

[6450-01-P]

DEPARTMENT OF ENERGY

Record of Decision and Floodplain Statement of Findings for the Freeport LNG Expansion, L.P. Export Application

AGENCY: Office of Fossil Energy, Department of Energy.

ACTION: Record of Decision.

SUMMARY: The U.S. Department of Energy (DOE) announces its decision in FE Docket Nos. 10-161-LNG and 11-161-LNG to issue DOE/FE Order Nos. 3282-C and 3357-B, granting Freeport LNG Expansion L.P., FLNG Liquefaction, LLC, FLNG Liquefaction 2, LLC, and FLNG Liquefaction 3, LLC (collectively, FLEX) final long-term multi-contract authority to export domestically produced liquefied natural gas (LNG) by vessel to nations with which the United States has not entered into a free trade agreement providing for national treatment for trade in natural gas (non-FTA countries). Order Nos. 3282-C and 3357-B are issued under section 3 of the Natural Gas Act (NGA). The proposed exports will originate from the existing Freeport Terminal, located on Quintana Island, southeast of the City of Freeport in Brazoria County, Texas, from liquefaction and related facilities to be constructed. DOE participated as a cooperating agency with the Federal Energy Regulatory Commission (FERC) in preparing an environmental impact statement (EIS) analyzing the potential environmental impacts of the proposed Liquefaction Project that, if constructed, will be used to support the export authorization sought from DOE's Office of Fossil Energy (DOE/FE).

ADDRESSES: The EIS and this Record of Decision (ROD) are available on DOE's National Environmental Policy Act (NEPA) website at <http://energy.gov/nepa/nepa-documents>. Order Nos. 3282-C and 3357-B are available on DOE/FE's website at <http://energy.gov/fe/downloads/listing-doefe-authorizations-issued-2014>. For additional information about the dockets in these proceedings, contact Larine Moore, U.S.

Department of Energy, Office of Natural Gas Regulatory Activities, Office of Fossil Energy, Room 3E-042, 1000 Independence Avenue, SW, Washington, DC 20585.

FOR FURTHER INFORMATION CONTACT: To obtain additional information about the project, the EIS, or the ROD, contact Mr. John Anderson, U.S. Department of Energy, Office of Natural Gas Regulatory Activities, Office of Fossil Energy, Room 3E-042, 1000 Independence Avenue, SW, Washington, DC 20585, (202) 586-5600; or Mr. Edward LeDuc, U.S. Department of Energy, Office of the Assistant General Counsel for Environment, 1000 Independence Avenue, SW, Washington, DC 20585, (202) 586-4007.

SUPPLEMENTARY INFORMATION: DOE prepared this ROD and Floodplain Statement of Findings pursuant to the National Environmental Policy Act of 1969 (42 United States Code [U.S.C.] 4321, et seq.), and in compliance with the Council on Environmental Quality (CEQ) implementing regulations for NEPA (40 Code of Federal Regulations [CFR] Parts 1500 through 1508), DOE's implementing procedures for NEPA (10 CFR Part 1021), and DOE's "Compliance with Floodplain and Wetland Environmental Review Requirements" (10 CFR Part 1022).

Background

On May 17, 2013, DOE/FE issued Order No. 3282¹ to Freeport LNG Expansion L.P. and FLNG Liquefaction, LLC, pursuant to section 3(a) of the NGA.² DOE/FE subsequently amended Order No. 3282 to add FLNG Liquefaction 2, LLC and FLNG Liquefaction 3, LLC as applicants and authorizations holders, together with Freeport LNG Expansion L.P. and FLNG Liquefaction, LLC (collectively, FLEX), and clarified the order in other respects.³ Order No. 3282, as amended, conditionally granted FLEX's Application⁴ in FE Docket No. 10-161-LNG for long-term, multi-contract authority to export domestically produced LNG by vessel to non-FTA countries. DOE/FE conditionally authorized FLEX to export LNG in a volume equivalent to 511 billion cubic feet per year (Bcf/yr) of natural gas (1.4 Bcf per day (Bcf/d)), or approximately 9 million metric tons per annum (mtpa) of LNG, for a term of 20 years.

On November 15, 2013, DOE/FE granted a second non-FTA conditional authorization to FLEX in DOE/FE Order No. 3357.⁵ Order No. 3357, as subsequently amended in Order No. 3357-A,⁶ conditionally authorized FLEX to export LNG in a

¹ *Freeport LNG Expansion L.P. and FLNG Liquefaction, LLC*, DOE/FE Order No. 3282, FE Docket No. 10-161-LNG, Order Conditionally Granting Long-Term Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Freeport LNG Terminal on Quintana Island, Texas to Non-Free Trade Agreement Nations (May 17, 2013).

² 15 U.S.C. § 717b(a). This authority is delegated to the Assistant Secretary for Fossil Energy pursuant to Redefinition Order No. 00-002.04F (July 11, 2013).

³ On February 7, 2014, DOE/FE issued Order No. 3282-A, which added FLNG Liquefaction 2, LLC and FLNG Liquefaction 3, LLC as applicants and authorization holders. On June 6, 2014, DOE/FE issued Order No. 3282-B, which further amended Order No. 3282 to clarify certain ordering paragraphs.

⁴ Application of Freeport LNG Expansion L.P., *et al.*, for Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Countries, FE Docket No. 10-161-LNG (Dec. 17, 2010).

⁵ *Freeport LNG Expansion L.P. et al.*, DOE/FE Order No. 3357, FE Docket No. 11-161-LNG, Order Conditionally Granting Long-Term Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Freeport LNG Terminal on Quintana Island, Texas to Non-Free Trade Agreement Nations (Nov. 15, 2013).

⁶ On June 6, 2014, DOE/FE issued Order No. 3357-A, which amended Order No. 3357 to clarify the terms of that Order's conditional authorization.

volume equivalent to 146 Bcf/yr of natural gas (0.4 Bcf/d) for a 20-year term. Together with the 1.4 Bcf/d conditionally authorized in the first non-FTA order, FLEX's total combined non-FTA export volume of 1.8 Bcf/d of natural gas (657 Bcf/yr) mirrors the known liquefaction capacity of the Liquefaction Project. All of FLEX's proposed exports will originate from the existing Freeport Terminal, located on Quintana Island, southeast of the City of Freeport in Brazoria County, Texas, and the liquefaction and related facilities to be constructed by FLEX, as described below.

In June of 2004, the Federal Energy Regulatory Commission (FERC) issued an order authorizing Freeport LNG Development, L.P. to site, construct, and operate what is now known as Phase I of the Freeport Terminal. In September of 2006 FERC issued an order authorizing the Phase II expansion of the Freeport LNG Terminal, which included an expansion of the Freeport Terminal's send-out capacity. In December of 2011, in FERC Docket No. CP12-29-000, FLEX filed with FERC an application requesting authorization to expand and modify its previously authorized import facilities to facilitate the import and export of LNG at the Freeport Terminal (the Phase II Modification Project). In August 2012, in FERC Docket No. CP12-509-000, FLEX filed an application with FERC to site, construct, and operate the Liquefaction Project at the Freeport Terminal under NGA section 3. FERC reviewed FLEX's application for the Liquefaction Project in FERC Docket No. CP12-509-000 in conjunction with FLEX's application for approval of the Phase II Modification Project in FERC Docket No. CP12-29-000.

At the time that DOE/FE issued the above-referenced non-FTA conditional authorizations to FLEX, the matters in FERC Docket Nos. CP12-29-000 and CP12-509-

000 were still pending. Accordingly, the non-FTA conditional authorizations addressed the record evidence in their respective dockets and entered findings on all non-environmental issues considered under NGA section 3(a), including the economic impacts, international impacts, and security of gas supply associated with FLEX's proposed exports. Because DOE/FE must also consider environmental issues, DOE/FE conditioned its authorizations on the satisfactory completion of FLEX's environmental review process under NEPA, and on DOE/FE's issuance of a finding of no significant impact or a record of decision (ROD).⁷

Project Description

The proposed facilities will be integrated into the existing Freeport Terminal, which presently consists of a marine berth, two 160,000 m³ full containment LNG storage tanks, LNG vaporization systems, associated utilities, and a 9.6-mile pipeline and meter station. The Phase II Modification Project calls for improvements to facilities previously authorized by FERC, including the re-orientation and modification of the Phase II marine berthing dock, modifying the LNG transfer pipelines between the second marine dock and LNG storage tanks (one of which is yet to be constructed but was approved with the authorization for the Phase II expansion), and the improvement of the current access road system, all contained within the previously authorized operational area of the Freeport Terminal.

In addition, the Liquefaction Project consists of multiple components, including a Liquefaction Plant at and adjacent to the existing Quintana Island terminal and facilities located beyond Quintana Island. The Liquefaction Plant would consist of three propane

⁷ See DOE/FE Order No. 3282 at 123 (Ordering Para. F).

pre-cooled mixed refrigerant liquefaction trains, each capable of producing a nominal 4.4 million metric tons per annum (mtpa) of LNG (13.2 mtpa total) for export, which equates to a total liquefaction capacity of approximately 1.8 Bcf/d of natural gas.

In support of the Liquefaction Plant, FLEX proposes to construct a natural gas Pretreatment Plant located about 2.5 miles north of the existing Quintana Island terminal. The Pretreatment Plant would process the gas for liquefaction. In addition, FLEX proposed to construct several interconnecting pipelines and utility lines including a 5.0-mile-long, 12-inch diameter boil-off gas (BOG) pipeline from the terminal to the Pretreatment Plant (referred together as the Pipeline/Utility Line System). The Liquefaction Plant, the Pretreatment Plant, and the Pipeline/Utility Line System, together with the associated appurtenant structures, are collectively referred to as the Liquefaction Project.

The EIS Process

In accordance with NEPA, FERC issued a draft Environmental Impact Statement (EIS) for the proposed Liquefaction Project and Phase II Modification Project on March 14, 2014. (79 FR 15,989). The draft EIS was mailed to stakeholders, including landowners, the cooperating agencies, and those who previously made comments during the NEPA scoping process. Issues raised by commenters included concerns regarding: air pollution (including air toxics, greenhouse gases, deposition impacts; and compliance with the National Ambient Air Quality Standards), safety and lack of an emergency response plan, construction traffic, noise and dust, lack of housing for construction workers, visual impacts, impacts on property values, water use and Freeport LNG's source of water, land use impacts, ability to safely build the facility on dredge spoils,

impacts on the historic Town of Quintana, expanding the scope of the cumulative impact analysis and alternatives analysis, recreational impacts, noxious odors, and the positive impacts from job creation.

The final EIS, published on June 20, 2014 (79 FR 35,345), recommended that FERC approve FLEX's proposed Liquefaction Project and Phase II Modification Project subject to 83 environmental conditions. On July 30, 2014, FERC issued its Order granting FLEX's requested authorization to modify previously authorized LNG facilities to facilitate the import and export of LNG at FLEX's Quintana Island terminal and granted authorization to site, construct, and operate the proposed facilities, subject to the 83 environmental conditions contained in Appendix A of that order.⁸

In accordance with 40 CFR 1506.3, after an independent review of FERC's final EIS, DOE adopted the EIS on October 3, 2014 (DOE/EIS-0487), and the U.S. Environmental Protection Agency published a notice of that adoption in the **Federal Register** on October 10, 2014. (79 FR 61304).

⁸ *Freeport LNG Development, L.P., et al.*, Order Granting Authorization Under Section 3 of the Natural Gas Act, 148 FERC ¶ 61,076 (July 30, 2014) [FERC Order].

Addendum to Environmental Review Documents Concerning Exports of Natural Gas From the United States (Addendum)

On June 4, 2014, DOE/FE published the Draft Addendum for public comment (79 FR 32258). Although not required by NEPA, DOE/FE prepared the Addendum in an effort to be responsive to the public and to provide the best information available on a subject that had been raised by commenters. The Addendum is a review of existing literature and was intended to provide information only on the resource areas potentially impacted by unconventional gas production.

The 45-day comment period on the Draft Addendum closed on July 21, 2014. DOE/FE received 40,745 comments in 18 separate submissions, and considered those comments in issuing the Addendum on August 15, 2014. DOE provided a summary of the comments received and responses to substantive comments in Appendix B of the Addendum. DOE/FE has incorporated the Draft Addendum, comments, and final Addendum into the record in its FLEX proceeding.

Alternatives

The EIS conducted an alternatives analysis for the Liquefaction Project and found no other practicable alternative that would result in less environmental impact that would still address the purpose and need of the Projects. Alternatives considered included the No Action Alternative, system alternatives, and site alternatives. With respect to the No Action Alternative, the EIS concluded that this alternative is not viable as FLEX would not be able to provide U.S. natural gas producers with new access to global gas suppliers and meet contractual obligations.

For the Phase II Modification Project, the EIS determined that the location, design, and purpose is wholly dependent on the existing plant facilities and operations at the Quintana Island terminal; therefore, other geographically separate sites beyond the terminal were not evaluated and no system alternatives exist that could achieve the terminal's operational flexibility and capabilities

With respect to system alternatives for the Liquefaction Project, the EIS analyzed other proposed LNG export facilities on the West Coast, Gulf Coast, and East Coast of the United States and whether these could be considered system alternatives. In all cases the EIS found that these alternatives would not address the Liquefaction Project's purpose and would not offer any significant environmental advantage.

The EIS also considered the possibility of expanding the size of another proposed LNG export terminal to address FLEX's desired export capacity. However, this alternative would involve further impacts such as: construction of additional liquefaction infrastructure plus the potential need for expanded docking facilities. Hence, the environmental impacts would not be significantly different than those that would occur as a result of the Liquefaction Project.

Additionally, the EIS evaluated site alternatives for the components of the Liquefaction Project, but did not find any viable alternatives. Siting of the Liquefaction Plant was dictated by the need to be close to the existing offloading areas, LNG storage tanks, docking area, and other existing LNG infrastructure at the Quintana Island terminal. Moreover, the proposed siting makes maximum use of the available areas within the existing Quintana Island terminal.

The EIS evaluated the feasibility of lowering the pad elevation of the Liquefaction Plant to determine whether this would lessen impacts on visibility, noise, safety, stormwater, and site engineering. However, the EIS determined that this would not provide substantial improvements in visibility and noise attenuation, and would result in significant geological safety, engineering, traffic and soil disposal issues.

With respect to the siting of the Pretreatment Plant, the EIS assessed ten alternative sites, all of which were deemed unsuitable due to site constraints and environmental impacts, except for one site. However, based on comments from residents regarding the lack of a suitable evacuation route in case of emergency at the alternative site, and concerns about noise, air emissions, water discharges, materials storage, and flood protection, the EIS concludes that the proposed site is the preferred site.

With respect to siting of the Pipeline/Utility Line System, the main alternative siting criteria were the functional interdependency and geographic locations of the proposed process facilities (Liquefaction Plant and Pretreatment Plant), FLEX's existing natural gas sendout pipeline, and the existing sendout pipeline meter station at Stratton Ridge. The Liquefaction Plant, Pretreatment Plant, and Stratton Ridge Meter Station represent fixed receipt or delivery points for the natural gas transported by the sendout pipeline and utilized in the liquefaction process. The existing sendout pipeline route constitutes the preferred route as it follows an existing right-of-way and minimizes environmental impacts.

Environmentally Preferred Alternative

When compared against the other action alternatives assessed in the EIS, as discussed above, the Liquefaction Project/Phase II Modification Project is the

environmentally preferred alternative. While the No-Action Alternative would avoid the environmental impacts identified in the EIS, adoption of this alternative would not meet the project objectives.

Decision

DOE has decided to issue Order Nos 3282-C and 3357-B authorizing FLEX to export domestically produced LNG by vessel from the Freeport LNG Terminal on Quintana Island, Texas to non-FTA countries up to the equivalent of 1.8 Bcf/d of natural gas for a term of 20 years.

Concurrently with this Record of Decision, DOE is issuing Order Nos. 3282-C and 3357-B in which it finds that the granting of the requested authorizations have not been shown to be inconsistent with the public interest, and that the applications should be granted subject to compliance with the terms and conditions set forth in Order Nos. 3282-C and 3357-B, including the environmental conditions adopted in the FERC Order at Appendix A. Additionally, the authorizations are conditioned on FLEX's compliance with any other preventative and mitigative measures imposed by other Federal or state agencies.

Basis of Decision

DOE's decision is based upon the analysis of potential environmental impacts presented in the EIS, and DOE's determination in Order Nos. 3282-C and 3357-B that the opponents of the applications have failed to overcome the statutory presumption that the proposed export authorizations are not inconsistent with the public interest. Although not required by NEPA, DOE also considered the Addendum, which summarizes available

information on potential upstream impacts associated with unconventional natural gas activities, such as hydraulic fracturing.

Mitigation

As a condition of its decision to issue Order Nos. 3282-C and 3357-B authorizing FLEX to export LNG to non-FTA countries, DOE is imposing requirements that will avoid or minimize the environmental impacts of the project. These conditions include the environmental conditions adopted in the FERC Order at Appendix A. Mitigation measures beyond those included in DOE Order Nos. 3282-C and 3357-B that are enforceable by other Federal and state agencies are additional conditions of Order Nos. 3282-C and 3357-B. With these conditions, DOE has determined that all practicable means to avoid or minimize environmental harm from the project have been adopted.

Floodplain Statement of Findings

DOE prepared this Floodplain Statement of Findings in accordance with DOE's regulations entitled "Compliance with Floodplain and Wetland Environmental Review Requirements" (10 CFR Part 1022). The required floodplain and wetland assessment was conducted during development and preparation of the EIS (see Sections 4.1.1.3 and 4.3.1.1 of the EIS). DOE determined that the placement of some project components within floodplains would be unavoidable.

However, the current design for the project minimizes floodplain impacts to the extent practicable.

Issued in Washington, D.C. on November 14, 2014.

A handwritten signature in black ink, appearing to read "Chris Smith", written in a cursive style.

Christopher A. Smith

Principal Deputy Assistant Secretary

Office of Fossil Energy