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

| | | |
|---|---|---|
| **In the Matter of:** | **)** | |
| | **)** | |
| **Venture Global Plaquemines LNG, LLC** | **)** | **Docket Nos. 16-28-LNG** |

# APPLICATION OF VENTURE GLOBAL PLAQUEMINES LNG, 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

Sandra Y. Snyder
Assistant General Counsel
Venture Global LNG, Inc.
1001 19th Street North
Suite 1500
Arlington, VA 22209
Telephone: (202) 920-0919
ssnyder@ventureglobalLNG.com

J. Patrick Nevins
Carlos E. Clemente
Latham & Watkins LLP
555 Eleventh Street, N.W.
Suite 1000
Washington, D.C. 20004
Telephone: (202) 637-3363
patrick.nevins@lw.com
carlos.clemente@lw.com

Filed: March 11, 2022

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

| | | |
|---|---|---|
| **In the Matter of:** | **)** | |
| | **)** | |
| **Venture Global Plaquemines LNG, LLC** | **)** | **Docket Nos. 16-28-LNG** |

# APPLICATION OF VENTURE GLOBAL PLAQUEMINES LNG, 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 Plaquemines LNG, LLC ("Plaquemines LNG") 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 Plaquemines LNG Project that is currently under construction on the west bank of the Mississippi River, near river mile marker 55, in Plaquemines Parish, Louisiana (the "Export Terminal" or "Project"). Plaquemines LNG anticipates that it will commence commercial operations of the Project in approximately mid-2025, 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 by the end of 2024. As detailed below, Plaquemines LNG requests that its total authorized export volumes be

---

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 Redelegation Order No. 00-002.04G issued on June 4, 2019.

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

increased from 1,240 billion cubic feet per year ("Bcf/yr") to 1,405.33 Bcf/yr, to reflect a refined analysis of the peak liquefaction capacity of the authorized Project facilities under optimal conditions.

Plaquemines LNG 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. 4446 issued in FE Docket No. 16-28-LNG on October 16, 2019, and (2) FTA nations in DOE/FE Order No. 3866 issued in the same docket on July 21, 2016. As amended, each of the authorizations extends through December 31, 2050.3 In total, Plaquemines LNG is currently authorized to export LNG to both FTA and non-FTA nations in a volume equivalent to 1,240 Bcf/yr, which is approximately 24.0 million metric tonnes per annum ("MTPA") of LNG.4

The Plaquemines LNG Project has a nameplate liquefaction capacity of 20.0 MTPA, which is the amount of production guaranteed by Plaquemines LNG's contractors based on the least favorable ambient conditions and other conservative assumptions. The 24.0 MTPA reflected in the export authorizations is based on Plaquemines LNG's estimate made in 2016 of the Project's peak, potential liquefaction output under optimal design conditions, as explained in Plaquemines LNG's original application in Docket No. 16-28-LNG. That same 24.0 MTPA peak capacity is also the current maximum liquefaction capacity authorized for construction and operation of the Project by the FERC.5

---

3 DOE/FE Order Nos. 3866-A and 4446-A issued in these proceedings on October 21, 2020, 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.

5 *See Venture Global Plaquemines LNG, LLC, et al.*, 168 FERC ¶ 61,204 (2019).

Subsequently, Plaquemines LNG has advanced and refined the final design of its Project, and learned significant lessons from the actual construction and production experience of the affiliated, and technologically-identical, Venture Global Calcasieu Pass, LLC ("Calcasieu Pass") export project. Plaquemines LNG has also worked with its contractors and equipment suppliers to refine the final design to better understand the capabilities of the approved facilities and plan how best to maximize the optimal peak output. As a result of that process, Plaquemines LNG 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 27.2 MTPA or approximately 1,405.33 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 Further, the proposed increase in peak liquefaction capacity does not introduce any significant new environmental impacts nor does it require any new environmental permits or amendment to existing permits. Plaquemines LNG is requesting that the FERC authorize the increased peak capacity by no later than August 30, 2022.

Plaquemines LNG requests here that DOE/FE correspondingly increase the quantity of its total authorized export volumes to 1,405.33 Bcf/yr for both FTA and non-FTA nations, so as to

---

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). For example, expected gas compositions that are leaner than previously anticipated contribute to greater power demand efficiency (kilowatt hour per tonne of LNG). In addition, at design conditions, the 31 megawatts Mixed Refrigerant compressor motors in the liquefaction trains will operate at less than full capacity, resulting in an additional margin above the guaranteed LNG production capacity when fully powered. Together, these factors indicate that during optimal conditions, including the best possible ambient temperatures and years with the least maintenance, the Project will have a greater peak LNG production capacity than previously estimated. Plaquemines LNG 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. Plaquemines LNG expects these issues to be the subject of the FERC review of the proposed increase in peak liquefaction capacity.

reflect the actual peak liquefaction capacity of the Project facilities under optimal conditions. Accordingly, Plaquemines LNG requests a limited amendment of DOE/FE Order Nos. 4446 and 3866 to increase the authorized export volumes in each by 165.33 Bcf/yr. All other obligations, rights, and responsibilities of the export authorizations – including without limitation the term extending through 2050, the inclusion of short-term authorization,7 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,8 and with previous orders of DOE/FE, Plaquemines LNG 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, Plaquemines LNG respectfully states the following:

## I. DESCRIPTION OF THE APPLICANT

The exact legal name of the Applicant is Venture Global Plaquemines LNG, LLC. Plaquemines LNG is a Delaware limited liability company with its primary place of business located at 1001 19th Street North, Suite 1500, Arlington, VA 22209. Plaquemines LNG is

---

7 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, Plaquemines LNG'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.

8 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.

primarily engaged in the business of developing the Export Terminal in Plaquemines Parish, Louisiana, authorized in the Order.

Plaquemines LNG is a 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 Plaquemines LNG. 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://venturegloballng.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.

Plaquemines LNG is Venture Global LNG's second project to be constructed. The first, the Calcasieu Pass export project located in Calcasieu Parish, Louisiana, is currently being commissioned and has exported two cargos of LNG as of March 9, 2022. Calcasieu Pass

produced its first LNG on January 19, 2022, completed the loading its first commissioning cargo on March 1, 2022, and completed the loading of its second commissioning cargo on March 9, 2022. All 10 MTPA of the nameplate capacity of the Calcasieu Pass project has been sold to major international companies in binding, long-term LNG Sales and Purchase Agreements ("SPAs"), as reflected in filings with DOE/FE.[9]

## II. CORRESPONDENCE AND COMMUNICATIONS

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


Sandra Y. Snyder
Assistant General Counsel
Venture Global LNG, Inc.
1001 19th Street North
Suite 1500
Arlington, VA 22209
Telephone: (202) 920-0919
ssnyder@ventureglobalLNG.com

J. Patrick Nevins
Carlos E. Clemente
Latham & Watkins LLP
555 Eleventh Street, N.W.
Suite 1000
Washington, D.C. 20004
Telephone: (202) 637-3363
patrick.nevins@lw.com
carlos.clemente@lw.com


## III. UPDATE REGARDING STATUS OF THE PROJECT

Plaquemines LNG has had tremendous success with the commercial development of its Project, particularly during 2021 and early 2022. It has entered into binding, long-term LNG SPAs for a total of 13 MTPA from the first phase of the Project with five major international companies: POLSKIE GÓRNICTWO NAFTOWE I GAZOWNICTWO SPÓŁKA AKCYJNA ("PGNiG"); Électricité de France, S.A.; China Petroleum & Chemical Corp. ("Sinopec"); CNOOC Gas and Power Singapore Trading & Marketing Pte. Ltd. ("CNOOC"); and Shell NA LNG LLC. Plaquemines LNG also has entered into another long-term SPA for the available

9 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.

annual quantities in excess of the nameplate capacity. All of these long-term SPAs have been filed with DOE/FE in accordance with the requirements of its export authorizations and DOE/FE policies.10

Plaquemines LNG anticipates completing debt and equity financing, and proceeding with a positive Final Investment Decision ("FID") for the first phase of its Project11 in the coming months. Prior to that FID, Plaquemines LNG has ample financing in place to continue to proceed with construction of its Export Terminal as quickly as feasible.12

Plaquemines LNG began initial mobilization and limited site preparation at the Export Terminal in the summer of 2020. In November 2020, Venture Global LNG announced that it awarded the engineering, procurement, and construction ("EPC") contract as lead contractor for Phase 1 of the Project to KBR, Inc. ("KBR") (which has managed and developed approximately a third of the world's LNG capacity.)13 In April 2021, Venture Global LNG announced that the Zachry Group will partner with KBR in a new joint venture ("KZJV") that will be the lead EPC contractor for the Project.

More significant site preparation activity began in mid-2021, and construction on the Terminal site commenced on August 18, 2021. Plaquemines LNG is now proceeding with construction of the Export Terminal as quickly and as safely as feasible, as authorized by the FERC Staff. To that end, Plaquemines LNG has submitted to the FERC numerous

---

10 Plaquemines LNG's filings related to its long-term contracts are available on DOE/FE's website at: https://www.energy.gov/fecm/articles/plaquemines-lng-facility.

11 For financing and FID purposes, the first phase of the Project is expected to include all of the facilities authorized by the FERC as Phase 1, as well as some additional liquefaction included as Phase 2.

12 In June 2019, Venture Global LNG announced that it had raised $675 million of capital from institutional investors to be used primarily for the further development of the Plaquemines LNG Project. In February 2021, Venture Global LNG announced that it closed a $500 million term loan with leading banks, the proceeds of which will be used to fund pre-FID construction activities for Plaquemines LNG, as well as for general corporate purposes.

13 *See* https://www.kbr.com/en/markets/industrial/gas-monetization/lng.

implementation plan filings requesting various authorizations and demonstrating compliance with the applicable FERC conditions of the Order. The FERC Staff has issued corresponding notices to proceed authorizing a wide range of activities. Additional requested notices to proceed are pending, and Plaquemines LNG will proceed with each of the planned activities as authorization from FERC is received. Details regarding the status of the ongoing construction of the Export Terminal are available in the numerous filings and issuances in FERC Docket No. CP17-66, including in monthly status reports. Plaquemines LNG anticipates that it will commence commercial operation of the Project in approximately mid-2025, and plans for a phased operational start-up that (with the requisite approvals from FERC Staff) could include the first exports of LNG by the end of 2024.

On the same day as this submission, Plaquemines LNG is filing 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 24.0 MTPA to 27.2 MTPA of LNG, or from approximately 1,240 Bcf/yr to approximately 1,405.33 Bcf/yr. Plaquemines LNG explains in that FERC amendment application that the increase does not involve any additional construction or modification of the authorized facilities, but rather results from a more refined analysis of the actual optimal output potential of those facilities. This filing seeks to increase the volumes authorized by DOE/FE for export to align with the increased peak liquefaction capacity proposed to FERC.

## IV. AUTHORIZATIONS REQUESTED

Plaquemines LNG requests an increase in its long-term, multi-contract authorization to export domestically produced LNG to a total authorized level of 1,405.33 Bcf/yr (which is

approximately equivalent to 27.2 MTPA),14 an increase of 165.33 Bcf/yr, for both FTA and non-FTA nations so as to reflect the actual peak liquefaction capacity of the Project facilities under optimal conditions. Specifically, Plaquemines LNG requests: (a) a limited amendment of DOE/FE Order No. 3866 to increase the authorized volumes to FTA nations from 1,240 to 1,405.33 Bcf/yr and (2) a limited amendment of DOE/FE Order No. 4446 to increase the authorized volumes to non-FTA nations from 1,240 to 1,405.33 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.

Plaquemines LNG 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.

Plaquemines LNG respectfully requests that DOE/FE issue the amended FTA authorization as soon as practicable, consistent with the statutory requirement of issuance without delay. Plaquemines LNG 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")15 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, Plaquemines LNG is requesting FERC action by no later than June 30, 2022 as no new facilities, new environmental permits (or amendments to existing permits) or construction are involved. Plaquemines LNG

---

14 Plaquemines LNG utilizes here the same the natural gas to LNG conversion measure utilized in its existing export authorizations in FE Docket No. 16-28-LNG.

15 42 U.S.C. § 4321, *et seq.*

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 Plaquemines LNG in maximizing LNG production from an already approved facility and assist with on-going development efforts.

### A. EXPORT TO FREE-TRADE NATIONS

Plaquemines LNG first requests that its existing authorization to export LNG to FTA nations be increased to a total of 1,405.33 Bcf/yr, through an limited amendment of DOE/FE Order No. 3866. 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.

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 modification or delay."16 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.17

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

16 15 U.S.C. § 717b(c) ("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.").

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

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.18 Consistent with the established practice of DOE/FE, Plaquemines LNG 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

Plaquemines LNG in this Application also requests that its existing authorization to export LNG to non-FTA nations be increased to a total of 1,405.33 Bcf/yr, through a limited amendment of DOE/FE Order No. 4446. 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

18 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.

> exportation or importation will not be consistent with the public interest.[19]

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.[20] This interpretation has been affirmed by the U.S. Court of Appeals for the District of Columbia Circuit.[21]

DOE/FE fully analyzed all relevant factors and concluded in DOE/FE Order No. 4446 that exports from the Plaquemines LNG Project to non-FTA nations are consistent with the public interest. The export volumes of 1,240 Bcf/yr authorized there were based on Plaquemines LNG's understanding at the time of the peak output of the facilities under optimal conditions. 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 165.33 Bcf/yr, however, Plaquemines LNG will present the reasons supporting additional exports below.

---

19 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.

20 *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 Plaquemines LNG, LLC*, DOE/FE Order No. 4446 at 18-19; *Venture Global Calcasieu Pass, LLC*, DOE/FE Order No. 4346 at 19.

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

The Policy Guidelines developed by DOE/FE in 1984 to implement NGA Section 3 (which are applicable to exports as well as imports[22]) promote the free and open trade of natural gas.[23] 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."[24] 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….[25]

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."[26] And as DOE/FE has explained: "The goals of the Policy Guidelines are to

---

22 *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).

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

24 *Id.*

25 *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.19, *supra*.

26 *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);

minimize federal control and involvement in energy markets and to promote a balanced and mixed energy resource system."27 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 per day ("Bcf/d").28 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 appropriate."29 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

*Bear Head LNG Corp.*, Order No. 3770 at 176 (Feb. 5, 2016); *Venture Global Plaquemines LNG, LLC*, DOE/FE Order No. 4446 at 42; *Venture Global Calcasieu Pass, LLC*, DOE/FE Order No. 4346 at 69.

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

28 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. 52,237, 52,243 (Aug. 25, 2020).

29 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.

arrangement is consistent with DOE/FE's policy of promoting market competition, and (iv) any other factors bearing on the public interest.30

Granting Plaquemines LNG's 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 2012.31 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 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,32 and more briefly in more recent orders.

---

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

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

32 *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*

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.33

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/d of natural gas, would affect the public interest. The first 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 2014.34 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

*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.

33 *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.

34 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.

various levels of U.S. LNG exports ranging from 12 Bcf/d to 28 Bcf/d.[35] 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.[36] 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.[37] 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.[38] 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).[39]

Although actual LNG exports have been consistently growing in recent years, they are just now approaching the 12 Bcf/d, low-end of the range considered in the 2014-15 studies.[40] Nevertheless, 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

---

35 *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.

36 *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).

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

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

39 *Id.* at 8.

40 In December 2021, EIA estimated that the nominal U.S. liquefaction capacity for export was 9.5 Bcf/d and the peak capacity was 11.6 Bcf/d. *See* EIA, Today in Energy, *U.S. liquefied natural gas export capacity will be world's largest by end of 2022, Dec. 9, 2021*, available at: https://www.eia.gov/todayinenergy/detail.php?id=50598. EIA concluded that by the end of 2022, with the addition of Train 6 at Sabine Pass and of Calcasieu Pass, nominal export capacity will reach 11.4 Bcf/d, and peak capacity will reach 13.9 Bcf/d. *Id.*

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

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 Plaquemine LNG's affiliate, Calcasieu Pass, and DOE/FE explained the methodology and results of the study in detail in that order43 (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 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

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.

44 *Id.* at 13.

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, Plaquemines LNG is not submitting any additional studies of its own. Plaquemines LNG will summarize, however, the factors showing the public interest in LNG exports:

**1. Natural Gas Supply Is 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 Plaquemines LNG, 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.

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

45 *Id.* at 14, 55-56.

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

Natural gas production in 2021 set a new record, exceeding 2019 production,47 and is expected to continue to grow in 2022 and 2023.48

The latest EIA data and projections also show U.S. natural gas production continuing to increase long-term. In its most recent long-term production projections, the reference case in EIA's *Annual Energy Outlook 2022* ("AEO 2022") projects that total U.S. dry natural gas production will increase to 42.58 Tcf in 2050, growing by an average amount of 0.7% per year from 2021-50.49 EIA also projects increasing natural gas consumption, but with growth at an annual rate of 0.4% – more slowly than the rate of growth in supply – consumption is projected to reach 34.02 Tcf in 2050.50 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. EIA's most recent analysis estimates total proved natural gas reserves of about 473.2 Tcf for 2020, compared to only around 213.3 Tcf in 2005, and of approximately 322.7 Tcf in 2012 when DOE/FE first seriously studied the implications of LNG exports.51 Additional information on the country's available gas supply is provided in the

---

47 *See* EIA Natural Gas Weekly Update, *Highlights of 2021 U.S. natural gas*, Jan. 5, 2022, available at: https://www.eia.gov/naturalgas/weekly/archivenew_ngwu/2022/01_06/.

48 *See* EIA Natural Gas Weekly Update, *U.S. marketed natural gas production forecast to rise in 2022 and 2023*, Feb. 9, 2022, available at: https://www.eia.gov/naturalgas/weekly/archivenew_ngwu/2022/02_10/.

49 EIA, AEO 2022, *Natural Gas Supply, Disposition, and Prices (Reference Case)*, at Table 13, Mar. 3, 2022, available at: https://www.eia.gov/outlooks/aeo/data/browser/#/?id=13-AEO2022&cases=ref2022&sourcekey=0.

50 *Id.*

51 EIA, U.S. *Crude Oil and Natural Gas Proved Reserves, Year-end 2020*, Jan. 13, 2022, at Table 9, U.S. proved reserves of total natural gas, wet after lease separation, 2001–20, available at: https://www.eia.gov/naturalgas/crudeoilreserves/pdf/Table9.pdf. The analysis shows a reduction from proved reserves of about 495.4 Tcf at the end of 2019. More recently, EIA concluded that proved reserves fell in 2020, by about 4% to 473.3 Tcf. That decline was largely attributable to the very low natural prices in 2020, the first year of the COVID-19 pandemic. *See* EIA, Today in Energy, *Proved reserves of natural gas fell 4% in the United States during 2020*, Jan. 26, 2022, available at: https://www.eia.gov/todayinenergy/detail.php?id=51038. Higher prices

biennial reports of the Potential Gas Committee ("PGC"). The most recent PGC report indicates that the United States possesses a total mean technically recoverable resource base of 3,368 Tcf as of year-end 2020.52 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. The U.S. became a net exporter of natural gas for the first time in almost 60 years in 2017,53 and U.S. natural gas exports have now set record highs for seven consecutive years.54 As the LNG exports have grown dramatically over the years, domestic natural gas prices remained low, with EIA pricing data showing average Henry Hub prices per Million

---

more recently, conversely, should lead to increases in proved reserves for 2021. In any event, the proved reserves for 2020 remain far in excess of the levels when DOE began considering the public interest implications of LNG exports.

52 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.

53 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#.

54 EIA, Today in Energy, *EIA expects U.S. natural gas production to rise as demand for exports grow*, Mar. 9, 2022, available at:https://www.eia.gov/todayinenergy/detail.php?id=51558.

British thermal units ("MMBtu") of $3.10 in 2017, $3.27 in 2018, and $2.57 in 2019,55 followed by the lowest prices in decades in 2020 with an average of just $2.05 for Henry Hub.56

Domestic natural gas prices did increase significantly in 2021, with Henry Hub prices averaging $3.89 per MMBtu as a result of several factors including weather disruptions, low inventories, and demand rebounding faster than supply following the pandemic.57 Natural gas prices have increased even more in early 2022,58 as a result of some of those same factors as well as the extraordinary events leading up to and following Russian's invasion of Ukraine.

Yet, EIA's projects the current high-prices to be short-lived, with low natural gas prices returning soon and then continuing throughout the period of the requested export authorization through 2050. Specifically, in the reference case of AEO 2022, EIA projects that Henry Hub prices (in 2021 dollars per MMBtu) to average $3.84 per MMBtu in 2022, then decrease steadily each year until reaching a low below $3.00 in 2026, and then to increase gradually over time but never again reach as high as the $3.84 projected in any subsequent year through 2050.59

Importantly, the projections in AEO 2022 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.60 For example, for the year 2050, the AEO

---

55 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.

56 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.

57 EIA, Today in Energy, *U.S. natural gas prices spiked in February 2021, then generally increased through October*, Jan. 6, 2022, available at: https://www.eia.gov/todayinenergy/detail.php?id=50778; EIA, Today in Energy, *Energy prices rose more than other commodities in 2021*, Jan. 3, 2022, available at: https://www.eia.gov/todayinenergy/detail.php?id=50718#.

58 *See* EIA, *Short-Term Energy Outlook*, Mar. 8, 2022, available at: https://www.eia.gov/outlooks/steo/.

59 *See supra* n.49.

60 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. DOE/FE Order No. 4446 at 35.

2022 reference case projects domestic dry gas production of 42.58 Tcf while the comparable data in the AEO 2017 reference case projected dry gas production for that year of 40.28 Tcf.61 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 2022 AEO projection $3.59 in 2021 dollars.62 In fact, the 2017 AEO projected Henry Hub prices in excess of $4.00 every year from 2020 to 2050, whereas the 2022 AEO shows prices below that level every year.63

As noted above, EIA expects average Henry Hub prices to gradually fall in the next several years, and remain consistently below $4.00.64 For comparison, the AEO 2017 – which DOE/FE focused on in its 2018 Study – had projected a 2020 Henry Hub price of $4.51 (in 2016 dollars) and showed prices over $4 every year continuing through 2050.65 The AEO 2022 longer-term projections, again, do not expect Henry Hub prices over $4 in any of those years.66 Thus, the current EIA pricing data is even more support of LNG exports that 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 Table 13 for AEO 2017 is available at: https://www.eia.gov/outlooks/aeo/data/browser/#/?id=13-AEO2017&cases=ref2017&sourcekey=0.

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

63 *Id.*

64 *See supra* n.60.

65 *See supra* n.62.

66 *See supra* n.60.

> industry would increase natural gas supply in response to increasing demand from the export markets.67

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.'68

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 Plaquemines LNG'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, Plaquemines LNG'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. Plaquemines LNG' 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. Plaquemines LNG will not further detail the general economic benefits of LNG exports, given that it is proposing here only a moderate increase in the authorized exports and the

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

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

significant 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 Plaquemines LNG itself.

These general conclusions about the benefits of LNG exports equally apply to Plaquemines LNG'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, Plaquemines LNG's Project will benefit the economy by creating jobs, increasing tax revenues, and reducing the nation's trade deficit. Regarding the last point, the U.S. has experienced large international balance of trade deficits for many years and the deficit has been dramatically increasing in recent years. Specifically, the trade deficit increased from $576.9 billion in 2019 (2.7% of U.S. gross domestic product ("GDP")) to $681.7 billion in 2020 (3% of GDP) and to an all-time high of $859.1 billion (or 3.7% of GDP) in 2021.69 Energy trades, including the growing exports of LNG, have helped to reduce the growth in the overall trade deficit.70 Authorizing increased LNG exports by Plaquemines LNG will help redress this imbalance further by allowing the U.S. to export more of its abundant and valuable natural gas.71

---

69 *See* News Release of the U.S. Census Bureau and the U.S. Bureau of Economic Analysis, *U.S. International Trade in Goods and Services, December 2021*, Feb. 8, 2022, available at: https://www.bea.gov/news/2022/us-international-trade-goods-and-services-december-2021 (Annual Summary statistics). For 2020 and 2019 amounts, *see also* U.S. Bureau of Economic Analysis ("BEA") News Release, *2020 Trade Gap is $681.7 Billion*, Mar. 5, 2021, available at: https://www.bea.gov/news/blog/2021-03-05/2020-trade-gap-6817-billion.

70 *See* EIA, Today in Energy, *U.S. energy trade lowers the overall 2020 U.S. trade deficit for the first time on record*, Sept. 22, 2021, available at: https://www.eia.gov/todayinenergy/detail.php?id=49656.

71 BEA issues monthly press releases showing the trade deficit each month. *See. e.g.*, U.S. Bureau of Economic Analysis News Release, "September 2021 Trade Gap is $80.9 Billion" (Nov. 4, 2021), available at:

### 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."72 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."73

DOE officials have often heralded these benefits when authorizing long-term, non-FTA export authorizations, including for Plaquemines LNG itself.74 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. Those benefits have been realized, for instance, in Plaquemine LNG's significant relationship with PGNiG.75

---

https://www.bea.gov/news/blog/2021-11-04/september-2021-trade-gap-809-billion. The total year-to-date for 2021 is reflects a computation of the monthly amount from each monthly press release.

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

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

74 *See* DOE Press Release, *Department of Energy Authorizes LNG Exports from the Venture Global Plaquemines Project*, Oct. 16, 2019, available at: https://www.energy.gov/articles/department-energy-authorizes-lng-exports-venture-global-plaquemines-project.

75 *See* Press Release, *Venture Global LNG and PGNiG Finalize Expansion of LNG Partnership Venture Global LNG and PGNiG Finalize Expansion of LNG Partnership*, Sept. 2, 2021, available at: https://ventureglobalIng.com/press/venture-global-lng-and-pgnig-finalize-expansion-of-lng-partnership/ (quoting the

Recent events have heightened the wide-spread understanding of the crucial geopolitical benefits of U.S. LNG. In particular, the events leading up to and following Russia's invasion have emphasized the world's need for U.S. LNG . The importance of this issue was reflected in the joint statements by President Biden and European Union ("EU") President von der Leyen,[76] as well as by the U.S.-EU Energy Council chaired by, among others, Energy Secretary Granholm.[77] Even more recently, the European Commission proposed a plan to reduce Europe's dependence on Russian gas as soon as possible, including importantly a dramatic increase in its LNG imports.[78] Given the world-wide need for additional gas supplies, DOE/FE should continue its long-standing policy of authorizing LNG exports.

**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 ("$CO_2$") emissions. Between 2005 and 2019, total U.S. electricity generation increased by almost 2% while related $CO_2$ emissions fell by 33%: while some of that reduction resulted from dramatically increased use of renewable generation, much of it has resulted from

President of the PGNiG Management Board regarding diversifying sources of natural gas and providing Polish customers with energy security).

76 *Joint Statement by President Biden and President von der Leyen on U.S.-EU Cooperation on Energy Security*, Jan. 28, 2022, available at: https://www.whitehouse.gov/briefing-room/statements-releases/2022/01/28/joint-statement-by-president-biden-and-president-von-der-leyen-on-u-s-eu-cooperation-on-energy-security/.

77 *Joint Statement on the U.S.-EU Energy Council*, Office of the Spokesperson, Feb. 7, 2022, available at: https://www.state.gov/joint-statement-on-the-u-s-eu-energy-council/.

78 *See* Press Release, European Commission, *REPowerEU: Joint European action for more affordable, secure and sustainable energy*, Mar. 8, 2022, available at: https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1511.

the substitution of coal with environmentally superior natural gas for electric generation.[79]

LNG exports from the U.S. may similarly substitute for coal, or fuel oil, usage overseas, thereby sharing the environmental benefits of natural gas with other nations in the quest to reduce global greenhouse gas emissions. The extremely high, international natural gas prices in recent months have fostered a return to increased reliance on coal for power generation in Europe as well as Asia.[80] More attractively priced U.S. LNG is needed to reverse that trend and help reduce carbon emissions. As a very prominent instance of this prospect being achieved, when Plaquemines LNG recently entered into large, long-term SPAs with Sinopec and CNOOC, the counter-parties publicly emphasized the contribution that those U.S. gas supplies will make to China's long-term climate and carbon emission goals.[81] Similarly, the public announcement of the expanded agreements between Venture Global LNG and PGNiG also emphasized the role of natural gas as a bridge fuel in the energy transition in Poland and the resulting decrease in carbon emissions.[82]

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

---

79 EIA, *U.S. Energy-Related Carbon Dioxide Emissions*, Sept. 30, 2020, available at: https://www.eia.gov/environment/emissions/carbon/#:~:text=EIA%20calculated%20that%20between%202005,carbon%20generation%20totaled%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 $CO_2$ 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.

80 *See* Press Release, International Energy Agency, *Coal power's sharp rebound is taking it to a new record in 2021, threatening net zero goals*, Dec. 17, 2021, available at: https://www.iea.org/news/coal-power-s-sharp-rebound-is-taking-it-to-a-new-record-in-2021-threatening-net-zero-goals.

81 *See* Press Release, *Venture Global and Sinopec Announce Historic LNG Sales and Purchase Agreements*, Nov. 4, 2021, available at: https://ventureglobalIng.com/press/venture-global-and-sinopec-announce-historic-lng-sales-and-purchase-agreements/; Press Release, *Venture Global LNG and CNOOC Gas & Power Announce LNG Sales and Purchase Agreements*, Dec. 21, 2021, available at: https://ventureglobalIng.com/press/venture-global-lng-and-cnooc-gas-power-announce-lng-sales-and-purchase-agreements/.

82 *See supra* n.76.

500 million tonnes of $CO_2$ - an effect equivalent to putting an extra 200 million [electric vehicles] running on zero-carbon electricity on the road over the same period."83 The IEA Report explained that "[w]hile 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 $CO_2$ 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."84 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."85

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.86 DOE/FE has held that "[t]he conclusions of the [2014 GHG Study], 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,

---

83 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.

84 *Id.*

85 *Id.*

86 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.

we see no reason to conclude that U.S. LNG exports will increase global GHG emissions in a material or predictable way."87

On September 19, 2019, DOE/FE announced the availability for public review and comment of a new report updating the 2014 GHG Study.88 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, 2020.89 In its responses, DOE/FE expressly concluded that "natural gas is one part of an environmentally preferable global energy portfolio" and reiterated 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."90

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

88 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.

89 *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).

90 *Id.* at 86.

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.91

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

## IV. REVIEW OF PROJECT ENVIRONMENTAL IMPACTS

Because Plaquemines LNG 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, Plaquemines LNG respectfully requests the DOE/FE increase the quantity of its total authorized export volumes to 1,405.33 Bcf/yr for both FTA and non-FTA nations, so as to reflect the actual peak liquefaction capacity of the Project under optimal conditions. Specifically, Plaquemines LNG requests a limited amendment of DOE/FE Order Nos. 4446 and 3866 to increase the authorized export volumes in each by 165.33 Bcf/yr. All other rights, obligations, and terms and conditions, of the export authorizations would remain the same without change.

Respectfully submitted,

*/s/ J. Patrick Nevins*


Sandra Y. Snyder
Assistant General Counsel
Venture Global LNG, Inc.
1001 19th Street North
Suite 1500
Arlington, VA 22209
Telephone: (202) 920-0919
ssnyder@ventureglobalLNG.com

J. Patrick Nevins
Carlos E. Clemente
Latham & Watkins LLP
555 Eleventh Street, N.W.
Suite 1000
Washington, D.C. 20004
Telephone: (202) 637-3363
patrick.nevins@lw.com
carlos.clemente@lw.com


Dated: March 11, 2022

*Appendix A*

# Verification

STATE OF VIRGINIA )
) SS:
CITY OF ARLINGTON )

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 Plaquemines LNG, 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
General Counsel

Sworn to and subscribed before me this 11th day of March, 2022.

Notary Public
In and For said City

My Commission Expires:

ANNETTE B. THRASHER
NOTARY PUBLIC
REG. #7756142
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES JUNE 30, 2022

*Appendix B*

**OPINION OF COUNSEL**

**Opinion of Counsel**

This opinion is submitted pursuant to 10 C.F.R. 590.202(c) (2021) of the Department of Energy administrative procedures. The undersigned is General Counsel to Venture Global LNG, Inc. and an authorized representative of Venture Global Plaquemines LNG, LLC.

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

Respectfully submitted.

Keith Larson
General Counsel
Venture Global LNG, Inc.
1001 19th Street North
Suite 1500
Arlington, VA 22209
Telephone: (202) 759-6736
klarson@ventureglobalIng.com

Dated: March 11, 2022