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

In the Matter of:)	
)	
Venture Global Calcasieu Pass, LLC)	Docket Nos. 13-69-LNG
)	14-88-LNG
)	15-25-LNG

**APPLICATION OF
VENTURE GLOBAL CALCASIEU PASS, LLC
FOR LIMITED AMENDMENT TO EXISTING
LONG-TERM, MULTI-CONTRACT AUTHORIZATIONS TO
EXPORT LIQUEFIED NATURAL GAS
TO FREE TRADE AND NON-FREE TRADE AGREEMENT NATIONS**

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Filed: December 3, 2021

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**APPLICATION OF
VENTURE GLOBAL CALCASIEU PASS, LLC
FOR LIMITED AMENDMENT TO EXISTING
LONG-TERM, MULTI-CONTRACT AUTHORIZATIONS TO
EXPORT LIQUEFIED NATURAL GAS
TO FREE TRADE AND NON-FREE TRADE AGREEMENT NATIONS**

Pursuant to Section 3 of the Natural Gas Act (“NGA”) 1 and Part 590 of the regulations of the Department of Energy (“DOE”), 2 Venture Global Calcasieu Pass, LLC (“Calcasieu Pass”) hereby submits for filing this application (“Application”) to the Office of Fossil Energy and Carbon Management of the DOE (“DOE/FE”) for a limited amendment of its existing export long-term, multi-contract authorizations to export domestically produced liquefied natural gas (“LNG”) from the Calcasieu Pass LNG Project that is currently under construction on the east side of the Calcasieu Ship Channel in Cameron Parish, Louisiana (the “Export Terminal” or “Project”). Calcasieu Pass anticipates that it will commence full operations of the Project in mid-2022, with a phased operational start-up that (subject to the requisite review and approvals from the Staff of the Federal Energy Regulatory Commission or “FERC”) could include the first exports of LNG in early 2022. As detailed below, Calcasieu Pass requests that its total

1 15 U.S.C. § 717b (2018). Authority to regulate the import and export of natural gas under the Section 3 has been delegated to the Assistant Secretary for Fossil Energy pursuant to Redefinition Order No. 00-002.04G issued on June 4, 2019.

2 10 C.F.R. Part 590 (2021).

authorized export volumes be increased from 620 billion cubic feet per year (“Bcf/yr”) to 640.666 Bcf/yr, to reflect a refined analysis of the peak liquefaction capacity of the authorized Project facilities under optimal conditions.

Calcasieu Pass was granted long-term, multi-contract authority to export LNG to (1) nations with which the United States has not entered into a Free Trade Agreement (“FTA”) requiring the national treatment of natural gas in DOE/FE Order No. 4346 issued in FE Docket Nos. 13-69-LNG, 14-88-LNG, and 15-25-LNG on March 5, 2019, and (2) FTA nations in three earlier orders: DOE/FE Order No. 3345 issued in FE Docket No. 13-69-LNG on September 27, 2013; DOE/FE Order No. 3520 issued in FE Docket No. 14-88-LNG on October 10, 2014; and DOE/FE Order No. 3662 issued in FE Docket No. 15-25-LNG on June 17, 2015. As amended, each of the authorizations extends through December 31, 2050. ³ In total, Calcasieu Pass is currently authorized to export LNG to both FTA and non-FTA nations in a volume equivalent to 620 Bcf/yr, which is approximately 12 million metric tonnes per annum (“MTPA”) of LNG. ⁴

The Calcasieu Pass Project has a nameplate liquefaction capacity of 10 MTPA, which is the amount of production guaranteed by Calcasieu Pass’s contractors based on the least favorable ambient conditions and other conservative assumptions. The 12 MTPA reflected in the export authorizations is based on Venture Global’s estimate of the Project’s peak, potential liquefaction output made in early 2015, just after completing its pre-Front End Engineering and Design (“pre-

³ DOE/FE Order Nos. 3345-A/ 3520-A/ 3662-A, 4346-A issued in these proceedings on October 21, 2020, following pursuant to DOE/FE’s final policy statement issued on July 29, 2020, entitled “Extending Natural Gas Export Authorizations to Non-Free Trade Agreement Countries Through the Year 2050” (the “Term Extension Policy Statement”).

⁴ The FTA and non-FTA volumes are not additive. Authorization for the total quantity for non-FTA exports was issued in DOE/FE Order No. 4346. The total FTA quantity, however, consists of the aggregation of: 243.6 Bcf/yr authorized in DOE/FE Order No. 3345, another 243.6 Bcf/yr authorized in DOE/FE Order No. 3520, plus 132.8 Bcf/yr authorized in DOE/FE Order No. 3662, consistent with three separate applications submitted by Calcasieu Pass.

FEED”) study, as explained in Calcasieu Pass’s original application in Docket No. 15-25-LNG. That same 12 MTPA capacity is also the current maximum liquefaction capacity authorized for construction and operation of the Project by the FERC. ⁵

Subsequently, Calcasieu Pass has significantly advanced and refined the final design of the Project, and worked with its equipment suppliers and contractors to refine their efficiencies and outputs to better understand the capabilities of the approved facilities. Based on that refined analysis, Calcasieu Pass is contemporaneously filing an application with FERC to amend its NGA Section 3 authorization to increase the Project’s peak liquefaction capacity under optimal conditions to 12.4 MTPA or approximately 640.666 Bcf/yr. The proposed increase in peak liquefaction capacity reflects refinements in the conditions and assumptions concerning the maximum potential operations; it does *not* involve the construction of any new facilities nor any modification of the previously authorized facilities. ⁶ Calcasieu Pass is requesting that the FERC authorize the increased peak capacity by no later than July 31, 2022.

Calcasieu Pass requests here that DOE/FE correspondingly increase the quantity of its total authorized export volumes to 640.666 Bcf per year for both FTA and non-FTA nations, so as to reflect the actual peak liquefaction capacity of the Project facilities under optimal conditions. Accordingly, Calcasieu Pass requests a limited amendment of DOE/FE Order Nos.

⁵ *Venture Global Calcasieu Pass, LLC, et al.*, 166 FERC ¶ 61,144 (2019).

⁶ The primary factor contributing to the increased peak LNG production capacity compared to the previous estimate is a better understanding of the efficiency and operating capabilities of key components of the liquefaction process system across various gas compositions, gained through a customary process of design progression and advanced simulations (static and dynamic). Calcasieu Pass anticipates that it can achieve the new peak LNG production while remaining in full compliance with its air emissions permit and other regulatory requirements, including U.S. Coast Guard limitations on the number of port calls to the Project terminal. Similarly, Calcasieu Pass expects that the increased LNG production at peak levels will not alter the conclusions or results of its previously reviewed and approved hazard analysis, or otherwise adversely affect its conformance with applicable safety requirements. Calcasieu Pass expects these issues to be the subject of the FERC review of the proposed increase in peak liquefaction capacity.

4346 and 3662 7 to increase the authorized export volumes in each by 20.666 Bcf/year. All other obligations, rights, and responsibilities of the export authorizations – including without limitation the term extending through 2050, the inclusion of short-term authorization, 8 and all applicable reporting requirements and other conditions – would remain the same without change.

Consistent with the different standards under Section 3 of the NGA applicable to LNG exports to FTA and non-FTA nations, 9 and with previous orders of DOE/FE, Calcasieu Pass requests that DOE/FE issue two separate orders authorizing the increased volumes of LNG exports proposed here, first, to FTA nations and, second, to non-FTA nations.

In support of this Application, Calcasieu Pass respectfully states the following:

7 Calcasieu Pass believes that amendment of DOE/FE Order No. 3662 issued in FE Docket No. 15-25-LNG, increasing the volumes authorized in that order from 132.8 to 173.466 Bcf/yr is the most logical and efficient way to increase the authorized volumes to FTA nations. Calcasieu Pass’s 2015 application in that docket reflected the previously estimated peak capacity of 12 MTPA, whereas the earlier applications related to the 10 MTPA nameplate capacity.

In somewhat similar circumstances, DOE/FE increased authorized FTA volumes for Magnolia LNG related to an increase in its peak liquefaction capacity by amending each of its two FTA authorizations and dividing the requested total increase equally between the two orders, while explaining that Magnolia did not specify in its Application how the increase should be reflected. Magnolia LNG LLC, DOE/FE Order No. 3245-A and 3406-A at page 4 (issued Mar. 21, 2019). Calcasieu Pass has no objection if DOE/FE would prefer to divide the increase of 40.666 Bcf/yr equally over its three FTA authorizations, but believes that amending only a single FTA order would be simpler.

8 On December 18, 2020, DOE/FE issued a Policy Statement discontinuing its practice of issuing separate long-term and short-term authorizations for exports of natural gas from the same facility. “Including Short-Term Export Authority in Long-Term Authorizations for the Export of Natural Gas on a Non-Additive Basis,” Policy Statement, 86 Fed. Reg. at 2,243 (Jan. 12, 2021) (hereinafter “Including Short-Term Policy Statement”). Instead, long-term authorizations to export domestically produced natural gas may include additional authority to export the same approved volume pursuant to transactions with terms of less than two years on a non-additive basis (including commissioning volumes). Accordingly, Calcasieu Pass’s existing long-term authorizations also allow for the export of a portion of the approved volumes on a short-term or spot basis, including for commissioning purposes.

9 NGA Section 3(c) provides that the export of natural gas to a nation with which there is in effect a FTA requiring national treatment for trade in natural gas shall be deemed to be consistent with the public interest and requires that such applications be granted without modification or delay. Section 3(a) provides that applications to export LNG to non-FTA nations shall be authorized unless the Secretary finds that the proposed exports will not be consistent with the public interest. Such exports are presumptively in the public interest and that presumption can be overcome only through an affirmative demonstration that the proposed export is inconsistent with the public interest, as explained below.

I. DESCRIPTION OF THE APPLICANT

The exact legal name of the Applicant is Venture Global Calcasieu Pass, LLC. Calcasieu Pass is a Delaware limited liability company with its primary place of business located at 1001 19th Street North, Suite 1500, Arlington, VA 22209. Calcasieu Pass is primarily engaged in the business of developing the Export Terminal in Cameron Parish, Louisiana, authorized in the Order.

Calcasieu Pass originally was a direct, wholly owned subsidiary of Venture Global LNG, Inc. (“Venture Global LNG”), which is a privately held Delaware corporation with the same principal place of business as Calcasieu Pass. Venture Global LNG is the developer of LNG export projects in the United States using modular mid-scale plant configuration with reliable, proven technology and innovative design to offer low-cost, clean and reliable U.S. LNG to the world. Additional information regarding Venture Global LNG and its projects is available at the company’s website at <http://ventureglobalng.com/>.

Venture Global LNG was founded by and originally owned and controlled by its sole member Venture Global Partners, LLC (“VG Partners”), which in turn is owned and controlled by Robert B. Pender and Michael A. Sabel (the “Principals”). To further develop and finance its projects, Venture Global LNG over time has sold small, passive ownership interests to a number of U.S. institutional and related investors. Currently, approximately 63.54% of the common stock of Venture Global LNG remains held by VG Partners, while the other 36.46% of the common stock is owned by a group of institutional investors. Each of the institutional investors owns only a small passive interest and has no power to direct Venture Global LNG’s management or policies. VG Partners, which remains wholly owned 50/50 by the Principals,

retains the sole right to control Venture Global LNG and to appoint the board of directors who direct its management and policies.

Venture Global LNG made a positive final investment decision (“FID”) for the Calcasieu Pass Project and then closed on the debt and equity financing for the Project on August 19, 2019. The project financing of Calcasieu Pass included equity investments totaling \$1.3 billion by Stonepeak Infrastructure Partners (“Stonepeak”), ¹⁰ as well as debt construction financing of \$5.8 billion from a lender group that includes many of the world’s leading Asian, European and North American project finance banks. ¹¹ On September 6, 2019, Calcasieu Pass filed a notification with DOE/FE in accordance with its procedures for changes in control, explaining the Stonepeak investment and the resulting corporate structure (which includes new subsidiaries through which Venture Global LNG now holds its indirect ownership interest in Calcasieu Pass). On March 17, 2020, DOE/FE responded to the notification, explaining that the resulting amendment to Calcasieu Pass’s non-FTA authorization was deemed granted pursuant to DOE/FE’s procedures because no protests were made within 30 days of the public notice, and adding that the investment is consistent with the public interest as it strengthened the financial capabilities of Calcasieu Pass to construct and execute its Project.¹²

Calcasieu Pass itself remains the holder of the export authorizations, as well as the FERC authorization. The officers and directors of Calcasieu Pass are all U.S. citizens. Calcasieu Pass is not owned, in whole or in part, directly or indirectly, or subsidized directly or indirectly, by

¹⁰ Stonepeak is a North America focused private equity firm, founded in 2011 and headquartered in New York, which manages approximately \$31 billion (as of February 2021) of capital for its investors in businesses comprised of hard assets with leading market positions. See <https://stonepeakpartners.com/about-us/>.

¹¹ See <https://venturegloballng.com/press/venture-global-announces-final-investment-decision-and-financial-close-for-calcasieu-pass-lng/>.

¹² Venture Global Calcasieu Pass, LLC, DOE/FE Notification Regarding Equity Ownership Change in Accordance with Procedures for Change in Control, at FE Docket Nos. 13-69-LNG, 14-88-LNG, 15-25-LNG (Mar. 17, 2020).

any foreign government, nor is it committed by contract to allow such ownership or subsidy by any foreign government.

II. CORRESPONDENCE AND COMMUNICATIONS

All correspondence and communications concerning this Application should be addressed to the following persons:

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III. UPDATE REGARDING STATUS OF THE PROJECT

As explained in Section I, in 2019, Venture Global LNG secured over \$7 billion of debt and equity financing for the Calcasieu Pass Project and made a positive FID to proceed with the Project. Calcasieu Pass has entered into binding, 20-year, LNG sale and purchase agreements (“SPAs”) with six off-takers – Shell, BP, Edison S.p.A., Galp, Repsol, and PGNiG – for a total of 8.5 MTPA of its 10 MTPA nameplate capacity. In addition, Calcasieu Pass entered into a 3-year SPA with Unipecc for another 1.0 MTPA of capacity, as well as a long-term SPA for the available annual quantities in excess of the nameplate capacity. It also has entered into a series of long-term natural gas supply contracts to procure necessary feed gas for its operations. Calcasieu Pass has filed all of these long-term contracts with DOE/FE in accordance with the requirements of its export authorizations and DOE/FE policies. ¹³

¹³ Calcasieu Pass’s filings related to its long-term contracts are available on DOE/FE’s website at: <https://www.energy.gov/fecm/articles/calcasieu-pass-terminal>.

Calcasieu Pass is proceeding with construction of the Export Terminal so as to commence operations as quickly and as safely feasible, and construction is progressing well. To that end, Calcasieu Pass has submitted to the FERC over one hundred and thirty implementation plan filings, and FERC Staff has issued numerous corresponding notices to proceed with a wide range of activities. As Calcasieu Pass has received those notices to proceed, it has moved forward with each of the authorized activities, and it will continue to do so as additional activities are authorized. Details regarding the status of the ongoing Export Terminal construction and commissioning activities are available in the numerous filings and issuance in FERC Docket No. CP15-550. In particular, Calcasieu Pass has submitted monthly status reports and Commission Staff have conducted periodic construction inspections, in accordance with the Order's conditions.

Construction of the Project was approximately 91% complete as at the end of October 2021. Among other significant construction milestones, Calcasieu Pass has successfully received and set onto foundations all of its 18 liquefaction modules, which were constructed off-site in Italy. Calcasieu Pass anticipates that it will commence full operations of the Export Terminal in mid-2022, and plans for a phased operational start-up that (with the requisite approvals from the FERC Staff) could include the first exports of LNG in early-2022.

On the same day as this submission, Calcasieu Pass has submitted an abbreviated application with FERC for a limited amendment of its NGA Section 3 authorization of the Project. That application requests an increase in the FERC-authorized peak liquefaction capacity achievable under optimal conditions from 12.0 MTPA to 12.4 MTPA of LNG, or from approximately 620 Bcf to approximately 640.666 Bcf per year. Calcasieu Pass explains in that FERC amendment application that the increase results from a more refined analysis of the actual

optimal output of the approved facilities and does not involve any additional construction or modification of those facilities.

IV. AUTHORIZATIONS REQUESTED

Calcasieu Pass requests an increase in its long-term, multi-contract authorization to export domestically produced LNG to a total authorized level of 640.666 Bcf per year (which is approximately equivalent to 12.4 MTPA), 14 an increase of 20.666 Bcf/year, for both FTA and non-FTA nations so as to reflect the actual peak liquefaction capacity of the Project facilities under optimal conditions. To be more precise, Calcasieu Pass requests (a) a limited amendment of DOE/FE Order No. 3662 to increase the authorized volumes to FTA nations from 132.8 to 153.466 Bcf/yr 15 and (2) a limited amendment of DOE/FE Order No. 4346 to increase the authorized volumes to non-FTA nations from 620 Bcf/yr to 640.666 Bcf/yr. The FTA and non-FTA volumes shall not be additive, and all other rights and obligations, and terms and conditions, of the export authorizations would remain the same without change.

Calcasieu Pass requests the issuance of separate orders authorizing the requested amendments to increase the authorized levels of LNG exports in two separate orders. This approach of issuing two separate orders for exports to FTA nations and non-FTA nations follows established DOE/FE policy and procedures.

Calcasieu Pass respectfully requests that DOE/FE issue the amended FTA authorization as soon as practicable, consistent with the statutory requirement of issuance without delay.

14 Calcasieu Pass utilizes here the same the natural gas to LNG conversion measure, which reflects a lean gas supply scenario, that was explained its application in FE Docket No. 15-25-LNG, which is the basis of its existing authorizations.

15 Calcasieu Pass requests that the total authorized amount of its authorized exports to FTA nations be increased to 640.666 Bcf/yr, and is essentially indifferent as what order(s) are amended for that purpose, but believes that amending DOE/FE Order No. 3662 may be the best approach. *See n. 7, supra.*

Calcasieu Pass expects that, pursuant to DOE/FE's procedures, the agency will not act on the non-FTA component of this Application until the National Environmental Policy Act ("NEPA") ¹⁶ review process for the Project is completed as part of the FERC approval process. In its application with FERC to amend its authorization to increase the authorized peak liquefaction capacity of the previously approved facilities, Calcasieu Pass is requesting FERC action by no later than July 31, 2022 as no new facilities or construction is involved. Calcasieu Pass respectfully requests that DOE/FE amend the non-FTA authorization as soon as practical following the FERC approval. Expedited review of this amendment application and the prompt issuance of the requested authorizations will assist Calcasieu Pass in maximizing LNG production from an already-approved facility that will soon be operational.

A. EXPORT TO FREE-TRADE NATIONS

Calcasieu Pass first requests that its existing authorization to export LNG to FTA nations be increased to a total of 640.666 Bcf/yr, through an limited amendment of DOE/FE Order No. 3662 that increases the authorized volumes from 132.8 to 153.466 Bcf/yr. This increased volume, when added to the Project's other two existing FTA authorizations, will correspond to a refined calculation of the peak liquefaction output, under optimal conditions, of the authorized facilities that are currently under construction.

Section 3(c) of the NGA, as amended by Section 201 of the Energy Policy Act of 1992 (Pub. L. 102-486), requires that applications to authorize exports of natural gas, including LNG, to a nation with which there is in effect a free trade agreement requiring national treatment for trade of natural gas be "deemed to be consistent with the public interest" and "granted without

¹⁶ 42 U.S.C. § 4321, *et seq.*

modification or delay.” ¹⁷ In addition, DOE/FE has held that the otherwise applicable regulatory requirements for public notice and other procedures set forth in 10 C.F.R. Part 590 do not apply to exports to FTA nations. ¹⁸

Under this statutory structure, the portion of this Application that seeks to increase the level of authorized exports to FTA nations should be granted without modification or delay. The DOE/FE has consistently followed this approach, granting over fifty (50) long-term authorizations (excluding those subsequently vacated) to allow exports of natural gas to FTA nations. ¹⁹ Consistent with the established practice of DOE/FE, Calcasieu Pass asks that the requested FTA authorization be granted initially and separately, without waiting on the further inquiry required to address the requested authorization for LNG export to non-FTA nations. Given the mandatory standard of NGA Section 3(a), DOE/FE is not required to engage in any analysis of factors affecting the public interest in acting on the FTA aspect of this Application, and has not done so when approving similar applications to export LNG to FTA nations. Nevertheless, further support for the requested FTA authorization is provided by the below presentation concerning the non-FTA authorization, to the extent it is deemed relevant.

B. EXPORT TO NON-FREE-TRADE NATIONS

Calcasieu Pass in this Application also requests that its existing authorization to export LNG to non-FTA nations be increased to a total of 640.666 Bcf/yr, through an limited

¹⁷ 15 U.S.C. § 717b(c) (2018) (“For purposes of [15 U.S.C. § 717b(a)] of this section, the importation of the natural gas referred to in [15 U.S.C. § 717b(b)] of this section, or the exportation of natural gas to a nation with which there is in effect a free trade agreement requiring national treatment for trade in natural gas, shall be deemed to be consistent with the public interest, and applications for such importation or exportation shall be granted without modification or delay.”).

¹⁸ E.g., *Venture Global Calcasieu Pass, LLC*, DOE/FE Order No. 3662 at 10, n. 19 (Jun. 17, 2015); *Venture Global Plaquemines LNG, LLC*, DOE/FE Order No. 3866 at 6, n. 8 (Jul. 21, 2016).

¹⁹ A list of orders authorizing long-term exports to FTA (and non-FTA) nations, as well as docket numbers and the links to the orders, is available on the DOE/FE website at: <https://www.energy.gov/fe/downloads/summary-lng-export-applications-lower-48-states>.

amendment of DOE/FE Order No. 4346. This increased volume will correspond to a refined calculation of the peak liquefaction output, under optimal conditions, of the authorized facilities that are currently under construction.

The non-FTA portion of the Application must be reviewed pursuant to the statutory standard established in Section 3(a) of the NGA. The statute 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 order of the [Secretary of Energy] authorizing it to do so. The [Secretary] *shall issue* such order upon application, *unless*, after opportunity for hearing, [the Secretary] finds that the proposed exportation or importation will not be consistent with the public interest. 20

This statutory language creates a presumption that the proposed export of natural gas is in the public interest. DOE/FE has consistently held that it must grant export applications unless opponents of an application overcome this presumption by making an affirmative demonstration that the proposed export is inconsistent with the public interest. 21 This interpretation has been affirmed by the U.S. Court of Appeals for the District of Columbia Circuit. 22

DOE/FE fully analyzed all relevant factors and concluded in DOE/FE Order No. 4346 that exports from the Calcasieu Pass Project to non-FTA nations are consistent with the public interest. The export volumes of 620 Bcf/yr authorized there were based on Calcasieu Pass's understanding at the time of the peak output of the facilities under optimal conditions.

20 15 U.S.C. § 717b(a) (2006) (emphasis added). The Secretary's authority was established by the DOE Organization Act of 1977, which transferred jurisdiction over gas import and export authorizations from the Federal Power Commission to DOE.

21 E.g., *Philips Alaska Natural Gas Corp. & Marathon Oil Co.*, DOE/FE Order No. 1473 at 13 (Apr. 2, 1999); *Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 2961 at 28 (May 20, 2011); *Dominion Cove Point LNG, LP*, DOE/FE Order No. 3331-B at 11 (Apr. 18, 2016); *Venture Global Calcasieu Pass, LLC*, DOE/FE Order No. 4346 at 19; *Venture Global Plaquemines LNG, LLC*, DOE/FE Order No. 4446 at 18-19.

22 E.g., *Sierra Club v. U.S. Dep't of Energy*, 867 F.3d 189 at 203 (D.C. Cir. 2017).

Increasing the quantity of the authorized exports to reflect a better, more refined understanding of the peak output of the facilities is equally consistent with the public interest. Increasing the amount of LNG that may be exported with no need for any additional facilities promotes the public interest. To ensure a complete record in support of the requested DOE/FE action increasing the authorized non-FTA exports by 20.666 Bcf/yr, however, Calcasieu Pass will present the reasons supporting additional exports below.

The Policy Guidelines developed by DOE/FE in 1984 to implement NGA Section 3 (which are applicable to exports as well as imports 23) promote the free and open trade of natural gas. 24 The Policy Guidelines were “designed to establish natural gas trade on a market-competitive basis and to provide immediate as well as long-term benefits to the American economy from this trade.” 25 Moreover, the Guidelines provide that:

The market, not government, should determine the price and other contract terms of imported [or exported] gas. U.S. buyers [sellers] should have full freedom – along with the responsibility – for negotiating the terms of trade arrangements with foreign sellers [buyers]....

* * *

The policy cornerstone of the public interest standard [of NGA Section 3] is competition. Competitive import [export] arrangements are an essential element of the public interest, and natural gas imported [exported] under arrangements that provide for the sale of gas in volumes and at prices responsive to market demands largely meets the public interest test.... 26

23 E.g., *Philips Alaska*, DOE/FE Order No. 1473 at 14; *Yukon Pacific Corp.*, DOE/FE Order No. 350, 1 FE ¶ 70,259 at 71,128 (1989); *Dominion Cove Point LNG, LP*, DOE/FE Order No. 3331 at 8 (Sept. 11, 2013).

24 *Policy Guidelines and Delegation Orders Relating to the Regulation of Imported Natural Gas*, 49 Fed. Reg. at 6,684 (Feb. 22, 1984).

25 *Id.*

26 *Id.* at 6,685 and 6,687. The parenthetical references to exports are added in the above quotation to reflect the applicability of the Policy Guidelines to exports. See n. 23, *supra*.

In authorizing long-term non-FTA exports, DOE/FE has repeatedly and consistently explained that it “continues to subscribe to the principle set forth in our 1984 Policy Guidelines that, under most circumstances, the market is the most efficient means of allocating natural gas supplies.” ²⁷ And as DOE/FE has explained: “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.” ²⁸ DOE/FE has promoted the competitive, free-trade policies embodied in the Policy Guidelines by consistently authorizing LNG exports to non-FTA nations in over 30 decisions over more than a decade, for aggregate authorized exports to non-FTA nations (were all the authorized projects actually placed in service) of over 58 Bcf/day. ²⁹ DOE/FE should continue to follow its longstanding practice here.

While NGA section 3(a) establishes a broad public interest standard and a presumption favoring export authorizations, the statute does not define “public interest” or identify the criteria that must be considered. In its orders authorizing long-term LNG exports to non-FTA nations, DOE has been guided by DOE Delegation Order No. 0204-111, which directed that regulation of gas exports be “based on a consideration of the domestic need for the gas to be exported and such other matters as the Administrator finds in the circumstances of a particular case to be

²⁷ E.g., *Freeport LNG Expansion, L.P.*, Order No. 3282 at 112 (May 17, 2013); *Lake Charles Exports*, Order No. 3324 at 125 (Aug. 7, 2013); *Dominion Cove Point LNG, LP*, Order No. 3331 at 141 (Sept. 11, 2013); *Freeport LNG*, Order No. 3357 at 154 (Nov. 15, 2013); *Cameron LNG, LLC*, DOE/FE Order No. 3391 at 132 (Feb. 11, 2014); *Jordan Cove Energy Project, L.P.*, Order No. 3413 at 143 (Mar. 24, 2014); *Oregon LNG*, Order No. 3465 at 141 (July 31, 2014); *Cheniere Marketing, LLC*, Order No. 3638 at 205 (May 12, 2015); *Sabine Pass Liquefaction, LLC*, Order No. 3669 at 210 (June 26, 2015); *Pieridae Energy (USA), LTD.*, Order No. 3768 at 216 (Feb. 5, 2016); *Bear Head LNG Corp.*, Order No. 3770 at 176 (Feb. 5, 2016); *Venture Global Calcasieu Pass, LLC*, DOE/FE Order No. 4346 at 69; *Venture Global Plaquemines LNG, LLC*, DOE/FE Order No. 4446 at 42.

²⁸ E.g., *Venture Global Plaquemines LNG, LLC*, DOE/FE Order No. 4446 at 19.

²⁹ A list of all the non-FTA approvals with docket numbers, volumes, and links to the relevant DOE/FE orders is available at: <https://www.energy.gov/fe/downloads/summary-lng-export-applications-lower-48-states>. Of course, as DOE/FE has recognized “it is far from certain that all or even most of the proposed LNG export projects will ever be realized because of the time, complexity, and expense of commercializing, financing, and constructing LNG export terminals, as well as the uncertainties inherent in the global market demand for LNG.” Term Extension Policy Statement, 85 Fed. Reg. at 52,243.

appropriate.” ³⁰ More specifically, DOE/FE has explained that its review of export applications focuses on: (i) the domestic need for the natural gas proposed to be exported, (ii) whether the proposed exports pose a threat to the security of domestic natural gas supplies, (iii) whether the arrangement is consistent with DOE/FE’s policy of promoting market competition, and (iv) any other factors bearing on the public interest. ³¹

Granting Calcasieu Pass’ requested authorization to export additional LNG will be consistent with, and indeed advance, the public interest. The general benefits of LNG exports are well known to DOE/FE and have been explained by it in numerous orders as well as a series of studies. In 2012, 2015, and again in 2018, DOE/FE released studies assessing the macroeconomic impacts of LNG exports to inform its decisions on applications seeking authorization to export LNG to non-FTA nations. The conclusions of those studies have been uniformly supportive of the public interest in LNG exports, as explained below.

Faced with multiple LNG export proposals, DOE/FE initially undertook an in-depth two-part study of the cumulative economic impact of LNG exports in 2012. ³² The first part of the study, conducted by the Energy Information Agency (“EIA”), evaluated the potential impact of additional LNG exports on domestic energy consumption, production and prices under several export scenarios, and was published in January 2012. The second part of the study, performed by NERA Economic Consulting (“NERA”), evaluated the potential macroeconomic impact of LNG exports using its energy-economy model, and was made available in December 2012. The

³⁰ DOE Delegation Order No. 0204-111 (Feb. 22, 1984) at 1 (¶ b); *see also Policy Guidelines and Delegation Orders Relating to the Regulation of Imported Natural Gas*, 49 Fed. Reg. at 6,690.

³¹ *E.g.*, *Venture Global Calcasieu Pass, LLC*, DOE/FE Order No. 4346 at 21; *Venture Global Plaquemines LNG, LLC*, DOE/FE Order No. 4446 at 20.

³² The 2012 studies are available at: <https://www.energy.gov/fe/services/natural-gas-regulation/lng-export-study>.

two 2012 studies, as well as the results of the extensive notice and comment process undertaken by DOE/FE seeking public comments on them, are summarized in detail in many DOE/FE orders authorizing LNG exports to non-FTA nations, 33 and more briefly in more recent orders. As DOE/FE has summarized, two of the key findings of the 2012 NERA study were the following:

- Across all the scenarios studied, NERA projected that the United States would gain net economic benefits from allowing LNG exports. For every market scenario examined, net economic benefits increased as the level of LNG exports increased. Scenarios with unlimited exports had higher net economic benefits than corresponding cases with limited exports. In all cases, the benefits that come from export expansion outweigh the losses from reduced capital and wage income to U.S. consumers, and hence LNG exports have net economic benefits in spite of higher domestic natural gas prices.
- U.S. natural gas prices would increase if the United States exports LNG. However, the global market limits how high U.S. natural gas prices can rise under pressure of LNG exports because importers will not purchase U.S. exports if U.S. wellhead price rises above the cost of competing supplies. Natural gas price changes attributable to LNG exports remain in a relatively narrow range across the entire range of scenarios. 34

By May 2014, as the volumes of proposed LNG exports continued to grow, DOE/FE commissioned two new economic studies to understand better how higher levels of LNG exports, at levels between 12 and 20 Bcf per day of natural gas, would affect the public interest. The first

33 E.g., *Freeport LNG*, Order No. 3282 at 30-109; *Lake Charles Exports*, Order No. 3324 at 42-121; *Dominion Cove Point LNG*, Order No. 3331 at 56-134; *Freeport LNG*, Order No. 3357 at 31-50 and 91-143; *Cameron LNG*, Order No. 3391 at 23-42 and 71-125; *Jordan Cove*, Order No. 3413 at 26-51 and 82-136; *Oregon LNG*, Order No. 3465 at 29-54 and 78-132; *Cheniere Marketing*, Order No. 3638 at 68-146; *Sabine Pass Liquefaction*, Order No. 3669 at 25-51 and 94-148.

34 See, e.g., *Freeport LNG*, Order No. 3282 at 40-41; *Lake Charles Exports*, Order No. 3324 at 52-53; *Dominion Cove Point LNG*, Order No. 3331 at 66-67; *Freeport LNG*, Order No. 3357 at 41-42; *Cameron LNG*, Order No. 3391 at 33-34; *Jordan Cove*, Order No. 3413 at 37-38; *Oregon LNG*, Order No. 3465 at 39-40; *Cheniere Marketing*, Order No. 3638 at 78-79; *Sabine Pass Liquefaction*, Order No. 3669 at 36-37. These findings are also set forth in the Executive Summary of NERA Study itself. See *Macroeconomic Impacts of LNG Export from the United States*, NERA Economic Consulting, at 1-2.

study was an update by EIA of its 2012 study that again focused on how LNG exports would affect domestic energy markets and was published in October 2014. ³⁵ The second study – which was jointly performed by the Center of Energy Studies at Rice University’s Baker Institute and Oxford Economics and published in October 2015 – considered the macroeconomic impact of various levels of U.S. LNG exports ranging from 12 Bcf to 28 Bcf per day (“Bcf/d”). ³⁶ The results of the 2014 and 2015 studies – which were entirely consistent with the conclusions of the 2012 studies – were summarized in detail in certain DOE/FE orders and found to be supportive of LNG exports. ³⁷ The 2014 EIA study generally showed relatively small increases in natural gas prices and increased production satisfying most of the increased demand, and concluded that increased LNG exports will result in higher economic output. ³⁸ The 2015 external study of the impact of LNG exports in the range of up to 28 Bcf/d concluded that higher LNG exports will have positive macroeconomic impacts, regardless of the assumptions about the U.S. natural gas markets.³⁹ That study estimated that increasing LNG exports from 12 Bcf/d to 20 Bcf/d would result in a positive impact on gross domestic product of \$7-20 billion annually over the years 2026-2040 (in 2015 prices).⁴⁰

³⁵ EIA, *Effect of Increased Levels of Liquefied Natural Gas Exports on U.S. Energy Markets* (Oct. 2014) (the “2014 EIA LNG Study”), available at: <https://fossil.energy.gov/app/docketindex/docket/index/11>.

³⁶ “*The Macroeconomic Impact of Increasing U.S. LNG Exports*,” (Oct. 29, 2015)(the “2015 LNG Study”), also available at: <https://fossil.energy.gov/app/docketindex/docket/index/11>. Although actual LNG exports have been consistently growing in recent years, they have still not yet exceeded even the 12 Bcf per day limit contemplated in the original 2012 studies. LNG exports have reached record highs in 2021 and averaged 9.6 Bcf per day over the first six months of the year, and the peak capacity currently in operation is 10.8 Bcf per day. *See* EIA, Today in Energy, “U.S. liquefied natural gas exports grew to record highs in the first half of 2021” (July 27, 2021), available at: <https://www.eia.gov/todayinenergy/detail.php?id=48876>.

³⁷ *E.g.*, *Golden Pass Products, LLC*, Order No. 3978 at 54-71 (Apr. 25, 2017); *Delfin LNG LLC*, Order No. 4028 at 51-69 (June 1, 2017).

³⁸ *See* 2014 EIA LNG Study at 12 (Summary of Results).

³⁹ *See* 2015 LNG Study at 8-16 (Executive Summary).

⁴⁰ *Id.* at 8.

In 2017, with growing volumes of authorized exports, DOE/FE and its contractor KeyLogic Systems commissioned the 2018 Export Study by NERA, which was released on DOE's website on June 7, 2018. ⁴¹ Public comments were filed and DOE responded to the comments and summarized the conclusions of the study published in the Federal Register on December 28, 2018. ⁴² Like DOE/FE's prior economic studies, the 2018 Study examines the impacts of varying levels of LNG exports on domestic energy markets; but it differs from earlier studies in the following ways:

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

The first non-FTA export authorization issued after release of the 2018 study was for Calcasieu Pass and DOE/FE explained the methodology and results of the study in detail in that order ⁴³ (as well as subsequent orders). The principal conclusions from the study, as summarized by DOE/FE, were that it provides substantial support for non-FTA authorization for volumes up to 52.8 Bcf/d of natural gas and that the United States experiences net economic

⁴¹ The 2018 study is available at: <https://fossil.energy.gov/app/docketindex/docket/index/10>.

⁴² "Study on Macroeconomic Outcomes of LNG Exports: Response to Comments Received on Study," 83 Fed. Reg. 67,251 (Dec. 28, 2018).

⁴³ *Venture Global Calcasieu Pass, LLC*, DOE/FE Order No. 4346 at 8-15.

benefits from LNG exports. ⁴⁴ DOE/FE also recognized in its Calcasieu Pass order that the EIA’s more recent projections from the 2019 Annual Energy Outlook (“AEO 2019”) reinforced the conclusions of the 2018 study, showing projected increases in domestic natural gas production well in excess of what is required to meet projected increases in domestic consumption. ⁴⁵

Given the extensive evidence of the benefits of LNG exports as demonstrated by the studies noted above and previously recognized by DOE/FE itself in its numerous orders, Calcasieu Pass is not submitting any additional studies of its own. Calcasieu Pass will summarize, however, the factors showing the public interest in LNG exports:

1. Natural Gas Supplies Are Ample for LNG Exports, As Well As Domestic Needs

The primary focus of the DOE/FE’s public interest analysis is on the domestic need for the LNG proposed to be exported. This domestic need can be analyzed by comparing the domestic natural gas supply against natural gas demand.

Domestic natural gas resources are abundant, environmentally friendly, and affordable, and are sufficient to meet both the domestic consumption demand and any expected level of LNG exports (including the increased volumes proposed by Calcasieu Pass) in the long-term. Technological developments in the natural gas industry have led to significant increases in domestically produced natural gas, especially with regard to non-conventional production of natural gas from onshore shale formations.

⁴⁴ *Id.* at 13.

⁴⁵ *Id.* at 14 and 55-56.

The tremendous growth in natural gas production in recent years is well-known. In 2005 – just before the shale gas renaissance – U.S. dry natural gas marketed production was just slightly more than 18 trillion cubic feet (“Tcf”). In contrast, production exceeded 33.8 Tcf in 2019, a record high, before decreasing slightly in 2020 with the economic impacts of the pandemic (while still remaining in excess of 33.4 Tcf, more than any other prior year). ⁴⁶

The latest EIA data and projections show U.S. natural gas production continuing to increase going forward. In its most recent long-term production projections, the reference case in EIA’s *Annual Energy Outlook 2021* (“AEO 2021”) projects that total U.S. dry natural gas production will increase to 42.99 Tcf in 2050, growing by an average amount of 0.8% per year from 2020-50. ⁴⁷ EIA also projects increased natural gas consumption, but with growth at an annual rate of 0.5% – more slowly than the rate of growth in supply – consumption is projected to reach 35.39 Tcf in 2050. ⁴⁸ The abundant reserves and growing surplus of natural gas production over consumption sets the stage for the U.S. to continue to be a major exporter of natural gas.

At the same time that natural gas production has grown, proven reserves have dramatically increased as well. AEO 2021 shows total proved natural gas reserves of about 494.9 Tcf for 2019, compared to only around 213.4 Tcf in 2005, and of approximately 322.7 Tcf in 2012 when DOE/FE first seriously studied the implications of LNG exports. ⁴⁹ Additional information on the country’s available gas supply is provided in the biennial reports of the Potential Gas Committee (“PGC”). The most recent PGC report indicates that the United States

⁴⁶ See EIA Natural Gas Data, available at: <http://www.eia.gov/dnav/ng/hist/n9070us2A.htm>.

⁴⁷ EIA, AEO 2021, at Table 13 *Natural Gas Supply, Disposition, and Prices (Reference Case)*, available at: <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=13-AEO2021&cases=ref2021&sourcekey=0>.

⁴⁸ *Id.*

⁴⁹ *Id.* at Table 9, U.S. proved reserves of total natural gas, wet after lease separation, 2001–19.

possesses a total mean technically recoverable resource base of 3,368 Tcf as of year-end 2020. ⁵⁰ This technically recoverable gas is in addition to the proved reserves estimated by EIA: combining the two values, the total U.S. future supply of natural gas stands at an all-time record 3,863 Tcf, which is well in excess of 100 years of supply at current consumption levels. Thus, over the time period that DOE/FE has been considering LNG exports, the conclusion that the U.S. has ample gas for both all domestic natural gas use and LNG export demand has only strengthened.

Furthermore, as a result of the increasing production and abundant reserves, domestic natural gas prices have remained very low as natural gas exports have increased – at least until very recently, as discussed further below. The U.S. became a net exporter of natural gas for the first time in almost 60 years in 2017, ⁵¹ and net gas exports have increased every year since then. ⁵² Notably, however, actual LNG exports have not yet reached even the low-end of the quantities studied in the 2014-15 studies. ⁵³ As the LNG exports have grown dramatically over the last several years, domestic natural gas prices remained very low, with EIA pricing data showing average Henry Hub prices per Million British thermal units (“MMBtu”) of \$3.10 in

⁵⁰ The latest PGC report, along with a press release dated October 19, 2021 summarizing the report and announcing its release, as well as a related slide presentation, are available at: <http://potentialgas.org/press-release>. As detailed there, the latest PGC mean estimate of technically recoverable resources actually reflects a slight decrease (of 0.2%) compared to the estimate of two years earlier, breaking a trend of seven consecutive biennial reports calculating record-high resource evaluations. Looking back to 2004, for comparison, PGC estimated the technically recoverable resource base as less than 1000 Tcf. See the slides accompanying the 2021 press release (*id.*) at page 8.

⁵¹ EIA, Today in Energy, “The United States exported more natural gas than it imported in 2017” (Mar. 19, 2018), available at: <https://www.eia.gov/todayinenergy/detail.php?id=35392#>.

⁵² See EIA, Today in Energy, “U.S. natural gas exports have been declining since April” (Sept. 15, 2020), available at: <https://www.eia.gov/todayinenergy/detail.php?id=45116#>.

⁵³ See nn. 35 and 36, *supra*.

2017, \$3.27 in 2018, and \$2.57 in 2019, 54 followed by the lowest prices in decades in 2020 with an average of just \$2.05 for Henry Hub. 55

EIA's most recent long-term studies project low natural gas prices to continue throughout the period of the requested export authorization through 2050. Specifically, in the reference case of AEO 2021, EIA projected that Henry Hub prices will remain below \$3.50 (in 2020 dollars per MMBtu) every year through 2033 and then below \$3.70 every subsequent year through 2050. 56

Importantly, the projections in AEO 2021 are even more supportive of LNG exports than the AEO 2017 data that was relied upon in DOE/FE's 2018 study that recognized the public interest benefits of exports at unconstrained levels. 57 For example, for the year 2050, the AEO 2021 reference case projects domestic production of 42.99 Tcf while the comparable data in the AEO 2017 reference case projected production for that year of 40.28 Tcf. 58 The differences in prices are even more dramatic, as the 2017 AEO projected a Henry Hub price for 2050 of \$5.83 per MMBtu in 2016 dollars, compared to the 2021 AEO projection \$3.69 in 2020 dollars. 59 In fact, the 2017 AEO projected Henry Hub prices in excess of \$4.00 every year from 2020 to 2050, whereas the 2021 AEO shows prices below that level every year. 60

54 See EIA, Today in Energy, "Natural gas prices in 2019 were the lowest in the past three years" (Jan. 9, 2020), available at: <https://www.eia.gov/todayinenergy/detail.php?id=42455>.

55 EIA, Today in Energy, "In 2020, U.S. natural gas prices were the lowest in decades," (Jan. 7, 2021), available at: <https://www.eia.gov/todayinenergy/detail.php?id=46376>.

56 EIA, AEO 2021, at Table 13 *Natural Gas Supply, Disposition, and Prices (Reference Case)*, available at: <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=13-AEO2021&cases=ref2021&sourcekey=0>.

57 Notably DOE/FE itself provided this same sort of comparison of the 2017 AEO to the then most recent 2019 AEO in its non-FTA authorization for Plaquemines LNG. *Venture Global Plaquemines LNG, LLC*, DOE/FE Order No. 4446 at 35.

58 Table 13 for AEO 2017 is available at: <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=13-AEO2017&cases=ref2017&sourcekey=0>.

59 Compare the versions of Table 13, cited in the prior to notes, from the two different studies.

60 *Id.*

Domestic natural gas prices have, however, increased significantly in recent months as a result of a concatenation of supply and demand factors influenced by the pandemic and the economic recovery associated with the emergence from it. The recent domestic natural gas prices have been much lower than natural gas prices elsewhere in the world, reinforcing the significant market demand for U.S. LNG. Furthermore, the domestic prices are projected to decrease after this coming winter. Specifically, EIA’s Short-Term Energy Outlook released on November 9, 2021, projects higher prices through the winter but then decreasing as 2022 continues, resulting in an average Henry Hub price of \$3.93 per MMBtu for the year 2022. ⁶¹ For comparison, the AEO 2017 – which DOE/FE focused on in its 2018 study – had actually projected a 2020 Henry Hub price of \$4.51 (in 2016 dollars) and showed prices over \$4 every year continuing through 2050.⁶² The current EIA longer-term projections, again, do not expect Henry Hub prices over \$4 in any of those years.⁶³ Thus, the latest available EIA pricing data is even more support of LNG exports than the data studied in 2018, and continues to demonstrate that arguments against LNG exports based on misplaced concern about insufficient supplies or domestic natural gas prices are baseless.

In the Term Extension Policy, DOE/FE explained

In evaluating the public interest, DOE takes seriously the potential economic impacts of higher natural gas prices. In addition to commissioning five economic studies since 2011 to examine these issues (most recently the 2018 LNG Export Study), DOE has taken into account factors that could mitigate price impacts, such as the current oversupply situation and data indicating that the natural gas

⁶¹ EIA, Short-Term Energy Outlook, Natural Gas Forecasts (Nov. 9, 2021), available (until the next release) at: <https://www.eia.gov/outlooks/steo/>.

⁶² See n. 58 *supra*.

⁶³ See n. 56 *supra*.

industry would increase natural gas supply in response to increasing demand from the export markets. 64

and

[T]he 2018 LNG Export Study found that ‘[i]ncreasing U.S. LNG exports under any given set of assumptions about U.S. natural gas resources and their production *leads to only small increases in U.S. natural gas prices.*’ The 2018 LNG Export Study also found that, because available natural gas resources have the largest impact on natural gas prices, ‘U.S. natural gas prices are far more dependent on available resources and technologies to extract available resources than on U.S. policies surrounding LNG exports.’ 65

Recent events provide no cause to question the validity of these conclusions.

As DOE/FE has repeatedly and consistently found in its many long-term export authorizations, there are adequate natural gas resources in the U.S. to meet demand associated with LNG exports as well as all domestic needs. Accordingly, granting Calcasieu Pass’s request to increase its authorized level of LNG exports to non-FTA nations is unlikely to affect the availability of natural gas to domestic consumers or to have negative economic effects. To the contrary, Calcasieu Pass’s proposed increased LNG exports will provide net economic benefits to the United States, regardless of the amount of LNG that is exported by others.

2. Calcasieu Pass’s Exports Will Provide Macro-Economic Benefits

Certain other applicants for LNG export authorizations have offered studies detailing projected economic benefits of their projects. Of course, the same sorts of benefits similarly will result from the Project, and from the increased level of exports addressed in this amendment application. Calcasieu Pass will not further detail the general economic benefits of LNG exports, given that it is proposing here only a minor increase in the authorized exports and the significant

64 Term Extension Policy Statement, 85 Fed. Reg. at 52,243.

65 *Id.* at 52,244 (emphasis in original, and internal citations to the 2018 LNG Export Study omitted).

consideration of this issue by DOE/FE as part of its consideration of the general issue of the public interest in LNG exports. As explained above, DOE/FE has commissioned a series of studies to evaluate the macro-economic effect of LNG exports and all have included that LNG exports result in net economic benefits, as recognized in DOE/FE's many export authorization orders including for Calcasieu Pass itself.

These general conclusions about the benefits of LNG exports equally apply to Calcasieu Pass's specific Project. Therefore, the macroeconomic benefits associated with the Project further demonstrate that it is consistent with, and indeed will promote, the public interest. In particular, Calcasieu Pass's Project will benefit the economy by creating jobs, increasing tax revenues, and reducing the nation's trade deficit.

3. LNG Exports Provide Geopolitical Benefits

In considering the international consequences of LNG exports in its prior orders, DOE/FE has frequently explained: “[t]o the extent U.S. exports can diversify global LNG supplies and increase the volumes of LNG available globally, it will improve energy security for many U.S. allies and trading partners. As such...authorizing [LNG] exports may advance the public interest for reasons that are distinct from and additional to the economic benefits identified in the 2018 LNG Export Study.” ⁶⁶ Similarly, in the Term Extension Policy Statement, DOE/FE recognized the international consequences of its LNG export decisions and explained: “An 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.” ⁶⁷

⁶⁶ E.g., *Venture Global Calcasieu Pass, LLC*, DOE/FE Order No. 4346 at 62; *Venture Global Plaquemines LNG, LLC*, DOE/FE Order No. 4446 at 36. Identical or very similar statements (relying on the then-current DOE/FE macroeconomic studies) are included in numerous other DOE orders.

⁶⁷ Term Extension Policy Statement, 85 Fed. Reg. at 52,244.

DOE officials have often heralded these benefits when authorizing long-term, non-FTA export authorizations, including for Calcasieu Pass itself. ⁶⁸ Export of LNG from the U.S. has the potential to fundamentally alter the world’s energy and economic map, and it is already beginning to do so. Increased access to U.S. natural gas not only provides new supplies to U.S. allies and trade partners around the world, but also positions the country as an alternative to traditional suppliers in Russia and the Middle East.

4. LNG Exports Provide Environmental Benefits

Exporting natural gas also will benefit the United States internationally because it will encourage the use of more environmentally friendly natural gas for the generation of electricity as opposed to coal, diesel or heavy fuel oil used in foreign countries. The increased use in the U.S. of natural gas for power generation in place of coal in recent years has resulted in decreased carbon dioxide (“CO₂”) emissions. Between 2005 and 2019, total U.S. electricity generation increased by almost 2% while related CO₂ emissions fell by 33%: while some of that reduction resulted from dramatically increased use of renewable generation, much of it has resulted from the substitution of coal with environmentally superior natural gas for electric generation. ⁶⁹ LNG exports from the U.S. may similarly substitute for coal, or fuel oil, usage overseas, thereby

⁶⁸ See DOE Press Release, “Department of Energy Authorizes LNG Exports from Venture Global Calcasieu Pass Project,” Mar. 5, 2019, available at: <https://www.energy.gov/articles/department-energy-authorizes-lng-exports-venture-global-calcasieu-pass-project>.

⁶⁹ EIA, “U.S. Energy-Related Carbon Dioxide Emissions,” released Sept. 30, 2020, available at: <https://www.eia.gov/environment/emissions/carbon/#:~:text=EIA%20calculated%20that%20between%202005,carbon%20generation%20total%205%2C475%20MMmt.&text=Between%202005%20and%202019%2C%20total,CO2%20emissions%20fell%20by%2033%25>; see also EIA, Today in Energy, “U.S. energy-related CO₂ emissions expected to rise slightly in 2018, remain flat in 2019” (Feb. 8, 2018) (“The underlying energy consumption trends that resulted in these changes—mainly because more electricity has been generated from natural gas than from other fossil fuels—have helped to lower the U.S. emissions level since 2005 because natural gas is a less carbon-intensive fuel than either coal or petroleum.”), available at: <https://www.eia.gov/todayinenergy/detail.php?id=34872>.

sharing the environmental benefits of natural gas with other nations in the quest to reduce global greenhouse gas emissions.

A 2019 study by the International Energy Agency (“IEA”), titled *The Role of Gas in Today’s Energy Transition*, observed that “[s]ince 2010, coal-to-gas switching has saved around 500 million tonnes of CO₂ - an effect equivalent to putting an extra 200 million [electric vehicles] running on zero-carbon electricity on the road over the same period.”⁷⁰ The IEA Report explained that “While there is a wide variation across different sources of coal and gas, an estimated 98% of gas consumed today has a lower lifecycle emissions intensity than coal when used for power or heat. This analysis takes into account both CO₂ and methane emissions and shows that, on average, coal-to-gas switching reduces emissions by 50% when producing electricity and by 33% when providing heat.”⁷¹ Furthermore, IEA concluded that “[t]here is potential in today’s power sector to reduce up to 1.2 gigatonnes of CO₂ emissions by switching from coal to existing gas-fired plants.”⁷²

DOE, with its National Energy Technologies Laboratory, prepared a study in 2014 of the Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States to better inform the public about the environmental effects of increased LNG exports. The study compared the greenhouse gas (“GHG”) emissions from power generation in Europe and Asia using exported U.S. LNG with the GHG emissions from power generated using local hydrocarbon resources.⁷³ DOE/FE has held that “[t]he conclusions of the [2014 GHG Study],

⁷⁰ IEA, *The Role of Gas in Today’s Energy Transition*, July 2019, summary of key findings available at: <https://www.iea.org/reports/the-role-of-gas-in-todays-energy-transitions>.

⁷¹ *Id.*

⁷² *Id.*

⁷³ DOE, DOE/NETL-2014/1649, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States* (May 14, 2014), (hereinafter, the “2014 GHG Study”), available at: <http://www.energy.gov/sites/prod/files/2014/05/f16/Life%20Cycle%20GHG%20Perspective%20Report.pdf>.

combined with the observation that many LNG-importing nations rely heavily on fossil fuels for electric generation, suggests that exports of U.S. LNG may decrease global GHG emissions, although there is substantial uncertainty on this point....Based on the record evidence, however, we see no reason to conclude that U.S. LNG exports will increase global GHG emissions in a material or predictable way.” ⁷⁴

On September 19, 2019, DOE/FE announced the availability for public review and comment of a new report updating the 2014 GHG Study. ⁷⁵ The purpose of the update was to provide additional information to the public and to inform DOE’s LNG export decisions with information about the life cycle GHG emissions of U.S. LNG exports for use in electric power generation. As with the 2014 GHG Study, the update compares life cycle GHG emissions from U.S. LNG exports to regional coal and other imported natural gas for electric power generation in Europe and Asia, while including more recent information. The results show that for all 100-year time horizon scenarios, the generation of power from U.S. natural gas has lower life cycle GHG emissions than power generation from regional coal, but the interpretation of the 20-year natural gas scenarios is more complex and uncertain. DOE/FE issued responses to comments on the 2019 GHG Study on January 2, 2020. ⁷⁶ In its responses, DOE/FE expressly concluded that “natural gas is one part of an environmentally preferable global energy portfolio” and reiterated

⁷⁴ E.g., *Venture Global Calcasieu Pass, LLC*, DOE/FE Order No. 4346 at 69; *Venture Global Plaquemines LNG, LLC*, DOE/FE Order No. 4446 at 41. Identical or very similar statements are included in numerous other DOE orders.

⁷⁵ DOE, DOE/NETL-2019/2041, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States: 2019 Update* (Sept. 12, 2019), available at: <https://fossil.energy.gov/app/docketindex/docket/index/21>.

⁷⁶ DOE, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas From the United States: 2019 Update—Responses to Comments*, 85 Fed. Reg. 72 (Jan. 2, 2020).

that the 2019 GHG Study, like the studies before it, “supports the proposition that exports of LNG from the lower-48 states will not be inconsistent with the public interest.”⁷⁷

DOE/FE returned to the topic of the environmental impacts of LNG exports, and in particular, the GHG topic, in the Term Extension Policy Statement. After explaining that the 2019 GHG Study supports the issuance of export authorizations, the Policy Statement adds:

foreign demand for U.S. natural gas has increased as countries in the Caribbean, Central America, and South America seek to import cleaner sources of energy. DOE further observes that many of these countries are currently dependent on diesel and/or fuel oil for their generation needs. These energy needs are challenging from both a cost- and emissions-perspective. By importing LNG from the United States, these countries will have access to a more reliable, cost-effective supply of energy that also has emissions benefits over current sources. At the same time, the United States will facilitate stronger relationships with these importing countries, while promoting U.S. leadership in the global energy market....

[I]mports of U.S. LNG can work in concert with the development of renewable generation both in the United States and in importing countries. Imported natural gas can provide reliable standby energy supply immediately, while renewable development is occurring. Imported LNG also can provide continued reliability to enhance solar or other renewable sources once they are developed. For these reasons, authorization holders...may provide indirect benefits to the use of renewable energy in importing countries. ⁷⁸

⁷⁷ *Id.*, 85 Fed. Reg. at 86.

⁷⁸ Term Extension Policy Statement, 85 Fed. Reg. at 52,245-46 (internal footnotes omitted).

IV. REVIEW OF PROJECT ENVIRONMENTAL IMPACTS

Because Calcasieu Pass does not propose any new facilities or construction as part of its increase in its peak liquefaction authorization, the related authorization of the proposal by both DOE/FE and FERC will not constitute a major federal action significantly affecting the quality of the human environment within the meaning of NEPA. Nevertheless, the FERC will conduct an environmental request process of the related amendment application being filed with it.

Consistent with the NEPA requirements and related regulations and the established approach with similar LNG export projects, FERC will act as the lead agency for the environmental review for the siting, construction and operation of the Project, with DOE participating in the NEPA review process as a cooperating agency.

V. APPENDICES

The following appendices are included as part of this Application:

Appendix A: Verification

Appendix B: Opinion of Counsel

VI. CONCLUSION

WHEREFORE, for all the foregoing reasons, Calcasieu Pass respectfully requests the DOE/FE increase the quantity of its total authorized export volumes to 640.666 Bcf per year for both FTA and non-FTA nations, so as to reflect the actual peak liquefaction capacity of the Project under optimal conditions. Specifically, Calcasieu Pass requests a limited amendment of DOE/FE Order Nos. 4346 and 3662 to increase the authorized export volumes in each by 20.666 Bcf/year. All other rights, obligations, and terms and conditions, of the export authorizations would remain the same without change.

Respectfully submitted,

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/s/ J. Patrick Nevins

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Dated: December 3, 2021

Appendix A

Verification

STATE OF VIRGINIA)
)
CITY OF ARLINGTON)

SS:

Keith Larson, being first duly sworn on his oath deposes and says: that he is the General Counsel of Venture Global LNG, Inc., and an authorized representative of Venture Global Calcasieu Pass, LLC; that he is duly authorized to make this Verification; that he has read the foregoing submittal and is familiar with the contests thereof; that all the statements and matters contained therein are true and correct to the best of his information, knowledge and belief; and that he is authorized to execute and file the same with the U.S. Department of Energy.

Keith Larson

Keith Larson
General Counsel

Sworn to and subscribed before me this 3rd day of December, 2021.

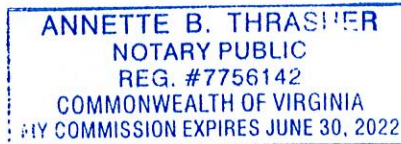
Annette B. Thrasher

Notary Public
In and For said City



My Commission Expires:

6/30/2022



Appendix B

OPINION OF COUNSEL

Opinion of Counsel

This opinion is submitted pursuant to 10 C.F.R. 590.202(c) of the Department of Energy administrative procedures. The undersigned is General Counsel to Venture Global LNG, Inc. and an authorized representative of Venture Global Calcasieu Pass, LLC.

I have reviewed the corporate documents of Venture Global Calcasieu Pass, LLC, and it is my opinion that the proposed export of natural gas is within the company's corporate powers.

Respectfully submitted.



Keith Larson
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Dated: December 3, 2021