order No. 3909-B (Dec. 10, 2020) (extending export term), *further amended by* DOE/FECM Order No. 3909-C (Apr. 27, 2022) (increasing export volume).

³⁶⁰ *Southern LNG Company, L.L.C.*, DOE/FE Order No. 3956, Docket No. 12-100-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Elba Island Terminal in Chatham County, Georgia, to Non-Free Trade Agreement Nations (Dec. 16, 2016).

³⁶¹ *Freeport LNG Expansion, L.P., et al.*, DOE/FE Order No. 3957, Docket No. 16-108-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Freeport LNG Terminal on Quintana Island, Texas, to Non-Free Trade Agreement Nations (Dec. 19, 2016).

LLC (2.57 Bcf/d),³⁶² Delfin LNG LLC (1.8 Bcf/d),³⁶³ the Lake Charles LNG Export Company, LLC Design Increase (0.33 Bcf/d),³⁶⁴ the Lake Charles Exports, LLC Design Increase,³⁶⁵ Eagle LNG Partners Jacksonville II LLC (0.01 Bcf/d),³⁶⁶ Mexico Pacific Limited LLC (1.7 Bcf/d),³⁶⁷ Venture Global Calcasieu Pass, LLC (1.7 Bcf/d),³⁶⁸ ECA Liquefaction, S. de R.L. de C.V. (Mid-Scale Project) (0.44 Bcf/d),³⁶⁹ Energía Costa Azul, S. de R.L. de C.V. (Large-Scale Project)

³⁶² *Golden Pass LNG Terminal LLC*, DOE/FE Order No. 3978, Docket No. 12-156-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Golden Pass LNG Terminal Located in Jefferson County, Texas, to Non-Free Trade Agreement Nations (Apr. 25, 2017), *amended by* DOE/FE Order No. 3978-B, Order Granting Request to Transfer Authorizations and Responding to Statement of Change in Control (Mar. 4, 2020) (transferring authorization from Golden Pass Products LLC to Golden Pass LNG Terminal LLC), *further amended by* DOE/FECM Order No. 3978-E (Apr. 27, 2022) (increasing export volume).

³⁶³ *Delfin LNG LLC*, DOE/FE Order No. 4028, Docket No. 13-147-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from a Proposed Floating Liquefaction Project and Deepwater Port 30 Miles Offshore of Louisiana to Non-Free Trade Agreement Nations (June 1, 2017).

³⁶⁴ *Lake Charles LNG Export Co., LLC*, DOE/FE Order No. 4010, Docket No. 16-109-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Lake Charles Terminal in Lake Charles, Louisiana, to Free Trade Agreement and Non-Free Trade Agreement Nations (June 29, 2017).

³⁶⁵ *Lake Charles Exports, LLC*, DOE/FE Order No. 4011, Docket No. 16-110-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Lake Charles Terminal in Lake Charles, Louisiana, to Free Trade Agreement and Non-Free Trade Agreement Nations (June 29, 2017).

³⁶⁶ *Eagle LNG Partners Jacksonville II LLC*, DOE/FE Order No. 4078, Docket No. 17-79-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas in ISO Containers Loaded at the Eagle Maxville Facility in Jacksonville, Florida, and Exported by Vessel to Free Trade Agreement and Non-Free Trade Agreement Nations (Sept. 15, 2017).

³⁶⁷ *Mexico Pacific Limited LLC*, DOE/FE Order No. 4312, Docket No. 18-70-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export U.S.-Sourced Natural Gas by Pipeline to Mexico for Liquefaction and Re-Export in the Form of Liquefied Natural Gas to Non-Free Trade Agreement Countries (Dec. 14, 2018).

³⁶⁸ *Venture Global Calcasieu Pass, LLC*, DOE/FE Order No. 4346, Docket Nos. 13-69-LNG, 14-88-LNG, 15-25-LNG, Opinion and Order Granting Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations (Mar. 5, 2019).

³⁶⁹ *ECA Liquefaction, S. de R.L. de C.V.*, DOE/FE Order No. 4364, Docket No. 18-144-LNG, Opinion and Order Granting Long-Term Authorization to Re-Export U.S.-Sourced Natural Gas in the Form of Liquefied Natural Gas from Mexico to Non-Free Trade Agreement Countries (ECA Mid-Scale Project) (Mar. 29, 2019), *amended by* DOE/FE Order No. 4364-A (Oct. 7, 2019) (transferring authorization from Energía Costa Azul, S. de R.L. de C.V. to ECA Liquefaction, S. de R.L. de C.V.).

(1.74 Bcf/d),³⁷⁰ Port Arthur LNG, LLC (1.91 Bcf/d),³⁷¹ Driftwood LNG LLC (3.88 Bcf/d),³⁷² FLEX4 (0.72 Bcf/d),³⁷³ Gulf LNG Liquefaction Company, LLC (1.53 Bcf/d),³⁷⁴ Eagle LNG Partners Jacksonville LLC (0.14 Bcf/d),³⁷⁵ Venture Global Plaquemines LNG, LLC (3.40 Bcf/d),³⁷⁶ Texas LNG Brownsville LLC (0.56 Bcf/d),³⁷⁷ Corpus Christi Liquefaction Stage III, LLC (1.59 Bcf/d),³⁷⁸ Rio Grande LNG, LLC (3.61 Bcf/d),³⁷⁹ Epsilon LNG LLC (1.083 Bcf/d),³⁸⁰ Cheniere Marketing, LLC and Corpus Christi Liquefaction, LLC (0.3 Bcf/d),³⁸¹ Sabine Pass Liquefaction, LLC (0.42 Bcf/d),³⁸² and this Order.

³⁷⁰ *Energía Costa Azul, S. de R.L. de C.V.*, DOE/FE Order No. 4365, Docket No. 18-145-LNG, Opinion and Order Granting Long-Term Authorization to Re-Export U.S.-Sourced Natural Gas in the Form of Liquefied Natural Gas from Mexico to Non-Free Trade Agreement Countries (ECA Large-Scale Project) (Mar. 29, 2019), *amended by* DOE/FE 4365-A (Dec. 10, 2020), *further amended by* DOE/FECM Order No. 4365-B (Dec. 20, 2022) (increasing export volume).

³⁷¹ *Port Arthur LNG, LLC*, DOE/FE Order No. 4372, Docket No. 15-96-LNG, Opinion and Order Granting Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations (May 2, 2019).

³⁷² *Driftwood LNG LLC*, DOE/FE Order No. 4373, Docket No. 16-144-LNG, Opinion and Order Granting Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations (May 2, 2019).

³⁷³ *Freeport LNG Expansion, L.P., et al.*, DOE/FE Order No. 4374, Docket No. 18-26-LNG, Opinion and Order Granting Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations (May 28, 2019).

³⁷⁴ *Gulf LNG Liquefaction Co., LLC*, DOE/FE Order No. 4410, Docket No. 12-101-LNG, Opinion and Order Granting Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations (July 31, 2019).

³⁷⁵ *Eagle LNG Partners Jacksonville LLC*, DOE/FE Order No. 4445, Docket No. 16-15-LNG, Opinion and Order Granting Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations (Oct. 3, 2019).

³⁷⁶ *Venture Global Plaquemines LNG, LLC*, DOE/FE Order No. 4446, Docket No. 16-28-LNG, Opinion and Order Granting Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations (Oct. 16, 2019).

³⁷⁷ *Texas LNG Brownsville LLC*, DOE/FE Order No. 4489, Docket No. 15-62-LNG, Opinion and Order Granting Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations (Feb. 10, 2020).

³⁷⁸ *Corpus Christi Liquefaction Stage III, LLC*, DOE/FE Order No. 4490, Docket No. 18-78-LNG, Opinion and Order Granting Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations (Feb. 10, 2020).

³⁷⁹ *Rio Grande LNG, LLC*, DOE/FE Order No. 4492, Docket No. 15-190-LNG, Opinion and Order Granting Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations (Feb. 10, 2020).

³⁸⁰ *Epsilon LNG LLC*, DOE/FE Order No. 4629, Docket No. 20-31-LNG, Opinion and Order Granting Long-Term Authorization to Export Natural Gas to Mexico for Liquefaction, and to Re-Export U.S. Sourced Natural Gas in the Form of Liquefied Natural Gas from Mexico to Free Trade Agreement and Non-Free Trade Agreement Nations (Dec. 8, 2020).

³⁸¹ *Cheniere Marketing, LLC and Corpus Christi Liquefaction, LLC*, DOE/FECM Order No. 4799, Docket No. 19-124-LNG, Order Granting Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations (Mar. 16, 2022).

³⁸² *Sabine Pass Liquefaction, LLC*, DOE/FECM Order No. 4800, Docket No. 19-125-LNG, Order Granting Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations (Mar. 16, 2022).

We note that the volumes authorized for export in the *Lake Charles Exports* and *Lake Charles LNG Export* orders are both 2.0 Bcf/d and 0.33 Bcf/d, respectively, yet are not additive to one another because the source of LNG approved under all of those orders is the Lake Charles Terminal.³⁸³ Additionally, the volumes authorized for export in the *Bear Head* and *Pieridae US* orders are not additive; together, they are limited to the capacity of the Maritimes Northeast Pipeline at the U.S.-Canadian border.³⁸⁴

In sum, the total export volume granted to date is within the range of scenarios analyzed in the 2018 LNG Export Study. The 2018 Study found that exports of LNG from the lower-48 states, in volumes up to and including 52.8 Bcf/d of natural gas, will not result in economic consequences that would render additional exports inconsistent with the public interest.³⁸⁵ DOE further notes that, to date, the cumulative total of U.S. and Mexico LNG export capacity, using U.S.-sourced natural gas, that is operating or under construction across 10 mid- or large-scale export projects is 20.53 Bcf/d of natural gas.³⁸⁶

DOE will continue taking a measured approach in reviewing the other pending applications to export natural gas. Specifically, DOE will continue to assess the cumulative impacts of each succeeding request for export authorization on the public interest with due regard to the effect on domestic natural gas supply and demand fundamentals.

The reasons in support of proceeding cautiously are several: (1) the 2018 LNG Export Study, like any study based on assumptions and economic projections, is inherently limited in its predictive accuracy; (2) applications to export significant quantities of domestically produced

³⁸³ *Lake Charles LNG Export Co., LLC*, DOE/FE Order No. 4010, at 55; *see also Lake Charles Exports, LLC*, DOE/FE Order No. 4011, at 54.

³⁸⁴ *See Bear Head LNG Corporation and Bear Head LNG (USA)*, DOE/FE Order No. 3770, at 178-79.

³⁸⁵ *See* 2018 Study Response to Comments, 83 Fed. Reg. at 67,273 (citing 2018 LNG Export Study at 63 & Appendix F to the Study).

³⁸⁶ *See supra* note 295.

LNG are still a relatively new phenomenon with uncertain impacts; and (3) the market for natural gas has experienced rapid reversals in the past and is again changing rapidly due to economic, geopolitical, technological, regulatory, and climate change-related developments. The market of the future very likely will not resemble the market of today. In recognition of these factors, DOE intends to monitor developments that could tend to undermine the public interest in grants of successive applications for exports of domestically produced LNG and to attach terms and conditions to LNG export authorizations to protect the public interest.

IX. FINDINGS

On the basis of the findings and conclusions set forth above, DOE grants the non-FTA portion of Vista Pacifico's Application, subject to the Terms and Conditions and Ordering Paragraphs set forth below.

X. TERMS AND CONDITIONS

To ensure that the authorization issued by this Order is not inconsistent with the public interest, DOE has attached the following Terms and Conditions to the authorization. Vista Pacifico must abide by each Term and Condition or face appropriate sanction.

A. Term of the Authorization

Consistent with DOE's practice, DOE will grant Vista Pacifico's authorization for a term to commence on the date that Vista Pacifico commences commercial re-export of U.S.-sourced natural gas in the form of LNG from the proposed VPLNG Mid-Scale Project, and to extend through December 31, 2050.

B. Commencement of Operations

Consistent with DOE's final non-FTA authorizations to date and as requested by Vista Pacifico, DOE will add as a condition of the authorization that Vista Pacifico must commence commercial LNG re-export operations no later than seven years from the date of issuance of this

Order. The purpose of this condition is to ensure that other entities that may seek similar authorizations are not frustrated in their efforts to obtain those authorizations by authorization holders that are not engaged in actual export or re-export operations.

C. Transfer, Assignment, or Change in Control

DOE's natural gas regulations prohibit authorization holders from transferring or assigning authorizations to import or export natural gas without specific authorization by the Assistant Secretary for Fossil Energy and Carbon Management.³⁸⁷ DOE has found that this requirement applies to any change in control of the authorization holder. This condition was deemed necessary to ensure that DOE will be given an adequate opportunity to assess the public interest impacts of such a transfer or change.

DOE construes a change in control to mean a change, directly or indirectly, of the power to direct the management or policies of an entity, whether such power is exercised through one or more intermediary companies or pursuant to an agreement, written or oral, and whether such power is established through ownership or voting of securities, or common directors, officers, or stockholders, or voting trusts, holding trusts, or debt holdings, or contract, or any other direct or indirect means.³⁸⁸ A rebuttable presumption that control exists will arise from the ownership or the power to vote, directly or indirectly, 10% or more of the voting securities of such entity.³⁸⁹

In this Order, DOE's evaluation of the public interest under NGA section 3(a) includes an evaluation of Vista Pacifico's ownership, including that its majority owner, Sempra Energy, is a U.S. company.³⁹⁰ Should Vista Pacifico's ownership change in the future, including a change

³⁸⁷ 10 C.F.R. § 590.405.

³⁸⁸ See U.S. Dep't of Energy, Procedures for Changes in Control Affecting Applications and Authorizations to Import or Export Natural Gas, 79 Fed. Reg. 65,541, 65,542 (Nov. 5, 2014) [hereinafter Change in Control Procedures].

³⁸⁹ See *id.*

³⁹⁰ See *supra* § IV.A (Description of Applicant).

such that its majority owner is no longer a U.S. company, DOE may evaluate that change in control under the public interest standard as set forth in DOE's Change in Control Procedures.³⁹¹

D. Agency Rights

Vista Pacifico requests authorization to re-export U.S.-sourced natural gas in the form of LNG on its own behalf and as agent for other entities that hold title to the LNG at the time of re-export, pursuant to long-term contracts. DOE previously has determined that, in LNG export orders in which Agency Rights have been granted, DOE shall require registration materials filed for, or by, a LNG title-holder (Registrant) to include the same company identification information and long-term contract information of the Registrant as if the Registrant had filed an application to re-export LNG on its own behalf.³⁹²

To ensure that the public interest is served, this authorization shall be conditioned to require that where Vista Pacifico proposes to re-export LNG as agent for other entities that hold title to the LNG (Registrants), it must register those entities with DOE in accordance with the procedures and requirements described herein.

E. Contract Provisions for the Sale or Transfer of U.S.-Sourced Natural Gas in the Form of LNG to be Re-Exported

DOE will require that Vista Pacifico file or cause to be filed with DOE any relevant long-term commercial agreements pursuant to which Vista Pacifico exports natural gas and/or re-exports LNG as agent for a Registrant. DOE finds that the submission of all such agreements or

³⁹¹ See Change in Control Procedures, 79 Fed. Reg. at 65,542 (stating that, for final non-FTA authorizations, “[i]f one or more protests are submitted, DOE will review any motions to intervene, protests, and answers, and will issue a determination as to whether the proposed change in control has been demonstrated to render the underlying authorization inconsistent with the public interest.”).

³⁹² See, e.g., *Cameron LNG, LLC*, DOE/FE Order No. 3846, Docket No. 15-90-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from Trains 4 and 5 of the Cameron LNG Terminal to Non-Free Trade Agreement Nations, at 128-29 (July 15, 2016); *Freeport LNG Expansion, L.P., et al.*, DOE/FE Order No. 2913, Docket No. 10-160-LNG, Order Granting Long-Term Authorization to Export Liquefied Natural Gas from the Freeport LNG Terminal to Free Trade Agreement Nations, at 7-8 (Feb. 10, 2011).

contracts within 30 days of their execution using the procedures described below will be consistent with the “to the extent practicable” requirement of section 590.202(b).³⁹³

In addition, DOE finds that section 590.202(c) of DOE’s regulations³⁹⁴ requires that Vista Pacifico file, or cause to be filed, all long-term contracts associated with the long-term supply of U.S.-sourced natural gas to the VPLNG Mid-Scale Project, whether signed by Vista Pacifico or the Registrant, within 30 days of their execution.

DOE recognizes that some information in Vista Pacifico’s or a Registrant’s long-term commercial agreements associated with the export of natural gas and/or the re-export of U.S.-sourced natural gas as LNG, and/or long-term contracts associated with the long-term supply of U.S.-sourced natural gas to the VPLNG Mid-Scale Project, may be commercially sensitive.

DOE therefore will provide Vista Pacifico the option to file or cause to be filed either unredacted contracts, or in the alternative: (A) Vista Pacifico may file, or cause to be filed, long-term contracts under seal, but it also will file either: (i) a copy of each long-term contract with commercially sensitive information redacted, or (ii) a summary of all major provisions of the contract(s) including, but not limited to, the parties to each contract, contract term, quantity, any take or pay or equivalent provisions/conditions, destination, re-sale provisions, and other relevant provisions; and (B) the filing must demonstrate why the redacted or non-disclosed information should be exempted from public disclosure.

To ensure that DOE destination and reporting requirements included in this Order are conveyed to subsequent title holders, DOE will include as a condition of this authorization that future contracts for the sale or transfer of LNG re-exported pursuant to this Order shall include an acknowledgement of these requirements.

³⁹³ 10 C.F.R. § 590.202(b).

³⁹⁴ *Id.* § 590.202(c).

F. Re-Export Quantity

This Order grants Vista Pacifico's Application, such that Vista Pacifico is authorized to re-export U.S.-sourced natural gas in the form of LNG to non-FTA countries in the full volume requested, equivalent to 200 Bcf/yr of natural gas.

G. Combined FTA and Non-FTA Export Authorization Volumes

Vista Pacifico is currently authorized in DOE/FE Order No. 4688 to export domestically produced natural gas to Mexico and to re-export the natural gas in the form of LNG to FTA countries in a total volume of 240 Bcf/yr of natural gas. Because the source of LNG for that FTA order and this Order is the VPLNG Mid-Scale Project, Vista Pacifico may not treat the volumes as additive to one another.

XI. ORDER

Pursuant to section 3 of the Natural Gas Act, it is ordered that:

A. Vista Pacifico LNG, S.A.P.I. de C.V. (Vista Pacifico) is authorized to re-export U.S.-sourced natural gas in the form of LNG by vessel from the proposed VPLNG Mid-Scale Project, to be located in Topolobampo, Sinaloa, Mexico, in a volume equivalent to 200 Bcf/yr of natural gas. This authorization is for a term to commence on the date of first commercial re-export and to extend through December 31, 2050. Vista Pacifico is authorized to re-export this LNG on its own behalf and as agent for other entities who hold title to the natural gas, pursuant to one or more contracts of any duration.³⁹⁵

B. Vista Pacifico may re-export the U.S.-sourced natural gas in the form of LNG to any country with which the United States does not have a FTA requiring national treatment for trade in natural gas, which currently has or in the future develops the capacity to import LNG, and

³⁹⁵ These contracts may include the export of commissioning volumes prior to the start of facility operations on a non-additive basis. *See supra* note 15.

with which trade in natural gas is not restricted by U.S. law or policy. Willful failure to comply with destination restrictions imposed by DOE will result in rescission of this authorization.

C. Vista Pacifico must commence re-export operations using the planned liquefaction and export terminal facilities no later than seven years from the date of issuance of this Order.

D. Vista Pacifico shall ensure that all transactions authorized by this Order are permitted and lawful under U.S. laws and policies, including the rules, regulations, orders, policies, and other determinations of the Office of Foreign Assets Control of the U.S. Department of the Treasury. Failure to comply with these requirements could result in rescission of this authorization and/or other civil or criminal penalties.

E. (i) Vista Pacifico shall file, or cause others to file, with the U.S. Department of Energy, Office of Fossil Energy and Carbon Management, Office of Resource Sustainability, Office of Regulation, Analysis, and Engagement (FE-34) a non-redacted copy of all executed long-term contracts associated with the long-term re-export of U.S.-sourced natural gas in the form of LNG from the VPLNG Mid-Scale Project on its own behalf or as agent for other entities. In particular, if Vista Pacifico enters an agreement to sell LNG through an affiliated entity, all long-term contracts entered into by that affiliated entity shall also be subject to the requirements of this paragraph. The non-redacted copies must be filed within 30 days of their execution and may be filed under seal, as described above.

(ii) Vista Pacifico shall file, or cause others to file, with the Office of Regulation, Analysis, and Engagement a non-redacted copy of all executed long-term contracts associated with the long-term supply of U.S.-sourced natural gas to the VPLNG Mid-Scale Project. The non-redacted copies must be filed within 30 days of their execution and may be filed under seal, as described above.

F. Vista Pacifico is permitted to use its authorization to re-export U.S.-sourced natural gas in the form of LNG as agent for other LNG title-holders (Registrants), after registering those entities with DOE.³⁹⁶ Registration materials shall include an agreement by the Registrant to supply Vista Pacifico with all information necessary to permit Vista Pacifico to register that person or entity with DOE, including: (1) the Registrant's agreement to comply with this Order and all applicable requirements of DOE's regulations at 10 C.F.R. Part 590, including but not limited to destination restrictions; (2) the exact legal name of the Registrant, state/location of incorporation/registration, primary place of doing business, and the Registrant's ownership structure, including the ultimate parent entity if the Registrant is a subsidiary or affiliate of another entity; (3) the name, title, mailing address, e-mail address, and telephone number of a corporate officer or employee of the Registrant to whom inquiries may be directed; and (4) within 30 days of execution, a copy of any long-term contracts not previously filed with DOE, described in Ordering Paragraph E of this Order.

Any change in the registration materials—including changes in company name, contact information, length of the long-term contract, termination of the long-term contract, or other relevant modification—shall be filed with DOE within 30 days of such change(s).

G. Vista Pacifico, or others for whom Vista Pacifico acts as agent, shall include the following provision in any agreement or other contract for the sale or transfer of U.S.-sourced natural gas re-exported in the form of LNG pursuant to this Order:

³⁹⁶ DOE notes that the registration requirements established in this Order will apply only in circumstances where Vista Pacifico re-exports U.S.-sourced LNG from Mexico on behalf of an entity that holds title to the LNG at the time that Vista Pacifico re-exports it. If natural gas or LNG is exported or re-exported by a person or entity other than Vista Pacifico pursuant to a different authorization issued by DOE, the terms of that authorization will govern the registration requirements that apply. Registration will not be required for purchases of natural gas produced in Mexico for consumption in Mexico (*i.e.*, where the purchase was not part of an arrangement to export the natural gas from the United States on behalf of the purchaser).

Customer or purchaser acknowledges and agrees that it will resell or transfer U.S.-sourced natural gas, including in the form of LNG, purchased hereunder for delivery to countries identified in Ordering Paragraph B of DOE/FECM Order No. 4929, issued December 20, 2022, in Docket No. 20-153-LNG, and/or to purchasers that have agreed in writing to limit their direct or indirect resale or transfer of the natural gas or LNG to such countries. Customer or purchaser further commits to cause a report to be provided to Vista Pacifico LNG, S.A.P.I. de C.V. that identifies the country (or countries) into which the natural gas or re-exported LNG was actually delivered, and to include in any resale contract for such LNG the necessary conditions to ensure that Vista Pacifico LNG, S.A.P.I. de C.V. is made aware of all such actual destination countries.

H. Within two weeks after the first re-export authorized in Ordering Paragraph A occurs, Vista Pacifico shall provide written notification of the date that the first re-export occurred.

I. Vista Pacifico shall file with the Office of Regulation, Analysis, and Engagement, on a semi-annual basis, written reports describing the status of the proposed VPLNG Mid-Scale Project. The reports shall be filed on or by April 1 and October 1 of each year, and shall include information on the status of the proposed VPLNG Mid-Scale Project, including but not limited to the following: (i) the status of permits required under Mexican state and federal laws for the siting, construction, and operation of the VPLNG Mid-Scale Project and for the exports of the LNG subject to this authorization; (ii) the date the VPLNG Mid-Scale Project is expected to commence first re-exports of LNG, and (iii) the status of any associated long-term supply and re-export contracts.

J. With respect to any change in control of the authorization holder, Vista Pacifico must comply with DOE's Procedures for Change in Control Affecting Applications and Authorizations to Import or Export Natural Gas.³⁹⁷

³⁹⁷ See Change in Control Procedures, 79 Fed. Reg. at 65,541-42.

K. Monthly Reports: With respect to the re-export of U.S.-sourced natural gas as LNG authorized by this Order, Vista Pacifico shall file with the Office of Regulation, Analysis, and Engagement, within 30 days following the last day of each calendar month, a report on Form FE-746R indicating whether re-exports have been made. The first monthly report required by this Order is due not later than the 30th day of the month following the month of first re-export. In subsequent months, if re-exports have not occurred, a report of “no activity” for that month must be filed. If re-exports have occurred, the report must provide the information specified for each applicable activity and mode of transportation, as set forth in the Guidelines for Filing Monthly Reports. These Guidelines are available at: <https://www.energy.gov/fecm/guidelines-filing-monthly-reports>.

(Approved by the Office of Management and Budget under OMB Control No. 1901-0294)

L. All monthly report filings on Form FE-746R shall be made to the Office of Regulation, Analysis, and Engagement according to the methods of submission listed on the Form FE-746R reporting instructions available at: <https://www.energy.gov/fecm/regulation>.

M. The motion to intervene of Sierra Club and protest of Sierra Club and Centro Mexicano para la Defensa del Medio Ambiente, A.C. (DAN) is dismissed.

Issued in Washington, D.C., on December 20, 2022.

Amy R. Sweeney
Director, Office of Regulation, Analysis, and Engagement
Office of Resource Sustainability

**APPENDIX A: LONG-TERM EXPORT AUTHORIZATIONS ISSUED TO
VISTA PACIFICO LNG, S.A.P.I. DE C.V.**

Docket No. 20-153-LNG, VPLNG Mid-Scale Project

Type of Order	Order No.	Date Issued	Volume (Bcf/yr)
FTA	4688	Apr. 9, 2021	240
Non-FTA	4929	Dec. 20, 2022	200

Notes:

The FTA and non-FTA volumes are not additive.

The smaller non-FTA volume represents a subset of the FTA volume—specifically, the portion of U.S.-sourced natural gas that will be liquefied at the VPLNG Mid-Scale Project and re-exported in the form of LNG to non-FTA countries.

APPENDIX B: FINDING OF NO SIGNIFICANT IMPACT

FINDING OF NO SIGNIFICANT IMPACT FOR THE APPLICATION OF VISTA PACIFICO LNG, S.A.P.I. DE C.V. FOR LONG-TERM AUTHORIZATION TO RE-EXPORT U.S.-SOURCED NATURAL GAS IN THE FORM OF LIQUEFIED NATURAL GAS FROM MEXICO TO NON-FREE TRADE AGREEMENT COUNTRIES

AGENCY: U.S. Department of Energy (DOE), Office of Fossil Energy and Carbon Management (FECM)

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: Under DOE/FECM Order No. 4929,³⁹⁸ Vista Pacifico LNG, S.A.P.I. de C.V. (Vista Pacifico) is authorized to re-export³⁹⁹ U.S.-sourced natural gas in the form of LNG by vessel, in a volume equivalent to 200 billion cubic feet (Bcf) per year (Bcf/yr) of natural gas, from the proposed VPLNG Mid-Scale Project, to be located in Topolobampo, Sinaloa, Mexico. Vista Pacifico is authorized to re-export this U.S.-sourced LNG by vessel to any country with which the United States has not entered into a free trade agreement (FTA) requiring national treatment for trade in natural gas, and with which trade is not prohibited by U.S. law or policy (non-FTA countries) under section 3(a) of the NGA.⁴⁰⁰

In an application filed on November 18, 2020 (Application),⁴⁰¹ Vista Pacifico states that the proposed VPLNG Mid-Scale Project would “include one liquefaction train capable of producing up to four (4) [million metric tons per year] of LNG and a gas pre-treatment unit for removal of Mercury and acid gas, dehydration, and natural gas liquids removal and fractionation,” along with a 180,000 cubic meter LNG storage tank, marine jetty, ground flare equipment, and piping and other facilities to interconnect to pipeline infrastructure.⁴⁰² Accordingly, in the non-FTA portion of the Application at issue, Vista Pacifico asks DOE to authorize re-exports of 200 Bcf/yr (0.55 Bcf per day) from the VPLNG Mid-Scale Project.⁴⁰³

On July 12, 2022, DOE issued a Notice of Environmental Assessment, in which DOE announced its intention to prepare an environmental assessment (EA) under the National Environmental Policy Act of 1969 (NEPA)⁴⁰⁴ to evaluate the potential environmental impacts associated with

³⁹⁸ *Vista Pacifico LNG, S.A.P.I. de C.V.*, DOE/FECM Order No. 4929, Docket No. 20-153-LNG, Order Granting Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Countries (VPLNG Mid-Scale Project) (Dec. 20, 2022).

³⁹⁹ For purposes of Vista Pacifico’s order, “re-export” means to ship or transmit U.S.-sourced natural gas in its various forms (gas, compressed, or liquefied) subject to DOE’s jurisdiction under the Natural Gas Act (NGA), 15 U.S.C. § 717b, from one foreign country (*i.e.*, a country other than the United States) to another foreign country.

⁴⁰⁰ 15 U.S.C. § 717b(a).

⁴⁰¹ *Vista Pacifico LNG, S.A.P.I. de C.V.*, Application for Long-Term Multi-Contract Authorizations to Export Natural Gas to Mexico and to Export Liquefied Natural Gas from Mexico to Free Trade Agreement and Non-Free Trade Agreement Nations (VPLNG Mid-Scale Project), Docket No. 20-153-LNG (Nov. 18, 2020) [hereinafter App.].

⁴⁰² *Id.* at 13.

⁴⁰³ *Id.* at 10, 50.

⁴⁰⁴ 42 U.S.C. § 4321 *et seq.*

Vista Pacifico's Application.⁴⁰⁵ On October 28, 2022, pursuant to the regulations of the Council on Environmental Quality (CEQ), DOE issued the final EA (EA) (DOE/EA-2192).⁴⁰⁶

SUPPLEMENTARY INFORMATION: Previously, on August 15, 2014, DOE published the *Addendum to Environmental Review Documents Concerning Exports of Natural Gas from the United States* (Addendum).⁴⁰⁷ DOE prepared the Addendum to be responsive to the public and to provide the best information available on a subject that had been raised by commenters in LNG export application dockets. The Addendum addresses unconventional natural gas production in the Nation as a whole. It does not attempt to identify or characterize the incremental environmental impacts that would result from LNG exports (or re-exports) to non-FTA countries.⁴⁰⁸

Also in 2014, DOE published a report entitled, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States* (2014 LCA GHG Report or 2014 Report).⁴⁰⁹ The 2014 LCA GHG Report calculated the life cycle (LCA) greenhouse gas (GHG) emissions for LNG made from natural gas sourced from the lower-48 states and exported to markets in Europe and Asia. DOE commissioned this life cycle analysis to inform its review of non-FTA applications, as part of its broader effort to evaluate different environmental aspects of the LNG production and export chain. The LCA GHG Report concluded that the use of U.S. LNG exports for power production in European and Asian markets will not increase global GHG emissions from a life cycle perspective, when compared to regional coal extraction and consumption for power production.

In 2019, DOE published an update to the 2014 LCA GHG Report, entitled *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas From the United States: 2019 Update* (LCA GHG Update or 2019 Update).⁴¹⁰ The conclusions of the 2019 Update were consistent with those of the 2014 LCA GHG Report—that, “[w]hile acknowledging uncertainty, to the extent U.S. LNG exports are preferred over coal in LNG-importing nations, U.S. LNG exports are likely to reduce global GHG emissions on per unit of energy consumed basis for

⁴⁰⁵ See *Vista Pacifico LNG, S.A.P.I. de C.V.*, Notice of Environmental Assessment, Docket No. 20-153-LNG (July 12, 2022), at 5 [hereinafter Notice of EA]. Vista Pacifico subsequently filed a response to the Notice of EA. See *Vista Pacifico LNG, S.A.P.I. de C.V.*, Response to Notice of Environmental Assessment, Docket No. 20-153-LNG (Aug. 2, 2022).

⁴⁰⁶ U.S. Dep't of Energy, *Vista Pacifico LNG, S.A.P.I. de C.V. Environmental Assessment – VPLNG Mid-Scale Project*, DOE/EA-2192 (Oct. 28, 2022), <https://www.energy.gov/sites/default/files/2022-10/FINAL%20Environmental%20Assessment%20-%20Vista%20Pacifico%2010-28-22.pdf> [hereinafter EA]; see also *id.* at 27 (Appendix D) (summarizing DOE's process in providing a draft of the EA to affected states and tribes).

⁴⁰⁷ U.S. Dep't of Energy, *Draft Addendum to Environmental Review Documents Concerning Exports of Natural Gas From the United States*, 79 Fed. Reg. 32,258 (June 4, 2014).

⁴⁰⁸ See *Sierra Club v. U.S. Dep't of Energy*, 867 F.3d 189, 198-99 (D.C. Cir. 2017) (upholding DOE's conclusion that, without knowing where local production of the incremental natural gas would occur, the corresponding environmental impacts are not reasonably foreseeable under NEPA).

⁴⁰⁹ U.S. Dep't of Energy, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas From the United States*, 79 Fed. Reg. 32,260 (June 4, 2014).

⁴¹⁰ Nat'l Energy Tech. Lab., *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States: 2019 Update* (DOE/NETL-2019/2041) (Sept. 12, 2019), <https://www.energy.gov/sites/prod/files/2019/09/f66/2019%20NETL%20LCA-GHG%20Report.pdf>.

power production.”⁴¹¹ Further, “to the extent U.S. LNG exports are preferred over other forms of imported natural gas, they are likely to have only a small impact on global GHG emissions.”⁴¹²

Additionally, as part of a NEPA rulemaking finalized on December 4, 2020,⁴¹³ DOE conducted a detailed review of technical documents regarding potential effects associated with marine transport of LNG.⁴¹⁴ These documents were identified in an accompanying Marine Transport Technical Support Document (Technical Support Document).⁴¹⁵ On the basis of the data referenced in the Technical Support Document, DOE concluded that “the transport of natural gas by marine vessels adhering to applicable maritime safety regulations and established shipping methods and safety standards normally does not pose the potential for significant environmental impacts.”⁴¹⁶

The purpose and need for DOE’s action is to comply with section 3(a) of the NGA, which requires DOE to issue an order granting an application for authority to export natural gas, including U.S.-sourced LNG, to non-FTA countries unless, after opportunity for hearing, DOE finds that the proposed export will not be consistent with the public interest. DOE’s decision to grant or deny Vista Pacifico’s Application is based on a public interest review of the proposed re-exports, which includes completing the environmental review required by NEPA.

Discussion and analysis related to the potential impacts of a grant of Vista Pacifico’s Application are contained within the EA (DOE/EA-2192), which is incorporated herein by reference. The EA determined that the environmental impacts subject to analysis are limited to those direct and indirect impacts that would occur in the United States and those that affect the global commons. Therefore, DOE did not analyze potential environmental impacts associated with elements of the proposed Project that would occur within the sovereign territory of Mexico or any other country.⁴¹⁷

In the EA, DOE evaluated potential environmental impacts of the requested authorization in the following areas: incremental U.S. natural gas production, incremental cross-border pipeline transportation of U.S.-sourced natural gas to Mexico, marine transportation of LNG, and GHG emissions and climate change.⁴¹⁸ The EA incorporated by reference the Addendum, the 2014 LCA GHG Report and 2019 Update, the Marine Transport Technical Support Document, and

⁴¹¹ U.S. Dep’t of Energy, Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas From the United States: 2019 Update – Response to Comments, 85 Fed. Reg. 72, 85 (Jan. 2, 2020).

⁴¹² *Id.*

⁴¹³ See U.S. Dep’t of Energy, National Environmental Policy Act Implementing Procedures, Final Rule; 85 Fed. Reg. 78,197 (Dec. 4, 2020).

⁴¹⁴ *Id.* at 78,199.

⁴¹⁵ See *id.* at 78,198 n.16 (citing U.S. Dep’t of Energy, Technical Support Document, Notice of Final Rulemaking, National Environmental Policy Act Implementing Procedures (10 C.F.R. Part 1021) (Nov. 2020)).

⁴¹⁶ *Id.* at 78,200; see also *id.* at 78,202. We note that, in the 2014 LCA GHG Report and 2019 Update, DOE also considered how emissions associated with the ocean transport of U.S. LNG in tankers contribute to total life cycle GHG emissions.

⁴¹⁷ See EA at 3-4. Although outside the scope of the EA, DOE summarized Mexico’s environmental review process for the public’s information. See *id.* at 4-5.

⁴¹⁸ See *id.* at 5-19.

documents in the Federal Energy Regulatory Commission (FERC) dockets for the regulatory review of the identified cross-border natural gas pipelines.

Based on the analysis in these areas, the EA concluded that the Proposed Action (re-exports of U.S.-sourced natural gas in the form of LNG in a volume of 200 Bcf/yr from the proposed VPLNG Mid-Scale Project) would not pose the potential for significant environmental impacts, and that a No Action Alternative would not have a currently identifiable environmental advantage over the Proposed Action.

DETERMINATION: On the basis of the EA (DOE/EA-2192)—including but not limited to the Addendum, the 2014 LCA GHG Report and 2019 Update, and the Technical Support Document referenced therein—DOE has determined that granting the non-FTA portion of Vista Pacifico’s Application to re-export 200 Bcf/yr of natural gas as LNG from the VPLNG Mid-Scale Project will not have a significant effect on the human environment. The preparation of an environmental impact statement, therefore, is not required, and DOE is issuing this Finding of No Significant Impact.

The EA and this FONSI are available at DOE’s website at <https://www.energy.gov/fecm/articles/vista-pacifico-lng-sapi-de-cv-fe-dkt-no-20-153-lng>. The EA and FONSI are also available at <https://www.energy.gov/nepa/nepa-documents>.