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

Vista Pacifico LNG, S.A.P.I. de C.V.

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FE Docket No. 20-53-LNG

**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

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defined below, 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, or in the future enters into, a free trade agreement (“FTA”) requiring national treatment for trade in natural gas (“FTA countries”),³ and
- b. any other country with which trade is not prohibited by U.S. law or policy (“Non-FTA countries”).⁴

Consistent with the policy statement issued by DOE/FE on July 29, 2020,⁵ Vista Pacifico requests a term through December 31, 2050 for the volumes requested in this Application.

Vista Pacifico requests this authorization both on its own behalf and as an agent for other parties who hold title to the gas and/or LNG at the time of export. Moreover, consistent with DOE/FE precedent,⁶ Vista Pacifico requests that DOE/FE neither limit the export locations to a

³ 15 U.S.C. § 717b(c).

⁴ Natural gas that is consumed in Mexico as fuel for pipeline transportation or liquefaction should be considered to be exported to Mexico, an FTA country. Thus, only the volume being re-exported from Mexico as LNG (200 Bcf/y) to Non-FTA countries should require Non-FTA export authorization.

⁵ *Extending Natural Gas Export Authorizations to Non-Free Trade Agreement Countries Through the Year 2050*, 85 Fed. Reg. 52,237 (Aug. 25, 2020) (“Term Extension Policy Statement”). Under the Term Extension Policy Statement, “[f]uture long-term non-FTA export authorizations, if granted, will have a standard export term lasting through December 31, 2050, unless a shorter term is requested by the applicant. Accordingly, all new long-term applications to export domestically produced natural gas from the lower-48 states, including LNG, should request an export term lasting through December 31, 2050 (inclusive of any make-up period)—or state that the applicant requests a shorter export term.” *Id.* at 52,247. To the extent that the DOE/FE’s policy set forth in the Term Extension Policy Statement is subsequently modified prior to the issuance of the authorization requested in this Application, Vista Pacifico respectfully requests that the DOE/FE grant the maximum term then permitted by DOE/FE policy.

⁶ See *Mexico Pacific Limited LLC*, DOE/FE Order No. 4312, FE 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) [hereinafter *Mexico Pacific*]; *Energía Costa Azul, S. de R.L. de C.V.*, DOE/FE Order No. 4364, FE 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) at 32-33 (Mar. 29, 2019) [hereinafter *ECA Mid-Scale*]; *Energía Costa Azul, S. de R.L. de C.V.*, DOE/FE Order No. 4365, FE 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) [hereinafter *ECA Large-Scale*].

specific set of border-crossing facilities, nor limit the export volumes to the capacity of one or more border-crossing facilities. Vista Pacifico further requests that the DOE/FE not require Vista Pacifico to file a subsequent application for supplemental authorizations if new or expanded U.S. pipelines are constructed in the future that Vista Pacifico could use to export natural gas up to Vista Pacifico's requested export volume.

Vista Pacifico is submitting this Application in connection with development of one of two sets of proposed Topolobampo liquefaction and export terminal facilities (the "Project" or "VPLNG Mid-Scale Project") to be located in Topolobampo, Mexico in the town of Topolobampo, municipality of Ahome in the coast of the Gulf of California in the northwestern part of the Mexican state of Sinaloa, approximately 500 miles south of the US-Mexico border. The proposed VPLNG Mid-Scale Project will receive, process, and liquefy natural gas into LNG, which will be stored on location and loaded onto ocean-going vessels for export to various foreign nations. The VPLNG Mid-Scale Project requires various permits from regulatory entities in Mexico, as well as authorization from the DOE/FE for the export of feed gas for the Project and for the re-export of LNG from the Project to FTA and Non-FTA nations. Vista Pacifico currently anticipates commencing construction activities associated with the VPLNG Mid-Scale Project in 2022 and commencing commercial operations no later than 2025.

In this Application, Vista Pacifico is requesting authorization to export natural gas by pipeline from the United States through any of the existing cross-border pipeline facilities interconnecting the United States and Mexico.⁷ Vista Pacifico is also requesting that DOE/FE

⁷ Appendix D attached to this Application contains a listing of the existing cross-border facilities between the United States and Mexico. Throughout this Application Vista Pacifico refers to "existing" capacity to encompass both pipeline projects that have already been built and placed into service, as well as those projects that were proposed and/or authorized by the FERC prior to and independent of the export applications of the VPLNG Mid-Scale Project and were therefore not related to Vista Pacifico's projects. Appendix D also includes an excerpt from a report prepared by ICF International for an unrelated project, the ECA Mid-Scale Project, which alternatively estimates capacity at the U.S.-Mexico border. Due to the quality of information available and the different

authorize the exportation of natural gas from facilities that may be constructed in the future. Given the configuration of the U.S. and Mexican pipeline grids, natural gas necessary to serve as feedstock for the VPLNG Mid- Scale Project can be sourced from multiple production basins and purchased at 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 VPLNG Mid-Scale Project.⁸ Vista Pacifico is in the process of securing arrangements for its upstream supply; however, at this time, Vista Pacifico notes that the export capacity through existing physical border-crossing pipeline facilities extending between the United States and Mexico exceeds the amount requested in this application, as discussed below.

The VPLNG Mid-Scale Project facilities will include: (a) a single natural gas liquefaction train module capable of producing up to four (4) million tonnes per annum (“mtpa”) of LNG, including the associated feed-gas pre-treatment adequate to receive pipeline quality feed gas; (b) a single 180,000 cubic meter (“m³”) LNG storage tank; (c) a jetty; (d) ground flare equipment; (e) piping and interconnection facilities; and (f) associated utilities.

As discussed below, applications for permits associated with the VPLNG Mid-Scale Project and any Mexican pipeline facilities used to transport natural gas to the Project in Mexico will be filed with the appropriate authorities in that country. The permitting process for construction permit applications will involve an environmental review undertaken by Mexican authorities, and construction of the facilities will not proceed until the necessary Mexican permits have been issued. Appendix B to this Application contains a general description of the Mexican permitting process for pipeline and liquefaction projects in that country.

calculation methodologies used, the estimates of total cross-border capacity established in the ICF report (14,907 MMcf/d) and the first page of Appendix D (14,830 MMcf/d) differ, but only very slightly.

⁸ 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.

Because upstream physical pipeline capacity in the United States and across the U.S./Mexican border exceeds the export volumes contemplated in this Application,⁹ consistent with its prior practice in other Non-FTA export proceedings,¹⁰ Vista Pacifico is requesting that the DOE/FE issue a determination that the Application qualifies for a categorical exclusion from review under the National Environmental Policy Act of 1969 (“NEPA”).¹¹ Specifically, consistent with applicable judicial and DOE/FE precedent, Vista Pacifico submits that the Project qualifies for Categorical Exclusion B5.7 set forth in the DOE’s regulations governing the agency’s compliance with NEPA, which applies, in relevant part, to “[a]pprovals . . . of new authorizations . . . to . . . export natural gas under section 3 of the Natural Gas Act that involve minor operational changes (such as changes in natural gas throughput, transportation, and storage operations) but not new construction.”¹²

Vista Pacifico respectfully requests that DOE/FE issue an order granting the requested authorizations to export natural gas from the United States to Mexico for use in Mexico or for liquefaction and re-export to FTA countries as described in this Application without modification or delay pursuant to Section 3(c) of the NGA not later than February 1, 2021. Further, Vista Pacifico respectfully requests that the DOE/FE issue an order granting the requested authorizations to export natural gas from the United States to Mexico for liquefaction and re-export to Non-FTA countries as described in this Application without modification or delay pursuant to Section 3(a) of the NGA not later than May 1, 2021.

In support of its application, Vista Pacifico states as follows:

⁹ See Appendix D (listing existing cross-border facilities with a combined capacity exceeding 14.8 Bcf/d).

¹⁰ *Mexico Pacific* at 30; *ECA Mid-Scale* at 35-36; *ECA Large-Scale* at 36.

¹¹ 42 U.S.C. § 4321 *et seq.* (2012).

¹² 10 C.F.R. Part 1021, Subpart D, app. B § B5.7.

I. COMMUNICATIONS AND CORRESPONDENCE

All communications and correspondence regarding this Application, including all service of pleadings and notice, should be directed to the following persons:¹³

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II. DESCRIPTION OF THE APPLICANT

The exact legal name of Vista Pacifico is Vista Pacifico, S.A.P.I. de C.V. Vista Pacifico is a variable-capital, limited liability company organized under the laws of Mexico. The principal place of business of Vista Pacifico is Paseo de la Reforma # 342 Piso 24, Col. Juarez, Del. Cuauhtémoc, Mexico D.F. 06600. Vista Pacifico is owned by subsidiaries of Infraestructura Energetica Nova, S.A.B. de C.V. (“IEnova”) and Sempra Energy. IEnova is one of the largest natural gas infrastructure developers in Mexico and was the first publicly-traded energy infrastructure company listed on the Mexican Stock Exchange (*Bolsa Mexicana de Valores*). A majority of the ownership interests in IEnova (66.6%) is held by indirect, wholly-owned subsidiaries of Sempra Energy, a publicly-traded California corporation,¹⁴ and the remaining outstanding shares of IEnova are publicly traded on the *Bolsa de Valores*. A chart reflecting the ownership structure of Vista Pacifico is attached as Appendix C.

¹³ Vista Pacifico requests waiver of Section 590.202(a) of DOE’s regulations, to the extent necessary to include outside counsel on the official service list in this proceeding. *See* 10 C.F.R. § 590.202(a).

¹⁴ The remaining shares of IEnova are publicly traded.

III. EXECUTIVE SUMMARY

The purpose of this Application is to obtain authorization from the DOE/FE under Section 3 of the NGA for the export of surplus natural gas from the United States to Mexico, where it will be liquefied at the VPLNG Mid-Scale Project site and loaded onto marine vessels for export as LNG to foreign markets. The Project is proposed to be located along the Pacific Coast in Mexico, on a 370.66-acre (150 Hectare) site for which IEnova has secured an option to purchase. The site is located in the town of Topolobampo, municipality of Ahome in the northwestern part of the Mexican state of Sinaloa, approximately 500 miles south of the US-Mexico border. The approval of exports as requested in this Application would permit the construction of the 4 mtpa VPLNG Mid-Scale Project. Abundant supplies of natural gas from the United States are available to serve both domestic natural gas needs and the needs of the VPLNG Mid-Scale Project for the proposed term. The use of U.S.-sourced natural gas for Vista Pacifico's exports would not significantly reduce the volume of natural gas potentially available for domestic consumption. The forecasts of the U.S. Energy Information Administration ("EIA"), illustrate that there is abundant U.S. natural gas supply currently and during the Project's proposed timeframe for exports. The robust supply of natural gas, largely as a result of increased levels of production from unconventional resources, is forecasted to exceed demand.

On an international level, the VPLNG Mid-Scale Project will favorably influence the balance of trade that the United States has with its international trading partners. Abundant 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. Furthermore, existing cross-border pipeline capacity between the United States and Mexico (approximately 14.8 Bcf/d) is well in excess of the volumes requested in this Application. Accordingly, Vista Pacifico respectfully requests that the DOE/FE issue an VPLNG Mid-Scale Project

order approving the requested exports without limiting the locations at which Vista Pacifico may export gas from the U.S. to a specific set of cross-border facilities, tying the volume of authorized exports to a particular set of cross-border facilities, or conditioning the authorization upon submission of further applications should Vista Pacifico choose to export the volumes requested in this Application using U.S. cross-border facilities that are constructed in the future.

IV. AUTHORIZATIONS REQUESTED

Vista Pacifico respectfully requests that the DOE/FE grant long-term multi contract authorizations for Vista Pacifico to engage in (1) exports of up to 240 Bcf/y of natural gas by pipeline to Mexico; and (2) re-exports of LNG up to the equivalent of 200 Bcf/y of natural gas (or an average of approximately 548 MMcf/d of natural gas) from the VPLNG Mid-Scale Project to FTA and Non-FTA countries.

As discussed in greater detail in Part VII of the Application below, consistent with DOE/FE Precedent, Vista Pacifico respectfully requests that the DOE/FE neither limit the locations at which Vista Pacifico may export gas from the United States to a specific set of border-crossing pipeline facilities, nor tie the quantity of natural gas that may be exported under the requested authorizations to the capacity of any particular cross-border pipeline facilities.¹⁵ Vista Pacifico further requests that the DOE/FE not require Vista Pacifico to file additional applications for authorization if new U.S. pipelines are constructed in the future that would transport the gas authorized under the export authorizations requested herein, but at different locations.¹⁶ Approving Vista Pacifico's request without imposing such restrictions would be consistent with the public interest and the manner in which the DOE/FE has treated Non-FTA export authorizations issued to LNG export projects

¹⁵ See *Mexico Pacific*; *ECA Mid-Scale* at 32-33; *ECA Large-Scale* at 32-33.

¹⁶ To the extent that Vista Pacifico proposes to export natural gas from the United States to Mexico for re-export from Mexico to other countries in volumes that exceed the volumes requested in this Application, Vista Pacifico will file any necessary additional application for authorization under the NGA.

located in the United States. Further, this proceeding is distinguishable from the only two proceedings in which the DOE/FE found such restrictions to be necessary, each of which involved the export of U.S. natural gas solely through a pipeline that did not at the time have sufficient physical capacity to transport the requested volumes to and across the international border. In contrast, the pipeline facilities identified in this Application as capable of transporting gas supplies for the VPLNG Mid-Scale Project currently have the physical capacity to transport the required gas to the U.S./Mexican border, and the total existing cross-border physical capacity substantially exceeds the volumes Vista Pacifico is requesting to export into Mexico. Further, the VPLNG Mid-Scale Project will have access to a wide range of natural gas supply and transportation options through the integrated grid of multiple interstate and intrastate natural gas pipelines in the U.S., numerous border-crossing facilities, and the Mexican natural gas pipeline grid that may be accessed in the future. Further, given the tendency of gas production profiles and economics to vary over long periods of time, gas supply arrangements for the Project may change over the course of the term requested in this Application, requiring Vista Pacifico to have some flexibility in the location where gas may be exported from the United States into Mexico. Thus, the restrictions that the DOE/FE has imposed in the past would be inappropriate here.

Vista Pacifico requests that the export term of the additional volumes requested in this Application extend through December 31, 2050.

Vista Pacifico requests that the term for the full volumes associated with the VPLNG Mid-Scale Project commence on the earlier of the date of first commercial export or a date seven years from the issuance of an order by the DOE/FE granting the requested authorizations. Vista Pacifico further requests that the term extend until December 31, 2050 or, in the event the DOE's practice as reflected in the Term Extension Policy Statement is modified, the maximum term permitted by

DOE/FE policy at the time the order approving the authorizations requested in this Application is issued. Vista Pacifico requests authorization to export natural gas and LNG on its own behalf and as agent for other parties who will hold title to natural gas at the time it is exported across the U.S./Mexican border and LNG at the time it is re-exported from the Vista Pacifico terminal for delivery to Non-FTA countries, as permitted by DOE/FE policy.¹⁷ Vista Pacifico will comply with all DOE/FE requirements related to Vista Pacifico's re-exportation of LNG produced from U.S.-sourced natural gas on behalf of others, including any applicable requirements to register LNG title holders or to file long-term commercial agreements under seal with the DOE/FE.

Vista Pacifico anticipates entering into one or more long-term export agreements with customers of the Project. Section 590.202(b) of DOE's regulations requires applicants to submit information regarding the terms of certain transactions, which includes long-term supply agreements and long-term export agreements.¹⁸ Vista Pacifico has not currently entered into any export agreements or finalized supply arrangements for the Project, but will comply with the obligation to file such agreements after they have been executed, consistent with DOE/FE policy.¹⁹

Accordingly, Vista Pacifico respectfully requests that the DOE/FE issue an order granting the authorization requested herein to export natural gas and LNG to FTA countries by February 1, 2021. Vista Pacifico further requests that the DOE/FE issue an order granting the authorization requested herein to export LNG to Non-FTA countries by May 1, 2021 which will allow Vista

¹⁷ *Freeport LNG Expansion, L.P.*, DOE/FE Order No. 2913, FE Docket No. 10-160-LNG, Order Granting Long-Term Authorization to Export Liquefied Natural Gas from Freeport LNG Terminal to Free Trade Nations (Feb. 10, 2011).

¹⁸ 10 C.F.R. § 590.202(b)(4).

¹⁹ Vista Pacifico notes that on December 13, 2018, the Department of Energy issued a proposed interpretive rule regarding the filing of contracts and purchase agreements associated with the export of natural gas. On January 18, 2019, Vista Pacifico's affiliate, Sempra LNG & Midstream, LLC (now Sempra LNG, LLC), filed comments on the proposed interpretive rule. As of the date of this filing, the proposed interpretive rule remains pending before the Department of Energy.

Pacifico to move forward with the commercial development, financing, and contracting of the Project.

V. DESCRIPTION OF THE PROJECT

A. VPLNG Mid-Scale Project

The VPLNG Mid-Scale Project will permit the exportation of U.S. natural gas from various sources to Mexico for liquefaction and re-export to foreign markets. The Project will be located in the town of Topolobampo, municipality of Ahome in the northwestern part of the Mexican state of Sinaloa, approximately 500 miles south of the border between the United States and Mexico. The Project is a joint effort between Sempra Energy and its Mexican affiliate, IEnova, which owns Vista Pacifico.

The Project will be located at a site for which IEnova hold an option to purchase near Topolobampo. A map of the general location of the facility is included in Appendix D. The major components that will be constructed as part of the VPLNG Mid-Scale Project include: (a) one (1) liquefaction train capable of producing up to four (4) mtpa of LNG and a gas pre-treatment unit for removal of Mercury and acid gas, dehydration, and natural gas liquids removal and fractionation; (b) a single LNG storage tank of 180,000m³, (c) a marine jetty; (d) ground flare equipment; and (e) piping and other facilities to permit the interconnection of the Project to pipeline infrastructure. Feed gas for the Project will be supplied through the Mexican pipeline grid. New or modified utilities and offsite facilities will be provided for the Project as required.

The VPLNG Mid-Scale Project is designed to meet the growing global demand for North American-sourced LNG over the next few decades. The location along the coast of Sinaloa will permit the VPLNG Mid-Scale Project to transport US natural gas to growing Asian markets while avoiding transits through the Panama Canal, as well as markets in other regions of Mexico, South

America, and other global markets. Following receipt of the approvals requested in this Application, Vista Pacifico plans to reach a final investment decision and commence construction of the VPLNG Mid-Scale Project to place it in service within seven years of the date of the DOE/FE order.

B. Natural Gas Supply and Transportation

Abundant supplies of natural gas in the United States are available to serve both domestic natural gas needs, including the proposed VPLNG Mid-Scale Project. Natural gas for the proposed exports can be sourced from basins throughout the United States including the Gulf Coast, Mid-Continent, West Texas, and Rocky Mountain regions, providing the VPLNG Mid-Scale Project with supply diversity and optionality for the benefit of its customers. Given the size of traditional natural gas resources available to the Project, as well as the rapid growth in emerging unconventional gas and oil technical resource base throughout the United States, the VPLNG Mid-Scale Project will have a choice of diverse and reliable alternative gas supplies.

The potential sources of natural gas for the Project will include vast supplies available from the producing regions in the Western United States and the Gulf Coast. The EIA reports that, in 2019, these regions collectively produced 19.2 trillion cubic feet (“Tcf”) (an average of approximately 52 Bcf/d) natural gas, which was over half of the U.S. total production for that year.²⁰ In addition, according to the Potential Gas Committee’s year-end 2018 assessment, the Gulf Coast, Rocky Mountain, and Mid-Continent regions are estimated to have traditional gas resources of 1,632 Tcf.²¹

²⁰ U.S. Energy Information Administration, *Natural Gas Gross Withdrawals and Production* (Aug. 31, 2020), http://www.eia.gov/dnav/ng/ng_prod_sum_a_EPG0_VGM_mmcfc_a.htm. For purposes of calculating total marketed production from the Western United States and Gulf Coast, EIA’s data has been aggregated for the following categories: TX, LA, MT, WY, CO, NM, UT, CA, and Federal Offshore Gulf of Mexico.

²¹ U.S. Potential Gas Committee, Press Release, *Potential Gas Committee Reports Record Future Supply of Natural Gas in the U.S.* (Sept. 11, 2019), <http://www.potentialgas.org/press-release>.

Technological improvements in natural gas exploration, drilling, and production have resulted in significant reductions in the costs of developing shale resources and making shale gas production economically viable. The EIA estimates that the total volume of technically recoverable dry natural gas resources in the Gulf Coast, Midcontinent, Southwest, Rocky Mountain regions is 1,450.6 Tcf.²² Technically recoverable natural gas resources from tight and shale resources for the same regions is estimated at 948 Tcf.²³ Dry natural gas production from shale and tight resources accounted for approximately 84% (28.35 Tcf) of the U.S. total in 2019 (33.81 Tcf).²⁴ Looking forward, the EIA projects shale gas and associated gas from tight oil plays will account for more than 90% of U.S. dry natural gas production by 2050.²⁵

Additionally, abundant supplies of natural gas in regions outside of the Gulf Coast, Midcontinent, Southwest, Rocky Mountain, and West Coast are also available to serve domestic natural gas needs, as well as the needs of export projects. The Appalachian Basin, which encompasses both the Marcellus and Utica supply regions, represents one of the most extensive potential sources of natural gas supply in the United States. According to the EIA, Eastern U.S. production of natural gas from shale resources leads growth in the Reference Case, with total U.S. gas production across most cases being driven by the continued development of the Marcellus and Utica shale plays.²⁶ The EIA estimates total technically recoverable dry natural gas resources in the East alone at 821.4 Tcf.²⁷ In response to the increased production in the Appalachian Basin

²² U.S. Energy Information Administration, *Assumptions to the Annual Energy Outlook 2020*, Oil and Gas Supply Module, tbl.2 (Jan. 29, 2020) [hereinafter *Assumptions to the AEO 2020*], <https://www.eia.gov/outlooks/aeo/assumptions/pdf/oilgas.pdf>. When offshore Gulf Cost and Pacific resources are included, total technically recoverable dry natural gas resources from these regions is approximately 1,729 Tcf.

²³ *Id.* at tbl. 3.

²⁴ U.S. Energy Information Administration, *Annual Energy Outlook 2020*, tbl. 14 (Jan. 29, 2020) [hereinafter *AEO 2020*], <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=14-AEO2020&cases=ref2020>.

²⁵ *Id.* at 49-50, <https://www.eia.gov/outlooks/aeo/pdf/AEO2020%20Full%20Report.pdf>. See also *id.* at tbl. 14, <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=14-AEO2020&cases=ref2018&sourcekey=0>.

²⁶ *Id.* at 51-52.

²⁷ *Assumptions to the AEO 2020*, Oil and Gas Supply Module at tbl. 2.

region, the natural gas industry has proposed new pipeline projects to transport production out of the Marcellus and Utica Shale Plays, as well as modifying existing systems to allow pipelines originally built and used to move gas into the Northeast to now provide new markets for excess gas out of the Northeast.²⁸ Appalachian gas production, in addition to Gulf Coast, Midcontinent, Southwest, Rocky Mountain, and West Coast gas production, is therefore well situated to satisfy domestic requirements for natural gas.

When these new resources are added to conventional producing formations, it is evident that the United States has more than sufficient supply to serve domestic needs and accommodate the proposed exports from the VPLNG Mid-Scale Project. In 2020, the EIA estimated total technically recoverable dry natural gas resources in the United States at 2,828.8 Tcf.²⁹ This growth in U.S. natural gas resources is reflected in other recent academic and industry evaluations. In its year-end 2018 assessment, the Potential Gas Committee determined that the United States possesses future available gas supply (reserves and resources) of 3,838 Tcf, which is an increase of approximately 697 Tcf (+22%) from the Potential Gas Committee's assessment in 2016.³⁰

The VPLNG Mid-Scale Project is well-positioned to access natural gas supplies from the numerous pipelines that are in proximity to the Project. Natural gas to be exported from the Project will be purchased in a market that has sufficient liquidity and capacity to accommodate a variety of purchase arrangements, including spot market transactions and long-term supply arrangements. Natural gas markets are particularly liquid in the Gulf Coast and Western U.S. regions as a result of the key market centers in the area and the availability of readily accessible incremental gas

²⁸ See, e.g., U.S. Energy Information Administration, *FERC Certificates Several New Natural Gas Pipelines in 2017* (Mar. 7, 2017), <https://www.eia.gov/todayinenergy/detail.php?id=30232>; U.S. Energy Information Administration, *Appalachian Basin Infrastructure Growth Will Make Marcellus/Utica Gas Available to Broader Market* (Mar. 18, 2015), https://www.eia.gov/naturalgas/weekly/archivenew_ngwu/2015/03_19/index.php.

²⁹ Assumptions to the AEO 2020, Oil and Gas Supply Module at tbl. 2.

³⁰ U.S. Potential Gas Committee, *supra* note 21.

supplies. The VPLNG Mid-Scale Project will have access to market centers providing ample liquidity to accommodate a wide and geographically diverse range of gas supply arrangements. This access to multiple supply options means that the VPLNG Mid-Scale Project will be able to respond to shifts in the economics and production profiles of different gas production areas, which may vary significantly over the term of the requested authorizations. Thus, given the integrated nature of the U.S. and Mexican pipeline system, which yields a broad range of supply and transportation options that the VPLNG Mid-Scale Project currently has at its disposal, it is uncertain where the gas used by the VPLNG Mid-Scale Project will originate.

Moreover, the abundance of cross-border facilities between the United States and Mexico makes it possible for the VPLNG Mid-Scale Project to access gas from several cross-border locations through existing facilities and the future construction of new and expanded pipeline facilities in the U.S. and Mexico.

The volume of 0.546 Bcf/d for which Vista Pacifico is seeking Non-FTA export authorization represents a fraction of the nearly 15 Bcf/d of physical cross-border capacity available from existing pipeline facilities.³¹ Vista Pacifico has undertaken a review of the orders of FERC and its predecessor, the Federal Power Commission ("FPC") to compile an index and map of the cross-border facilities that have either already been approved or have been proposed to FERC prior to and independent of the VPLNG Mid-Scale Project, which is attached to this Application as Appendix D. There is approximately 14.83 Bcf/d of existing physical cross-border pipeline capacity between the United States and Mexico, including approximately 6.67 Bcf/d of

³¹ As discussed in note 4 above, any volumes consumed in Mexico as fuel for pipeline transportation and in the liquefaction process are consumed in Mexico, an FTA country, and are thus not relevant to the DOE/FE's public interest determination under NGA Section 3(a).

capacity in the California, Arizona, and West Texas regions and approximately 8.17 Bcf/d in the South Texas region.

Vista Pacifico is considering several gas supply options for the VPLNG Mid-Scale Project that could connect in Mexico to any existing or future cross-border facilities along the U.S./Mexican border. While plans for the gas supply arrangements to provide feed gas for the project are still in development, several options currently exist for transporting gas to the Project. For example, 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 Gasoducto Ojinaga, respectively, totals 2.4 Bcf/d. Moving further west of those interconnections, the Sierrita Pipeline in Arizona, has a capacity of 0.627 Bcf/d and interconnects at the border to the Gasoducto Aguaprieta / Sonora system in Mexico. The physical capacity at just these three crossborder locations is approximately 3.03 Bcf/d, which is well above the 0.546 Bcf/d Non-FTA export volume requested in this Application.³² Any issues regarding the takeaway and delivery capacity of the pipeline facilities located in Mexico will be addressed by Vista Pacifico and the relevant permitting authorities in Mexico.

C. Mexican Regulatory Review of Mid-Scale Project and Pipelines in Mexico

As discussed more fully in Part VII below, the VPLNG Mid-Scale Project does not involve construction in the United States. Given the location of the VPLNG Mid-Scale Project in Mexico, the facility will not be subject to the review of the FERC under the NGA or NEPA. Instead, 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.

³² See Appendix D.

The Mexican permitting process includes a thorough environmental review under Mexican state and federal legislation similar to the review conducted by U.S. agencies under NEPA. Specifically, Mexico’s primary statute governing the environmental reviews of projects is the *Ley General del Equilibrio Ecológico y la Protección al Ambiente*/General Law of Ecological Balance and Environmental Protection (“LGEEPA”), which is administered by the *Secretaría de Medio Ambiente y Recursos Naturales*/Ministry of Environmental and Natural Resources (“SEMARNAT”). Within the SEMARNAT, the *Agencia Nacional de Seguridad Industrial y de Protección al Medio Ambiente del Sector Hidrocarburos*/National Agency for Industrial Security and Environmental Protection for the Hydrocarbon Industry (“ASEA”), is responsible for regulating and supervising industrial, operational and environmental safety for projects related to the hydrocarbon sector, including the construction of natural gas pipelines and liquefaction facilities.

As part of ASEA’s review of projects under the LGEEPA, a *Manifestación de Impacto Ambiental*/Environmental Impact Assessment (“MIA”) must be prepared. Similar to an Environmental Impact Statement (“EIS”) under NEPA, a MIA presents the results of comprehensive analysis and studies of potential environmental impacts associated with a project, including site preparation, construction, operation, and decommissioning, as well as an assessment of measures to mitigate environmental impacts and an analysis demonstrating compliance with Mexican laws and regulations, as well as prudent industry practices and international standards. The MIA must describe the project’s stages and the ecosystems in which it will be developed. The document presents the results of comprehensive analyses and environmental studies, including an assessment of mitigation measures. The MIA for gas pipelines and liquefaction facilities must also include an Environmental Risk Analysis, which analyzes safety and risk mitigation procedures.

If ASEA concludes that a project is environmentally viable, it will issue a resolution approving the MIA and an Environmental Impact Authorization (“ERA”), which specifies the authorization’s terms and conditions, including required measures to mitigate environmental impacts. In doing so, ASEA considers the comments derived from the public consultation process and the various federal and state agencies that were notified during the evaluation process. The enforcement of the terms of a MIA and ERA falls under the jurisdiction of ASEA, which is entitled to perform periodic verification visits to ensure compliance with all applicable environmental regulations, as well as the terms and conditions of environmental permits. ASEA also oversees a facility’s continued compliance with applicable laws, regulations, and conditions governing safety, risk mitigation, technical processes, and the environment through enforcement of the *Sistemas de Administración de Seguridad Industrial, Seguridad Operativa y Protección/Industrial, Operational, and Environmental Safety Management System*.

In addition to review of the MIA and ERA, ASEA reviews and issues authorizations for projects, such as pipelines and liquefaction facilities, that will impact existing land use. In reviewing such proposals, ASEA relies upon a technical opinion issued by the members of the *Consejo Forestal Estatal/State Forestry Council* in the form of an *Estudio Técnico Justificativo/Technical Justification Study* submitted by the applicant to demonstrate that biodiversity will not be negatively affected and that there will be no soil erosion, detriment to water quality, or diminished rate of recovery, among other environmental impacts. Any land use change must be authorized by ASEA in a permit referred to as a *Cambio de Uso de Suelo en Terrenos Forestales/Forestry Land Use Change Permit*, which also specifies mitigation requirements similar to those included in the MIA. A monetary compensation for the impacted area must be made to the *Fondo Nacional Forestal/Mexican Forestry Fund*.

Project proponents in the hydrocarbon industry, including pipeline and liquefaction facilities, must perform an *Evaluación de Impacto Social*/Social Impact Assessment (“EvIS”), which identifies, characterizes and assesses social impacts that could be caused by such project and proposes a social management plan. The EvIS is subject to review and approval of the *Secretaría de Energía*/Ministry of Energy. In addition, permits are required from the *Comisión Reguladora de Energía*/Energy Regulatory Commission to engage in activities that are subject to third-party access and those activities that are not subject to third-party access but require a permit, including the self-supply of electric energy, transportation, liquefaction, regasification, and storage of natural gas in Mexico.

D. Commercial Structure

Vista Pacifico is currently in discussions with customers regarding the proposed commercial structure of the VPLNG Mid-Scale Project (*e.g.*, whether the facilities will sell LNG under sales purchase agreements, provide liquefaction services under tolling agreements, *etc.*). As noted above, Vista Pacifico has not yet entered into long-term export contracts in connection with the export authorizations requested herein or finalized gas supply arrangements for the Project. However, once executed, Vista Pacifico will file any such contracts with the DOE/FE in accordance with the DOE/FE’s filing requirements.

VI. PUBLIC INTEREST ANALYSIS

A. Applicable Legal Standards

Pursuant to sections 301(b) and 402 of the Department of Energy Organization Act,³³ and delegations of authority issued thereunder, the DOE/FE is responsible for evaluating applications

³³ 42 U.S.C. §§ 7151(b), 7172 (2012).

to export natural gas and LNG from the United States under section 3 of the NGA.³⁴ As discussed below, to the extent that this Application requests authority to export natural gas produced in the United States to Mexico for consumption in that country, and for re-export to other FTA nations, that request should be deemed in the public interest and granted without modification or delay, as required by NGA section 3(c).³⁵ As recently clarified in the *Bear Head* and *Pieridae* orders,³⁶ the applicable legal standard for the portion of the Application that requests authorization to re-export U.S. natural gas from Mexico to Non-FTA countries is set forth in section 3(a) of the NGA.³⁷

1. Exports to FTA Countries

Section 3(c) was added to the NGA by section 201 of the Energy Policy Act of 1992.³⁸ That section provides in relevant part that applications to the DOE/FE requesting authority for the export of natural gas, including LNG, to a nation with which there is in effect a FTA requiring national treatment for trade in natural gas shall be deemed consistent with the public interest and granted without modification or delay.³⁹ Accordingly, the portion of this Application requesting authority to export U.S. natural gas to Mexico for liquefaction and re-export to FTA countries is deemed by statute to be consistent with the public interest and must be approved without modification or delay.

2. Exports to Non-FTA Countries

The general standard for review of applications to export to Non-FTA countries is established by section 3(a) of the NGA, which provides that:

[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

³⁴ 15 U.S.C. § 717b. This authority is delegated to the Assistant Secretary for Fossil Energy pursuant to Redelegation Order No. 00-002.04G (June 4, 2019).

³⁵ 15 U.S.C. § 717b(c).

³⁶ *Pieridae* Order at 3-4; *Bear Head* Order at 154-55.

³⁷ 15 U.S.C. § 717b(a).

³⁸ Energy Policy Act of 1992, Pub. L. No. 102-486, § 201, 106 Stat. 2776, 2866 (1992).

³⁹ 15 U.S.C. § 717b(c).

order of the [Secretary] authorizing it to do so. The [Secretary] shall issue such order upon application, unless, after opportunity for hearing, it finds that the proposed exportation or importation will not be consistent with the public interest. The [Secretary] may by its 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, and may from time to time, after opportunity for hearing, and for good cause shown, make such supplemental order in the premises as it may find necessary or appropriate.⁴⁰

In applying this provision, the DOE/FE has consistently found that section 3(a) creates a rebuttable presumption that proposed exports of natural gas are in the public interest.⁴¹ The DOE/FE will grant a Non-FTA export application unless opponents of the application make an affirmative showing based on evidence in the record that the export would be inconsistent with the public interest.⁴²

The DOE/FE's prior decisions have looked to the 1984 Policy Guidelines setting out the criteria to be employed in evaluating applications for natural gas imports.⁴³ While nominally applicable to natural gas import cases, the DOE/FE has found these Policy Guidelines applicable

⁴⁰ *Id.* § 717b(a).

⁴¹ *Sierra Club v. U.S. Dep't of Energy*, 867 F.3d 189, 203 (D.C. Cir. 2017). *See also*, *Lake Charles Exports, LLC*, DOE/FE Order No. 3324-A, FE 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, at 13 (July 29, 2016); *Lake Charles LNG Export Company, LLC*, DOE/FE Order No. 3868, FE 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, at 11 (Jul. 29, 2016); *Cameron LNG, LLC*, DOE/FE Order No. 3846, FE 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 in Cameron and Calcasieu Parishes, Louisiana, to Non-Free Trade Agreement Nations, at 10 (July 15, 2016); *Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 3792, FE 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 13 (Mar. 11, 2016).

⁴² *Phillips Alaska Nat. Gas Corp. & Marathon Oil Co.*, DOE/FE Order No. 1473, FE Docket No. 96-99-LNG, Order Extending Authorization to Export Liquefied Natural Gas from Alaska, at 13 n.42 (Apr. 2, 1999) (citing *Panhandle Producers & Royalty Owners Ass'n v. ERA*, 822 F.2d 1105, 1111 (D.C. Cir. 1987)); *see also* *Lake Charles Exports, LLC*, DOE/FE Order No. 3324-A, at 13; *Lake Charles LNG Export Co.*, DOE/FE Order No. 3868 at 11; *Cameron LNG, LLC*, DOE/FE Order No. 3846 at 10; *Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 3792 at 13-14.

⁴³ New Policy Guidelines and Delegation Orders From Secretary of Energy to Economic Regulatory Administration and Federal Energy Regulatory Commission Relating to the Regulation of Imported Natural Gas, 49 Fed. Reg. 6,684 (Feb. 22, 1984) [hereinafter Policy Guidelines].

to natural gas export applications, as well.⁴⁴ 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 Policy Guidelines provide that:

The market, not government, should determine the price and other contract terms of imported [or exported] gas . . . The federal government’s primary responsibility in authorizing imports [or exports] should 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.⁴⁵

The DOE/FE’s analysis has also been guided by DOE Delegation Order No. 0204-111.⁴⁶ According to the Delegation Order, exports of natural gas are to be regulated primarily “based on a consideration of the domestic need for the gas to be exported and such other matters [found] in the circumstances of a particular case to be appropriate.”⁴⁷ Although the Delegation Order is no longer in effect, the DOE/FE’s review of export applications continues to focus on: (i) the domestic need for 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 the DOE/FE’s policy of promoting market competition; and (iv) any other factors bearing on the public interest.⁴⁸

⁴⁴ *Phillips Alaska Nat. Gas Corp.*, at 14, 42; *see also Lake Charles Exports, LLC*, DOE/FE Order No. 3324-A, at 14; *Lake Charles LNG Export Company, LLC*, DOE/FE Order No. 3868, at 12; *Cameron LNG, LLC*, DOE/FE Order No. 3846, at 11; *Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 3792, at 15.

⁴⁵ Policy Guidelines at 6,685.

⁴⁶ U.S. Department of Energy, Delegation Order No. 0204-111 (Feb. 22, 1982) [hereinafter Delegation Order].

⁴⁷ Delegation Order at para. (b).

⁴⁸ *See, e.g., Lake Charles Exports, LLC*, DOE/FE Order No. 3324-A, at 15; *Cameron LNG, LLC*, DOE/FE Order No. 3846, at 11-12; *Cameron LNG, LLC*, DOE/FE Order No. 3391-A, FE 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, at 9-10 (Sept. 10, 2014); *Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 2961, FE Docket No. 10-111-LNG, Opinion and Order Conditionally Granting Long-Term Authorization to Export Liquefied Natural Gas From Sabine Pass LNG Terminal to Non-Free Trade Agreement Nations, at 29 (May 20, 2011).

The DOE/FE has indicated that the following additional considerations are relevant in determining whether proposed exports are in the public interest: whether the exports will be beneficial for regional economies, the extent to which the exports will foster competition and mitigate trade imbalances with the foreign recipient nations, and the degree to which the exports would encourage efficient management of U.S. domestic natural resources.⁴⁹

As demonstrated below, the exports of natural gas and LNG proposed herein satisfy each of these considerations.

B. Domestic Need for the Gas to be Exported

The VPLNG Mid-Scale Project is being proposed in light of the rapid growth in U.S. natural gas resources and production. In particular, drilling productivity gains and extraction technology enhancements have enabled significant growth in supplies from unconventional gas-bearing shale formations in the United States. In addition, estimates of recoverable natural gas resources have increased by approximately 1,081 Tcf (62%) between 2009 and 2020.⁵⁰ In light of the substantial addition of resources and the comparatively minor increases in domestic natural gas demand, there are more than sufficient natural gas resources to accommodate both domestic demand and the exports proposed in this Application throughout the term of the requested authorization.

As U.S. natural gas resources and production have increased, U.S. natural gas prices have

⁴⁹ See, e.g., *Cameron LNG, LLC*, DOE/FE Order No. 3846, at 105-125; *Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 3792, at 162-191, *Cameron LNG, LLC*, DOE/FE Order No. 3391-A, at 125-35; *Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 2961, at 34-38.

⁵⁰ Compare Assumptions to the AEO 2020, Oil and Gas Supply Module, at tbl. 2 with U.S. Energy Information Administration, *Assumptions to the Annual Energy Outlook 2009*, tbl. 9.2 (Mar. 2009) [hereinafter Assumptions to the AEO 2009], [http://www.eia.gov/forecasts/archive/aeo09/assumption/pdf/0554\(2009\).pdf](http://www.eia.gov/forecasts/archive/aeo09/assumption/pdf/0554(2009).pdf).

fallen significantly. The annual average Henry Hub spot price for natural gas fell from \$8.86 per MMBtu in 2008 to \$2.56 per MMBtu in 2019.⁵¹ In its most recently calculated reference case, the EIA estimates that Henry Hub prices will remain lower than \$4 per MMBtu (in 2019 dollars) throughout the projection period.⁵² Prices for natural gas in the U.S. market continue to be lower than those of most other major gas-consuming countries.⁵³ The result is that domestic gas can be exported, liquefied, and re-exported to foreign markets on a competitive basis. As discussed below, such exports can be expected to have only a nominal effect on U.S. prices.

1. Domestic Natural Gas Supply

As the EIA has noted, domestic “[n]atural gas production from tight and shale gas formations has grown rapidly in recent years.”⁵⁴ The EIA estimates that natural gas production over the 2020-2025 period will grow at 1.9% a year, and will outpace consumption in most cases.⁵⁵ The EIA further estimates that U.S. dry gas production increased from 21.3 Tcf in 2010 to 34.0 Tcf in 2019.⁵⁶

This growth trend is expected to continue over the next several decades. Total U.S. dry gas production is projected to grow to 45 Tcf by 2050, with a 0.9% annual growth rate between 2019 and 2050.⁵⁷ Much of the future natural gas production growth is expected to come from

⁵¹ U.S. Energy Information Administration, *Henry Hub Natural Gas Spot Price* (Sept. 16, 2020), <https://www.eia.gov/dnav/ng/hist/rngwhhda.htm>. The average Henry Hub spot price for January through July of 2020 was approximately \$1.80. *Id.*

⁵² AEO 2020 at 47.

⁵³ *See, e.g.*, The World Bank, *World Bank Commodities Price Data (The Pink Sheet)* (Sept. 2, 2020), <http://pubdocs.worldbank.org/en/451141599073982216/CMO-Pink-Sheet-September-2020.pdf> (the average natural gas price in August 2020 was \$2.29 per MMBtu in the United States, while the average price in Europe was \$2.86 per MMBtu and the average LNG price was \$7.79 per MMBtu in Japan).

⁵⁴ U.S. Energy Information Administration, *Annual Energy Outlook 2016* at IF-29 (Aug. 2016), [https://www.eia.gov/outlooks/aeo/pdf/0383\(2016\).pdf](https://www.eia.gov/outlooks/aeo/pdf/0383(2016).pdf).

⁵⁵ AEO 2020 at 45-46.

⁵⁶ U.S. Energy Information Administration, *U.S. Dry Natural Gas Production* (Sep. 30, 2020), <https://www.eia.gov/dnav/ng/hist/n9070us2A.htm>.

⁵⁷ AEO 2020 at tbl. 13, <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=13-AEO2020&cases=ref2020&sourcekey=0>.

unconventional production of shale resources that rely on horizontal drilling and multi-stage hydraulic fracturing. Specifically, the EIA found that production from shale gas and associated gas from tight oil plays would be the largest contributor to natural gas production growth, comprising 91% of total U.S. production by 2050.⁵⁸ In its 2020 Annual Energy Outlook, the EIA has also significantly increased its long term estimates of shale gas production as compared to its projections in prior years. For example, the EIA revised its projection of shale gas production in 2040 from 32.54 in its 2020 Annual Energy Outlook, up from 19.58 Tcf in its 2015 Annual Energy Outlook.⁵⁹ This growth in shale production has been accompanied by an increase in the overall volume of U.S. natural gas resources. The EIA's estimates of recoverable natural gas resources have increased by 1,081 Tcf (62%) between 2009 and 2020.⁶⁰

2. Domestic Natural Gas Demand

Although domestic demand for natural gas is anticipated to grow, the rate of demand increase will continue to be outpaced by the growth of available supply. For example, though demand for natural gas has increased since 2009, production of natural gas has increased faster due to the shale gas revolution.⁶¹ According to data published by the EIA, U.S. natural gas consumption only increased 29% from 2010 to 2019.⁶² In its Annual Energy Outlook 2020, the EIA estimates long-term annual U.S. demand growth of only 0.5%, with demand expected to reach

⁵⁸ AEO 2020 at tbl. 14, <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=14-AEO2020&cases=ref2020&sourcekey=0>.

⁵⁹ *Compare* AEO 2020 at tbl. 14, <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=14-AEO2020&cases=ref2020&sourcekey=0> with U.S. Energy Information Administration, *Annual Energy Outlook 2015* at tbl. A14 (Apr. 2015), [https://www.eia.gov/outlooks/aeo/pdf/0383\(2015\).pdf](https://www.eia.gov/outlooks/aeo/pdf/0383(2015).pdf).

⁶⁰ *Compare* Assumptions to the AEO 2020, Oil and Gas Supply Module Assumptions at tbl. 2 with Assumptions to the Annual Energy Outlook 2009 at tbl. 9.2.

⁶¹ The Brattle Group, *Understanding Natural Gas Markets*, at 3 (Sep. 2014), <https://www.api.org/~media/Files/Oiland-Natural-Gas/Natural-Gas-primer/Understanding-Natural-Gas-Markets-Primer-High.pdf>.

⁶² U.S. Energy Information Administration, *U.S. Natural Gas Total Consumption* (Aug. 31, 2020), <https://www.eia.gov/dnav/ng/hist/n9140us2a.htm>.

36.50 Tcf in 2050.⁶³ In contrast, total U.S. dry gas production during the same period is projected to grow at an annual rate of 0.9%, with dry gas production estimated to reach 45 Tcf in 2050, as compared to 33.81 Tcf in 2019.⁶⁴

The EIA forecasts that natural gas consumption in the electric power sector will increase to 12.20 Tcf in 2050 from 11.40 Tcf in 2019 in the Reference case.⁶⁵ The EIA estimates that natural gas consumption in the industrial sector will increase by an average of 1.1% per year to 14.70 Tcf in 2050 from 10.35 Tcf in 2019 in the Reference case.⁶⁶ Natural gas consumption in the commercial sector will increase only by 0.2% per year to 3.74 Tcf in 2050 from 3.50 Tcf in 2019 in the EIA Reference case.⁶⁷ The residential sector is forecasted to experience a -0.3% annual average growth in natural gas with a decrease in consumption to 4.55 Tcf in 2050 from 5.03 Tcf in 2019.⁶⁸

3. Effects on Domestic Prices of Natural Gas

Analyses performed and commissioned by the DOE/FE demonstrate that LNG exports from the United States would not result in adverse economic outcomes for U.S. consumers. In 2012, the DOE released a two-part study evaluating the effects on the U.S. economy of LNG exports to Non-FTA countries in volumes up to 12 Bcf per day. In 2014 and 2015, DOE/FE released an updated two-part study assessing the economic effects of higher levels of U.S. LNG exports—*i.e.*, between 12 and 20 Bcf per day.

⁶³ AEO 2020 at tbl. 13.

⁶⁴ *Id.* at tbl. 14.

⁶⁵ *Id.* at tbl. 13.

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.*

The first part of the 2012 studies consisted of an EIA report evaluating how LNG exports would affect domestic energy consumption, production, and prices under various scenarios involving either 6 Bcf per day or 12 Bcf per day (the “2012 EIA Study”).⁶⁹ The 2012 EIA Study projected that natural gas prices would rise over time, even without additional LNG exports.⁷⁰ In the second part of the 2012 studies, NERA Economic Consulting (“NERA”) assessed the macroeconomic effects of increased LNG exports under a range of global natural gas supply and demand scenarios, including scenarios with unlimited LNG exports (“2012 NERA Study”).⁷¹ In each of the scenarios analyzed, NERA found that the United States would experience net economic benefits from increased LNG exports.⁷² With regard to the effect of natural gas prices, NERA further projected that “price changes attributable to LNG exports remain in a relatively narrow range across the entire range of scenarios.”⁷³ NERA also indicated that the peak natural gas export levels and resulting price increases analyzed by the 2012 EIA Study are “not likely,”⁷⁴ namely because U.S. exports would fall far short of the levels of exports assumed in the 2012 EIA Study.⁷⁵ Even in the export scenarios that led to the most significant theoretical price increases projected by the 2012 EIA Study, the 2012 NERA Study found net benefits to U.S. consumers.⁷⁶ The 2012 NERA Study further found that the net positive economic results became greater with higher levels of exports.⁷⁷

⁶⁹ U.S. Energy Information Administration, *Effect of Increased Natural Gas Exports on Domestic Energy Markets, as Requested by the Office of Fossil Energy* (Jan. 2012), https://www.energy.gov/sites/prod/files/2013/04/f0/fe_eia_lng.pdf.

⁷⁰ *Id.* at 6.

⁷¹ NERA Economic Consulting, *Macroeconomic Impacts of LNG Exports from the United States* (Dec. 2012), https://www.energy.gov/sites/prod/files/2013/04/f0/nera_lng_report.pdf.

⁷² *Id.* at 6.

⁷³ *Id.* at 2.

⁷⁴ *Id.* at 9.

⁷⁵ *Id.* at 12.

⁷⁶ *Id.* at 6.

⁷⁷ *Id.* at 12.

The DOE/FE's updated studies consisted of a 2014 domestic market analysis by EIA ("2014 EIA Study"), and a 2015 macroeconomic analysis conducted by the Center for Energy Studies at Rice University's Baker Institute and Oxford Economics ("2015 LNG Export Study").⁷⁸ The 2014 EIA Study evaluated the effects on U.S. energy markets of increased LNG exports, ranging from 12 Bcf per day to 20 Bcf per day.⁷⁹ The 2014 EIA Study projected that, under the Annual Energy Outlook 2014 Reference Case, the increased LNG export levels analyzed would lead to a 2% to 5% increase in residential natural gas prices between 2015 and 2040 compared to baseline projections.⁸⁰ This forecast is less than the predicted 3% to 7% average increase between 2015 and 2035 that EIA had previously projected for a lower level of exports under the Annual Energy Outlook 2011 Reference Case. The 2014 EIA Study found that, even if exports of LNG are greater than forecasted, increased energy production spurs investment, which more than offsets the adverse effects of somewhat higher energy prices when the export scenarios are applied.⁸¹ EIA further noted that the model it relied upon is focused on the domestic U.S. energy system and economy, and does not address several key international linkages that may further increase economic benefits.⁸² That limitation notwithstanding, the EIA 2014 Study estimated that higher LNG exports would result in gross domestic product ("GDP") increases across all scenarios.⁸³

The 2015 LNG Export Study similarly evaluated the macroeconomic effects of LNG exports ranging from 12 Bcf per day to 20 Bcf per day, and confirmed that increased LNG exports

⁷⁸ U.S. Energy Information Administration, *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>; Center for Energy Studies at Rice University Baker Institute and Oxford Economics, *The Macroeconomic Impact of Increasing U.S. LNG Exports* (Oct. 29, 2015), https://www.energy.gov/sites/prod/files/2015/12/f27/20151113_macro_impact_of_lng_exports_0.pdf.

⁷⁹ 2014 EIA Study.

⁸⁰ *Id.* at 12.

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.* at 24-25.

would yield net positive macroeconomic results.⁸⁴ The 2015 LNG Export Study found that LNG exports would raise domestic prices and lower international prices.⁸⁵ The 2015 LNG Export Study also found that increased exports would lead to small declines in output at the margin for some energy-intensive industries (albeit declines that are offset by positive effects to industries that benefit from increased exports).⁸⁶ Nevertheless, the 2015 LNG Export Study found that these potentially adverse outcomes would be offset by the overall net macroeconomic benefits of increased LNG exports, finding that “[a]cross the domestic cases, the positive impacts of higher U.S. gas production, greater investment in the U.S. natural gas sector, and increased profitability of U.S. gas producers typically exceeds the negative impacts of higher domestic natural gas prices associated with increased LNG exports.”⁸⁷ Moreover, the 2015 LNG Export Study concluded that rising exports would result in GDP increases between 0.03 and 0.07 percent over the period from 2026 to 2040, equating to \$7 to \$21 billion USD annually in today’s prices.⁸⁸ DOE/FE has recognized that the 2014 EIA Study and 2015 LNG Export Study are “fundamentally sound” and “provide substantial support” for authorizing LNG exports.⁸⁹ Indeed, the DOE/FE has noted that the 2015 LNG Export Study demonstrates that “the United States will experience net economic benefits from the issuance of authorizations to export domestically produced LNG.”⁹⁰

Most recently, NERA published another study (“2018 NERA Study”) examining the probability and macroeconomic impact of various lower-48 sourced LNG export scenarios.⁹¹ Like

⁸⁴ 2015 LNG Export Study at 82.

⁸⁵ *Id.* at 8

⁸⁶ *Id.*

⁸⁷ *Id.* at 16.

⁸⁸ *Id.* at 8, 17.

⁸⁹ *See Cameron LNG*, DOE/FE Order No. 3846 at 109-10.

⁹⁰ *Id.* at 110.

⁹¹ NERA Economic Consulting, *Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports*, at 14 (June 7, 2018), <https://www.energy.gov/sites/prod/files/2018/06/f52/Macroeconomic%20LNG%20Export%20Study%202018.pdf>. [hereinafter 2018 LNG Export Study].

the prior studies the DOE/FE has commissioned, the 2018 NERA Study examines the impacts of varying levels of LNG exports on domestic energy markets. However, the 2018 NERA Study also assesses the likelihood of different levels of “unconstrained” LNG exports (defined as market determined levels of exports) and analyzes the outcomes of different LNG export levels on the U.S. natural gas markets and the U.S. economy as a whole, over the 2020 to 2050 time period. Specifically, the 2018 NERA Study develops 54 scenarios by identifying various assumptions for domestic and international supply and demand conditions to capture a wide range of uncertainty in the natural gas markets.⁹² “Throughout the entire range of scenarios, [the 2018 NERA Study found] that overall U.S. economic output is higher whenever global markets call for higher levels of LNG exports, assuming that exports are allowed to be determined by market demand.”⁹³ Further, the 2018 NERA Study found that “[f]or each of the supply scenarios, higher levels of LNG exports in response to international demand consistently lead to higher levels of GDP. . . . Consumer welfare, expressed in dollar terms, is also higher when there is greater domestic oil and gas supply” and higher levels of LNG exports.⁹⁴

As demonstrated above, the overall balance between the domestic supply and demand forecasts for the U.S. natural gas market demonstrates that the volumes proposed to be exported in this Application are not needed by the domestic market. This lack of domestic need, combined with the minimal impacts to U.S. prices that exports to Non-FTA countries are projected to have, likewise demonstrates that the export of such volumes is not inconsistent with the public interest.

⁹² The 2018 NERA Study analyzed “the robustness of unlimited market level determined LNG exports by examining different scenarios that reflect a wide range of natural gas market conditions, where robustness is measured using key macroeconomic metrics such as GDP, aggregate household income, and consumer welfare.” *Id.* at 13.

⁹³ *Id.* at 14

⁹⁴ *Id.* at 18, 20.

C. Other Public Interest Considerations

1. Increased Exports and International Trade

The 2018 LNG Export Study found that increased U.S. exports of natural gas “will improve the U.S. balance of trade and result in a wealth transfer into the United States.”⁹⁵ Additionally, LNG exports provide important geopolitical benefits by diversifying global energy supply. In the Policy Statement, DOE/FE recognized that “[a]n efficient, transparent international market for natural gas with diverse sources of supply provides both economic and strategic benefits to the United States and its allies” and that “to the extent U.S. exports can diversify global LNG supplies and increase the volumes of LNG available globally, these exports will improve energy security for many U.S. allies and trading partners.”⁹⁶ The authorizations requested herein will further these international trade and geopolitical benefits.

2. Environmental Benefits

LNG exports can have significant environmental benefits as natural gas is cleaner burning than other fossil fuels. For example, the DOE’s Life Cycle Analysis Greenhouse Gas (“GHG”) Report (“2014 GHG Report”) noted that under most scenarios analyzed in the report, “generation of power from imported natural gas [into both Europe and Asia] has lower life cycle GHG emissions than power generation from regional coal.”⁹⁷ In 2018, the Department of Energy commissioned an update to its 2014 GHG Report, entitled *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas From the United States: 2019 Update* (“2019 GHG Report Update”).⁹⁸ As with the 2014 GHG Report, the 2019 GHG Report Update compared life cycle

⁹⁵ 2018 LNG Export Study at 64.

⁹⁶ Policy Statement, 85 Fed. Reg. at 52244.

⁹⁷ U.S. Department of Energy, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States* at 9 (May 29, 2014), <https://energy.gov/sites/prod/files/2014/05/f16/Life%20Cycle%20GHG%20Perspective%20Report.pdf>.

⁹⁸ U.S. Department of Energy, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from*

GHG emissions of exports of domestically produced LNG to Europe and Asia, compared with alternative fuel sources (such as regional coal and other imported natural gas) for electric power generation in the destination countries. The 2019 GHG Report Update demonstrated that the conclusions of the 2014 GHG Report remained the same—*i.e.*, 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.⁹⁹ Accordingly, an increased supply of natural gas made possible through LNG exports can help countries move away from less environmentally friendly fuels by displacing the current consumption of coal in power generation and deterring the construction of additional coal-fired generation capacity.

VII. REVIEW OF ENVIRONMENTAL EFFECTS

A. Review of the Application is Subject to a Categorical Exclusion under NEPA

Vista Pacifico respectfully requests that the DOE/FE determine that under the circumstances, a categorical exclusion from the requirement to produce an environmental assessment and/or an environmental impact statement (“EIS”) is both applicable and appropriate for DOE/FE’s review of the export volumes requested in this application in association with the VPLNG Mid-Scale Project. Application of a categorical exclusion in this case is appropriate because the VPLNG Mid-Scale Project will be located in Mexico, beyond the scope of the DOE/FE’s jurisdiction. Further, as relevant to the DOE/FE’s analysis under established practice, the existing physical pipeline capacity in the U.S. exceeds the volumes Vista Pacifico is requesting to export to Mexico and the nature of any expansions of U.S. pipelines that might later be made to support exports of natural gas via the VPLNG Mid-Scale Project are currently uncertain.

the United States: 2019 Update—Response to Comments, 85 Fed. Reg. 72 (Jan. 2, 2020).

⁹⁹ See *id.* at 78, 85.

Accordingly, under the relevant DOE regulations and DOE/FE precedent, Vista Pacifico's construction of the VPLNG Mid-Scale Project should not be considered relevant for the purposes of the Categorical Exclusion under NEPA. In addition, the requested exports associated with the VPLNG Mid-Scale Project are not expected individually or cumulatively to have significant environmental impacts in the United States.¹⁰⁰ The DOE/FE has no obligation to perform a NEPA analysis of potential future natural gas pipeline expansions in connection with exercising its jurisdiction to approve exports of natural gas under Section 3 of the NGA. Finally, Vista Pacifico submits that the imposition of a condition similar to the conditions that were imposed in the *Bear Head/Pieridae* proceedings would be inconsistent with the public interest because it would place an obligation upon Vista Pacifico that would be unreasonably vague and unworkable.

The regulations adopted by the Council on Environmental Quality ("CEQ") state that the application of categorical exclusions to certain categories of actions is appropriate where the implementing agency has determined such actions are not expected to have individually or cumulatively significant environmental impacts.¹⁰¹ The DOE regulations implementing NEPA recognize such an exemption applicable in this situation. Specifically, Categorical Exclusion B5.7 generally exempts "[a]pprovals . . . of new authorizations . . . to . . . export natural gas under section 3 of the Natural Gas Act that involve minor operational changes (such as changes in natural gas throughput, transportation, and storage operations) but not new construction."¹⁰² Vista Pacifico's Application would qualify for this exclusion since the construction of the Project facilities will occur entirely in Mexico. Furthermore, the physical capacity of the existing cross-border pipeline

¹⁰⁰ Categorical exclusions apply in the case of actions the implementing agency has determined are not expected to have individually or cumulatively significant environmental impacts. *See* 40 C.F.R. § 1508.4.

¹⁰¹ *See* 40 C.F.R. § 1508.4.

¹⁰² 10 C.F.R. Part 1021, Subpart D, app. B § B5.7 (emphasis added).

facilities along the U.S./Mexican border exceeds the proposed export volumes and any potential future pipeline facilities that may be used to serve the Project are uncertain at this time.

As the courts have recognized, NEPA is generally construed so as not to require the consideration of extraterritorial impacts (i.e., impacts beyond the United States), except under a few defined circumstances not present here. Absent evidence of Congressional intent to the contrary, a federal statute should be construed as applying only within the territorial jurisdiction of the United States.¹⁰³ The primary purpose of this presumption is “to protect against unintended clashes between our laws and those of other nations which could result in international discord.”¹⁰⁴ Reviewing courts have found that there is no explicit Congressional discussion directing the extraterritorial application of NEPA.¹⁰⁵

The environmental effects of construction and operation of the VPLNG Mid-Scale Project facilities are already being reviewed by Mexican regulators. The DOE/FE has served as a cooperating agency in FERC’s NEPA review process associated with the construction of LNG export projects located in the United States. In those proceedings, the DOE/FE has relied upon the NEPA analysis prepared by FERC and has adopted FERC’s environmental analysis for purposes of meeting DOE/FE’s NEPA obligations. However, in the case of the VPLNG Mid-Scale Project, the construction and operation of the facilities will occur in Mexico. As such, the construction and operation of the Project and associated Mexican pipeline facilities have been or will be reviewed and approved by regulatory authorities within the nation of Mexico. As part of this process, the Mexican agencies with jurisdiction over the Project and associated pipelines

¹⁰³ See *Equal Emp. Opportunity Comm’n v. Arabian Am. Oil Co.*, 499 U.S. 244 (1991).

¹⁰⁴ *Id.* at 248; see also *NEPA Coal. v. Aspin*, 837 F. Supp. 466, 467-68 (D.D.C. 1993) (holding that NEPA does not apply to U.S. bases in Japan).

¹⁰⁵ *Greenpeace USA v. Stone*, 748 F. Supp. 749, 758-59 (D. Haw. 1990); see also *Nat. Res. Def. Council v. Nuclear Reg. Comm’n*, 647 F.2d 1345, 1367 (D.C. Cir. 1981).

conduct their own environmental review of the VPLNG Mid-Scale Project, assuring that the environmental impacts connected to the Project in Mexico have been considered by the appropriate Mexican authorities.

A finding that Categorical Exclusion B5.7 applies to exempt the Application from review under NEPA is consistent with the conclusion that the DOE/FE reached in other instances where it has reviewed proposals to export U.S. gas to a foreign country for re-export to Non-FTA countries. In its decisions in *Bear Head* and *Pieridae*, DOE found that Categorical Exclusion B5.7 was applicable because the only construction proposed would occur outside of the United States, which was “beyond the scope of [DOE’s] environmental review under NEPA.”¹⁰⁶ In the *Pieridae* decision, the DOE/FE confirmed that an environmental analysis of construction outside of the United States “is outside the scope of [DOE’s] environmental review under NEPA . . . which necessarily focuses on potential environmental impacts within the United States.”¹⁰⁷

In addition to determining whether a proposed action falls within the classes of actions qualifying for a categorical exclusion, DOE/FE must also consider whether the proposal has been segmented to meet the definition of a categorical exclusion.¹⁰⁸ Segmentation occurs when “a proposal is broken down into small parts in order to avoid the appearance of significance of the total action. The scope of a proposal must include the consideration of connected and cumulative actions, that is, the proposal is not connected to other actions with potentially significant impacts

¹⁰⁶ *Pieridae* Order at 202; *Bear Head* Order at 162.

¹⁰⁷ *Pieridae* Order at 190.

¹⁰⁸ 10 C.F.R. § 1021.410(b)(3). DOE/FE is also required to consider whether there are any extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal. *Id.* § 1021.410(b)(2). Extraordinary circumstances are defined as “unique situations presented by specific proposals, including, but not limited to, scientific controversy about the environmental effects of the proposal; uncertain effects or effects involving unique or unknown risks; and unresolved conflicts concerning alternative uses of available resources.” *Id.* As noted above, the VPLNG Mid-Scale Project involves no construction of facilities in the United States and will therefore have no environmental effects requiring NEPA review. Accordingly, there can be no extraordinary circumstances affecting the significance of environmental effects.

(40 CFR 1508.25(a)(1)) [and] is not related to other actions with individually insignificant but cumulatively insignificant impacts (40 CFR 1508.27(b)(7))”¹⁰⁹

Connected actions, in turn, are actions that are “closely related and therefore should be discussed in the same impact statement. Actions are connected if they:

- (i) Automatically trigger other actions which may require environmental impact statements.
- (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously.
- (iii) Are interdependent of a larger action and depend on the larger action for their justification.”¹¹⁰

With respect to actions with “individually insignificant but cumulatively significant impacts,” DOE regulations explain that “[s]ignificance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.”¹¹¹

Under the relevant DOE regulations and DOE/FE precedent, there are no connected actions that have been improperly segmented from the VPLNG Mid-Scale Project for the purposes of NEPA—the Project will not automatically trigger other actions requiring NEPA review, does not depend on actions occurring in the United States in order to proceed, and is not dependent on a larger action in the United States for its justification. Nor does the Project involve any actions with individually insignificant but cumulatively significant impacts. As discussed in Part V.B above, and as reflected in Appendix D, the physical capacity of the existing cross-border pipeline facilities is well in excess of the full volumes requested in this Application.

¹⁰⁹ *Id.* § 1021.410(b)(3).

¹¹⁰ 40 C.F.R. § 1508.25(a)(1).

¹¹¹ *Id.* § 1508.27(b)(7).

Finally, the DOE/FE has no obligation to perform a NEPA analysis of potential future FERC-jurisdictional gas pipeline expansions in connection with exercising its jurisdiction to approve exports of natural gas under section 3 of the NGA. The U.S. Court of Appeals for the D.C. Circuit has held¹¹² that the FERC need not consider the alleged indirect effects of LNG exports in certificating LNG export facilities because those alleged effects are caused by the DOE/FE's decision to authorize the underlying export:

The [FERC's] NEPA analysis did not have to address the indirect effects of the anticipated export of natural gas . . . because [DOE/FE], not the [FERC], has sole authority to license the export of any natural gas going through [the applicant's U.S. LNG terminal] facilities. In the specific circumstances where, as here, any agency "has no ability to prevent a certain effect due to" that agency's "limited statutory authority over the relevant action[]," then that action "cannot be considered the legally relevant 'cause' of the effect" for NEPA purposes.¹¹³

In this case, the FERC, not the DOE/FE, has exclusive jurisdiction over the siting and approval of natural gas pipeline facilities under the NGA. Under the rationale of *Public Citizen, Sierra Club (Freeport)*, and *EarthReports*, the DOE/FE should not be required to include in a NEPA analysis the consequences of future actions over which it has no jurisdiction. The DOE/FE cannot be said to be the proximate cause of such alleged effects. While *Bear Head* and *Pieridae* appear to conflict with this position to some degree, both decisions **predate** the relevant D.C. Circuit opinions that were issued regarding the scope of NEPA review.

¹¹² *Sierra Club v. FERC*, 827 F.3d 36, 47 (D.C. Cir. 2016) [hereinafter *Sierra Club (Freeport)*] (FERC did not have to consider the indirect effects of the anticipated export of natural gas because DOE/FE has sole authority to authorize such exports); *Sierra Club v. FERC*, 827 F.3d 59, 68 (D.C. Cir. 2016) (same); *EarthReports, Inc. v. FERC*, 828 F.3d 949, 952 (D.C. Cir. 2016) (same).

¹¹³ *Sierra Club (Freeport)*, 827 F.3d at 47 (quoting *Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 770 (2004)) (emphasis in original).

B. DOE/FE Should Not Impose Point-of-Export or Future Construction Restrictions

1. Volume and Facility Point-of-Export Restrictions Are Unnecessary

Given the existence of abundant physical cross-border pipeline capacity to export U.S. gas to the VPLNG Mid-Scale Project, Vista Pacifico respectfully requests that the DOE/FE issue the authorizations sought in this Application without imposing any restriction upon the points of export and/or facilities along the U.S./Mexican border that Vista Pacifico may utilize to export gas destined for the VPLNG Mid-Scale Project from the United States. If, in the future, the VPLNG Mid-Scale Project or any other projects proposed at the Vista Pacifico facility require an aggregate amount of exported U.S. gas in excess of the volumes for which Vista Pacifico is requesting authorization in this Application, the appropriate applications will be filed with the DOE/FE for any additional or supplemental authorizations that may be necessary with respect to those incremental volumes. However, a requirement to obtain additional DOE/FE approval before exporting natural gas in amounts authorized by the order requested by this Application from specific existing or future cross-border facilities is unnecessary and would be inconsistent with the DOE/FE's treatment of other natural gas export applications.

Although in two previous cases the DOE/FE has imposed conditions limiting the scope of an applicant's Non-FTA export authorization in the "unusual circumstances" discussed below, this Application does not involve such unusual circumstances and is materially distinguishable from the situation considered in those proceedings. Accordingly, the DOE/FE should not impose the same conditions on any order approving Vista Pacifico's proposed exports. Rather, Vista Pacifico respectfully requests that DOE/FE issue an order without such a restriction tied to future upstream and/or cross-border developments, consistent with the way DOE/FE has treated exports from U.S. LNG facilities.

In *Bear Head* and *Pieridae*, the Non-FTA export authorizations issued in connection with two terminals to be located in Nova Scotia, Canada, were limited to volumes equal to the existing capacity of the Maritimes & Northeast (“M&N”) US Pipeline at the border of the United States and Canada. In those proceedings, it was clear that the M&N US Pipeline, which would transport the gas to the U.S. border for export, was physically incapable of transporting the full volume requested by either applicant. The DOE/FE approved both applications based upon Categorical Exclusion B5.7 but limited the scope of the authorizations only to exports using the existing physical capacity of the M&N US Pipeline facilities that had been authorized by the FERC at the time. Specifically, the DOE/FE stated that its authorization and the categorical exclusion upon which it relied did “not apply to any future construction or operational changes to expand the capacity of the M&N US Pipeline or other facilities located within the United States **caused either in whole or in part by [the applicant’s] export operations.**”¹¹⁴ The DOE/FE emphasized that if either applicant in *Bear Head* or *Pieridae* proposed to export volumes using “new” or “upgraded” pipeline capacity, *i.e.*, “new capacity not presently in existence on [M&N US Pipeline], or if it proposes to use capacity on newly constructed or upgraded cross-border pipelines,” it would be required to apply to the DOE/FE for new export authorization “[t]o ensure that DOE/FE has an opportunity to review the public interest and environmental impacts of any such capacity additions or the use of other existing pipelines.”¹¹⁵ The DOE/FE stated that pipeline capacity would be considered “new” or “upgraded” for purposes of the limitation it placed on both authorizations “if it is the result of physical changes that increase the northbound capacity of such a pipeline and any such changes require an amendment to the pipeline’s certificate issued by FERC

¹¹⁴ *Pieridae* Order at 10 (emphasis added); *see also* *Bear Head* Order at 10 (emphasis added).

¹¹⁵ *Bear Head* Order at 5; *see* *Pieridae* Order at 5.

under NGA section 7.”¹¹⁶ The DOE/FE noted that it “may participate in the FERC-led NEPA review, as it typically does in proceedings involving LNG export facilities pursuant to NGA section 15, 15 U.S.C. §717n” for any such new Non-FTA export application filed in connection with a Section 7 certificate.¹¹⁷

The VPLNG Mid-Scale Project is not similarly situated to the *Bear Head* and *Pieridae* projects. First, both Canadian projects were geographically remote on the Nova Scotia peninsula and served by only one interstate pipeline: M&N US Pipeline. In those cases, the DOE/FE found that transportation on the M&N US Pipeline was “**essential**” to the project but noted in each case that the record had not demonstrated that the M&N US Pipeline was capable of physically transporting the full volume of gas requested to be exported. While there was some discrepancy between the *Bear Head* and *Pieridae* applications as to the actual cross-border capacity of the M&N US Pipeline,¹¹⁸ neither applicant claimed that the existing cross-border capacity was sufficient to transport its full requested volume. In addition, the DOE/FE noted in both proceedings that the applicants had not demonstrated that the capacity on the M&N US Pipeline mainline facilities from the receipt point in Dracut, Massachusetts, to the U.S./Canadian border was sufficient to transport the full volume of either project. In contrast to the M&N US Pipeline discussed in *Bear Head* and *Pieridae*, in this case, the physical capacity of the cross-border

¹¹⁶ *Pieridae* Order at 5.

¹¹⁷ *Pieridae* Order at 5. *See* NGA § 15, 15 U.S.C. § 717n(b) (designating the FERC as the “lead agency” with respect to NEPA reviews associated with projects constructed under NGA Sections 3 and 7 and directing “[e]ach Federal and State agency considering an aspect of an application for Federal authorization [to] cooperate with the [FERC] and comply with the deadlines established by the [FERC]”).

¹¹⁸ The *Bear Head* application claimed it was 833,317 Dth/d and the *Pieridae* application claimed it was 440,000 Dth/d. *Compare* *Bear Head* Order at 4 (citing *Bear Head LNG Corporation*, Application for Long-Term Authorizations to Export Natural Gas to Canada and to Export Liquefied Natural Gas from Canada to Free Trade Agreement and Non-Free Trade Agreement Nations, FE Docket No. 15-33-LNG, 5 n.18 (Feb. 25, 2015)) *with* *Pieridae* Order at 4 (citing *Pieridae Energy (USA) Ltd.*, Application for Long-Term, Multi-Contract Authorization to Export Natural Gas into Canada for Consumption and Through Canada to Free Trade and Non-Free Trade Agreement Nations after Conversion into LNG, FE Docket No. 14-179-LNG, at 17 n.22 (Oct. 24, 2014)).

facilities, as established in Appendix D to this Application, substantially exceeds the export volumes requested in this Application. There is approximately 15 Bcf/d of cross-border capacity from existing facilities, making it possible for the VPLNG Mid-Scale Project to access gas from several cross-border locations for the export of its requested 548 MMcf/d volume of natural gas through pipeline construction conducted in Mexico that may occur in the future.¹¹⁹

Vista Pacifico asserts and the DOE/FE has conceded that in prior Non-FTA export proceedings, the DOE/FE “has not afforded weight in its public interest review to the capacity of the interstate pipelines delivering natural gas for export.”¹²⁰ The DOE/FE recognized an exception to this practice in the cases of *Bear Head* and *Pieridae*, reasoning that the applicants should be treated differently from other Non-FTA LNG export applicants because they “identifie[d] only a single pipeline capable of transporting natural gas to an LNG terminal for export and **that pipeline may not presently have the capacity to meet the anticipated demand for export volumes.**”¹²¹

The DOE/FE specifically noted that the *Bear Head* and *Pieridae* proceedings involved the “unusual circumstance of an applicant proposing to export volumes that **exceed** the capacity of the single pipeline essential to completing the transportation central to the re-export proposal.”¹²²

This Application does not involve the “unusual circumstance” presented to the DOE/FE in *Bear Head* and *Pieridae* because the existing physical pipeline capacity exceeds the full requested volumes for export. Thus, the DOE/FE should treat the authorizations requested by Vista Pacifico in this Application similarly to the way in which it has treated other Non-FTA export applications.

¹¹⁹ For example, the physical capacities of Sierrita Gas Pipeline (627 MMcf/d), Comanche Trail Pipeline (1,100 MMcf/d), Roadrunner Pipeline (875 MMcf/d), and Trans-Pecos Pipeline (1,300 MMcf/d) each exceed the requested volume in this proceeding.

¹²⁰ *Bear Head* Order at 157. Vista Pacifico considers “upstream facilities” to include any pipeline facilities that are upstream of the pipeline that is directly interconnected with and necessary to transport gas to the facilities of an LNG terminal.

¹²¹ *Id.* (emphasis added).

¹²² *Id.* at 4 (emphasis added); *see also* *Pieridae* Order at 195.

Unlike the applicants in *Bear Head* and *Pieridae*, the physical capacity of existing cross-border facilities identified in this Application exceeds the volumes for which Vista Pacifico is requesting Non-FTA export authorization.

Accordingly, because the VPLNG Mid-Scale Project does not involve exports through a pipeline that is physically incapable of transporting its requested volumes, as was the case in *Bear Head* and *Pieridae*, the VPLNG Mid-Scale Project is not similarly situated to the applicants in those proceedings and the DOE/FE should not impose the same manner of restriction on the location and specific facilities that can be used to export the natural gas for the VPLNG Mid-Scale Project.

2. Future Capacity Restrictions Are Unnecessary

With regard to future pipeline construction or expansion, in both *Bear Head* and *Pieridae*, the DOE/FE stated that a NEPA and an NGA public interest review would be required when new capacity “result[s] proximately” from the issuance of the export authorization.¹²³ This would “ensure that no U.S.-based pipeline facilities **essential** to [the applicant’s] export operations are put into service for those purposes without an opportunity for the necessary environmental review, including opportunity for public participation.”¹²⁴ The DOE/FE, however, did not define what it meant by a future project being “proximate[ly]” caused or “essential” to an export project. Vista Pacifico asserts that the DOE/FE should interpret this precedent narrowly to encompass only those situations where proposed exports cannot be physically accomplished without some new construction—*i.e.*, where the proposed “export volumes . . . **exceed** the capacity of the single pipeline essential to completing the transportation central to the re-export proposal,” as was the

¹²³ *Pieridae* Order at 197.

¹²⁴ *Id.* at 191-92 (emphasis added).

case with *Bear Head* and *Pieridae*.¹²⁵ As discussed below, imposing the same future capacity conditions that it applied to *Bear Head* and *Pieridae* under different circumstances would be unnecessary, unworkable, and inconsistent with the way in which DOE/FE treats other applicants.¹²⁶

Like all pipeline facilities, upstream facilities in the U.S. natural gas pipeline grid that will transport gas destined for the VPLNG Mid-Scale Project may be expanded and new facilities may be constructed in the future, and some of those new or expanded facilities may be used to transport natural gas that is ultimately destined for export at the VPLNG Mid-Scale Project. However, for the purposes of review under NEPA, this does not mean that any future pipeline construction is either “essential” or caused “proximately” by a particular export authorization that the DOE/FE may have issued. Neither is the DOE/FE required by NEPA or the NGA to condition its export authorization orders to require submission of a new application to ensure the DOE/FE can participate in the FERC proceeding to consider the environmental impacts of such facilities. NEPA requires a “reasonably close causal relationship between the environmental effect and the alleged cause” “akin to proximate cause in tort law.”¹²⁷ Given the inherent variability of gas supply arrangements in a well-functioning, liquid, and ever-shifting upstream natural gas market and the DOE/FE’s lack of authority to permit or deny any particular pipeline facilities, the export authorization requested in this Application cannot be said to be the proximate cause of potential future expansion of pipeline facilities for the purposes of NEPA.

The FERC, not the DOE/FE, is responsible for authorizing the siting and construction of

¹²⁵ *Bear Head* Order at 4 (emphasis added); *see also* *Pieridae* Order at 195-96.

¹²⁶ Further, as discussed in Part VII.A above, the continued vitality of the reasoning underpinning the DOE’s conclusions in the *Bear Head* and *Pieridae* proceedings regarding the scope of the agency’s obligations under NEPA with respect to the construction of upstream facilities solely within the jurisdiction of the FERC is doubtful in light of the D.C. Circuit’s recent conclusions in *Sierra Club (Freeport)* and *EarthReports*.

¹²⁷ *Public Citizen*, 541 U.S. at 754, 767.

interstate pipeline facilities under Section 7 of the NGA and cross-border facilities under Section 3 of the NGA and through the grant of Presidential Permits. It is the primary responsibility of the FERC to ensure that the impacts of such facilities are considered under NEPA and the NGA, which it will do if and when such facilities are proposed. There is no requirement under either statute for the DOE/FE to continue to be involved in every such future proceeding over which the DOE/FE neither has statutory authority nor control, merely because the construction of such upstream facilities may have some connection to a previously-granted export authorization. The DOE/FE cannot be said to be the proximate cause of such alleged effects.¹²⁸ Further, even though it is possible or even likely that pipeline facilities in the United States may be constructed in the future and those facilities may be used to transport gas to be exported in connection with the VPLNG Mid-Scale Project, the DOE/FE would not engage in improper segmentation by approving the export of the requested volumes in this Application.¹²⁹

Imposing a condition limiting the export of natural gas destined for the VPLNG Mid-Scale Project to the use of existing facilities similar to the condition that the DOE/FE imposed on the exports in the *Bear Head* and *Pieridae* proceedings would be both unnecessary and unworkable. Such a broad condition would require Vista Pacifico to project and submit a new application for every possible upstream capacity expansion that could conceivably transport gas associated with its proposed project.¹³⁰ This interpretation would also be burdensome on the DOE/FE, requiring it

¹²⁸ See *Sierra Club v. FERC (Freeport)*, 827 F.3d at 47 (“The [FERC’s] NEPA analysis did not have to address the indirect effects of the anticipated export of natural gas . . . because [DOE/FE], not the [FERC], has sole authority to license the export of any natural gas going through [the applicant’s U.S. LNG terminal] facilities. In the specific circumstances where, as here, any agency ‘has no ability to prevent a certain effect due to’ that agency’s ‘limited statutory authority over the relevant action[],’ then that action ‘cannot be considered the legally relevant ‘cause’ of the ‘effect’ for NEPA purposes.) (quoting *Public Citizen*, 541 U.S. at 771).

¹²⁹ See *O’Reilly v. U.S. Army Corps of Eng’rs*, 477 F.3d 225, 237-38 (5th Cir. 2007) (rejecting the argument “that the current project is wrongly piecemealed [*i.e.*, improperly segmented] because [subsequent phases of construction not presently proposed before the agency] are reasonably foreseeable”).

¹³⁰ Like all LNG export projects, it is not necessarily foreseeable if, when, and where specific upstream facilities in the robust North American natural gas pipeline grid will be constructed or expanded and whether particular volumes

to institute a new proceeding associated with exports using each new upstream facility and participate in every FERC proceeding involving those facilities. Where, as here, the physical capacity of existing facilities exceeds the requested volumes for export, that should be the end of the inquiry, and the DOE/FE should issue an order approving the Non-FTA exports associated with the VPLNG Mid-Scale Project under Categorical Exclusion B5.7 without restricting the use of facilities to export gas under that authorization as it did in *Bear Head* and *Pieridae*.

3. The VPLNG Mid-Scale Project Should Not Be Treated Differently From Other LNG Export Projects

In other proceedings involving U.S. LNG export terminals, the DOE/FE has not conditioned the export of volumes to the use of capacity on specific upstream or interconnecting pipeline facilities.¹³¹ Instead, authorized volumes have been tied to the liquefaction capacity of the LNG terminal, without regard to the upstream facilities necessary to transport the natural gas from the production area to the terminal.¹³² Neither has DOE/FE required authorization holders to obtain additional export authority when new pipeline facilities are constructed that directly interconnect with the LNG export terminal. Several pipeline facilities have been approved and/or constructed to interconnect directly with LNG terminals with existing Non-FTA export authorizations, and the DOE/FE has not required any of the relevant authorization holders to obtain additional

of gas destined for export will be transported on those facilities. This is particularly true given the potential for the sources of supply for a project to shift over the course of the life of the project.

¹³¹ See *Bear Head* Order at 157.

¹³² See, e.g., *Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 3792 (approving LNG export volumes incremental to previously-authorized volumes in order to align authorized volumes to the maximum liquefaction production capacity of the liquefaction facilities); *Cameron LNG, LLC*, DOE/FE Order No. 3797, FE 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) (authorizing LNG export volumes incremental to previously authorized volumes to match the peak capacity of the relevant liquefaction trains under optimal conditions); *Lake Charles LNG Export Company, LLC*, DOE/FE Order No. 4010, FE 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) (authorizing additional export volumes to align volumes authorized for export with the project's liquefaction production capacity).

authorization from the DOE/FE prior to utilizing such new pipeline capacity.¹³³ Applying a different requirement to a similarly situated applicant, such as Vista Pacifico, would be arbitrary and capricious.¹³⁴ Further, treating the VPLNG Mid-Scale Project differently from the way it has treated other U.S. applications would be inconsistent with DOE/FE’s stated commitment to Congress to treat Mexican and Canadian projects fairly.¹³⁵ Accordingly, Vista Pacifico respectfully requests that any order issued by the DOE/FE not be conditioned on any restriction upon the points of export and/or facilities that Vista Pacifico may utilize now or in the future to export gas destined for the VPLNG Mid-Scale Project from the United States.

C. A Condition Similar to *Bear Head/Pieridae* Would Be Vague and Unworkable

It would be inconsistent with the public interest for the DOE/FE to impose a condition, similar to the condition it imposed in the *Bear Head* and *Pieridae* Non-FTA authorization orders, that would require Vista Pacifico to file a new application if facilities that may be used to export natural gas are constructed in the future. The scope of Vista Pacifico’s obligations to comply with

¹³³ See, e.g., *Transcontinental Gas Pipe Line Co., LLC*, 153 FERC ¶ 61,077 (2015) (approving Transco’s Gulf Trace Expansion Project, which would provide transportation of up to 1,200,000 Dth/d of incremental firm transportation service from Transco’s existing facilities at St. Helena Parish, Louisiana, to the Sabine Pass LNG terminal in Cameron Parish, as well as Sabine Pass’s proposal to construct piping and valves at its Section 3 liquefaction terminal to receive the gas from Transco’s project); *Cheniére Creole Trail Pipeline, L.P.*, 142 FERC ¶ 61,137 (2013) (original feed gas pipeline for Sabine Pass); *Columbia Gulf Transmission, LLC*, 152 FERC ¶ 61,214 (2015) (approving Columbia Gulf Transmission’s Cameron Access Project, which would provide transportation of up to 800,000 Dth/d of incremental firm transportation service from new and looped facilities in Jefferson Davis, Cameron, and Calcasieu Parishes, Louisiana); *Tennessee Gas Pipeline Co., L.L.C.*, 161 FERC ¶ 61,265 (2017) (approving Tennessee’s Lone Star Project to provide up to 300,000 Dth/d of firm transportation service to a new interconnection with the Corpus Christi LNG terminal on Tennessee’s 100 Line in San Patricio County, Texas).

¹³⁴ *Indep. Petroleum Ass’n of Am. v. Babbitt*, 92 F.3d 1248, 1258 (D.C. Cir. 1996) (“An agency must treat similar cases in a similar manner unless it can provide a legitimate reason for failing to do so.”); *Westar Energy, Inc. v. Fed. Energy Regulatory Comm’n*, 473 F.3d 1239, 1241 (D.C. Cir. 2007) (“[A] fundamental norm of administrative procedure requires an agency to treat like cases alike.”); *Burlington N. & Santa Fe Ry. Co. v. Surface Transp. Bd.*, 403 F.3d 771, 776 (D.C. Cir. 2005) (noting that an agency “must provide an adequate explanation to justify treating similarly situated parties differently”).

¹³⁵ See, e.g., *Strategic Petroleum Reserve Discussion Draft and Title IV Energy Efficiency: Hearing Before the Subcomm. on Energy and Power of the H. Comm. on Energy & Commerce*, 114 Cong. 36 (Apr. 30, 2015) (statement of Assistant Secretary for Fossil Energy Christopher Smith stating “[T]he commitment that we have made is that we are going to treat applicants in Canada, applicants in Mexico, and applicants in the United States in a way that is open, . . . transparent, . . . fair, [and] . . . consistent.”).

such a condition would be unreasonably vague. Specifically, if such an order were to require Vista Pacifico to submit a new or amended application for Non-FTA export authorization, it would be unclear how Vista Pacifico must determine the type of pipeline construction to which such a condition would apply. In the *Bear Head* and *Pieridae* orders, because the physical capacity of the pipeline was less than the export volume requested for the geographically isolated LNG terminals on the Nova Scotia peninsula, it was a logical certainty that some construction was necessary just to move the full volumes to and across the U.S./Canadian border. It was clear from those orders that the condition requiring the submission of a new application would apply to any new capacity that would make up the difference between the export volumes requested and the physical capacity of the M&N US Pipeline, allowing the full volumes to be exported. The VPLNG Mid-Scale Project does not involve these “unusual circumstances.” Given that today the physical capacity on the existing cross-border facilities exceeds the volume requested, it is unclear the circumstances under which Vista Pacifico would be obliged to file a new application.

Further, compliance with such a condition would be practically unworkable. If the order granting Vista Pacifico authorization to export natural gas to Non-FTA countries limits Vista Pacifico’s exports to only those using “existing” facilities, it is unclear how Vista Pacifico could ensure compliance with this requirement if those facilities are expanded for reasons unrelated to the VPLNG Mid-Scale Project— *e.g.*, to serve other projects and/or load growth in Mexico. In light of the integrated nature of pipelines and the fungibility of gas streams on a natural gas pipeline, compliance with a directive requiring Vista Pacifico to limit its exports only to those that can be accomplished using facilities and/or capacity that was “existing” at the time of the export authorization would be difficult, if not impossible in most cases. For example, in the case of an expansion to an existing pipeline facility, it would be impossible to determine which molecules of

gas were transported on “existing” capacity and which were transported using the expanded facilities.¹³⁶ Consequently, because such an obligation would be vague and unworkable, Vista Pacifico submits that it would not be consistent with the public interest for DOE/FE to impose conditions on Vista Pacifico’s requested export authorization similar to those imposed in the *Bear Head* and *Pieridae* proceedings.

VIII. APPENDICES

The following attachments and appendices are included with this Application:

Verification

Appendix A: Opinion of Counsel

Appendix B: Permitting Overview for Pipeline and Liquefaction Projects in Mexico

Appendix C: Vista Pacifico Ownership Structure

Appendix D: Summary of Existing Cross-Border Facilities

IX. CONCLUSION

For the reasons set forth above, ECA respectfully requests that the DOE/FE issue an order authorizing Vista Pacifico to export, on its own behalf and as agent for others: (1) 240 Bcf/y of natural gas by pipeline to Mexico; and (2) the equivalent of 200 Bcf/y as LNG from Topolobampo, Mexico to FTA and Non-FTA countries, as described herein. Vista Pacifico requests that DOE/FE grant for such additional volumes an export term extending through December 31, 2050. Vista Pacifico further requests that the commencement date for the authorization commence on the

¹³⁶ This unworkability is yet another reason why a narrow interpretation of the condition placed on the applicants in *Bear Head* and *Pieridae* (*i.e.*, an interpretation requiring a new application only where the requested volume exceeds existing physical capacity) makes more logical sense.

earlier of the date of first export or seven years from the date DOE/FE issues an order granting the authorizations requested herein.

Respectfully submitted,

/s Jerrod L. Harrison
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Counsel for Vista Pacifico LNG, S.A.P.I. de C.V.

Dated: November 18, 2020

VERIFICATION

I, Juancho Enrique Eekhout, declare that I am the Chairman of the Board of Directors and Legal Representative (*Presidente del Consejo de Administración y Apoderado Legal*) of Vista Pacifico LNG, S.A.P.I. de C.V. and am duly authorized to make this Verification; that I have read the foregoing instrument and that the facts therein stated are true and correct to the best of my knowledge, information and belief.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed in San Diego, California on November 18, 2020.

DocuSigned by:

Juancho Enrique Eekhout

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DS
JH

Juancho Enrique Eekhout
Chairman of the Board of Directors and
Legal Representative
Vista Pacifico LNG, S.A.P.I. de C.V.
488 8th Avenue
San Diego, CA 92101

APPENDIX A
Opinion of Counsel



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OPINION OF COUNSEL

October 29, 2020

Ms. Amy Sweeney
Office of Fossil Energy
U.S. Department of Energy
FE-34
Forrestal Building
1000 Independence Avenue, S.W
Washington, DC 20585

RE: *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**

Dear Ms. Sweeney:

This opinion of counsel is submitted pursuant to Section 590.202(c) of the regulations of the United States Department of Energy, 10 C.F.R. § 590.202(c) (2020). I am counsel to Vista Pacifico LNG, S.A.P.I. de C.V. (“VPLNG”).

I have reviewed the organizational and internal governance documents of VPLNG and it is my opinion that the proposed export of natural gas as described in the application filed by ECA Liquefaction, to which this Opinion of Counsel is attached as Appendix A, is within the company powers of VPLNG.

Respectfully submitted,

DocuSigned by:

A5E4B858C3A742B
Rene Buentello Carbonell

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APPENDIX B

Permitting Overview for Pipeline and Liquefaction Projects in Mexico

Permitting Overview for Pipeline and Liquefaction Projects in Mexico



	Name	Position	Date	Signature
Reviewed by	Sergio Romero	Director of Regulation and Industry Affairs (IENOVA)	Nov, 4, 2020.	
Prepared by	Valery Madero	Manager Social and Environmental Regulation (IENOVA)	Nov, 4, 2020.	
	Elisa Valle	Regulatory Senior Manager (IENOVA)	Nov, 4, 2020.	
	Andrea Porras	Manager Social and Environmental Regulation (IENOVA)	Nov, 4, 2020.	

1. Purpose

This document provides a general overview of the permitting process in Mexico, as well as an outline of the required energy-sector, environmental, social and other required permits for projects related to the hydrocarbon sector, specifically those requested for the construction and operation of natural gas pipelines and liquefaction facilities.

2. Document overview

This document outlines and describes all required regulatory permits, their scopes and mechanics, and their potential statutory processing times, in order to achieve a successful development of natural gas pipelines and liquefaction projects (section 3). The document also summarizes the approximate time it takes to prepare applications for necessary permits (Section 4) and describes the elements taken into consideration by Mexican governmental agencies for obtaining said energy-sector, environmental, social and other necessary permits (section 5). The document concludes with a brief description of IEnova and its extensive experience in permitting energy infrastructure projects in Mexico (Section 6).

3. Mexican agencies involved in authorizations and permits

This section includes a high-level scope of the required permits for hydrocarbon activities, including liquefaction and natural gas pipeline projects, as well as the involved Federal Government agencies and their statutory resolution times.

As discussed above, **Table 1** lists all appropriate agencies, as well as the main necessary permits, which are applicable to the construction and operation of natural gas pipelines and liquefaction projects. It is worth mentioning that all descriptions, requirements and sequencing will vary depending on the overall purpose of each project.

Table 1. Agencies and federal permits involved in liquefaction and natural gas pipeline projects.

Mexican Agency	Permit	Comments	Statutory Time	Term	Liquefaction	Pipelines
Environmental Permits (find a detailed description in Section 5)						
<i>Agencia de Seguridad, Energía y Ambiente /</i> Environmental and Safety Agency for the Hydrocarbon Industry (ASEA)	Environmental Impact Assessment (MIA)	<ul style="list-style-type: none"> ❖ According to the General Law of Ecological Equilibrium and Environmental Protection (LGEEPA), a MIA authorized by ASEA is needed in order to develop construction and/or operating liquefaction and gas pipelines activities. 	60 - 120 business days	Regularly these permits' validity last for the entire lifespan of the project. Any modification to such parameters, would require amendments to this authorization, and in some cases, a new MIA could be required.	●	●
	Environmental Risk Assessment (ERA)	<ul style="list-style-type: none"> ❖ An ERA must be included in the MIA, based on the fact that these activities usually involve hazardous materials and processes that could compromise industrial and environmental safety. 				
	Unique Regulated Registry Number (CURR)	<ul style="list-style-type: none"> ❖ The CURR registration is required under the entity that holds the CRE permit. ❖ It is required for construction phase. ❖ It establishes the general management system mechanisms that will be developed within the SASISOPA. 	35 business days	The CURR is valid during the entire lifespan of the project. Any modification to the CURR elements, would require amendment authorized by ASEA.	●	●

Mexican Agency	Permit	Comments	Statutory Time	Term	Liquefaction	Pipelines
	Management System (SASISOPA)	<ul style="list-style-type: none"> ❖ Industrial, Operational, and Environmental Safety Management System is required for any project related to the hydrocarbon sector. ❖ Feed or As Built engineering must be generated in order to develop a Risk Analysis, pursuant ASEA's Guidelines and CRE permit is required to grant this permit. ❖ All activities related to the project must be regulated by the SASISOPA, from operation to decommissioning of the project. 	135 business days	Does not have a term. The SASISOPA is aligned with the terms of the CRE permit, and mandatory during the operation phase.	●	●
	Change of Land Use (ETJ)	<ul style="list-style-type: none"> ❖ A Technical Justification Study, which demonstrates that the ecosystem's biodiversity will not be jeopardized, is required for areas in which natural vegetation will be removed. ❖ The entity must have registered agreements to the State's Public Registry of Property to demonstrate ownership or legal possession of the property. 	85 business days	Granted upon request based on the described time in the file. It is needed prior to any project activity established in a forestry area.	●	●
Other Infrastructure Permits						
<i>Comisión Reguladora de Energía / Energy Comision</i>	Open season procedure	<ul style="list-style-type: none"> ❖ Procedural approval to conduct an open season in terms of the Hydrocarbons Law . 	50 business days			●

Mexican Agency	Permit	Comments	Statutory Time	Term	Liquefaction	Pipelines
Reguladora de Energía / Energy Regulatory Commission (CRE)	Transportation permit	<ul style="list-style-type: none"> ❖ Permit needed for the transportation of natural gas through pipelines, which consists of receiving, conducting and delivering natural gas through an authorized route. ❖ The authorization of the permit includes General terms and Conditions. ❖ The engineering must be verified by a third-party verification agent and issue a report that supports the permitted design. ❖ EvIS request confirmation is required for the CRE admit the process. 	140 business days	30 year from granting of the permit.		●
	Liquefaction permit	<ul style="list-style-type: none"> ❖ Permit that allows for the operation of liquefaction facilities, for a specific capacity and specific technology. ❖ Permission is required until operation. 	140 business days	30 year from granting of the permit	●	
	Commercialization permit	<ul style="list-style-type: none"> ❖ According to the hydrocarbon law is necessary to market liquid natural gas. 	140 business days	30 year from granting of the permit.	●	
Comision Federal de Competencia Economica/ Federal Economic Commission Competition (COFECE)	Cross Participation Authorization	<ul style="list-style-type: none"> ❖ It is required it so that COFECE realizes that the permit holder does not affect competition, market efficiency and effective open access. 	90 business days	Open term is update according with COFECE's authorization	●	
Secretaría de Energía / Secretary of Energy (SENER)	Export Permit	<ul style="list-style-type: none"> ❖ Must be requested for the capacity under the liquefaction permit to export liquid natural gas to other contries. 	15 business days	20 year from granting of the permit.	●	
	Social Impact Assessment (EvIS)	<ul style="list-style-type: none"> ❖ According to the Hydrocarbons Law and Administrative Regulations issued by SENER, all activities related to hydrocarbon sector (regasification, liquefaction, transportation, 	90 business days	. This permit's validity lasts for the entire lifespan of the project.	●	●

Mexican Agency	Permit	Comments	Statutory Time	Term	Liquefaction	Pipelines
		<p>distribution, and storage) must perform a social impact assessment, which identifies, characterizes and assesses social impacts that could be caused by the project.</p> <ul style="list-style-type: none"> ❖ During the project's development a Social Management Plan is executed to implement specific measures, resulting from the positive or negative social impacts, as well the actions, human, and financial resources considered, communication strategies, among others. 				
<i>Secretaría de Comunicaciones y Transportes / Secretary of Transportation and Communications (SCT)</i>	Road crossing permit	<ul style="list-style-type: none"> ❖ SCT must grant a permit when the pipeline crosses federal right of ways (roads and highways). 	65 calendar days	Indefinite duration. The SCT also grants a construction authorization for 180 natural days, which could be renewed or extended 10 business days before it expires.		●
	Marine Concession or permit	<ul style="list-style-type: none"> ❖ If the liquefaction project were to be developed near the shoreline and will develop marine infrastructure in a marine area, an SCT Concession or permit is required. ❖ This Concession applies for port terminals outside API. ❖ The maritime works and dredging can be included in the concession and permit. 	90 calendar days	20 – 50 years	●	
	Start of construction authorization	<ul style="list-style-type: none"> ❖ In order to build any port terminal (whether it is public (API) or private), SCT must grant a start of construction authorization. 	45 calendar days	Does not have a term. This is an authorization to perform a task.	●	

Mexican Agency	Permit	Comments	Statutory Time	Term	Liquefaction	Pipelines
<i>Secretaría de Marina / Ministry of Marine (SEMAR)</i>	Dumping permit	❖ If dredging is executed to increase depth for the marine infrastructure.	60 business days	The term is aligned with the MIA	●	●
<i>Secretaría de Medio Ambiente y Recursos Naturales / Ministry of Environment and Natural Resources (SEMARNAT)</i>	Federal Maritime Terrestrial Zone Concesión (ZOFEMAT)	❖ If the Project has infrastructure within the federal maritime terrestrial zone (the the strip of twenty meters wide of the mainland, walkable and contiguous to the beach), a concession is needed.	200 calendar days	The general term granted is 15 years for general use.	●	
<i>Comisión Nacional del Agua / National Water Commission (CONAGUA)</i>	Bodies of water or federal zones occupation concession.	❖ CONAGUA must grant a permit if the pipeline project crosses any rivers or other bodies of water.	60 business days	No less than 5 and no more than 30 years.		●
	Concession for the use and exploitation of national waters	❖ CONAGUA must grant a concession if sea water is needed for the project's operation.	60 business days	No less than 5 and no more than 30 years.	●	
	Wastewater discharge permit	❖ CONAGUA must grant a water discharge permit if the project dispose wastewater in national bodies.	60 business days	No less than 5 and no more than 30 years.	●	
<i>Instituto Nacional de Antropología e Historia / National Institute of Anthropology and History (INAH)</i>	Archaeological Clearance	❖ Archeological survey conducted by INAH, before construction are conducted. ❖ If INAH concludes the existence of archaeological vestiges, an archeological clearance must be granted by the same Institute.	The survey and archeological clearance will depend on the area to be cleared.	Does not have a term. This is an authorization to perform a task.	●	●

4. Elaboration and Preparation Timing for Key Permits - liquefaction and natural gas pipeline

Engineering	Topic	Timing
Basic engineering	Preparation of engineering	3-4 months
FEED engineering	Preparation of engineering	8 months
Permit	Topic	Timing
MIA and ERA	Permitting elaboration (by environmental consultant)	8-10 weeks (upon reception of overall arrangement)
CURR	Permitting elaboration (by consultant)	8 weeks
SASISOPA	Permitting elaboration (by consultant)	10 weeks
ETJ*	Permitting elaboration (by environmental consultant)	8-10 weeks
	Rights of Way (Timing varies depending on distance, ownership, status of land)	2 – 15 months
CRE	Permitting elaboration	3 weeks
COFECE	Permitting elaboration	2-3 months
SENER	Export Permit elaboration	3 months
	EvIS Permitt elaboration (by consultant)	10 weeks
SEMAR	Permitting elaboration	8-10 weeks
SCT	Road crossing permit elaboration*	5 weeks
	Marine concession or permit elaboration	8 weeks
	Start of construction filing elaboration	1 month
ZOFEMAT Concession	Permitting elaboration	8 weeks
CONAGUA concession and permit	Permitting elaboration (by consultant)	8-10 weeks
CONAGUA*	Permitting elaboration	8-10 weeks
	Rights of Way	2-15 months

*Rights of way are needed before conducting any study regarding these permits. There are many variables as to the timing to resolve contracts regarding rights of ways, such as the pipeline's required distance, if the land where the pipeline were to cross is private or of common ownership, how many owners does the land have (if there are more than one), if the land is in legal dispute, *etc.*

5. Environmental and regulatory permits

This section describes a general overview on the Federal environmental regulatory requirements during the permitting filing and review process. The filing and granting of the environmental permits listed below are required in order to start construction and operation of gas pipeline projects and liquefaction projects in Mexico.

5.1. Environmental Impact Assessment (Federal)

- Mexico's main federal environmental law, *Ley General del Equilibrio Ecológico y la Protección al Ambiente* / General Law of Ecological Balance and Environmental Protection (**LGEEPA**), issued in 1988, is designed to preserve and protect the environment and, alongside its regulations, dictates guidelines for the use of natural resources and sets out pollution prevention and control methods. All facilities located in Mexico are subject to this Mexican environmental law. The LGEEPA is administered by the *Secretaría de Medio Ambiente y Recursos Naturales* / Ministry of Environmental and Natural Resources (**SEMARNAT**), the federal environmental agency in Mexico analogous to the U.S. Environmental Protection Agency.
- The Federal Government created the *Agencia Nacional de Seguridad Industrial y de Protección al Medio Ambiente del Sector Hidrocarburos* (**ASEA**), which is a decentralized Agency of the SEMARNAT responsible for regulating and supervising industrial, operational and environmental safety for projects related to the hydrocarbon sector, including the construction of natural gas pipelines and liquefaction facilities.
- Article 28 of the LGEEPA requires SEMARNAT or ASEA to set standards to evaluate environmental impacts and establish conditions applicable to the development of infrastructure, with the objective of reducing and mitigating any impacts that a project may have on the environment. This process involves the preparation and filing with ASEA of a "*Manifestación de Impacto Ambiental* / Environmental Impact Assessment" (**MIA**). Similar to an Environmental Impact Statement under the U.S. National Environmental Policy Act, a MIA presents the results of comprehensive analysis and studies of potential environmental impacts associated with a project, including site preparation, construction,

operation, and decommissioning, as well as an assessment of measures to mitigate environmental impacts and an analysis demonstrating compliance with Mexican laws.

- The MIA process also provides for extensive public involvement, including notices published in the ASEA’s “Ecological Gazette” (included in their webpage: http://transparencia.asea.gob.mx/Gaceta_ASEA), a public consultation process and hearings. In addition, ASEA solicits and considers comments from various government agencies (including local authorities, CONANP, , etc.).
- If ASEA concludes, based on its review of the MIA, that a project is environmentally viable, it will issue an Environmental Impact Authorization (**EIA**) which specifies the authorization’s terms and conditions, including required measures to mitigate environmental impacts. In doing so, ASEA takes into account the comments derived from the public consultation process and the various federal and state agencies that were notified during the evaluation process.
- The MIA must describe the project’s stages, as well as the ecosystems in which it will be developed. Furthermore, the MIA should include the results of comprehensive analyses and environmental studies, as well as an assessment of mitigation measures, often based on the following **Table 2**.

Table 2. Main environmental factors under evaluation for the MIA.

❖ Agricultural and Soil	❖ Land Use
❖ Air Quality	❖ Noise
❖ Biological Resources	❖ Paleontological Resources
❖ Cultural Resources	❖ Public Health and Safety
❖ Geological Hazards	❖ Traffic and Transportation
❖ Visual Resources	❖ Transmission System Safety and Nuisance
❖ Waste Management / Hazardous Materials and Handling	❖ Water Resources
❖ Wildfire / Fire Safety	❖ Worker Safety

- The enforcement of the terms of a MIA falls under the jurisdiction of ASEA, which is entitled to perform verification visits to ensure compliance with all applicable environmental regulations, as well as the terms and conditions of environmental permits. If a project is noncompliant, ASEA may issue warnings or fines, depending on the severity of the noncompliance, and may terminate a project if there are continued violations of the regulation or if the violations represent a risk to the integrity of the ecosystem.

5.2. Environmental Risk Analysis (Federal)

- According to Article 147 of the LGEEPA and its Regulations, if a project involves certain highly-regulated industrial activities, such as in the hydrocarbons industry, the MIA presented to ASEA must include an Environmental Risk Analysis (**ERA**) for review and ruling. Both a gas pipeline and a liquefaction project will always involve an ERA.
- The ERA is a preventive tool that establishes specific policies, analytical procedures, evaluations and risk control measures to protect the environment and nearby communities by anticipating the possibility of a high-consequence event.
- The ERA must incorporate all preventive measures and scenarios based on technical studies performed at the site where the pipeline will be located (analysis of High Risk and Buffer Zones, technical feasibility studies, among others), a description of the facility's safe-zones, and clear indications of environmental safety measures.
- The development of the ERA must be developed considering the ASEA hydrocarbon Sector Risk Analysis Guide, as well as the SEMARNAT Guide to Terrestrial Pipelines.

5.3. Forestry Land Use Change (Federal)

- The "*Ley General de Desarrollo Forestal Sustentable / General Law of Sustainable Forestry Development (LGDFS)*", issued in 2003 with implementing regulations enacted in 2005, regulates the management, protection, restoration and conservation of natural ecosystems. In April 2020, a Decree¹ was published in the DOF reforming and adding various sections to Article 7 of the LGDFS.
- According to this law, all projects, including the construction of pipelines and liquefaction facilities, must obtain authorization to change the use of soil in forestry lands. Furthermore, as stated in the Decree abovementioned, this implies that change of land use on forest land refers to the total or partial removal of forest vegetation from wooded forest land or other forest land is contemplated for use or induction of non-forest activities. In other words, all land is subject to the process of land use change on forest land (even if they are within population centers).

¹ "DECRETO por el que se reforman y adicionan diversas fracciones del artículo 7 de la Ley General de Desarrollo Forestal Sustentable", DOF: 13/04/2020.

- Article 117 of the LGDFS establishes that ASEA may authorize a forestry land use change based on a technical opinion issued by the members of the State Forestry Council (*Consejo Forestal Estatal*) contingent to a “*Estudio Técnico Justificativo*” (Technical Justification Study or **ETJ**) submitted by the applicant where it demonstrates that biodiversity will not be negatively affected and that there will be no soil erosion, detriment to water quality or diminished rate of recovery.
- According to Article 97 of the LGDFS establishes authorization to forestry land use change on burned land may not be granted without 20 years having passed and the SEMARNAT being reliably accredited that the ecosystem has been fully regenerated.
- To avoid any type of malpractice, the LGDFS establishes that a burned area does not lose its quality of forest land or preferably forest land, so that any action against its conservation as forest land, without having the authorization to change the use of soil would entail an environmental damage and the eventual application of an administrative penalty.
- Furthermore, the ETJ must include the duration of each of the project’s stages, change in land use implementation methods, and should suggest that the proposed alternative land uses will be more productive in the long-run.
- Any land use change must be authorized by a “*Cambio de Uso de Suelo en Terrenos Forestales*” permit (Forestry Land Use Change or **CUSTF**) issued by ASEA. This federal permit authorizes the change of the environmental designation of the land from forested lands to others such as industrial and urban lands, and includes mitigation requirements similar to those included in the MIA. To complete this process, a payment must be made to the Mexican Forestry Fund (*Fondo Nacional Forestal*) to compensate for the vegetation that will be removed.

5.4. SASISOPA

- The Industrial, Operational, and Environmental Safety Management System / *Sistema de Administración de Seguridad Industrial, Seguridad Operativa y Protección al Medio Ambiente* (**SASISOPA**) is a tool that regulates a facility’s performance during operational and further stages. All pipeline and liquefaction projects must follow the procedures and mechanisms established in the SASISOPA, as well every term and condition established by the ASEA to mitigate all plausible operational risks that could be caused by the pipeline

and liquefaction industrial activities and to improve its performance in order to guarantee industrial, social and environmental safety.

- It is important to mention that in May 2020 an regulation (Acuerdo)² related to authorization of the SASISOPA was published in the Federal Official Gazette (DOF), which requires the authorization of the SASISOPA for the operation phase (formerly, it was required for construction phase). This system is governed by ASEA's federal Law (*Ley de la Agencia Nacional de Seguridad Industrial y de Protección al Medio Ambiente del Sector Hidrocarburos*), and specific Administrative Provisions which gives ASEA the institutional power to regulate, monitor, implement and authorize a pipeline and/or liquefaction project based on risk assessment, the technical opinion regarding the design and the coherence with the CRE permit.
- Additionally, those who will develop a pipeline or liquefaction project must be registered under a Unique Regulated Registry Number (**CURR**) / *Clave Única de Registro del Regulado*, which is a code that allows the ASEA to identify who is requesting a specific authorization and currently, it is a requirement for construction.

5.5. Other Permits

This section describes a general overview on the federal regulatory requirements during the permitting filing and review process. The filing and granting of the energy-sector permits listed below are required in order to start operation of gas pipeline projects and liquefaction projects in Mexico.

5.5.1. Open Season

- Chapter IV of the Third Title of the LH requires titleholders of natural gas transportation open access permits to give open access to third parties to their pipelines.
- The general administrative provisions regarding open access and provision of transportation services by natural gas pipeline, establish that those interested in developing a natural gas transportation system must carry out an open season, in order to identify the

² "ACUERDO por el cual se modifican, adicionan y derogan diversos artículos de las Disposiciones administrativas de carácter general que establecen los lineamientos para la conformación, implementación y autorización de los Sistemas de Administración de Seguridad Industrial, Seguridad Operativa y Protección al Medio Ambiente, aplicables a las actividades del Sector Hidrocarburos que se indican", DOF: 04/05/2020.

market demand and service provision requirements and optimize the capacity sizing of the transport system.

- The entity that is interested in developing the natural gas pipeline first needs to obtain the authorization of the CRE for the open season procedure.

5.5.2. Transportation and Liquefaction Permits

- LH is designed to regulate permits in the hydrocarbon industry activities (transportation, storage, distribution, compression, liquefaction, decompression, regasification, marketing, and sale of hydrocarbon products to the public), and permits for the management of integrated systems. The LH is administered by the CRE. The CRE in Mexico is analogous to the U.S. Federal Energy Regulatory Commission.
- The CRE has technical, operative, and budgetary autonomy and is responsible for regulating the electric sector and overseeing midstream and downstream segments of the hydrocarbons value chain.
- According to Article 48 of the LH and its regulation, the CRE shall grant permits in the hydrocarbon industry activities, which include transportation and liquefaction of natural gas.
- The transport of natural gas is subject to open access conditions, it has regulated rates, and general conditions for the provision of the service which seek to make such service non-discriminatory. The liquefaction activity is closed access.

5.5.3. Cross Participation

- The Federal Law of Economic Competition (“**LFCE**”), issued in 2014, is designed to ensure low levels of market concentration by promoting competition. The LFCE is administered by the COFECE
- Article 83 of the LH establishes if an transport permit holder participate indirectly in the share capital of marketing permit holder, as is in the case of the project, should carry out activities in independent entities and systems and establish the legal and corporate mechanisms (“Chinese walls”) necessary to prevent such cross participation from affecting the development of competitive markets in these sectors.

- The agreement A/005/2016 published on March 3, 2016, establishes the interpretation of the CRE regarding the cross participation referred to in the second paragraph of Article 83 of the LH and establishes the procedure to authorize it.

5.5.4. Social Impact Assessment

- The “*Ley de Hidrocarburos*” / Hydrocarbons Law (“**LH**”), issued in 2016, regulates the surface exploration, activities related to petroleum such as treatment and refinement, activities related to natural gas, as well as activities related to petroleum products and petrochemicals.
- According to Article 121 of the LH and its Regulation, those interested in obtaining a permit or an authorization to develop hydrocarbons projects, must file to the Secretary of Energy a Social Impact Assessment.
- In 2018, the Secretary of Energy issued the General Administrative Provisions on the Social Impact Assessment in the Energy Sector (*Disposiciones Administrativas de Carácter General sobre la Evaluación de Impacto Social en el Sector Energético*), which establishes the guidelines for the elaboration and presentation of the Social Impact Assessment, as well as the procedure to be followed by the Secretary of Energy for the issuance of the corresponding Resolution.

5.5.5. INAH's authorization

- The “*Ley Federal Sobre Monumentos y Zonas Arqueológicas, Artísticas E Históricas* / Federal Law on Monuments and Archeological, Artistic and Historic Zones (“**LFMZAAH**”), created in 1972 and reformed in 2018, regulates the protection, issuance and revocation of declarations of archaeological, artistic and historical monuments and zones.
- According to Articles 42, 43 and 44 of the LFMZAAH, those interested in obtaining a permit or an authorization to develop projects near or within a Monument Zone, must request an approval to the INAH.

- In order to obtain such authorization, an inspection must be carried out and, if applicable, a rescue must be performed.

5.5.6. ZOFEMAT Concession

- The “*Ley General de Bienes Nacionales / General Law of National Assets*” and “*Reglamento para el Uso y Aprovechamiento del Mar Territorial, Vías Navegables Playas, Zona Federal Marítimo Terrestre y Terrenos Ganados al Mar / Regulation for the Use and Exploitation of the Territorial Sea, Waterways, Beaches, Federal Maritime Terrestrial Zone and Reclaimed Lands* published in 2004 and 1991, respectively, regulates the use of the federal maritime terrestrial zone (**ZOFEMAT**) which is the strip of twenty meters of the mainland contiguous to the beach.
- The ZOFEMAT can be use through a concession title issued by SEMARNAT, which entitles the project to use the area for liquefaction activities, according to the MIA approved by ASEA.
- In any case, it is forbidden to limit the free access to the ZOFEMAT.

5.5.7. Dumping permit

- The “*Ley de Vertimientos en las Zonas Marinas Mexicanas / Dumping Law in Mexican Marine Zones*” issued in 2013, aims to control and prevent the pollution or sea alteration in the Mexicans marines zones. In 2020, the Law was modified to delineate the concept of dumping.
- The Law consideres as dumping the following activities: deliberate evacuation of wastes and other materials from ships, aircraft, platforms or other constructions with the only purpose of elimination; deliberate drowning of ships, aircrafts, platforms or other constructions into the sea with the purpose of abandon them; storage waste or other materials in the seabed; and the abandonment or demolition of platforms or other constructions, with the only purpose of dispose them in the sea.
- If the project requires any dredging to install any infrastructure in the marine area, this permit shall be solicited to the Ministry of Marine. In order to request said permit, the MIA

resolution is required as well the favourable opinion of the Ministry of Communications and Transportation related to the impact to the maritime traffic in the dumping area.

5.5.8. SCT Authorizations

- According to the “*Ley de Puertos / Port Law*” published in 1993, the use and exploitation in ports, maritime terminals and marine areas, and the construction of infrastructure within marine zones requires a concession or permit granted by the SCT.
- The concession or permit allows the use of federal assets controlled by the Federal Government. In order to obtain this concession or permit, the MIA Resolution and the ZOFEMAT concession must be included in the filing.

6. About IEnova

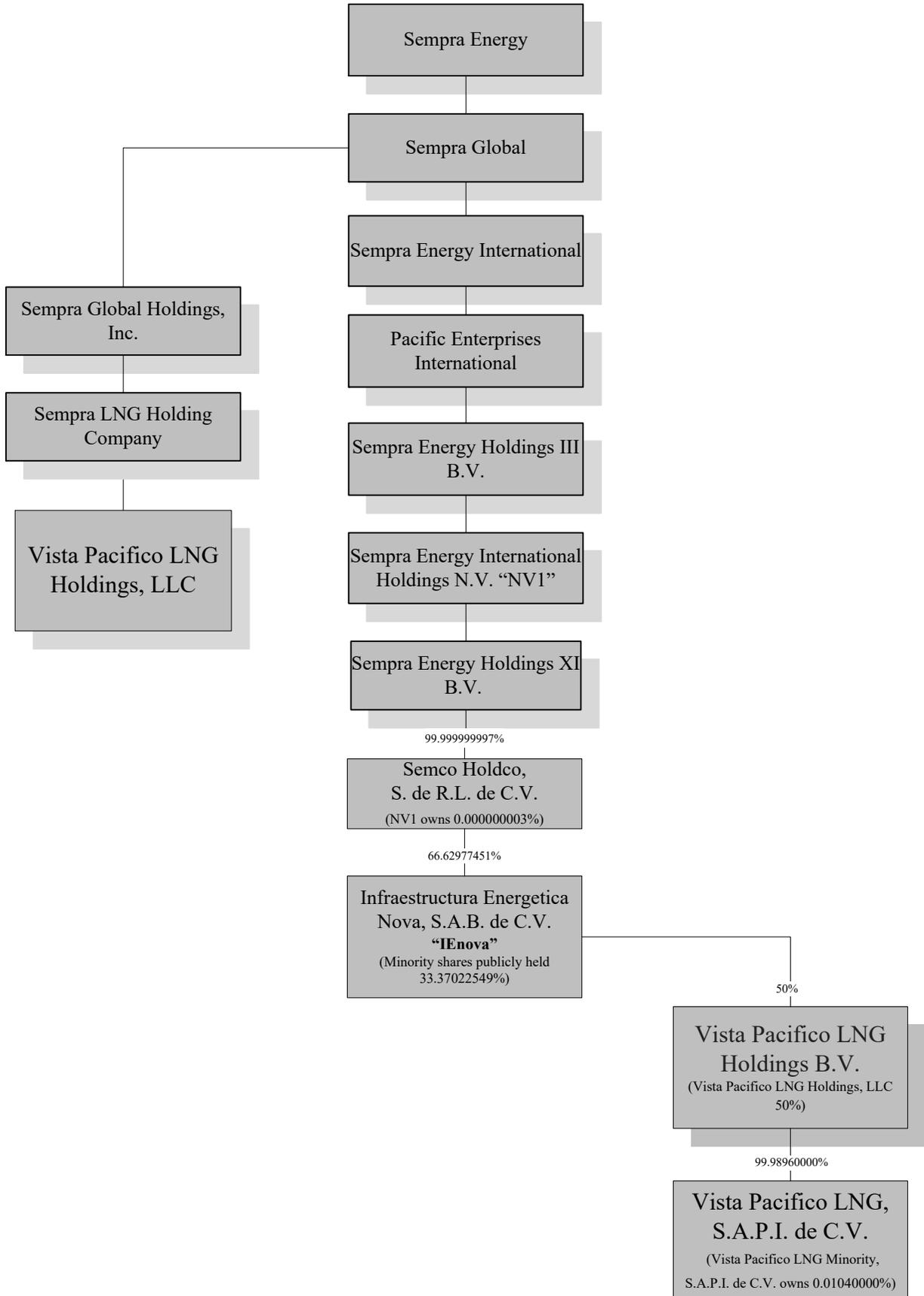
IEnova (IENOVA.MX), a subsidiary of Sempra Energy (SRE:US), is one of the largest private energy companies in Mexico that develops, builds and operates energy infrastructure, with more than 1,300 employees and approximately US\$9.6 billion invested.

IEnova currently has a presence in 17 states in Mexico, including those states bordering the U.S.. IEnova owns 3,391 km of Natural Gas, LPG and Ethane pipelines for transport and 8,276 km of Natural Gas pipelines for distribution across Mexico, and a LNG reception, storage and regasification terminal with a send-out capacity of 1000 MMcfd in Baja California. Currently IEnova is developing with Sempra a project to add liquefaction capabilities to its LNG terminal. Since 1996, IEnova has secured environmental permits for more than 34 company assets, which are still in force and effect for the operation of such assets.

APPENDIX C

Vista Pacifico Ownership Structure

Vista Pacifico LNG, S.A.P.I. de C.V.
 Ownership structure
 Current as of November 17, 2020



APPENDIX D

Summary of Existing Cross-Border Facilities

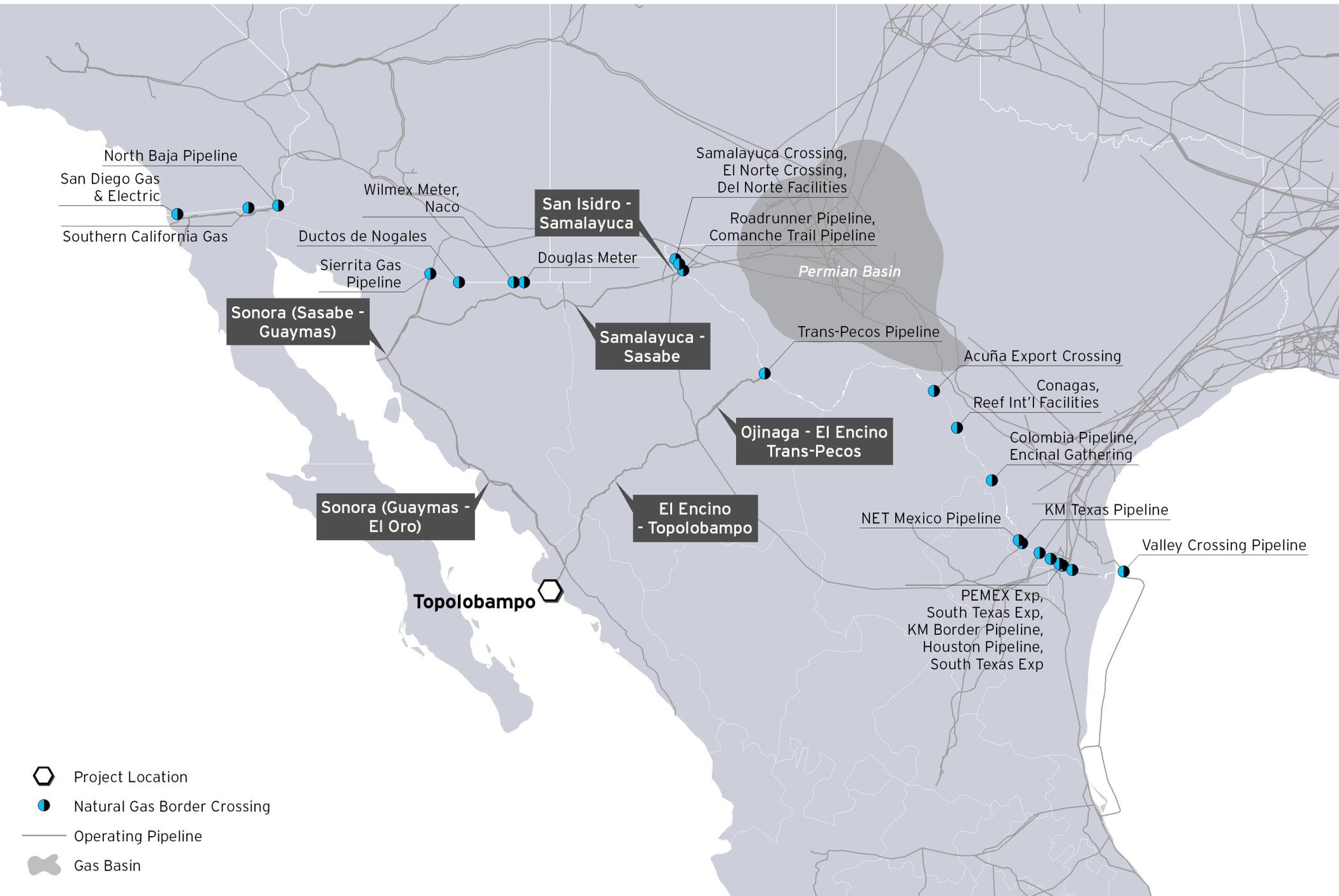
Summary of Existing Cross-Border Facilities

	Pipeline / Operator	FERC Order Granting Presidential Permit or Establishing Capacity	FERC Docket Nos.	Point of Entry / Exit	Approved / Proposed Capacity (mmcf/d)
1	San Diego Gas & Electric Co.	<u>116 FERC ¶ 61,246</u> (2006)	CP93-117	Otay, CA / Tijuana, BC	800
2	Southern California Gas Co.	68 FERC ¶ 61,277 (1994)	CP94-207	Calexico, CA/ Mexicali, BC	40
3	North Baja Pipeline Co.	<u>98 FERC ¶ 61,020</u> (2002)	CP01-23, CP06-61	Ogilby, CA/ Los Algodones, BC	500
4	Sierrita Gas Pipeline	<u>147 FERC ¶ 61,192</u> (2014)	CP13-74, CP18-38	Sasabe, AZ/ Sasabe, Son	627
5	El Paso Natural Gas Co (Ductos de Nogales)	<u>94 FERC ¶ 61,393</u> (2001)	CP01-41	Santa Cruz, AZ/ Nogales, Son	9
6	El Paso Natural Gas Co (Douglas Meter)	<u>141 FERC ¶ 61,026</u> (2012)	CP98-357, CP12-7	Cochise, AZ/ Agua Prieta, Son	117
7	El Paso Natural Gas Co (El Fresno/Willmex Meter)	<u>141 FERC ¶ 61,026</u> (2012)	CP99-323, CP12-7	Cochise, AZ/ Agua Prieta, Son	329
8	El Paso Natural Gas Co (Naco/Monument 90 Facilities)	<u>154 FERC ¶ 61,257</u> (2016)	G-104, CP15-493	Cochise, AZ/ Naco, Son	57
9	El Paso Natural Gas Co (Samalayuca Crossing)	<u>140 FERC ¶ 61,072</u> (2012)	CP93-253, CP12-74	El Paso, TX/ Cd. Juarez, Chih	545
10	El Paso Natural Gas Co (El Norte Crossing)	<u>140 FERC ¶ 61,174</u> (2012)	CP12-96	Clint, TX/ Cd. Juarez, Chih	366
11	ONEOK Partners (Roadrunner – Tarahumara PL)	<u>153 FERC ¶ 61,041</u> (2015)	CP15-161	San Elizario, TX/ San Isidro, Chih	875
12	Comanche Trail Pipeline LLC (ETP Waha-San Elizario)	<u>155 FERC ¶ 61,182</u> (2016)	CP15-503	San Elizario, TX/ San Isidro, Chih	1,100
13	Trans-Pecos Pipeline LLC (ETP Waha-Presidio)	<u>155 FERC ¶ 61,140</u> (2016)	CP15-500	Presidio, TX/ Ojinaga, Chih	1,300
14	OkTex Pipeline Co., (Del Norte Facilities)	105 FERC ¶ 61,047 (2003)	CP03-99, CP00-384 CP91-2128	El Paso, TX / Juarez, Chih.	112
15	West Texas Gas Co (Acuña Export Crossing)	<u>101 FERC ¶ 61,058</u> (2002)	CP02-97	Val Verde, TX/ Cd. Acuña, Coah	25
16	West Texas Gas Co (Conagas)	<u>76 FERC ¶ 61,264</u> (1996)	CP84-361, CP84-366, CP96-497, CP02-382	Eagle Pass, TX/ Piedras Negras, Coah	38
17	West Texas Gas Co. (Reef Int'l Facilities)	99 FERC ¶ 61,221 (2002).	CP02-74, CP08-410	Eagle Pass, TX / Piedras Negras, Chih.	15
18	Kinder-Morgan Texas Pipeline Co.	<u>77 FERC ¶ 61,205</u> (1996)	CP96-583, CP12-440, CP13-94	Roma, TX/ Cd. Miguel Aleman, Tam	700
19	NET Mexico Pipeline	<u>145 FERC ¶ 61,112</u> (2013)	CP13-482	Starr, TX/ Cd. Camargo, Tam	2,100
20	Tennessee Gas Pipeline Co (PEMEX Exp)	<u>86 FERC ¶ 61,244</u> (1999)	CP99-28	Hidalgo, TX/ Reynosa, Tam	185
2	Tennessee Gas Pipeline Co (South Texas Exp)	<u>101 FERC ¶ 61,360</u> (2002)	CP02-117	Hidalgo, TX/ Reynosa, Tam	320
2	Coral Energy Corp. / Kinder Morgan Border Pipeline LLC	<u>89 FERC ¶ 61,171</u> (1999)	CP99-564, CP17-474	Hidalgo, TX/ Reynosa, Tam	450
23	Houston Pipeline (Energy Transfer)	<u>146 FERC ¶ 61,195</u> (2014)	CP14-13	Hidalgo, TX/ Reynosa, Tam	140
24	Texas Eastern Transmission (South Texas Exp)	16 FPC 27 (1956) 9 FERC ¶ 61,362 (1979)	G-9785, CP80-93	Hidalgo, TX/ Reynosa, Tam	300
25	Colombia Pipeline, LLC (Howard Energy - Impulsora)	<u>151 FERC ¶ 61,117</u> (2015)	CP14-513, CP16-70	Webb, TX/ Colombia, NL	1,120
26	Encinal Gathering Ltd	<u>121 FERC ¶ 61,248</u> (2007)	CP07-418	Webb, TX/ Coahuila	60
27	Valley Crossing Pipeline Co (Spectra Energy)	<u>161 FERC ¶ 61,084</u> (2017)	CP17-19	Brownsville, TX/ Offshore with Sur de Texas-Tuxpan Interconnect	2,600
Total Existing Cross-Border Capacity					<u>14,830</u>

U.S. Pipeline Capacity and Flows to Mexico

U.S. Pipeline	Mexico Pipeline	Current Capacity (MMcf/d)	2017 Flows (MMcf/d) ¹	2020 Capacity (MMcf/d)
California				
San Diego Gas & Electric Co	TGN de Baja California	415	2	415
North Baja	Gasoducto Bajanorte / Rosarito	500	296	500
Southern California Gas	DGN Pipeline	70	52	70
Arizona				
Sierrita	Gasoducto Aguaprieta / Sonora	201	98	524
El Paso	PEMEX	512	234	862
West Texas				
OneOK WesTex and Roadrunner	PEMEX / Tarahumara Pipeline	965	114	965
El Paso	PEMEX / Gasoducto de Chihuahua	360	70	360
Comanche Trail	San Isidro-Samalayuca	1,100	48	1,100
El Paso	San Isidro-Samalayuca	550	230	550
Trans-Pecos	Gasoducto Ojinaga	1,356	0	1,356
South Texas				
Tennessee Gas Pipeline	PEMEX / Gasoducto Del Rio	527	217	527
NET Mexico Pipeline	Los Ramones	2,100	1,896	2,100
KM Texas and KM Tejas	PEMEX / KM Gas Natural de Mexico	990	934	990
Nueva Era Pipeline	Nueva Era Pipeline	0	0	1,000
Valley Crossing	Sur de Texas –Tuxpan Pipeline	0	0	2,600
Texas Eastern	PEMEX	350	22	350
West Texas Gas Co	PEMEX	472	1	472
Houston Pipeline Co	PEMEX	140	86	140
Tidelands Oil & Gas Co	PEMEX	26	22	26
Total		10,634	4,322	14,907

Source: EIA



North Baja Pipeline
 San Diego Gas & Electric
 Southern California Gas

Wilmex Meter, Naco

San Isidro - Samalayuca

Samalayuca Crossing, El Norte Crossing, Del Norte Facilities

Roadrunner Pipeline, Comanche Trail Pipeline

Ductos de Nogales

Douglas Meter

Permian Basin

Sierrita Gas Pipeline

Sonora (Sasabe - Guaymas)

Samalayuca - Sasabe

Trans-Pecos Pipeline

Acuña Export Crossing

Conogas, Reef Int'l Facilities

Ojinaga - El Encino Trans-Pecos

Colombia Pipeline, Encinal Gathering

Sonora (Guaymas - El Oro)

El Encino - Topolobampo

NET Mexico Pipeline

KM Texas Pipeline

Valley Crossing Pipeline

Topolobampo 

PEMEX Exp, South Texas Exp, KM Border Pipeline, Houston Pipeline, South Texas Exp

-  Project Location
-  Natural Gas Border Crossing
-  Operating Pipeline
-  Gas Basin