

UNITED STATES OF AMERICA  
DEPARTMENT OF ENERGY  
OFFICE OF FOSSIL ENERGY

---

FREEPORT LNG EXPANSION, L.P. )  
FLNG LIQUEFACTION, LLC )  
FLNG LIQUEFACTION 2, LLC & ) FE DOCKET NO. 16-108-LNG  
FLNG LIQUEFACTION 3, LLC )  

---

OPINION AND ORDER GRANTING LONG-TERM, MULTI-CONTRACT  
AUTHORIZATION TO EXPORT LIQUEFIED NATURAL GAS  
BY VESSEL FROM THE FREEPORT LNG TERMINAL  
ON QUINTANA ISLAND, TEXAS,  
TO NON-FREE TRADE AGREEMENT NATIONS

DOE/FE ORDER NO. 3957

DECEMBER 19, 2016

**TABLE OF CONTENTS**

I. INTRODUCTION..... 1

II. BACKGROUND..... 4

    A. DOE’s LNG Export Studies..... 4

    B. DOE’s Environmental Studies ..... 6

    C. FERC Proceeding..... 8

    D. DOE/FE’s Adoption of the Environmental Assessment and Issuance of a Finding of No Significant Impact Under NEPA..... 10

III. SUMMARY OF FINDINGS AND CONCLUSIONS..... 10

IV. PUBLIC INTEREST STANDARD ..... 11

V. DESCRIPTION OF REQUEST..... 13

    A. Description of Applicant..... 13

    B. Description of Liquefaction Project..... 14

    C. Procedural History ..... 15

    D. Business Model..... 16

    E. Source of Natural Gas ..... 17

VI. APPLICANT’S PUBLIC INTEREST ANALYSIS ..... 17

VII. DISCUSSION AND CONCLUSIONS..... 19

    A. Non-Environmental Issues..... 20

        1. FLEX’s Application..... 20

        2. Price Impacts ..... 21

        3. Significance of the 2014 and 2015 LNG Export Studies ..... 23

        4. Benefits of International Trade..... 24

    B. Environmental Issues ..... 25

        1. Adoption of FERC’s Environmental Assessment ..... 25

        2. Environmental Impacts Associated with Induced Production of Natural Gas ..... 25

        3. Greenhouse Gas Impacts Associated with U.S. LNG Exports..... 27

    E. Other Considerations..... 34

    F. Conclusion ..... 35

VIII. TERMS AND CONDITIONS ..... 40

    A. Term of the Authorization..... 40

    B. Commencement of Operations Within Seven Years ..... 40

    C. Commissioning Volumes ..... 41

    D. Make-Up Period..... 41

    E. Transfer, Assignment, or Change in Control ..... 41

    F. Agency Rights..... 42

    G. Contract Provisions for the Sale or Transfer of LNG to be Exported..... 44

    H. Export Quantity..... 45

I.	Combined FTA and Non-FTA Export Authorization Volumes .....	46
IX.	FINDINGS .....	46
X.	ORDER .....	46

## **FREQUENTLY USED ACRONYMS**

AEO	Annual Energy Outlook
Bcf/d	Billion Cubic Feet per Day
Bcf/yr	Billion Cubic Feet per Year
CPP	Clean Power Plan
DOE	U.S. Department of Energy
EA	Environmental Assessment
EIA	U.S. Energy Information Administration
EPA	U.S. Environmental Protection Agency
FE	Office of Fossil Energy, U.S. Department of Energy
FERC	Federal Energy Regulatory Commission
FLEX	collectively, Freeport LNG Expansion, L.P.; FLNG Liquefaction, LLC; FLNG Liquefaction 2, LLC; and FLNG Liquefaction 3, LLC
FONSI	Finding of No Significant Impact
FTA	Free Trade Agreement
GHG	Greenhouse Gas
LNG	Liquefied Natural Gas
Mcf	Thousand Cubic Feet
MMBtu	Million British Thermal Units
NEPA	National Environmental Policy Act
NERA	NERA Economic Consulting
NETL	National Energy Technology Laboratory
NGA	Natural Gas Act
NO <sub>x</sub>	Nitrogen Oxides
VOC	Volatile Organic Compound

## I. INTRODUCTION

On August 3, 2016, four entities—Freeport LNG Expansion, L.P.; FLNG Liquefaction, LLC; FLNG Liquefaction 2, LLC; and FLNG Liquefaction 3, LLC (collectively, FLEX)—filed an application (Application)<sup>1</sup> with the Office of Fossil Energy of the Department of Energy (DOE/FE) under section 3(a) of the Natural Gas Act (NGA).<sup>2</sup> In the Application, FLEX asks DOE/FE to grant an amendment (Amendment) to its existing long-term, multi-contract authorization in DOE/FE Order Nos. 3357, 3357-A, 3357-B, and 3357-C in FE Docket No. 11-161-LNG (collectively, DOE/FE Order No. 3357).<sup>3</sup> That order authorizes FLEX to export domestically produced liquefied natural gas (LNG) from the Freeport Terminal located near the city of Freeport, in Brazoria County, Texas, to any country with which the United States does not have a free trade agreement (FTA) requiring national treatment for trade in natural gas, and with which trade is not prohibited by U.S. law or policy (non-FTA countries).

Under Order No. 3357, FLEX is authorized to export LNG in a volume equivalent to 146 billion cubic feet per year (Bcf/yr) of natural gas, or 0.4 Bcf per day (Bcf/d). However, in this proceeding, FLEX states that the Freeport LNG Liquefaction Project (Liquefaction Project) will be capable of producing more LNG than FLEX originally calculated as the nominal production capacity of the Project's three liquefaction trains.<sup>4</sup> FLEX therefore seeks to amend the LNG

---

<sup>1</sup> Freeport LNG Expansion, L.P., *et al.*, Application for Amendment to Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations, FE Docket Nos. 16-108-LNG & 11-161-LNG (Aug. 3, 2016) [hereinafter FLEX App.].

<sup>2</sup> 15 U.S.C. § 717b(a). The authority to regulate the imports and exports of natural gas, including liquefied natural gas, under section 3 of the NGA (15 U.S.C. § 717b) has been delegated to the Assistant Secretary for FE in Redelegation Order No. 00-006.02 issued on November 17, 2014.

<sup>3</sup> *See, e.g.*, Freeport LNG Expansion, L.P., *et al.*, DOE/FE Order No. 3357-B, FE Docket No. 11-161-LNG, Final Opinion and Order Granting Long-Term Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Freeport LNG Terminal on Quintana Island, Texas, to Non-Free Trade Agreement Nations (Nov. 14, 2014); *see also* DOE/FE Order No. 3357-C (Dec. 4, 2015) (opinion and order denying request for rehearing of Order No. 3357-B).

<sup>4</sup> *See Freeport LNG Development, L.P., et al.*, Order Amending Section 3 Authorization, 156 FERC ¶ 61,019, at P 5 (July 7, 2016) [hereinafter FERC 2016 Order].

export volume approved in Order No. 3357 to reflect more precise information about the design and operating assumptions of the Liquefaction Project.

Specifically, FLEX asks DOE/FE to increase the LNG export quantity in Order No. 3357 by an additional volume equivalent to 125 Bcf/yr of natural gas (0.34 Bcf/d).<sup>5</sup> On July 7, 2016, the Federal Energy Regulatory Commission (FERC) approved a similar amendment to its original 2014 NGA section 3 authorization for the Freeport LNG Liquefaction Project—authorizing an increase in the Liquefaction Project’s capacity from 1.8 Bcf/d to 2.31 Bcf/d of natural gas.<sup>6</sup> In so doing, FERC observed that no construction or modification of the Liquefaction Project is required to accomplish this capacity increase.<sup>7</sup>

As in Order No. 3357, FLEX seeks authorization to export this additional volume of LNG on its own behalf and as agent for other entities that hold title to the LNG at the time of export. FLEX requests this authorization for a 20-year period commencing on the date of first commercial export from the Liquefaction Project. On September 8, 2016, DOE/FE published a Notice of FLEX’s Application in the *Federal Register*.<sup>8</sup> The Notice of Application called on interested persons to submit protests, motions to intervene, notices of intervention, and comments by November 7, 2016. DOE/FE received no filings in response to the Application, and therefore FLEX’s Application is uncontested.

We note that DOE/FE Order No. 3357 is currently the subject of a judicial challenge pending before the U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit) in

---

<sup>5</sup> FLEX App. at 2 n.5, 4-5.

<sup>6</sup> See FERC 2016 Order, *supra* note 4, at PP 1, 5-6; see *infra* § II.C.

<sup>7</sup> See *id.* at 5.

<sup>8</sup> Freeport LNG Expansion, L.P., *et al.*, Application for Amendment to Long-Term, Multi-Contract Authorizations to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations for a Period of 20 Years, 81 Fed. Reg. 62,109 (Sept. 8, 2016).

*Sierra Club v. DOE*, Case No. 15-1489.<sup>9</sup> We therefore lack jurisdiction to amend Order No. 3357 in Docket No. 11-161-LNG,<sup>10</sup> and decline FLEX's request to do so. Pursuant to DOE/FE regulations, however, we construe FLEX's application as a request for a new authorization to export LNG, and grant FLEX's request in this docket proceeding (Docket No. 16-108-LNG).<sup>11</sup>

The volume authorized in this Order is additive to FLEX's previously authorized non-FTA export volumes in DOE/FE Order No. 3282-C<sup>12</sup> and Order No. 3357, referenced above. Accordingly, FLEX is now authorized to export a total volume of 782 Bcf/yr of natural gas (2.14 Bcf/d) from the Liquefaction Project to non-FTA countries as follows:

- (i) 511 Bcf/yr under Order No. 3282-C (FE Docket No. 10-161-LNG);
- (ii) 146 Bcf/yr under Order No. 3357 (FE Docket No. 11-161-LNG); and
- (iii) 125 Bcf/yr under this Order, No. 3957 (FE Docket No. 16-108-LNG).

The volume authorized in this Order is not additive to the export volumes in FLEX's existing authorizations to FTA countries<sup>13</sup> (identified below), which originate from the same Liquefaction Project.

In sum, the grant of export authority in this Order—in a volume of LNG equivalent to 0.34 Bcf/d (125 Bcf/yr) of natural gas—brings DOE/FE's cumulative total of approved non-FTA exports of LNG and compressed natural gas (CNG) to 16.99 Bcf/d of natural gas.

---

<sup>9</sup> Oral argument in this case is scheduled for February 2, 2017.

<sup>10</sup> The administrative record for DOE/FE Order No. #3357 was filed with the D.C. Circuit on February 12, 2016, and a corrected record filed on May 23, 2016. Accordingly, the Court has exclusive jurisdiction over that proceeding. 15 U.S.C. § 717r(b).

<sup>11</sup> 10 C.F.R. § 590.201(a).

<sup>12</sup> *Freeport LNG Expansion, L.P., et al.*, DOE/FE Order No. 3282-C, FE Docket No. 10-161-LNG, Final Opinion and Order Granting Long-Term Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Freeport LNG Terminal on Quintana Island, Texas, to Non-Free Trade Agreement Nations (Nov. 14, 2014).

<sup>13</sup> The United States currently has FTAs requiring national treatment for trade in natural gas with Australia, Bahrain, Canada, Chile, Colombia, Dominican Republic, El Salvador, Guatemala, Honduras, Jordan, Mexico, Morocco, Nicaragua, Oman, Panama, Peru, Republic of Korea, and Singapore. FTAs with Israel and Costa Rica do not require national treatment for trade in natural gas.

## II. BACKGROUND

### A. DOE's LNG Export Studies

In 2011, DOE/FE engaged the U.S. Energy Information Administration (EIA) and NERA Economic Consulting (NERA) to conduct a two-part study of the economic impacts of U.S. LNG exports, which together was called the “2012 LNG Export Study.” In relevant part, the 2012 EIA Study examined how prescribed levels of natural gas exports (at 6 Bcf/d and 12 Bcf/d) above baseline cases could affect domestic energy markets. The NERA Study projected that, across all scenarios studied—assuming either 6 Bcf/d or 12 Bcf/d of LNG export volumes—the United States would experience net economic benefits from allowing LNG exports. DOE/FE published a notice of availability of the 2012 LNG Export Study in the *Federal Register* for public comment.<sup>14</sup> DOE/FE responded to the public comments in connection with the LNG export proceedings identified in that notice.<sup>15</sup>

By May 2014, in light of the volume of LNG exports to non-FTA countries then-authorized by DOE/FE and the number of non-FTA export applications still pending, DOE/FE determined that an updated study was warranted to consider the economic impacts of exporting LNG from the lower-48 states to non-FTA countries.<sup>16</sup> On May 29, 2014, DOE announced plans to undertake new economic studies to gain a better understanding of how potentially higher

---

<sup>14</sup> See 2012 LNG Export Study, 77 Fed. Reg. 73,627 (Dec. 11, 2012), available at: [http://energy.gov/sites/prod/files/2013/04/f0/fr\\_notice\\_two\\_part\\_study.pdf](http://energy.gov/sites/prod/files/2013/04/f0/fr_notice_two_part_study.pdf) (Notice of Availability of the LNG Export Study).

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

<sup>16</sup> Because there is no natural gas pipeline interconnection between Alaska and the lower 48 states, DOE/FE generally views those LNG export markets as distinct. DOE/FE therefore focuses on LNG exports from the lower-48 states for purposes of determining macroeconomic impacts.

levels of U.S. LNG exports—at levels between 12 and 20 Bcf/d of natural gas—would affect the public interest.<sup>17</sup>

DOE/FE commissioned two new macroeconomic studies. The first, *Effect of Increased Levels of Liquefied Natural Gas Exports on U.S. Energy Markets*, was performed by EIA and published in October 2014 (2014 EIA LNG Export Study or 2014 Study).<sup>18</sup> The 2014 EIA Study assessed how specified scenarios of increased natural gas exports could affect domestic energy markets. At DOE’s request, this 2014 Study served as an update of EIA’s January 2012 study of LNG export scenarios and used baseline cases from EIA’s 2014 *Annual Energy Outlook* (AEO 2014).<sup>19</sup>

The second study, *The Macroeconomic Impact of Increasing U.S. LNG Exports*, was performed jointly by the Center for Energy Studies at Rice University’s Baker Institute and Oxford Economics under contract to DOE/FE (together, Rice-Oxford) and published in October 2015 (2015 LNG Export Study or 2015 Study).<sup>20</sup> The 2015 Study is a scenario-based assessment of the macroeconomic impact of levels of U.S. LNG exports, sourced from the lower-48 states in volumes ranging from 12 to 20 Bcf/d of natural gas under a range of assumptions, including U.S. resource endowment, U.S. natural gas demand, international LNG market dynamics, and other factors. The analysis covers the 2015 to 2040 time period.

---

<sup>17</sup> See U.S. Dep’t of Energy, Office of Fossil Energy, Request for an Update of EIA’s January 2012 Study of Liquefied Natural Gas Export Scenarios, available at: <http://energy.gov/fe/downloads/request-update-eia-s-january-2012-study-liquefied-natural-gas-export-scenarios> (May 29, 2014) (memorandum from FE to EIA).

<sup>18</sup> U.S. Energy Information Administration, *Effect of Increased Levels of Liquefied Natural Gas Exports on U.S. Energy Markets* (Oct. 2014), available at: <https://www.eia.gov/analysis/requests/fe/pdf/lng.pdf>.

<sup>19</sup> Each Annual Energy Outlook (AEO) presents EIA’s long-term projections of energy supply, demand, and prices. It is based on results from EIA’s National Energy Modeling System (NEMS) model.

<sup>20</sup> Center for Energy Studies at Rice University Baker Institute and Oxford Economics, *The Macroeconomic Impact of Increasing U.S. LNG Exports* (Oct. 29, 2015), available at: [http://energy.gov/sites/prod/files/2015/12/f27/20151113\\_macro\\_impact\\_of\\_lng\\_exports\\_0.pdf](http://energy.gov/sites/prod/files/2015/12/f27/20151113_macro_impact_of_lng_exports_0.pdf).

On December 29, 2015, DOE/FE published a Notice of Availability of the 2014 and 2015 LNG Export Studies in the *Federal Register*, and invited public comment on those Studies.<sup>21</sup> DOE received 38 comments in response to the Notice of Availability, of which 14 comments opposed the conclusions in the 2014 and 2015 Studies and/or LNG exports generally, 21 expressed support for the Studies, and three took no position. DOE/FE has carefully examined the comments in a series of non-FTA LNG export decisions,<sup>22</sup> and the precedents established in those decisions have been considered in our review of FLEX's Application. *See infra* § VII.B.

### **B. DOE's Environmental Studies**

On June 4, 2014, DOE/FE issued two notices in the *Federal Register* proposing to evaluate different environmental aspects of the LNG production and export chain. First, DOE/FE announced that it had conducted a review of existing literature on potential environmental issues associated with unconventional natural gas production in the lower-48 states. The purpose of this review was to provide additional information to the public concerning the potential environmental impacts of unconventional natural gas exploration and production activities, including hydraulic fracturing. DOE/FE published its draft report for public review and comment, entitled *Draft Addendum to Environmental Review Documents Concerning Exports of Natural Gas from the United States* (Draft Addendum).<sup>23</sup> DOE/FE received

---

<sup>21</sup> U.S. Dep't of Energy, Macroeconomic Impacts of LNG Exports Studies; Notice of Availability and Request for Comments, 80 Fed. Reg. 81,300, 81,302 (Dec. 29, 2015) [hereinafter Notice of Availability] (providing a 45-day public comment period "to help inform DOE in its public interest determinations of the authorizations sought in the 29 non-FTA export applications identified ...").

<sup>22</sup> *See, e.g., Lake Charles LNG Export Co., LLC*, DOE/FE Order No. 3868, FE Docket No. 13-04-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Lake Charles Terminal in Calcasieu Parish, Louisiana to Non-Free Trade Agreement Nations, at 43-81 (July 29, 2016).

<sup>23</sup> Dep't of Energy, Draft Addendum to Environmental Review Documents Concerning Exports of Natural Gas From the United States, 79 Fed. Reg. 32,258 (June 4, 2014). DOE/FE announced the availability of the Draft Addendum on its website on May 29, 2014.

comments on the Draft Addendum and, on August 15, 2014, issued the final Addendum with its response to the public comments contained in Appendix B.<sup>24</sup>

Second, DOE/FE commissioned the National Energy Technology Laboratory (NETL), a DOE applied research laboratory, to conduct an analysis calculating the life cycle greenhouse gas (GHG) emissions for LNG exported from the United States. The purpose of this analysis was to determine: (i) how domestically-produced LNG exported from the United States compares with regional coal (or other LNG sources) for electric power generation in Europe and Asia from a life cycle GHG perspective, and (ii) how those results compare with natural gas sourced from Russia and delivered to the same markets via pipeline. DOE/FE published NETL's report entitled, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States* (LCA GHG Report).<sup>25</sup> DOE/FE also received public comment on the LCA GHG Report, and provides its response to those comments in this Order.

With respect to both the Addendum and the LCA GHG Report, DOE/FE has taken all public comments into consideration in this decision and has made those comments, as well as the underlying studies, part of the record in this proceeding. As explained below, neither the Addendum nor the LCA GHG Report are required by the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. § 4321 *et seq.*, but DOE/FE believes that these documents will inform its review of the public interest under NGA section 3(a), and are responsive to concerns raised in other FLEX non-FTA export proceedings.

---

<sup>24</sup> Dep't of Energy, Addendum to Environmental Review Documents Concerning Exports of Natural Gas From the United States, 79 Fed. Reg. 48,132 (Aug. 15, 2014) [hereinafter Addendum]; *see also* <http://energy.gov/fe/addendum-environmental-review-documents-concerning-exports-natural-gas-united-states>.

<sup>25</sup> Dep't of Energy, Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas From the United States, 79 Fed. Reg. 32,260 (June 4, 2014) [hereinafter LCA GHG Report]. DOE/FE announced the availability of the LCA GHG Report on its website on May 29, 2014.

### C. FERC Proceeding

The stated purpose of FLEX's Application is to align the volumes of LNG authorized for export from the Freeport LNG Liquefaction Project with the "optimized production design of the facilities," as approved by FERC in its July 7, 2016 Order (2016 Order).<sup>26</sup>

Previously, in June 2004, FERC authorized the siting, construction, and operation of the Freeport LNG terminal for the importation of natural gas.<sup>27</sup> FERC issued an order in September 2006 authorizing expansion of the LNG terminal and an increase in its send-out capacity.<sup>28</sup> The facilities authorized by the 2006 order included an additional marine berthing dock, facilities to transfer LNG from ships to the terminal, and an additional LNG storage tank.<sup>29</sup> In 2014, FERC issued an order authorizing the construction and operation of liquefaction and other facilities and use of the Freeport LNG terminal to export domestic natural gas (FERC 2014 Order).<sup>30</sup> The facilities authorized as part of the Liquefaction Project included three LNG trains, each of which were then-estimated to be capable of producing a nominal 4.4 million metric tons per annum of LNG, for a total liquefaction capacity of approximately 657 Bcf/yr of natural gas, or 1.8 Bcf/d.<sup>31</sup>

Thereafter, on June 15, 2015, four Freeport entities (Freeport LNG Development, L.P.; FLNG Liquefaction, LLC; FLNG Liquefaction 2, LLC; and FLNG Liquefaction 3, LLC) applied to FERC for a "limited amendment" to FERC's 2014 Order. The proposed Amendment would increase the Liquefaction Project's authorized LNG production capacity from 1.8 Bcf/d to 2.14 Bcf/d of natural gas, based on less conservative operating assumptions.<sup>32</sup>

---

<sup>26</sup> FLEX App. at 2; *see also id.* at 2 n.5.

<sup>27</sup> *Freeport LNG Development, L.P.*, 107 FERC ¶ 61,278, *order on reh'g*, 108 FERC ¶ 61,253 (2004).

<sup>28</sup> *Freeport LNG Development, L.P.*, 116 FERC ¶ 61,290 (2006).

<sup>29</sup> *See* 2016 FERC Order at P 3 n.4.

<sup>30</sup> *Freeport LNG Development, L.P.*, 148 FERC ¶ 61,076, *order denying reh'g*, 149 FERC ¶ 61,119 (2014).

<sup>31</sup> FERC 2016 Order at P 4.

<sup>32</sup> FLEX App. at 2 n.5; FERC 2016 Order at P 12.

To satisfy applicable NEPA requirements, FERC staff prepared an environmental assessment (EA) for the proposed Amendment. The EA was placed into the public record on March 31, 2016.<sup>33</sup> The EA acknowledged that the proposed capacity increase would not require the construction of new facilities or the modification of previously-authorized facilities, and would not operate outside the range of feed gas composition cases previously analyzed.<sup>34</sup> On this basis, the EA found that the proposed Amendment would not affect geology, soils, water resources, wetlands, vegetation, fisheries, wildlife, threatened and endangered species, land use, recreation, visual resources, noise, safety, or socioeconomics.<sup>35</sup> The analysis in the EA also addressed air quality, cumulative impacts, and alternatives, and concluded that approval of the proposal would not constitute a major federal action significantly affecting the quality of the human environment.<sup>36</sup>

Based on the analysis in the EA, FERC issued the 2016 Order in which it granted the requested Amendment and increased the authorized maximum LNG production level of the Liquefaction Project to 2.14 Bcf/d of natural gas (782 Bcf/yr).<sup>37</sup> FERC concluded that, if operated in accordance with Freeport Liquefaction's application and the environmental and engineering conditions imposed by FERC's prior orders for the Freeport LNG terminal, approval of the Amendment would not constitute a major federal action significantly affecting the quality of the human environment.<sup>38</sup> FERC ordered that, in all other respects, FERC's 2014 Order authorizing the Liquefaction Project remained in full force and effect.<sup>39</sup>

---

<sup>33</sup> FERC 2016 Order at P 14; *see also* Environmental Assessment, Freeport LNG Development, L.P., FLNG Liquefaction, LLC, FLNG Liquefaction 2, LLC and FLNG Liquefaction 3, LLC, FERC Docket CP15-518-000 (March 2016).

<sup>34</sup> *See* FERC 2016 Order at P 35.

<sup>35</sup> *See id.* at P 14.

<sup>36</sup> *See id.*

<sup>37</sup> *See id.* (Ordering Para. A).

<sup>38</sup> FERC 2016 Order at P 36.

<sup>39</sup> *See id.* (Ordering Paras. A, B).

In light of this background, FLEX maintains in this proceeding that the needed FERC authority already has been issued, and that a grant of the Application will not involve any new construction activities.

**D. DOE/FE's Adoption of the Environmental Assessment and Issuance of a Finding of No Significant Impact Under NEPA**

After an independent review, DOE/FE is concurrently adopting FERC's 2016 EA (DOE/EA-2055) and issuing a Finding of No Significant Impact (FONSI) for the proposed design increase.<sup>40</sup> In granting this Order, we note that FERC's 2016 Order is conditioned on FLEX's on-going compliance with the environmental conditions adopted in the 2014 FERC Order authorizing the construction and operation of the Liquefaction Project.<sup>41</sup>

**III. SUMMARY OF FINDINGS AND CONCLUSIONS**

This Order presents DOE/FE's findings and conclusions on all issues associated with FLEX's proposed exports under NGA section 3(a), including both environmental and non-environmental issues.<sup>42</sup> As the basis for this Order, DOE/FE has reviewed an administrative record that includes (but is not limited to) the following: FLEX's uncontested Application; DOE/FE's 2014 and 2015 LNG Export Studies; the Addendum; the LCA GHG Report; public comments received on DOE/FE's various analyses; FERC's 2016 EA; and the FERC 2016 Order amending the FERC 2014 Order for the Freeport Terminal to reflect the increased liquefaction capacity.

DOE/FE hereby authorizes FLEX's export of domestically produced LNG from the Freeport Terminal to non-FTA countries in a volume equivalent to 125 Bcf/yr of natural gas.

---

<sup>40</sup> U.S. Dep't of Energy, Finding of No Significant Impact for Freeport LNG Liquefaction Project Regarding Application Seeking Department of Energy Authorization to Export Liquefied Natural Gas From Freeport LNG Terminal to Non-Free Trade Agreement Nations, DOE/EA-2055 (Dec. 19, 2016) [hereinafter FLEX FONSI].

<sup>41</sup> See 2016 FERC Order at P 36 & Ordering Paras.

<sup>42</sup> The non-environmental issues primarily include economic and international impacts associated with the proposed exports, as well as security of the natural gas supply in the United States. See *infra* § IV (public interest standard).

This authorization is subject to the Terms and Conditions and Ordering Paragraphs set forth herein. *See infra* §§ VIII-X.

#### IV. PUBLIC INTEREST STANDARD

Section 3(a) of the NGA sets forth the standard for review of the Application:

[N]o person shall export any natural gas from the United States to a foreign country or import any natural gas from a foreign country without first having secured an order of the [Secretary of Energy<sup>43</sup>] authorizing it to do so. The [Secretary] shall issue such order upon application, unless after opportunity for hearing, [he] finds that the proposed exportation or importation will not be consistent with the public interest. The [Secretary] may by [the Secretary's] order grant such application, in whole or part, with such modification and upon such terms and conditions as the [Secretary] may find necessary or appropriate.

15 U.S.C. § 717b(a). This provision creates a rebuttable presumption that a proposed export of natural gas is in the public interest. DOE/FE must grant such an application unless opponents of the application overcome that presumption by making an affirmative showing of inconsistency with the public interest.<sup>44</sup>

While section 3(a) establishes a broad public interest standard and a presumption favoring export authorizations, the statute does not define “public interest” or identify criteria that must be considered. In prior decisions, however, DOE/FE has identified a range of factors that it evaluates when reviewing an application for export authorization. These factors include economic impacts, international impacts, security of natural gas supply, and environmental

---

<sup>43</sup> The Secretary's authority was established by the Department of Energy Organization Act, 42 U.S.C. § 7172, which transferred jurisdiction over imports and export authorizations from the Federal Power Commission to the Secretary of Energy.

<sup>44</sup> *See, e.g., Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 2961, FE Docket No. 10-111-LNG, Opinion and Order Conditionally Granting Long-Term Authorization to Export Liquefied Natural Gas From Sabine Pass LNG Terminal to Non-Free Trade Agreement Nations, at 28 (May 20, 2011) [hereinafter *Sabine Pass*]; *see also Phillips Alaska Natural Gas Corp. & Marathon Oil Co.*, DOE/FE Order No. 1473, FE Docket No. 96-99-LNG, Order Extending Authorization to Export Liquefied Natural Gas from Alaska, at 13 (April 2, 1999) [hereinafter *Phillips Alaska Natural Gas*], citing *Panhandle Producers & Royalty Owners Ass'n v. ERA*, 822 F.2d 1105, 1111 (D.C. Cir. 1987).

impacts, among others. To conduct this review, DOE/FE looks to record evidence developed in the application proceeding.<sup>45</sup>

DOE/FE's prior decisions have also looked to certain principles established in its 1984 Policy Guidelines.<sup>46</sup> The goals of the Policy Guidelines are to minimize federal control and involvement in energy markets and to promote a balanced and mixed energy resource system.

The Guidelines provide that:

The market, not government, should determine the price and other contract terms of imported [or exported] natural gas .... The federal government's primary responsibility in authorizing imports [or exports] will be to evaluate the need for the gas and whether the import [or export] arrangement will provide the gas on a competitively priced basis for the duration of the contract while minimizing regulatory impediments to a freely operating market.<sup>47</sup>

While nominally applicable to natural gas import cases, DOE/FE subsequently held in Order No. 1473 that the same policies should be applied to natural gas export applications.<sup>48</sup>

In Order No. 1473, DOE/FE stated that it was guided by DOE Delegation Order No. 0204-111. That delegation order, which authorized the Administrator of the Economic Regulatory Administration to exercise the agency's review authority under NGA section 3, directed the Administrator to regulate exports "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

---

<sup>45</sup> See, e.g., *Sabine Pass*, DOE/FE Order No. 2961, at 28-42 (reviewing record evidence in issuing conditional authorization).

<sup>46</sup> New Policy Guidelines and Delegations Order Relating to Regulation of Imported Natural Gas, 49 Fed. Reg. 6684 (Feb. 22, 1984) [hereinafter 1984 Policy Guidelines].

<sup>47</sup> *Id.* at 6685.

<sup>48</sup> *Phillips Alaska Natural Gas*, DOE/FE Order No. 1473, at 14 (citing *Yukon Pacific Corp.*, DOE/FE Order No. 350, Order Granting Authorization to Export Liquefied Natural Gas from Alaska, 1 FE ¶ 70,259, at 71,128 (1989)).

particular case to be appropriate.”<sup>49</sup> In February 1989, the Assistant Secretary for Fossil Energy assumed the delegated responsibilities of the Administrator of ERA.<sup>50</sup>

Although DOE Delegation Order No. 0204-111 is no longer in effect, DOE/FE’s review of export applications has continued to focus 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 described herein.

## **V. DESCRIPTION OF REQUEST**

FLEX seeks long-term, multi-contract authorization to export domestically produced LNG from the Freeport LNG Liquefaction Project at the Freeport Terminal to non-FTA countries in a volume equivalent to approximately 125 Bcf/yr of natural gas (0.34 Bcf/d). FLEX requests a 20-year term of authorization, commencing on the date of first export from the Liquefaction Project. FLEX seeks to export this LNG on its own behalf and as agent for third parties who hold title to the LNG at the time of export.<sup>51</sup> FLEX requests that this volume be additive to the volumes of LNG authorized for export to non-FTA countries in existing DOE/FE orders.

### **A. Description of Applicant**

For purposes of this proceeding, FLEX is comprised of four entities: Freeport LNG Expansion, L.P.; FLNG Liquefaction, LLC; FLNG Liquefaction 2, LLC; and FLNG

---

<sup>49</sup> DOE Delegation Order No. 0204-111, at 1; *see also* 1984 Policy Guidelines, 49 Fed. Reg. at 6690.

<sup>50</sup> *See* Applications for Authorization to Construct, Operate, or Modify Facilities Used for the Export or Import of Natural Gas, 62 Fed. Reg. 30,435, 30,437 n.15 (June 4, 1997) (citing DOE Delegation Order No. 0204-127, 54 Fed. Reg. 11,436 (Mar. 20, 1989)).

<sup>51</sup> FLEX App. at 2-3.

Liquefaction 3, LLC. FLEX states that FLNG Liquefaction, LLC (FLIQ1) is indirectly owned by Freeport Expansion, Osaka Gas Company Ltd., and JERA Co., Inc.<sup>52</sup> FLNG Liquefaction 2, LLC (FLIQ2) is indirectly owned by Freeport Expansion and IFM Global Infrastructure Fund.<sup>53</sup> FLNG Liquefaction 3, LLC (FLIQ3) is an indirect wholly owned subsidiary of Freeport Expansion.<sup>54</sup> These FLEX entities—as well as their ultimate parent company, Freeport LNG Development, L.P. (Freeport LNG)—are authorized to do business in Texas and have a principal place of business in Houston, Texas.<sup>55</sup>

Freeport LNG owns and operates the Freeport Terminal. FLEX states that Freeport LNG is a Delaware limited partnership with one general partner, Freeport LNG-GP, LLC, a Delaware limited liability company owned by an individual, Michael S. Smith, and by IFM Investors Midstream, LLC.<sup>56</sup> According to FLEX, Freeport LNG’s limited partners are: (1) Freeport LNG Investments, LLP and FLNGI Option Holdco, LLC, a Delaware limited liability limited partnership and limited liability company, respectively, owned by Mr. Smith; (2) GIP II FLNG, L.P. and GIP II FLNG Holdings Partnership 2, LLC, a Delaware limited partnership and Delaware limited liability company, respectively, owned by Global Infrastructure Partners; and (3) Turbo LNG, LLC, a Delaware limited liability company owned by Osaka Gas Company, Ltd.<sup>57</sup>

## **B. Description of Liquefaction Project**

FLEX has stated that the Liquefaction Project facilities, which are currently under construction, will be integrated into the existing Freeport Terminal, which consists of a marine

---

<sup>52</sup> FLEX App. at 3.

<sup>53</sup> *Id.*

<sup>54</sup> *Id.*

<sup>55</sup> *Id.*

<sup>56</sup> FLEX App. at 3.

<sup>57</sup> *Id.*

berth, two 160,000 m<sup>3</sup> full containment LNG storage tanks, LNG vaporization systems, associated utilities, and a 9.6-mile pipeline and meter station. According to FLEX, the FERC-authorized improvements to the Liquefaction Project include a second marine berthing dock, a third LNG storage tank, and transfer pipelines between the second marine dock and LNG storage tanks.

FLEX further asserts that the proposed increase in production capacity represents the maximum or peak LNG production and export capability of the liquefaction trains under optimal operating conditions, and is based on the most up-to-date design and engineering information.<sup>58</sup>

### C. Procedural History

DOE/FE Order No. 3357-B, issued on November 14, 2014, sets forth much of FLEX’s procedural history with DOE/FE in detail.<sup>59</sup> Briefly—and including this Order—FLEX holds the following non-FTA orders:

**Table 1: Orders Issued by DOE/FE to FLEX for the Export of Domestic LNG from the Freeport LNG Terminal to Non-FTA Countries**

Docket No.	Order No.	Date Issued	Trains	Volume (Bcf/yr)	Term/Type
10-161-LNG	3282-C	November 14, 2014	1-3	511.0	20 years, multi-contract
11-161-LNG	collectively, 3357	November 14, 2014	1-3	146.0	20 years, multi-contract
16-108-LNG	3957	December 19, 2016	1-3	125.0	20 years, multi-contract
<b>Total Volume</b>				<b>782.0</b>	

Additionally, FLEX holds the following FTA orders:

<sup>58</sup> FLEX App. at 11.

<sup>59</sup> See *supra* at 1 n.3.

**Table 2: Orders Issued by DOE/FE to FLEX for the Export of Domestic LNG from the Freeport LNG Terminal to FTA Countries**

<b>Docket No.</b>	<b>Order No.</b>	<b>Date Issued</b>	<b>Trains</b>	<b>Volume (Bcf/yr)</b>	<b>Term/Type</b>
10-160-LNG	2913-A	February 10, 2011, as amended February 7, 2014	1-3	511.0	25 years, multi-contract
12-06-LNG	3066-A	February 10, 2012, as amended February 7, 2014	1-3	511.0	25 years, multi-contract
<b>Total Volume</b>				<b>1,022</b>	

**D. Business Model**

FLEX seeks authority to export LNG on its own behalf and also as agent for third parties. FLEX states that, with limited exception, it does not purchase natural gas under long-term purchase agreements, but rather its business model is based on long-term liquefaction tolling agreements.<sup>60</sup> According to FLEX, its customers generally secure their own natural gas for export. Because of the interconnectivity of the U.S. natural gas pipeline system, FLEX states that it and its customers will have access to almost any point on the grid through direct delivery or by displacement.<sup>61</sup>

FLEX states that, to date, it has entered into long-term contracts with Osaka Gas Trading and Export, LLC; Chubu US Gas Trading LLC; and Kansai Electric Power Co., Inc. for a portion of the requested export volume.<sup>62</sup> For any additional contracts it enters into, FLEX states that it will file, or cause to be filed, either unredacted contracts, or long-term contracts under seal, with either: (i) a copy of each long-term contract with commercially sensitive information redacted, or

---

<sup>60</sup> FLEX App. at 6.

<sup>61</sup> *Id.*

<sup>62</sup> *Id.* at 7.

(ii) a summary of all major provisions of the contracts including, but not limited to, the parties to each contract, contract term, quantity any take-or-pay equivalent provisions/conditions, destinations, re-sale provisions, and other relevant provisions.<sup>63</sup>

### **E. Source of Natural Gas**

FLEX states that it will export natural gas available in the United States natural gas pipeline system.<sup>64</sup> Previously, FLEX has informed DOE/FE that the source of natural gas for its proposed exports is expected to come primarily from the Texas market.

## **VI. APPLICANT'S PUBLIC INTEREST ANALYSIS**

FLEX states that its proposed export of domestically produced LNG is consistent with the public interest, and therefore meets the standard under NGA section 3(a).<sup>65</sup> According to FLEX, DOE/FE already has concluded in DOE/FE Order Nos. 3282-C and 3357 that exports from the Freeport LNG Liquefaction Project are not inconsistent with the public interest. Specifically, "DOE/FE found that LNG exports from the Liquefaction Project will result in many local and national economic and public benefits."<sup>66</sup>

FLEX states that the improved outlook for domestic natural gas production stemming from technological advances has enabled greater access to Gulf Coast and other U.S. natural gas supplies. FLEX argues that the lack of domestic need for the LNG necessary to support the proposed exports is "clear from the existing and projected trends concerning U.S. gas demand and supply."<sup>67</sup>

---

<sup>63</sup> *Id.*

<sup>64</sup> *Id.* at 6.

<sup>65</sup> FLEX App. at 8.

<sup>66</sup> *Id.*

<sup>67</sup> *Id.* at 8-9.

FLEX points to the 1984 DOE *Policy Guidelines*, which state that “[t]he market, not government, should determine the price and other contract terms of imported [and exported] gas,” and that “the federal government’s primary responsibility ... should be to evaluate the need for the gas ....”<sup>68</sup> FLEX argues that DOE/FE has stated in previous export authorizations that domestic need for the natural gas proposed to be exported is “the only explicit criterion that must be considered in determining the public interest.”<sup>69</sup>

According to FLEX, current projections indicate that supply available to domestic consumers will far exceed market need for the foreseeable future.<sup>70</sup> FLEX states that governmental sources, such as EIA’s *Annual Energy Outlook 2015*, provide evidence that domestic natural gas resources are abundantly available to meet projected future domestic needs, including its proposed exports in this proceeding.<sup>71</sup> Similarly, FLEX states, the *Annual Energy Outlook 2016* (AEO 2016) Early Release supports this evidence, stating that “[n]atural gas production in the Reference case grows more than 50% between 2015 and 2040,”<sup>72</sup> with production during the same time period expected to exceed consumption.<sup>73</sup>

FLEX also cites DOE/FE’s 2012 LNG Export Study, among other studies, in asserting that LNG exports from the United States will benefit the U.S. economy as a whole and will not result in any significant adverse price impacts to consumers.<sup>74</sup>

Finally, FLEX contends that natural gas exports are consistent with U.S. policy initiatives

---

<sup>68</sup> *Id.* at 9 (citing DOE, *New Policy Guidelines and Delegation Orders from Secretary of Energy to Economic Regulatory Administration and Federal Energy Regulatory Commission Relating to the Regulation of Imported Natural Gas*, 49 Fed. Reg. 6684, 6685 (Feb. 22, 1984)).

<sup>69</sup> *Id.* (citing *Phillips Alaska* at 14).

<sup>70</sup> FLEX App. at 9.

<sup>71</sup> *Id.*

<sup>72</sup> *Id.* (quoting EIA, *Annual Energy Outlook 2016 Early Release: Annotated Summary of Two Cases*, at 7 (May 17, 2016), available at: [http://www.eia.gov/forecasts/aeo/er/pdf/0383er\(2016\).pdf](http://www.eia.gov/forecasts/aeo/er/pdf/0383er(2016).pdf)).

<sup>73</sup> *Id.* at 10.

<sup>74</sup> FLEX App. at 10.

and global energy priorities.<sup>75</sup> Citing DOE precedent, FLEX maintains that “[a]n efficient, transparent international market for natural gas with diverse sources of supply provides both economic and strategic benefits to the United States and our allies.”<sup>76</sup>

## VII. DISCUSSION AND CONCLUSIONS

In reviewing FLEX’s Application to export LNG, DOE/FE has considered both its obligations under NEPA and its obligation under NGA section 3(a) to ensure that the proposed LNG export proposals are not inconsistent with the public interest. To accomplish these purposes, DOE/FE has examined a wide range of information addressing environmental and non-environmental factors, including:

- FLEX’s uncontested Application;
- FERC’s 2016 EA and 2016 Order approving the increased capacity of the Freeport LNG Liquefaction Project at the Freeport Terminal;
- The Draft Addendum, comments received in response to the Draft Addendum, and the final Addendum;
- The LCA GHG Report (and the supporting NETL document), including comments submitted in response to those documents; and
- The 2014 EIA LNG Export Study and the 2015 LNG Export Study, including comments received in response to those Studies.

To avoid repetition, the following discussion focuses on arguments and evidence presented by FLEX to the extent that DOE/FE has not already addressed the same or substantially similar arguments in its responses to comments on the Addendum, the LCA GHG Report, and/or the 2014 and 2015 Studies.

---

<sup>75</sup> *Id.*

<sup>76</sup> *Id.* (citation omitted).

## **A. Non-Environmental Issues**

In considering non-environmental issues in this proceeding, we have reviewed the Application and the 2014 and 2015 LNG Export Studies. We also take administrative notice of EIA's more recent authoritative supply data and projections, set forth in the *Annual Energy Outlook 2015* (AEO 2015)<sup>77</sup> and AEO 2016<sup>78</sup> as discussed below.

### **1. FLEX's Application**

Upon review, we find that several factors identified in the Application support a grant of the authorization to export domestically produced LNG in an amount equivalent to 125 Bcf/yr of natural gas, or 0.34 Bcf/d.

First, we find that the volume of LNG authorized for export in this Order—equivalent to 0.34 Bcf/d of natural gas—will have no practical impact on the domestic supply of natural gas in the United States or natural gas markets, as evidenced by the 2014 and 2015 LNG Export Study, as well as AEO 2015 and AEO 2016, as discussed further below.

Second, the 2014 and 2015 LNG Export Study also project that exports of LNG will generate net economic benefits to the broader U.S. economy.

Third, as discussed below, over the 20-year term of the authorization, the proposed exports will benefit the liquidity of international natural gas markets and make a positive contribution to the United States' trade balance. For this reason, FLEX's proposed exports are consistent with U.S. policy under the National Export Initiative.<sup>79</sup>

---

<sup>77</sup> U.S. Energy Information Administration, *Annual Energy Outlook 2015* (April 2015), available at: [http://www.eia.gov/outlooks/aeo/pdf/0383\(2015\).pdf](http://www.eia.gov/outlooks/aeo/pdf/0383(2015).pdf).

<sup>78</sup> U.S. Energy Information Administration, *Annual Energy Outlook 2016* (July 2016, updated Sept. 2016), available at: [www.eia.gov/forecasts/aeo/](http://www.eia.gov/forecasts/aeo/).

<sup>79</sup> National Export Initiative, 75 Fed. Reg. 12,433 (Mar. 16, 2010).

## 2. Price Impacts

As discussed above, the 2014 and 2015 LNG Export Studies projected the economic impacts of LNG exports in a range of scenarios, including scenarios that exceeded the current amount of LNG exports authorized in the final non-FTA export authorizations to date (equivalent to a total of 16.99 Bcf/d of natural gas).<sup>80</sup> The 2015 Study concluded that LNG exports at these levels (12 to 20 Bcf/d of natural gas) would result in higher U.S. natural gas prices, but that these price changes would remain in a relatively narrow range across the scenarios studied. However, even with these estimated price increases, the 2015 Study found that the United States would experience net economic benefits from increased LNG exports in all cases studied.<sup>81</sup>

We have also reviewed EIA's AEO 2016, published in June 2016. The Reference case of this projection includes the effects of the Clean Power Plan (CPP),<sup>82</sup> which is intended to reduce carbon emissions from the power sector. DOE/FE assessed the AEO 2016 to evaluate any differences from AEO 2014, which formed the basis for the 2014 Study.

Comparing key results from 2040 (the end of the projection period in Reference case projections from AEO 2014 and AEO 2016) shows that the latest Outlook foresees market conditions that would be even more supportive of LNG exports, including higher production and demand coupled with lower prices. Results from EIA's AEO 2016 no-CPP case, which is the same as the Reference case but does not include the CPP, are also more supportive of LNG

---

<sup>80</sup> See *infra* § VII.F.

<sup>81</sup> See 2015 Study at 8, 82.

<sup>82</sup> U.S. Env'tl. Protection Agency, Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule, 80 Fed. Reg. 64,662 (Oct. 23, 2015) (effective Dec. 22, 2015). On February 9, 2016, the U.S. Supreme Court issued a stay of the effectiveness of this rule pending review. See *Chamber of Commerce, et al. v. EPA, et al.*, Order in Pending Case, 577 U.S. \_\_\_\_ (2016).

exports on the same basis of higher production and demand with lower prices relative to AEO 2014.

For the year 2040, the AEO 2016 Reference case anticipates 15 percent more natural gas production in the lower-48 than AEO 2014. It also projects an average Henry Hub natural gas price that is lower than AEO 2014 by nearly 40 percent. With regard to exports, the 2016 projection’s 2040 net pipeline exports of 2.4 Bcf/d and total LNG exports of 18.4 Bcf/d (over 90 percent higher than total LNG exports in AEO 2014) illustrate the Outlook’s view of a market environment supportive of exports.

In the AEO 2016 no-CPP case, for the year 2040, lower-48 production is almost 14 percent higher than in AEO 2014, with the Henry Hub price over 42 percent lower. Net pipeline exports of 2.8 Bcf/d and total LNG exports of 18.6 Bcf/d again indicate a market supportive of exports. These differences are depicted in the table below:

**Table 3: Year 2040 Reference Case Comparisons in AEO 2014 and AEO 2016**

	<b>AEO 2014 Reference Case</b>	<b>AEO 2016 Reference Case Includes Clean Power Plan</b>	<b>AEO 2016 Reference Case Without Clean Power Plan</b>
<b>Lower-48 Dry Natural Gas Production (Bcf/d)</b>	99.7	114.6	113.5
<b>Total Natural Gas Consumption (Bcf/d)</b>	86.7	94.3	92.6
<b>Electric Power Sector Consumption (Bcf/d)</b>	30.8	32.8	30.6
<b><u>Net Exports by Pipeline (Bcf/d)</u></b>	6.7	2.4	2.8

<b>Net LNG Exports (Bcf/d)</b>	9.2	18.2	18.4
<b>LNG Exports – Total (Bcf/d)</b>	9.6	18.4	18.6
<b>Lower-48</b>	7.4	18.4	18.6
<b>Alaska</b>	2.2	0.0	0.0
<b>Henry Hub Spot Price (\$/MMBtu)<sup>(Note 1)</sup></b>	<b>\$8.03 (2015\$)</b> \$7.65 (2012\$)	<b>\$4.86 (2015\$)</b>	<b>\$4.65 (2015\$)</b>

Note 1: Prices adjusted to 2015\$ with the GDP implicit deflator for AEO 2014.

### **3. Significance of the 2014 and 2015 LNG Export Studies**

For the reasons discussed above, DOE/FE commissioned the 2014 EIA LNG Export Study and the 2015 LNG Export Study, and invited the submission of responsive comments on both Studies. DOE/FE has analyzed this material and determined that these two Studies provide substantial support for granting FLEX’s Application. Specifically, the conclusion of the 2015 Study is that the United States will experience net economic benefits from issuance of authorizations to export domestically produced LNG.

We have evaluated the public comments submitted in response to the 2014 and 2015 LNG Export Studies. Certain commenters have criticized aspects of the models, assumptions, and design of the Studies. As discussed above, however, EIA’s projections in AEO 2016 continue to show market conditions that will accommodate increased exports of natural gas. When compared to the AEO 2014 Reference case, the AEO 2016 Reference case projects increases in domestic natural gas production—well in excess of what is required to meet projected increases in domestic consumption. Accordingly, we find that the 2014 and 2015 LNG

Export Studies are fundamentally sound and support the proposition that the proposed authorization will not be inconsistent with the public interest.

#### **4. Benefits of International Trade**

We have not limited our review to the contents of the 2014 and 2015 LNG Export Studies and the data from AEO 2015 and AEO 2016, but have considered a wide range of other information. For example, the National Export Initiative, established by Executive Order, sets an Administration goal to “improve conditions that directly affect the private sector’s ability to export” and to “enhance and coordinate Federal efforts to facilitate the creation of jobs in the United States through the promotion of exports.”<sup>83</sup>

We have also considered the international consequences of our decision. We review applications to export LNG to non-FTA nations under section 3(a) of the NGA. The United States’ commitment to free trade is one factor bearing on that review. An efficient, transparent international market for natural gas with diverse sources of supply provides both economic and strategic benefits to the United States and our allies. Indeed, increased production of domestic natural gas has significantly reduced the need for the United States to import LNG. In global trade, LNG shipments that would have been destined to U.S. markets have been redirected to Europe and Asia, improving energy security for many of our key trading partners. To 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 U.S. exports may advance the public interest for reasons that are distinct from and additional to the economic benefits identified in the 2014 and 2015 Studies.<sup>84</sup>

---

<sup>83</sup> National Export Initiative, 75 Fed. Reg. 12,433 (Mar. 16, 2010).

<sup>84</sup> See FLEX App. at 10.

## **B. Environmental Issues**

### **1. Adoption of FERC's Environmental Assessment**

DOE/FE is responsible for conducting an independent review of the results of FERC's efforts and determining whether the record needs to be supplemented in order for DOE/FE to meet its statutory responsibilities under section 3 of the NGA and under NEPA. DOE/FE has reviewed the administrative record compiled at FERC, including: (i) the 2016 EA reviewing FLEX's proposal to increase the maximum peak day LNG production level of the Liquefaction Project to 2.14 Bcf/d,<sup>85</sup> and (ii) the FERC 2016 Order amending the FERC 2014 Order for the Freeport Terminal to reflect the increased liquefaction capacity. Based on that review, DOE/FE has concluded that supplementation of the record is not warranted or necessary in order for DOE/FE to take final agency action herein. Accordingly, DOE/FE adopts the EA in the FONSI (*see supra* § II.D), and the findings contained in the FERC Order, and hereby incorporates FERC's reasoning and findings in this Order.

### **2. Environmental Impacts Associated with Induced Production of Natural Gas**

The current rapid development of natural gas resources in the United States likely will continue, with or without the export of natural gas to non-FTA nations.<sup>86</sup> Nevertheless, a decision by DOE/FE to authorize exports to non-FTA nations could accelerate that development by some increment. As discussed above, the Addendum reviewed the academic and technical literature covering the most significant issues associated with unconventional gas production, including impacts to water resources, air quality, greenhouse gas emissions, induced seismicity, and land use.

---

<sup>85</sup> 2016 FERC Order at P 1.

<sup>86</sup> Addendum at 2.

The Addendum shows that there are potential environmental issues associated with unconventional natural gas production that need to be carefully managed, especially with respect to emissions of volatile organic compounds (VOCs) and methane, and the potential for groundwater contamination. These environmental concerns do not lead us to conclude, however, that exports of natural gas to non-FTA nations should be prohibited. Rather, we believe the public interest is better served by addressing these environmental concerns directly—through federal, state, or local regulation, or through self-imposed industry guidelines where appropriate—rather than by prohibiting exports of natural gas. Unlike DOE, environmental regulators have the legal authority to impose requirements on natural gas production that appropriately balance benefits and burdens, and to update these regulations from time to time as technological practices and scientific understanding evolve. For example, in 2012, using its authority under the Clean Air Act, the U.S. Environmental Protection Agency (EPA) promulgated regulations for hydraulically fractured wells that are expected to yield significant emissions reductions.<sup>87</sup> In 2013, EPA updated those regulations to include storage tanks,<sup>88</sup> and in 2014 EPA issued a series of technical white papers exploring the potential need for additional measures to address methane emissions from the oil and gas sector.<sup>89</sup> In January 2015, EPA announced a strategy for “address[ing] methane and smog-forming VOC emissions from the oil and gas industry in order to ensure continued, safe and responsible growth in U.S. oil and natural gas production.”<sup>90</sup> Specifically, as part of the Administration’s efforts to address climate change,

---

<sup>87</sup> U.S. Env’tl. Prot. Agency, Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews; Final Rule, 77 Fed. Reg. 49,490 (Aug. 16, 2012).

<sup>88</sup> U.S. Env’tl. Prot. Agency, Oil and Natural Gas Sector: Reconsideration of Certain Provisions of New Source Performance Standards; Final Rule, 78 Fed. Reg. 58,416 (Sept. 23, 2013).

<sup>89</sup> U.S. Env’tl. Prot. Agency, Office of Air Quality Planning & Standards, *White Papers on Methane and VOC Emissions*, <http://www3.epa.gov/airquality/oilandgas/methane.html> (released April 15, 2014).

<sup>90</sup> U.S. Env’tl. Prot. Agency, Fact Sheet: EPA’s Strategy for Reducing Methane and Ozone-Forming Pollution From the Oil and Natural Gas Industry (Jan. 14, 2015),

EPA has initiated a rulemaking to set standards for methane and VOC emissions from new and modified oil and gas production sources, and natural gas processing and transmission sources.<sup>91</sup>

EPA issued the proposed rule in September 2015,<sup>92</sup> and the final rule on June 3, 2016.<sup>93</sup>

Section 3(a) of the NGA is too blunt an instrument to address these environmental concerns efficiently. A decision to prohibit exports of natural gas would cause the United States to forego entirely the economic and international benefits discussed herein, but would have little more than a modest, incremental impact on the environmental issues identified by intervenors. For these reasons, we conclude that the environmental concerns associated with natural gas production do not establish that exports of natural gas to non-FTA nations are inconsistent with the public interest.

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

Certain commenters on the LCA GHG Report, the Addendum, and the 2014 and 2015 LNG Export Studies have expressed concern that exports of domestic natural gas to non-FTA nations may impact the balance of global GHG emissions through their impact domestically on the price and availability of natural gas for electric generation and other uses. They also have objected that exports of natural gas could have a negative effect on the GHG intensity and total amount of energy consumed in foreign nations.

---

<http://www.epa.gov/airquality/oilandgas/pdfs/20150114fs.pdf>.

<sup>91</sup> The White House, Office of the Press Secretary, Fact Sheet: Administration Takes Steps Forward on Climate Action Plan by Announcing Actions to Cut Methane Emissions (Jan. 14, 2015), <https://www.whitehouse.gov/the-press-office/2015/01/14/fact-sheet-administration-takes-steps-forward-climate-action-plan-anno-1> (stating that, in developing the proposed and final standards, EPA “will focus on in-use technologies, current industry practices, [and] emerging innovations ... to ensure that emissions reductions can be achieved as oil and gas production and operations continue to grow.”).

<sup>92</sup> See U.S. Env'tl. Prot. Agency, Oil and Natural Gas Sector: Emission Standards for New and Modified Sources, Proposed Rule, 80 Fed. Reg. 56,593 (Sept. 18, 2015). EPA subsequently extended the public comment period on this proposed rule and two related proposed rules until December 4, 2015. See 80 Fed. Reg. 70,719 (Nov. 13, 2015).

<sup>93</sup> See U.S. Env'tl. Prot. Agency, Oil and Natural Gas Sector: Emission Standards for New and Modified Sources, Final Rule, 81 Fed. Reg. 35,824 (June 3, 2016).

**a. Domestic Environmental Impacts Associated with Increased Natural Gas Prices**

To the extent exports of natural gas to non-FTA nations increase domestic natural gas prices, those higher prices would be expected, all else equal, to reduce the use of natural gas in the United States as compared to a future case in which exports to non-FTA exports were prohibited. Within the U.S. electric generation sector, reduced demand for natural gas caused by higher prices would be balanced by some combination of reduced electric generation overall (aided by conservation and efficiency measures), increased generation from other resources (such as coal, renewables, and nuclear), and more efficient use of natural gas (*i.e.*, shifting of generation to natural gas-fired generators with superior heat rates).

Although EIA's 2012 Study found that additional natural gas production would supply most of the natural gas needed to support added LNG exports, EIA modeled the effects of higher natural gas prices on energy consumption in the United States in the years 2015 through 2035, and found several additional results. In particular, EIA found that "under Reference case conditions, decreased natural gas consumption as a result of added exports are countered proportionately by increased coal consumption (72 percent), increased liquid fuel consumption (8 percent), other increased consumption, such as from renewable generation sources (9 percent), and decreases in total consumption (11 percent)."<sup>94</sup> Further, EIA determined that, in the earlier years of the 2015 to 2035 period, "the amount of natural gas to coal switching is greater," with "coal play[ing] a more dominant role in replacing the decreased levels of natural gas consumption, which also tend to be greater in the earlier years."<sup>95</sup> Likewise, "[s]witching from natural gas to coal is less significant in later years, partially as a result of a greater proportion of

---

<sup>94</sup> 2012 EIA Study at 18.

<sup>95</sup> *Id.*

switching into renewable generation.”<sup>96</sup> EIA ultimately projected that, for LNG export levels from 6 to 12 Bcf/d of natural gas and under Reference case conditions, aggregate carbon dioxide emissions would increase above a base case with no exports by between 643 and 1,227 million metric tons (0.5 to 1.0 percent) over the period from 2015 to 2035.<sup>97</sup> It is worth noting, however, that a substantial portion of these projected emissions came from consumption of natural gas in the liquefaction process, rather than from increased use of coal. The liquefaction of natural gas is captured in the LCA GHG Report’s estimate of the life cycle GHG emissions of U.S.-exported LNG, discussed above.

We further note that EIA’s 2014 Study assumed the regulations in effect at the time the AEO 2014 was prepared. Therefore, EIA’s analysis included the impacts that EPA’s Mercury and Air Toxics Standard<sup>98</sup> but not EPA’s Transport Rule<sup>99</sup> as it had been vacated at the time. EIA’s analysis in 2014 also captured the Clean Air Interstate Rule, which sets limits on regional sulfur dioxide and mono-nitrogen oxides (SO<sub>2</sub> and NO<sub>x</sub>). There are, however, other rules that were not final at the time of AEO 2014, including two then-proposed rules from EPA to reduce the extent to which the increased use of coal would compensate for reduced use of natural gas. These rules, finalized in the fall of 2015, impose limits on GHG emissions from both new and existing coal-fired power plants.<sup>100</sup> In particular, these rules have the potential to mitigate

---

<sup>96</sup> *Id.*

<sup>97</sup> *Id.* at 19.

<sup>98</sup> U.S. Env’tl. Prot. Agency, National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units; Final Rule, 77 Fed. Reg. 9,304 (Feb. 16, 2012).

<sup>99</sup> U.S. Env’tl. Prot. Agency, Federal Implementation Plans: Interstate Transport of Fine Particulate Matter and Ozone and Correction of SIP Approvals; Final Rule, 76 Fed. Reg. 48,208 (Aug. 8, 2011).

<sup>100</sup> U.S. Env’tl. Protection Agency, Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units; Final Rule, 80 Fed. Reg. 64,510 (Oct. 23, 2015); U.S. Env’tl. Protection Agency, Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule, 80 Fed. Reg. 64,662 (Oct. 23, 2015) (effective Dec. 22, 2015). As noted above, *supra* note 82, the U.S. Supreme Court has issued a stay of the effectiveness of this rule pending review.

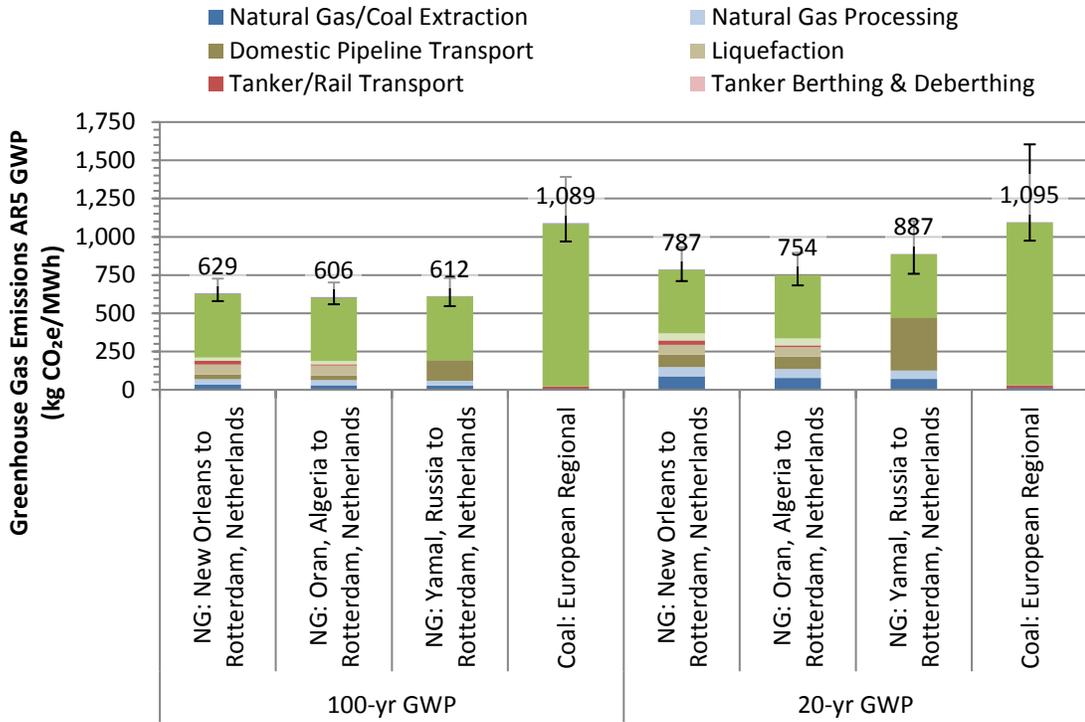
significantly any increased emissions from the U.S. electric power sector that would otherwise result from increased use of coal, and perhaps to negate those increased emissions entirely.

The AEO 2016 incorporated the Clean Power Plan final rule (discussed *supra*) in the Reference case and assumes that all states choose to meet a mass-based standard to cover both existing and new sources of carbon dioxide emissions. In the Reference case—which includes 18.4 Bcf/d of LNG exports from the United States in 2040—electric power sector carbon dioxide emissions are projected to be 35 percent below 2005 levels in 2030 due to the implementation of the CPP. Natural gas generation increases by 44 percent in the Reference case from 2015 to 2040, and coal generation declines by 32 percent from 2015 to 2040.

Therefore, on the record before us, we cannot conclude that exports of natural gas would be likely to cause a significant increase in U.S. GHG emissions through their effect on natural gas prices and the use of coal for electric generation.

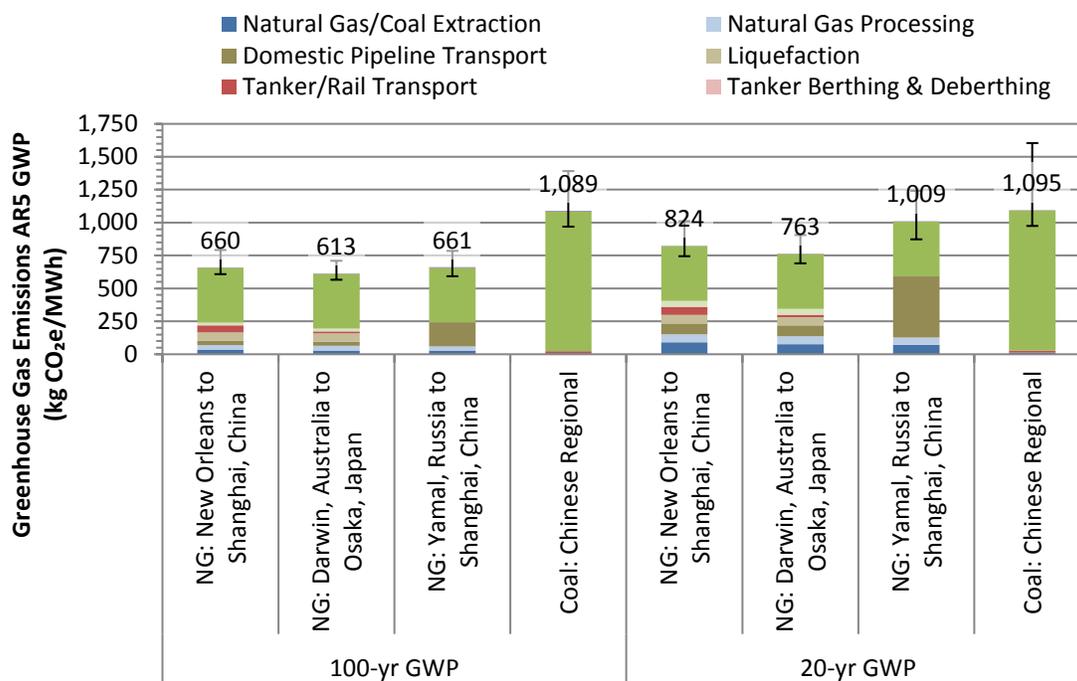
**b. International Impacts Associated with Energy Consumption in Foreign Nations**

The LCA GHG Report estimated the life cycle GHG emissions of U.S. LNG exports to Europe and Asia, compared with certain other fuels used to produce electric power in those importing countries. The key findings for U.S. LNG exports to Europe and Asia are summarized in Figures 1 and 2 below:



**Figure 1: Life Cycle GHG Emissions for Natural Gas and Coal Power in Europe<sup>101</sup>**

<sup>101</sup> LCA GHG Report at 9 (Figure 6-1).



**Figure 2: Life Cycle GHG Emissions for Natural Gas and Coal Power in Asia<sup>102</sup>**

While acknowledging substantial uncertainty, the LCA GHG Report shows that to the extent U.S. LNG exports are preferred over coal in LNG-importing nations, U.S. LNG exports are likely to reduce global GHG emissions. Further, to the extent U.S. LNG exports are preferred over other forms of imported natural gas, they are likely to have only a small impact on global GHG emissions.<sup>103</sup>

The LCA GHG Report does not answer the ultimate question whether authorizing exports of natural gas to non-FTA nations will increase or decrease global GHG emissions, because regional coal and imported natural gas are not the *only* fuels with which U.S.-exported LNG would compete. U.S. LNG exports may also compete with renewable energy, nuclear energy, petroleum-based liquid fuels, coal imported from outside East Asia or Western Europe, indigenous natural gas, synthetic natural gas derived from coal, and other resources, as well as

<sup>102</sup> LCA GHG Report at 10 (Figure 6-2).

<sup>103</sup> *Id.* at 9, 18.

efficiency and conservation measures. To model the effect that U.S. LNG exports would have on net global GHG emissions would require projections of how each of these fuel sources would be affected in each LNG-importing nation. Such an analysis would not only have to consider market dynamics in each of these countries over the coming decades, but also the interventions of numerous foreign governments in those markets.

For example, some commenters have observed that renewable energy has experienced significant growth in key LNG-importing countries such as India and China. These commenters do not, however, place the growth of renewable energy in the context of the aggregate use of fossil energy projects in those countries. Nor do they explain the extent to which growth in renewable energy has been driven by public policies in those countries and how the availability of U.S. LNG exports would or would not impact the continuation of those policies.

The uncertainty associated with estimating each of these factors would likely render such an analysis too speculative to inform the public interest determination in this or other non-FTA LNG export proceedings. Accordingly, DOE/FE elected to focus on the discrete question of how U.S. LNG compares on a life cycle basis to regional coal and other sources of imported natural gas in key LNG-importing countries. This is a useful comparison because coal and imported natural gas are prevalent fuel sources for electric generation in non-FTA LNG-importing nations. For example, EIA notes that installed electric generation capacity in China was 63 percent coal and 4 percent natural gas in 2013.<sup>104</sup> For India, installed electric generation capacity in 2014 is 62 percent coal and 8 percent natural gas.<sup>105</sup> In both China and India, electric generation

---

<sup>104</sup> U.S. Energy Information Administration, China Analysis Brief (last updated May 14, 2015), *available at*: <http://www.eia.gov/beta/international/analysis.cfm?iso=CHN>.

<sup>105</sup> U.S. Energy Information Administration, India Analysis Brief (last updated June 14, 2016), *available at* <http://www.eia.gov/beta/international/analysis.cfm?iso=IND>.

capacity is expected to increase substantially in coming years. For Japan, the largest importer of LNG in the world, electric generation from fossil fuels was 74 percent of total generation in 2011 and 86 percent in 2013 after the Fukushima disaster.<sup>106</sup> In Europe, use of fossil fuels is slightly less than in the Asian nations noted above but still significant, comprising 62 percent of electric generation in the United Kingdom and around half for Spain for 2014, respectively.<sup>107</sup>

The conclusions of the LCA GHG Report, 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 as indicated above. In any event, the record does not support the conclusion that U.S. LNG exports will increase global GHG emissions in a material or predictable way. Therefore, while we share the commenters' strong concern about GHG emissions as a general matter, based on the current record evidence, we do not see a reason to conclude that U.S. LNG exports will significantly exacerbate global GHG emissions.

#### **E. Other Considerations**

Our decision is not premised on an uncritical acceptance of the general conclusion of the 2014 and 2015 LNG Export Studies of net economic benefits from LNG exports. Both of those Studies and many public comments identify significant uncertainties and even potential negative impacts from LNG exports. The economic impacts of higher natural gas prices and potential increases in natural gas price volatility are two of the factors that we view most seriously. Yet we also have taken into account factors that could mitigate such impacts, such as the current

---

<sup>106</sup> U.S. Energy Information Administration, Japan Analysis Brief (last updated Jan. 30, 2015), *available at*: <http://www.eia.gov/beta/international/analysis.cfm?iso=JPN>.

<sup>107</sup> EIA, International Energy Statistics, *available at*: <http://www.eia.gov/beta/international/>. To evaluate the effect that U.S. LNG exports may have on the mix of fuels used for electric generation in Western Europe also requires consideration of the role of the European Trading System (ETS). The ETS places a cap on GHG emissions. Therefore, where the cap is a binding constraint, the ETS ultimately may ensure that the availability of U.S.-exported LNG will not affect aggregate emissions.

oversupply situation and data indicating that the natural gas industry would increase natural gas supply in response to increasing exports. Further, we note that it is far from certain that all or even most of the proposed LNG export projects will ever be realized because of the time, difficulty, and expense of commercializing, financing, and constructing LNG export terminals, as well as the uncertainties inherent in the global market demand for LNG. On balance, we find that the potential negative impacts of FLEX's proposed exports are outweighed by the likely net economic benefits and by other non-economic or indirect benefits.

More generally, DOE/FE continues to subscribe to the principle set forth in our 1984 Policy Guidelines<sup>108</sup> that, under most circumstances, the market is the most efficient means of allocating natural gas supplies. However, agency intervention may be necessary to protect the public in the event there is insufficient domestic natural gas for domestic use. There may be other circumstances as well that cannot be foreseen that would require agency action.<sup>109</sup> Given these possibilities, DOE/FE recognizes the need to monitor market developments closely as the impact of successive authorizations of LNG exports unfolds.

## **F. Conclusion**

We have reviewed the evidence in the record and relevant precedent in earlier non-FTA export decisions and have not found an adequate basis to conclude that FLEX's proposed exports of LNG to non-FTA countries will be inconsistent with the public interest. For that reason, we

---

<sup>108</sup> 49 Fed. Reg. at 6,684 (Feb. 22, 1984).

<sup>109</sup> Some commenters previously asked DOE to clarify the circumstances under which the agency would exercise its authority to revoke (in whole or in part) previously issued LNG export authorizations. We cannot precisely identify all the circumstances under which such action would be taken. We reiterate our observation in *Sabine Pass* that: "In the event of any unforeseen developments of such significant consequence as to put the public interest at risk, DOE/FE is fully authorized to take action as necessary to protect the public interest. Specifically, DOE/FE is authorized by section 3(a) of the Natural Gas Act ... to make a supplemental order as necessary or appropriate to protect the public interest. Additionally, DOE is authorized by section 16 of the Natural Gas Act 'to perform any and all acts and to prescribe, issue, make, amend, and rescind such orders, rules, and regulations as it may find necessary or appropriate' to carry out its responsibilities." *Sabine Pass*, DOE/FE Order No. 2961, at 33 n.45 (quoting 15 U.S.C. § 717o).

are authorizing FLEX's proposed exports to non-FTA countries subject to the limitations and conditions described in this Order.

In deciding whether to grant a final non-FTA export authorization, we consider in our decision-making the cumulative impacts of the total volume of all final non-FTA export authorizations. With the issuance of this Order and the order being issued concurrently today to FLEX, DOE/FE has now issued final non-FTA authorizations in a cumulative volume of exports totaling 16.99 Bcf/d of natural gas, or 6.20 trillion cubic feet per year, for the 24 final authorizations issued to date—Sabine Pass Liquefaction, LLC (2.2 Bcf/d),<sup>110</sup> Carib Energy (USA) LLC (0.04 Bcf/d),<sup>111</sup> Cameron LNG, LLC (1.7 Bcf/d),<sup>112</sup> FLEX I (1.4 Bcf/d),<sup>113</sup> FLEX II (0.4 Bcf/d),<sup>114</sup> Dominion Cove Point LNG, LP (0.77 Bcf/d),<sup>115</sup> Cheniere Marketing, LLC and Corpus Christi Liquefaction, LLC (2.1 Bcf/d),<sup>116</sup> Sabine Pass Liquefaction, LLC Expansion

---

<sup>110</sup> *Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 2961-A, FE Docket No. 10-111-LNG, Final Opinion and Order Granting Long-Term Authorization to Export Liquefied Natural Gas From Sabine Pass LNG Terminal to Non-Free Trade Agreement Nations (Aug. 7, 2012).

<sup>111</sup> *Carib Energy (USA) LLC*, DOE/FE Order No. 3487, FE Docket No. 11-141-LNG, Final Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas in ISO Containers by Vessel to Non-Free Trade Agreement Nations in Central America, South America, or the Caribbean (Sept. 10, 2014).

<sup>112</sup> *Cameron LNG, LLC*, DOE/FE Order No. 3391-A, FE Docket No. 11-162-LNG, Final Opinion and Order Granting Long-Term Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Cameron LNG Terminal in Cameron Parish, Louisiana, to Non-Free Trade Agreement Nations (Sept. 10, 2014).

<sup>113</sup> *Freeport LNG Expansion, L.P., et al.*, DOE/FE Order No. 3282-C, FE Docket No. 10-161-LNG, Final Opinion and Order Granting Long-Term Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Freeport LNG Terminal on Quintana Island, Texas, to Non-Free Trade Agreement Nations (Nov. 14, 2014) (FLEX I Final Order).

<sup>114</sup> *Freeport LNG Expansion, L.P., et al.*, DOE/FE Order No. 3357-B, FE Docket No. 11-161-LNG, Final Opinion and Order Granting Long-Term Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Freeport LNG Terminal on Quintana Island, Texas, to Non-Free Trade Agreement Nations (Nov. 14, 2014) (FLEX II Final Order).

<sup>115</sup> *Dominion Cove Point LNG, LP*, DOE/FE Order No. 3331-A, FE Docket No. 11-128-LNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas from the Cove Point LNG Terminal in Calvert County, Maryland, to Non-Free Trade Agreement Nations (May 7, 2015).

<sup>116</sup> *Cheniere Marketing, LLC and Corpus Christi Liquefaction, LLC*, DOE/FE Order No. 3638, FE Docket No. 12-97-LNG, Final Order and Opinion Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Proposed Corpus Christi Liquefaction Project to Be Located in Corpus Christi, Texas, to Non-Free Trade Agreement Nations (May 12, 2015).

Project (1.38 Bcf/d),<sup>117</sup> American Marketing LLC (0.008 Bcf/d),<sup>118</sup> Emera CNG, LLC (0.008 Bcf/d),<sup>119</sup> Floridian Natural Gas Storage Company, LLC,<sup>120</sup> Air Flow North American Corp. (0.002 Bcf/d),<sup>121</sup> Bear Head LNG Corporation and Bear Head LNG (USA), LLC (0.81 Bcf/d),<sup>122</sup> Pieridae Energy (USA) Ltd.,<sup>123</sup> Sabine Pass Liquefaction, LLC Design Increase (0.56 Bcf/d),<sup>124</sup> Cameron LNG, LLC Design Increase (0.42 Bcf/d),<sup>125</sup> Flint Hills Resources, LP (0.01 Bcf/d),<sup>126</sup>

---

<sup>117</sup> *Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 3669, FE Docket Nos. 13-30-LNG, 13-42-LNG, & 13-121-LNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Sabine Pass LNG Terminal Located in Cameron Parish, Louisiana, to Non-Free Trade Agreement Nations (June 26, 2015).

<sup>118</sup> *American LNG Marketing LLC*, DOE/FE Order No. 3690, FE Docket No. 14-209-LNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas in ISO Containers Loaded at the Proposed Hialeah Facility Near Medley, Florida, and Exported by Vessel to Non-Free Trade Agreement Nations (Aug. 7, 2015).

<sup>119</sup> *Emera CNG, LLC*, DOE/FE Order No. 3727, FE Docket No. 13-157-CNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Compressed Natural Gas by Vessel From a Proposed CNG Compression and Loading Facility at the Port of Palm Beach, Florida, to Non-Free Trade Agreement Nations (Oct. 19, 2015).

<sup>120</sup> *Floridian Natural Gas Storage Co., LLC*, DOE/FE Order No. 3744, FE Docket No. 15-38-LNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas in ISO Containers Loaded at the Proposed Floridian Facility in Martin County, Florida, and Exported by Vessel to Non-Free Trade Agreement Nations (Nov. 25, 2015).

<sup>121</sup> *Air Flow North American Corp.*, DOE/FE Order No. 3753, FE Docket No. 15-206-LNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas in ISO Containers Loaded at the Clean Energy Fuels Corp. LNG Production Facility in Willis, Texas, and Exported by Vessel to Non-Free Trade Agreement Nations in Central America, South America, the Caribbean, or Africa (Dec. 4, 2015).

<sup>122</sup> *Bear Head LNG Corporation and Bear Head LNG (USA)*, DOE/FE Order No. 3770, FE Docket No. 15-33-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export U.S.-Sourced Natural Gas by Pipeline to Canada for Liquefaction and Re-Export in the Form of Liquefied Natural Gas to Non-Free Trade Agreement Countries (Feb. 5, 2016).

<sup>123</sup> *Pieridae Energy (USA) Ltd.*, DOE/FE Order No. 3768, FE Docket No. 14-179-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export U.S.-Sourced Natural Gas Natural Gas by Pipeline to Canada for Liquefaction and Re-Export in the Form of Liquefied Natural Gas to Non-Free Trade Agreement Countries (Feb. 5, 2016).

<sup>124</sup> *Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 3792, FE Docket No. 15-63-LNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel From the Sabine Pass LNG Terminal Located in Cameron Parish, Louisiana, to Non-Free Trade Agreement Nations (Mar. 11, 2016).

<sup>125</sup> *Cameron LNG, LLC*, DOE/FE Order No. 3797, FE Docket No. 15-167-LNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Cameron Terminal Located in Cameron and Calcasieu Parishes, Louisiana, to Non-Free Trade Agreement Nations (Mar. 18, 2016).

<sup>126</sup> *Flint Hills Resources, LP*, DOE/FE Order No. 3829, FE Docket No. 15-168-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas in ISO Containers and in Bulk Loaded at the Stabilis LNG Eagle Ford Facility in George West, Texas, and Exported by Vessel to Non-Free Trade Agreement Nations (May 20, 2016).

Cameron LNG, LLC Expansion Project (1.41 Bcf/d),<sup>127</sup> Lake Charles Exports, LLC (2.0 Bcf/d),<sup>128</sup> Lake Charles LNG Export (2.0 Bcf/d),<sup>129</sup> Carib Energy (USA), LLC (0.004),<sup>130</sup> Magnolia LNG, LLC (1.08 Bcf/d),<sup>131</sup> Southern LNG Company, L.L.C. (0.36 Bcf/d),<sup>132</sup> and this Order.

We note that the volumes authorized for export in the *Lake Charles Exports* order and *Lake Charles LNG Export* are both 730 Bcf/yr (2.0 Bcf/d), yet are not additive to one another because the source of LNG approved under both orders is from the Lake Charles Terminal. Likewise, the *Carib* and *Floridian* orders are both 14.6 Bcf/yr of natural gas (0.04 Bcf/d), yet are not additive to one another because the source of LNG approved under both orders is from the Floridian Facility.<sup>133</sup> Additionally, the volumes authorized for export in the *Bear Head* and *Pieridae US* orders are not additive; together, they are limited to a maximum of 0.81 Bcf/d to

---

<sup>127</sup> *Cameron LNG, LLC*, DOE/FE Order No. 3846, FE Docket No. 15-90-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from Trains 4 and 5 of the Cameron LNG Terminal Located in Cameron and Calcasieu Parishes, Louisiana, to Non-Free Trade Agreement Nations (July 15, 2016).

<sup>128</sup> *Lake Charles Exports, LLC*, DOE/FE Order No. 3324-A, FE Docket No. 11-59-LNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Lake Charles Terminal in Calcasieu Parish, Louisiana, to Non-Free Trade Agreement Nations (July 29, 2016).

<sup>129</sup> *Lake Charles LNG Export Co., LLC*, DOE/FE Order No. 3868, FE Docket No. 13-04-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Lake Charles Terminal in Calcasieu Parish, Louisiana to Non-Free Trade Agreement Nations (July 29, 2016).

<sup>130</sup> *Carib Energy (USA) LLC*, DOE/FE Order No. 3937, FE Docket No. 16-98-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas in ISO Containers Loaded at Designated Pivotal LNG, Inc. Facilities and Exported by Vessel to Non-Free Trade Agreement Nations in Central America, South America, or the Caribbean (Nov. 28, 2016).

<sup>131</sup> *Magnolia LNG, LLC*, DOE/FE Order No. 3909, FE Docket No. 13-132-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel From the Proposed Magnolia LNG Terminal to be Constructed in Lake Charles, Louisiana, to Non-Free Trade Agreement Nations (Nov. 30, 2016).

<sup>132</sup> *Southern LNG Company, L.L.C.*, DOE/FE Order No. 3956, FE Docket No. 12-100-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Elba Island Terminal in Chatham County, Georgia, to Non-Free Trade Agreement Nations (Dec. 16, 2016).

<sup>133</sup> See *Floridian Natural Gas Storage Co., LLC*, DOE/FE Order No. 3744, at 22 (stating that the quantity of LNG authorized for export by Floridian in DOE/FE Order No. 3744 “will be reduced by the portion of the total approved volume of 14.6 Bcf/yr that is under firm contract directly or indirectly to Carib Energy (USA), LLC”); see also *id.* at 21 (Floridian “may not treat the volumes authorized for export in the [*Carib* and *Floridian*] proceedings as additive to one another.”).

reflect the current capacity of the Maritimes Northeast Pipeline at the U.S.-Canadian border.<sup>134</sup> In sum, the total export volume is within the range of scenarios analyzed in the 2014 and 2015 LNG Export Studies. The 2015 Study found that in all such scenarios—assuming LNG export volumes totaling 12 Bcf/d up to 20 Bcf/d of natural gas—the United States would experience net economic benefits.

DOE/FE will continue taking a measured approach in reviewing the other pending applications to export domestically produced LNG. Specifically, DOE/FE will continue to assess the cumulative impacts of each succeeding request for export authorization on the public interest with due regard to the effect on domestic natural gas supply and demand fundamentals. In keeping with the performance of its statutory responsibilities, DOE/FE will attach appropriate and necessary terms and conditions to authorizations to ensure that the authorizations are utilized in a timely manner and that authorizations are not issued except where the applicant can show that there are or will be facilities capable of handling the proposed export volumes and existing and forecast supplies that support that action. Other conditions will be applied as necessary.

The reasons in support of proceeding cautiously are several: (1) the 2014 and 2015 LNG Export Studies, like any studies based on assumptions and economic projections, are inherently limited in their predictive accuracy; (2) applications to export significant quantities of domestically produced LNG are a new phenomena with uncertain impacts; and (3) the market for natural gas has experienced rapid reversals in the past and is again changing rapidly due to economic, technological, and regulatory developments. The market of the future very likely will not resemble the market of today. In recognition of these factors, DOE/FE intends to monitor

---

<sup>134</sup> See *Bear Head LNG Corporation and Bear Head LNG (USA)*, DOE/FE Order No. 3770, at 178-79 (stating that the quantity of LNG authorized for export by Bear Head LNG and Pieridae US “are not additive; together, they are limited to a maximum of 0.81 Bcf/d to reflect the current capacity of the M&N US Pipeline.”).

developments that could tend to undermine the public interest in grants of successive applications for exports of domestically produced LNG and, as previously stated, to attach terms and conditions to the authorization in this proceeding and to succeeding LNG export authorizations as are necessary for protection of the public interest.

## **VIII. TERMS AND CONDITIONS**

To ensure that the authorization issued by this Order is not inconsistent with the public interest, DOE/FE has attached the following Terms and Conditions to the authorization. The reasons for each term or condition are explained below. FLEX must abide by each Term and Condition or may face rescission of the authorization or other appropriate sanction.

### **A. Term of the Authorization**

FLEX requests a 20-year term for the authorization commencing from the date commercial export operations begin. This term is consistent with our practice in the non-FTA export authorizations issued to date, including FLEX's non-FTA authorization in DOE/FE Order No. 3357. The 20-year term will begin on the date when FLEX commences commercial export of domestically sourced LNG from the Freeport Terminal, but not before.

### **B. Commencement of Operations Within Seven Years**

Consistent with our prior non-FTA authorizations to date, including FLEX's non-FTA authorization in DOE/FE Order No. 3357, DOE/FE will add as a condition of the authorization that FLEX must commence commercial LNG export operations from the Liquefaction Project no later than seven years from the date of issuance of this Order. The purpose of this condition is to ensure that other entities that may seek similar authorizations are not frustrated in their efforts to obtain those authorizations by authorization holders that are not engaged in actual export operations.

### **C. Commissioning Volumes**

FLEX will be permitted to apply for short-term export authorizations to export Commissioning Volumes prior to the commencement of the first commercial exports of domestically sourced LNG from the Freeport Terminal. “Commissioning Volumes” are defined as the volume of LNG produced and exported under a short-term authorization during the initial start-up of each LNG train, before each LNG train has reached its full steady-state capacity and begun its commercial exports pursuant to FLEX’s long-term contracts.<sup>135</sup> The Commissioning Volumes will not be counted against the maximum level of volumes previously authorized in FLEX’s FTA and non-FTA orders or in this Order.

### **D. Make-Up Period**

FLEX will be permitted to continue exporting for a total of three years following the end of the 20-year term established in this Order, solely to export any Make-Up Volume that it was unable to export during the original export period. The three-year term during which the Make-Up Volume may be exported shall be known as the “Make-Up Period.”

The Make-Up Period does not affect or modify the total volume of LNG previously authorized in FLEX’s FTA and non-FTA orders or in this Order. Insofar as FLEX may seek to export additional volumes not previously authorized for export, it will be required to obtain appropriate authorization from DOE/FE.

### **E. Transfer, Assignment, or Change in Control**

DOE/FE’s natural gas import/export regulations prohibit authorization holders from transferring or assigning authorizations to import or export natural gas without specific

---

<sup>135</sup> For additional discussion of Commissioning Volumes and the Make-Up Period referenced below, see *Freeport LNG Expansion, L.P., et al.*, DOE/FE Order Nos. 3282-B & 3357-A, FE Docket Nos. 10-161-LNG & 11-161-LNG, Order Amending DOE/FE Order Nos. 3282 and 3357, at 4-9 (June 6, 2014).

authorization by the Assistant Secretary for Fossil Energy.<sup>136</sup> As a condition of the similar authorization issued to Sabine Pass in DOE/FE Order No. 2961, DOE/FE found that the requirement for prior approval by the Assistant Secretary under its regulations applies to any change of effective control of the authorization holder either through asset sale or stock transfer or by other means. This condition was deemed necessary to ensure that, prior to any transfer or change in control, DOE/FE will be given an adequate opportunity to assess the public interest impacts of such a transfer or change.

DOE/FE construes a change in control to mean a change, directly or indirectly, of the power to direct the management or policies of an entity whether such power is exercised through one or more intermediary companies or pursuant to an agreement, written or oral, and whether such power is established through ownership or voting of securities, or common directors, officers, or stockholders, or voting trusts, holding trusts, or debt holdings, or contract, or any other direct or indirect means. A rebuttable presumption that control exists will arise from the ownership or the power to vote, directly or indirectly, 10 percent or more of the voting securities of such entity.<sup>137</sup>

#### **F. Agency Rights**

FLEX requests authorization to export LNG from the Liquefaction Project in a volume equivalent to 125 Bcf/yr on its own behalf and as agent for other entities that hold title to the LNG at the time of export, pursuant to long-term contracts. DOE/FE previously addressed the issue of Agency Rights in Order No. 2913, which granted FLEX authority to export LNG to FTA

---

<sup>136</sup> 10 C.F.R. § 590.405.

<sup>137</sup> For information on DOE/FE's procedures governing a change in control, see U.S. Dep't of Energy, Procedures for Changes in Control Affecting Applications and Authorizations to Import or Export Natural Gas, 79 Fed. Reg. 65,641 (Nov. 5, 2014) [hereinafter Procedures for Changes in Control].

countries.<sup>138</sup> In that order, DOE/FE approved a proposal by FLEX to register each LNG title holder for whom FLEX sought to export LNG as agent. DOE/FE found that this proposal was an acceptable alternative to the non-binding policy adopted by DOE/FE in *Dow Chemical*, which established that the title for all LNG authorized for export must be held by the authorization holder at the point of export.<sup>139</sup> We find that the same policy considerations that supported DOE/FE's acceptance of the alternative registration proposal in Order No. 2913 apply here as well.

DOE/FE has reiterated its policy on Agency Rights procedures in prior authorizations, including in *Cameron LNG, LLC*, DOE/FE Order No. 3846.<sup>140</sup> In that order, DOE/FE determined that, in LNG export orders in which Agency Rights have been granted, DOE/FE shall require registration materials filed for, or by, an LNG title-holder (Registrant) to include the same company identification information and long-term contract information of the Registrant as if the Registrant had filed an application to export LNG on its own behalf.<sup>141</sup>

To ensure that the public interest is served, this authorization shall be conditioned to require that where FLEX proposes to export LNG from the Liquefaction Project as agent for other entities that hold title to the LNG (Registrants), it must register with DOE/FE those entities on whose behalf it will export LNG in accordance with the procedures and requirements described herein.

---

<sup>138</sup> *Freeport LNG Expansion, L.P., et al.*, DOE/FE Order No. 2913, FE Docket No. 10-160-LNG, Order Granting Long-Term Authorization to Export Liquefied Natural Gas from Freeport LNG Terminal to Free Trade Nations (Feb. 10, 2011) [hereinafter *Freeport LNG*].

<sup>139</sup> *Dow Chem. Co.*, DOE/FE Order No. 2859, FE Docket No. 10-57-LNG, Order Granting Blanket Authorization to Export Liquefied Natural Gas, at 7-8 (Oct. 5, 2010), *discussed in Freeport LNG*, DOE/FE Order No. 2913, at 7-8.

<sup>140</sup> *See Cameron LNG, LLC*, DOE/FE Order No. 3846, *supra* note 127.

<sup>141</sup> *See id.* at 128-29 (citation omitted).

### **G. Contract Provisions for the Sale or Transfer of LNG to be Exported**

DOE/FE's regulations require applicants to supply transaction-specific factual information "to the extent practicable."<sup>142</sup> Additionally, DOE/FE regulations allow confidential treatment of the information supplied in support of or in opposition to an application if the submitting party requests such treatment, shows why the information should be exempted from public disclosure, and DOE/FE determines it will be afforded confidential treatment in accordance with 10 C.F.R. § 1004.11.<sup>143</sup>

DOE/FE will require that FLEX file or cause to be filed with DOE/FE any relevant long-term commercial agreements, including liquefaction tolling agreements, pursuant to which FLEX exports LNG as agent for a Registrant.

DOE/FE finds that the submission of all such agreements or contracts within 30 days of their execution using the procedures described below will be consistent with the "to the extent practicable" requirement of section 590.202(b). By way of example and without limitation, a "relevant long-term commercial agreement" would include an agreement with a minimum term of two years, an agreement to provide natural gas processing or liquefaction services at the Freeport Terminal, a long-term sales contract involving natural gas or LNG stored or liquefied at the Terminal, or an agreement to provide export services from the Terminal.

In addition, DOE/FE finds that section 590.202(c) of DOE/FE's regulations<sup>144</sup> requires that FLEX file, or cause to be filed, all long-term contracts associated with the long-term supply of natural gas to the Freeport Terminal, whether signed by FLEX or the Registrant, within 30 days of their execution.

---

<sup>142</sup> 10 C.F.R. § 590.202(b).

<sup>143</sup> *Id.* § 590.202(e).

<sup>144</sup> *Id.* § 590.202(c).

DOE/FE recognizes that some information in FLEX's or a Registrant's long-term commercial agreements associated with the export of LNG, and/or long-term contracts associated with the long-term supply of natural gas to the Freeport Terminal, may be commercially sensitive. DOE/FE therefore will provide FLEX the option to file or cause to be filed either unredacted contracts, or in the alternative (A) FLEX may file, or cause to be filed, long-term contracts under seal, but it also will file either: i) a copy of each long-term contract with commercially sensitive information redacted, or ii) a summary of all major provisions of the contract(s) including, but not limited to, the parties to each contract, contract term, quantity, any take or pay or equivalent provisions/conditions, destinations, re-sale provisions, and other relevant provisions; and (B) the filing must demonstrate why the redacted information should be exempted from public disclosure.

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

#### **H. Export Quantity**

FLEX sought authorization to export up to 125 Bcf/yr of natural gas (0.34 Bcf/d), which is within the maximum liquefaction capacity of the Freeport LNG Liquefaction Project as approved by FERC.<sup>145</sup> As set forth herein, this Order authorizes the export of LNG in the full amount requested, up to the equivalent of 125 Bcf/yr of natural gas.

---

<sup>145</sup> *Freeport LNG Development, L.P. et al.*, 156 FERC ¶ 61,019 (2016).

## **I. Combined FTA and Non-FTA Export Authorization Volumes**

FLEX is currently authorized in DOE/FE Order Nos. 3282-C and 3357 to export domestically produced LNG from the Freeport Terminal to non-FTA countries in volumes equivalent to 511 Bcf/yr and 146 Bcf/yr of natural gas, respectively, for a total volume of 657 Bcf/yr of natural gas. In light of the maximum liquefaction capacity of the Liquefaction Project as approved by FERC, the volume authorized for export in this Order (125 Bcf/yr) is additive to those non-FTA volumes. Under these three orders, FLEX is authorized to export a total volume of LNG equivalent to 782 Bcf/yr of natural gas, or 2.14 Bcf/d, to non-FTA countries.

Because the source of LNG for all of FLEX's export authorizations is the Freeport LNG Liquefaction Project, FLEX may not treat its FTA export volumes (authorized in DOE/FE Order Nos. 2913-A and 3066-A) as additive to the authorized non-FTA export volumes referenced above.

## **IX. FINDINGS**

On the basis of the findings and conclusions set forth above, we find that it has not been shown that a grant of the requested authorization will be inconsistent with the public interest, and we further find that FLEX's Application should be granted subject to the Terms and Conditions set forth herein. The following Ordering Paragraphs reflect current DOE/FE practice.

## **X. ORDER**

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

A. Freeport LNG Expansion, L.P.; FLNG Liquefaction, LLC; FLNG Liquefaction 2, LLC; and FLNG Liquefaction 3, LLC (collectively, FLEX) are authorized to export domestically produced LNG by vessel from the Freeport Terminal located on Quintana Island, Texas, in a volume equivalent to 125 Bcf/yr of natural gas. FLEX is authorized to export this LNG on its

own behalf and as agent for other entities that hold title to the natural gas, pursuant to one or more long-term contracts (a contract greater than two years).

B. The 20-year authorization period will commence when FLEX commences commercial export of domestically sourced LNG from the Freeport Terminal, but not before. FLEX may export Commissioning Volumes prior to the commencement of the terms of this Order, pursuant to a separate short-term export authorization. The Commissioning Volumes will not be counted against the maximum level of volume authorized in any of FLEX's existing FTA and non-FTA orders, including this Order.

C. FLEX may continue exporting for a total of three years following the end of the 20-year export term, solely to export any Make-Up Volume that it was unable to export during the original export period. The three-year Make-Up Period allowing the export of Make-Up Volumes does not affect or modify the maximum volume of LNG authorized for export in any of FLEX's existing FTA and non-FTA orders, including this Order. Insofar as FLEX may seek to export additional volumes not previously authorized for export, it will be required to obtain appropriate authorization from DOE/FE.

D. FLEX must commence export operations using the planned liquefaction facilities no later than seven years from the date of issuance of this Order.

E. The LNG export quantity authorized in this Order is equivalent to 125 Bcf/yr of natural gas. This quantity is additive to the export volumes in FLEX's existing non-FTA authorizations (DOE/FE Order Nos. 3282-C and 3357), but is not additive to the export volumes in FLEX's existing FTA authorizations (DOE/FE Order Nos. 2913-A and 3066-A).

F. This LNG may be exported to any country with which the United States does not have a FTA requiring the national treatment for trade in natural gas, which currently has or in the

future develops the capacity to import LNG, and with which trade is not prohibited by United States law or policy.

G. FLEX shall ensure that all transactions authorized by this Order are permitted and lawful under United States laws and policies, including the rules, regulations, orders, policies, and other determinations of the Office of Foreign Assets Control of the United States Department of the Treasury and FERC. Failure to comply with this requirement could result in rescission of this authorization and/or other civil or criminal remedies.

H. In light of the ordering paragraph in the FERC 2016 Order stating that, “[i]n all other respects, the authorizations granted in the [FERC 2014 Order] authorizing the Liquefaction Project shall remain in full force and effect,”<sup>146</sup> FLEX shall ensure compliance with all terms and conditions established by FERC in the original Environmental Impact Statement (EIS) for the Freeport LNG Liquefaction Project.<sup>147</sup> This includes the 83 environmental conditions recommended in the EIS and adopted in the FERC 2014 Order at Appendix A.<sup>148</sup> Additionally, this authorization is conditioned on FLEX’s on-going compliance with any other preventative and mitigative measures at the Freeport Terminal imposed by federal or state agencies.

I. (i) FLEX shall file, or cause others to file, with the Office of Regulation and International Engagement a non-redacted copy of all executed long-term contracts associated with the long-term export of LNG as agent for other entities from the Freeport Terminal. The non-redacted copies may be filed under seal and must be filed within 30 days of their execution. Additionally, if FLEX has filed the contracts described in the preceding sentence under seal or

---

<sup>146</sup> FERC 2016 Order at Ordering Para. B; *see also id.* at P 36.

<sup>147</sup> *Freeport LNG Development, L.P., et al.*, Freeport LNG Liquefaction Project, Phase II Modification Project, Final Environmental Impact Statement, FERC/EIS-0250F (June 2014).

<sup>148</sup> *Freeport LNG Development, L.P., et al.*, Order Granting Authorizations Under Section 3 of the Natural Gas Act, 148 FERC ¶ 61,076 (July 30, 2014); *see also* DOE/FE Order No. 3357-B at 3-5 (on October 3, 2014, after an independent review, DOE/FE adopted FERC’s final EIS for the FLEX Liquefaction Project (DOE/EIS-0487)).

subject to a claim of confidentiality or privilege, within 30 days of their execution, FLEX shall also file, or cause others to file, for public posting either: (a) a redacted version of the contracts described in the preceding sentence, or (b) major provisions of the contracts. In these filings, FLEX shall state why the redacted or non-disclosed information should be exempted from public disclosure.

(ii) FLEX shall file, or cause others to file, with the Office of Regulation and International Engagement a non-redacted copy of all executed long-term contracts associated with the long-term supply of natural gas to the Freeport Terminal. The non-redacted copies may be filed under seal and must be filed within 30 days of their execution. Additionally, if FLEX has filed the contracts described in the preceding sentence under seal or subject to a claim of confidentiality or privilege, within 30 days of their execution, FLEX shall also file, or cause others to file, for public posting either: i) a redacted version of the contracts described in the preceding sentence, or ii) major provisions of the contracts. In these filings, FLEX shall state why the redacted or non-disclosed information should be exempted from public disclosure.

J. FLEX, or others for whom FLEX acts as agent, shall include the following provision in any agreement or other contract for the sale or transfer of LNG exported pursuant to this Order and any other applicable DOE/FE authorization:

Customer or purchaser acknowledges and agrees that it will resell or transfer U.S.-sourced natural gas in the form of LNG purchased hereunder for delivery only to countries identified in Ordering Paragraph F of DOE/FE Order No. 3957, issued December 19, 2016, in FE Docket No. 16-108-LNG and/or to purchasers that have agreed in writing to limit their direct or indirect resale or transfer of such LNG to such countries. Customer or purchaser further commits to cause a report to be provided to Freeport LNG Expansion, L.P.; FLNG Liquefaction, LLC; FLNG Liquefaction 2, LLC; and FLNG Liquefaction 3, LLC (collectively, FLEX) that identifies the country of destination (or countries) into which the exported LNG or natural gas was actually delivered and/or received for end use, and to include in any resale contract for such LNG the necessary conditions to insure that FLEX is made aware of all such actual destination countries.

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

L. Each registration submitted pursuant to this Order shall have current information on file with DOE/FE. Any changes in company name, contact information, change in term of the long-term contract, termination of the long-term contract, or other relevant modification, shall be filed with DOE/FE within 30 days of such change(s).

M. As a condition of this authorization, FLEX shall ensure that all persons required by this Order to register with DOE/FE have done so. Any failure by FLEX to ensure that all such persons or entities are registered with DOE/FE shall be grounds for rescinding in whole or in part the authorization.

N. Within two weeks after the first export of domestically produced LNG occurs from the Freeport Terminal, FLEX shall provide written notification of the date that the first export of LNG authorized in Ordering Paragraph A above occurred.

O. FLEX shall file with the Office of Regulation and International Engagement, on a semi-annual basis, written reports describing the progress of the proposed Liquefaction Project. The reports shall be filed on or by April 1 and October 1 of each year, and shall include information on the progress of the Liquefaction Project, the date the Liquefaction Project is expected to be operational, and the status of the long-term contracts associated with the long-term export of LNG and any long-term supply contracts.

P. With respect to any change in control of the authorization holder, FLEX must comply with DOE/FE's Procedures for Change in Control Affecting Applications and Authorizations to Import or Export Natural Gas.<sup>149</sup> For purposes of this Ordering Paragraph, a "change in control" shall include any change, directly or indirectly, of the power to direct the management or policies of FLEX, whether such power is exercised through one or more intermediary companies or pursuant to an agreement, written or oral, and whether such power is established through ownership or voting of securities, or common directors, officers, or stockholders, or voting trusts, holding trusts, or debt holdings, or contract, or any other direct or indirect means.<sup>150</sup>

Q. Monthly Reports: With respect to the LNG exports authorized by this Order, FLEX shall file with the Office of Regulation and International Engagement, within 30 days following the last day of each calendar month, a report indicating whether exports of LNG have been made. The first monthly report required by this Order is due not later than the 30<sup>th</sup> day of the month following the month of first export. In subsequent months, if exports have not occurred, a report of "no activity" for that month must be filed. If exports of LNG have occurred, the report must give the following details of each LNG cargo: (1) the name(s) of the authorized exporter registered with DOE/FE; (2) the name of the U.S. export terminal; (3) the name of the LNG

---

<sup>149</sup> See Procedures for Changes in Control at 65,541-42.

<sup>150</sup> See *id.* at 65,542.

tanker; (4) the date of departure from the U.S. export terminal; (5) the country (or countries) into which the exported LNG or natural gas is actually delivered and/or received for end use; (6) the name of the supplier/seller; (7) the volume in Mcf; (8) the price at point of export per million British thermal units (MMBtu); (9) the duration of the supply agreement; and (10) the name(s) of the purchaser(s).

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

R. All monthly report filings shall be made to U.S. Department of Energy (FE-34), Office of Fossil Energy, Office of Regulation and International Engagement, P.O. Box 44375, Washington, D.C. 20026-4375, Attention: Natural Gas Reports. Alternatively, reports may be e-mailed to [ngreports@hq.doe.gov](mailto:ngreports@hq.doe.gov) or may be faxed to Natural Gas Reports at (202) 586-6050.

Issued in Washington, D.C., on December 19, 2016.



---

Christopher A. Smith  
Assistant Secretary  
Office of Fossil Energy