

153 FERC ¶ 61,300
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Norman C. Bay, Chairman;
Cheryl A. LaFleur, Tony Clark,
and Colette D. Honorable.

Trunkline Gas Company, LLC	Docket Nos. CP14-119-000
Lake Charles LNG Export Company, LLC and Lake Charles LNG Company, LLC	CP14-120-000
Lake Charles LNG Company, LLC	CP14-122-000

ORDER GRANTING SECTION 3 AND SECTION 7 AUTHORIZATIONS
AND APPROVING ABANDONMENT

(Issued December 17, 2015)

1. On March 25, 2014, Lake Charles LNG Export Company, LLC (Lake Charles LNG Export) and Lake Charles LNG Company, LLC (Lake Charles LNG)¹ jointly filed an application in Docket No. CP14-120-000 [hereinafter Liquefaction Docket], pursuant to section 3 of the Natural Gas Act (NGA).² Lake Charles LNG Export and Lake Charles LNG seek authorization to site, construct, and operate new facilities for the liquefaction and export of natural gas (Liquefaction Facilities), to be located adjacent to Lake Charles LNG's existing liquefied natural gas (LNG) import terminal located in Calcasieu Parish, Louisiana (terminal); and to modify and construct certain facilities (Modified Facilities) at the terminal (the Liquefaction Project).

¹ On September 19, 2014, Trunkline LNG Export, LLC and Trunkline LNG Company, LLC changed their company names to Lake Charles LNG Export Company, LLC and Lake Charles LNG Company, LLC, respectively.

² 15 U.S.C. §717b (2012).

2. Also, on March 25, 2014, Lake Charles LNG filed an application in Docket No. CP14-122-000 [hereinafter Conversion Docket] to convert its existing section 7 certificated facilities at the terminal to section 3 jurisdiction. Specifically, pursuant to sections 7(b) and 3 of the NGA, Lake Charles LNG requests authorization to: (i) abandon certain terminal facilities previously certificated under NGA section 7; (ii) abandon services provided under Lake Charles LNG's FERC Gas Tariff and its certificates of public convenience and necessity; (iii) cancel Lake Charles LNG's FERC Gas Tariff, including all rate schedules therein; and (iv) operate such abandoned facilities and services under NGA section 3, so that the entirety of Lake Charles LNG's terminal facilities and operations are authorized solely under section 3. These requests involve no new construction.

3. Additionally, on March 25, 2014, Trunkline Gas Company, LLC (Trunkline) filed an application in Docket No. CP14-119-000 [hereinafter Certificate Docket] pursuant to sections 7(b) and 7(c) of the NGA³ and Part 157 of the Commission's regulations⁴ for authorization to abandon, construct, operate, and modify interstate natural gas pipeline facilities, located in Arkansas, Mississippi, and Louisiana (Pipeline Modifications Project).

4. For the reasons stated below, we will authorize Lake Charles LNG Export's and Lake Charles LNG's proposals under NGA section 3 to construct and operate the Liquefaction Project. We will also grant Lake Charles LNG's request to convert its facilities and operations to NGA section 3 jurisdiction. Lastly, we will authorize Trunkline's proposal under NGA sections 7(b) and 7(c) to abandon, construct, and operate the Pipeline Modifications Project. The authorizations issued to the Lake Charles LNG Export, Lake Charles LNG, and Trunkline (Applicants) are subject to certain conditions discussed herein.

I. Background and Proposals

5. Lake Charles LNG, a Delaware limited liability company, is a wholly owned, direct subsidiary of Energy Transfer Equity, L.P. Lake Charles LNG owns and operates

³ 15 U.S.C. § 717f (2012).

⁴ 18 C.F.R. pt 157 (2015).

the terminal, which includes approximately 9.0 billion cubic feet (Bcf) of LNG storage capacity and re-gasification facilities. Lake Charles LNG Export, a Delaware limited liability company, is a wholly owned, indirect subsidiary of Energy Transfer Equity, L.P. and Energy Transfer Partners, L.P. Lake Charles LNG Export was established to own and operate the Liquefaction Facilities and to hold an LNG export authorization issued by the U.S. Department of Energy's Office of Fossil Energy (DOE/FE).

6. Trunkline, a Delaware limited liability company, is a natural gas company as defined in the NGA and is engaged in the transmission of natural gas in interstate commerce subject to the jurisdiction of the Commission.⁵ Trunkline's transmission system extends from its historical supply sources in Texas and Louisiana, through Arkansas, Mississippi, Tennessee, Kentucky, and Illinois to a principal terminus at the Indiana-Michigan state line near Elkhart, Indiana.

7. In 1977, the Federal Power Commission, predecessor to the Commission, initially authorized, under NGA sections 3 and 7, the construction and operation of the terminal to receive, store, and regasify LNG imported from Algeria.⁶ At the same time, under NGA section 7(c), the Commission authorized Trunkline to construct a 45.8-mile-long gas pipeline lateral extending from the tailgate of the terminal to Trunkline's existing interstate natural gas pipeline system in Longville, Louisiana (LNG Lateral) to transport the gas that was made available by the revaporization of the imported LNG.⁷

8. The import terminal received deliveries in 1982. Deliveries were suspended in 1983, but resumed in 1989 when the Commission authorized Lake Charles LNG to provide LNG terminal services.⁸ Subsequently, the Commission granted several requests to modify and expand the terminal and the import services under NGA sections 3 and 7

⁵ 15 U.S.C. § 717a (6) (2012).

⁶ *Trunkline LNG Co. and Trunkline Gas Co.*, 58 FPC 726 (1977), *amended on reh'g*, 58 FPC 2935 (1977). The terminal was originally designed to store up to 6.3 Bcf of LNG and to regasify up to 700 million cubic feet (MMcf) per day (MMcf/d) of LNG, and included a marine unloading dock, storage tanks, vaporizers, and associated facilities.

⁷ *Id.*

⁸ *Trunkline LNG Company*, 49 FERC ¶ 61,199 (1989).

authority.⁹ The Commission also approved Trunkline's various requests to modify its pipeline facilities to accommodate the modifications and expansions at the terminal.¹⁰

A. Lake Charles LNG Export and Lake Charles LNG's Liquefaction, Project, Docket No. CP14-120-000

9. The Liquefaction Project consists of two parts: construction and operation of the Liquefaction Facilities proposed by Lake Charles LNG Export and construction and operation of the Modified Facilities proposed by Lake Charles LNG. The new Liquefaction Facilities will be located on approximately 286 acres of land immediately north of and adjacent to the terminal. As stated above, Lake Charles LNG currently owns and operates the terminal. Lake Charles LNG Export will own the Liquefaction Facilities and hold the DOE/FE authorization to export LNG from the terminal.¹¹ In 2013,

⁹ *Trunkline LNG Co.*, 55 FERC ¶ 61,072 (1991) (approving new pipeline facilities to allow for the physical connection of future customers at the outlet of the terminal); *Trunkline LNG, Co.*, 94 FERC ¶ 62,270 (2001) (authorizing modifications to the terminal to increase daily send-out capacity to 1,000 MMcf/d); *CMS Trunkline LNG Co., LLC*, 100 FERC ¶ 61,217, *order on reh'g*, 101 FERC ¶ 61,300 (2002) (authorizing the Expansion Project, consisting of construction of a fourth storage tank to increase the storage capacity to 9.0 Bcf and construction of additional vaporizers to increase the daily send-out capacity to 1,300 MMcf/d, and various other facilities), *amended by Trunkline LNG Co., LLC*, 105 FERC ¶ 61,137 (2003) (removing proposed unloading dock) and 114 FERC ¶ 61,147 (2006) (authorizing increase of vaporization capacity at terminal to 1,500 MMcf/d); *Trunkline Gas Co., LLC*, 108 FERC ¶ 61,251 (2004) (authorizing additional unloading facilities, vaporizers and additional vaporization service, and an increase in the send-out capacity to 2.1 Bcf/d); *Trunkline LNG Co., LLC*, 117 FERC ¶ 61,339 (2006) (authorizing the construction of Ambient Air Vaporization and natural gas liquids processing facilities).

¹⁰ *See CMS Trunkline Gas Co., LLC*, 102 FERC ¶ 62,072 (2003) (authorizing the increase of capacity at the metering facilities at the tailgate of the terminal to increase deliverability from the terminal to Trunkline's pipeline system); *see also Trunkline Gas Co., LLC*, 108 FERC ¶ 61,251 (authorizing construction of the LNG Lateral Loop pipeline, a 30-inch diameter, 22.8-mile looping pipeline, to accommodate increased send-out capacity of the terminal), *amended by Trunkline Gas Co., LLC*, 110 FERC ¶ 61,131 (2005) (amending the LNG Lateral Loop to a 36-inch diameter pipeline and increasing the metering capacity at several delivery points).

¹¹ DOE/FE has authorized the export of up to 15.0 million metric tons per annum (MTPA) of liquefied natural gas from the terminal. First, in 2011, DOE/FE authorized

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DOE/FE authorized Lake Charles LNG Export to export 15.0 MTPA of LNG from the terminal to Free Trade Agreement (FTA) nations.¹² Lake Charles LNG Export's non-FTA application remains pending in DOE/FE Docket No. 13-04-LNG.

10. Lake Charles LNG Export's Liquefaction Facilities will include three liquefaction trains, with a design production capacity of 16.45 MTPA of LNG, or each sufficient to produce 5.48 MTPA, to be constructed and placed into service in phases.¹³ Lake Charles LNG Export estimates that the first train will be placed into service in the second quarter of 2019, with the second and third trains placed into service in the fourth quarter of 2019 and the second quarter of 2020, respectively.

Lake Charles Exports, LLC (LCE) (a separate entity from Lake Charles LNG Exports, the applicant here) to export LNG from the terminal to Free Trade Agreement (FTA) nations on behalf of BG LNG Services, Inc. (BG LNG). In August 2013, DOE/FE conditionally granted LCE's request to export LNG to non-FTA nations. *See Lake Charles Exports, LLC*, DOE/FE Docket No. 11-59-LNG, Order No. 2987 (July 22, 2011) and *Lake Charles Exports, LLC*, DOE/FE Docket No. 11-59-LNG, Order No. 3324 (August 7, 2013), *as amended*. Both LCE and BG LNG are jointly owned subsidiaries of BG Group plc and Energy Transfer Equity, L.P. DOE/FE Order Nos. 2987 and 3324 authorize LCE to export up to 730 Bcf per year (Bcf/y), the equivalent of 15.0 MTPA, of LNG on its own behalf or as an agent for BG LNG.

¹² *See Trunkline LNG Export, LLC*, DOE/FE Docket No. 13-04-LNG, Order No. 3252 (March 7, 2013) (authorizing Lake Charles LNG Export to export LNG pursuant to one or more long-term contracts with third parties). The LCE and Lake Charles LNG Export authorizations are coincident, thus do not increase the total quantity of LNG (15.0 MTPA) that can be exported from the terminal. Lake Charles LNG Export's authorization has a broader customer base than LCE's, in that it allows Lake Charles LNG Export to export LNG on behalf of one or more third parties, while LCE is authorized to export LNG on its own behalf or as an agent for BG LNG. On December 7, 2013, LCE filed an amendment application with DOE/FE seeking the same commercial flexibility as Lake Charles LNG Export's authorization; the amendment application is pending.

¹³ The NGA section 3 authorization requested here reflects the design production capacity (16.45 MTPA of liquefied natural gas) of the Liquefaction Project, while DOE/FE's authorized export quantity (15.0 MTPA of LNG or 730 Bcf/y) reflects allowance for design margins, maintenance, and outages. Additional authorization may be sought in the future from DOE/FE for the design production capacity of the Liquefaction Project.

11. The Liquefaction Facilities also include: LNG and vapor tie-in lines to the terminal; three natural gas liquids removal units (one for each train); three gas treatment units, each consisting of a fractionation unit, acid gas removal unit, gas dehydration unit, and mercury removal unit; a refrigerant storage and resupply system for the three trains, consisting of storage bullet tanks holding refrigerants and condensate product storage and an associated truck loading/unloading area; a boil-off gas and handling system; a nitrogen generation and distribution system; LNG rundown lines from the liquefaction area to the LNG storage tanks; construction docks; and associated infrastructure.

12. Additionally, the Liquefaction Project includes construction and operation of Lake Charles LNG's Modified Facilities at the terminal. Specifically, Lake Charles LNG proposes to: replace in-tank LNG pumps with larger pumps and associated piping; replace LNG loading arms at the west dock; modify its boil-off compression and handling system; expand and integrate the electrical and security systems; integrate the control and emergency shutdown systems; expand and integrate the telecommunications system; install a larger vapor return pipeline from the west dock to the LNG storage tanks; upgrade the marine relief system; replace the mooring dolphins and breasting dolphins at the west dock; and add new mooring and breasting dolphins and upgrade equipment on the existing breasting dolphins at the east dock.

13. Lake Charles LNG Export proposes, under negotiated commercial agreements, to provide tolling services to BG LNG, consisting of the treatment and liquefaction of gas delivered to the terminal by BG LNG, the storage of the resulting LNG, and the loading of the LNG on vessels for export. In order to provide an integrated liquefaction, storage, and loading service to BG LNG, Lake Charles LNG Export will enter into arrangements with Lake Charles LNG, under which Lake Charles LNG will provide storage and vessel loading capacity to Lake Charles LNG Export.

B. Lake Charles LNG's Section 3 Conversion, Docket No. CP14-122-000

14. As noted above, construction and operation of the terminal facilities was originally certificated under NGA section 7. Through various proceedings, the majority of the terminal *capacity* is currently authorized under NGA section 3; however, the originally certificated *facilities* and certain services utilizing that capacity remain subject to an NGA section 7 certificate.¹⁴ In order to harmonize the proposed use of the existing facilities

¹⁴ The Commission initially issued section 7 certificates for the terminal facilities. See *Trunkline LNG Co. and Trunkline Gas Co.*, 58 FPC 726 (1977); *Trunkline LNG Company and Pan National Gas Sales, Inc.*, 49 FERC ¶ 61,199; *Trunkline LNG Co.*, 55 FERC ¶ 61,072; *Trunkline LNG, Co.*, 94 FERC ¶ 62,270. However, the Commission subsequently determined that NGA section 3(e)(1) gives the Commission the exclusive

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for the provision of export services, Lake Charles LNG seeks to bring the entirety of its facilities and operations under a single regulatory regime – NGA section 3. The conversion to NGA section 3 authorization contemplates no new construction.

15. To operate the facilities under NGA section 3 jurisdiction, Lake Charles LNG first requests abandonment authority under NGA section 7(b) for the terminal facilities and for the services provided under Lake Charles LNG's FERC Gas Tariff. Lake Charles LNG also seeks to cancel its *Third Revised Volume No. 1-A* Gas Tariff, including all rate schedules therein.¹⁵ Lake Charles LNG then requests authorization to operate the terminal facilities and to provide services under section 3.

16. Lake Charles LNG states that its one customer, BG LNG, has subscribed to all of the capacity of the terminal.¹⁶ Upon conversion to NGA section 3 authority, Lake Charles LNG states that it will provide import service under new negotiated service agreements that will supersede BG LNG's current agreements. However, during the construction of the Liquefaction Project and when exporting LNG, Lake Charles LNG will be required to isolate the terminal's vaporization facilities, and, therefore, will be unable to provide vaporization services. Lake Charles LNG states that BG LNG is amenable to this suspension of vaporization service during the construction and export of LNG from the proposed Liquefaction Project. Lake Charles LNG does not anticipate

authority to approve or deny an application for construction, expansion, or operation of an LNG terminal. *See CMS Trunkline LNG Co., LLC*, 100 FERC ¶ 61,217 at n.1 and *Trunkline LNG Co., LLC*, 117 FERC ¶ 61,339 at n.1.

¹⁵ In its March 25, 2014 application, Lake Charles LNG sought to cancel its FERC Gas Tariff, *Third Revised Volume No. 1-A*. However on November 7, 2014, by separate delegated letter orders, the Director of the Division of Pipeline Regulation granted Lake Charles LNG's request, in Docket No. RP15-49-000, to cancel the *Third Revised Volume No. 1-A* Tariff, and accepted, in Docket No. RP15-48, the request to replace the Tariff with the *Fourth Revised Volume No. 1-A*, to reflect its name change from Trunkline LNG Company, effective October 14, 2014. In light of the aforementioned filings, the Commission interprets the request to cancel *Third Revised Volume No. 1-A*, as a request to cancel Lake Charles LNG's Gas Tariff, *Fourth Revised Volume No. 1-A*.

¹⁶ In 2001, BG LNG executed a service agreement, subscribing to all of the uncommitted firm capacity of the LNG terminal. Since 2005, BG LNG has been the sole customer of Lake Charles LNG under all rate schedules. *See* Application in Docket No. CP14-120-000 at 5-6.

resuming operation of the revaporization equipment until BG LNG, its sole regasification service customer, requests resumption of regasification services.

17. Lake Charles LNG states that the proposed conversion to NGA section 3 jurisdiction and the Tariff cancellation will be made effective at the start of construction of the Liquefaction Project.

C. Trunkline's Pipeline Modifications Project, Docket No. CP14-119-000

18. Trunkline seeks authorization under NGA sections 7(b) and (c) to construct, abandon, and modify natural gas pipeline facilities in order to meet demand for additional transportation capacity required to deliver natural gas to certain liquefaction facilities in the Louisiana Gulf Coast area. Trunkline states that the Pipeline Modifications Project will enable the delivery of 2.6 Bcf per day (Bcf/d) of natural gas to the Liquefaction Facilities and terminal, enable bi-directional flow (north-south) in the pipeline system, and enable increased access to natural gas supplies.

19. Specifically, Trunkline seeks authorization to construct and operate the following two new pipelines: (1) an 11.4-mile-long, 42-inch-diameter pipeline from mainline valve 303-A in Jefferson Davis Parish, Louisiana, to mainline valve 203-A and proposed Compressor Station 203-A in Calcasieu Parish, Louisiana (Mainline Connector); and (2) a 6.5-mile-long, 24-inch-diameter loop pipeline from mainline valve 205 to mainline valve 204A (Mainline 200-3 Loop). The Mainline 200-3 Loop would be offset 25 feet from the adjacent existing pipeline.

20. The Pipeline Modifications Project also includes modifications to Trunkline's existing Mainline 200-1 and Mainline 100-3 pipeline systems. Trunkline proposes to modify Mainline 200-1 by removing a check meter at the existing U.S. 190 Meter Station, and also by replacing mainline valve 202 at the Transcontinental Gas Pipe Line Company, LLC (Transco) Ragley Meter Station, both in Beauregard Parish, Louisiana. Trunkline also proposes to replace two segments of the Mainline 200-1 Line, totaling 2,967 feet, in Calcasieu and Beauregard Parishes, Louisiana. Modifications to Trunkline's Mainline 100-3 include construction and modification of launcher/receiver barrels in Washington County, Mississippi, and Chicot County, Arkansas.

21. Trunkline also requests approval to construct and modify compressor stations to enable bi-directional flow of the natural gas on its system. Trunkline proposes to construct and operate a new 103,175 horsepower (HP) compressor station near mainline valve 203-A on Trunkline's Mainline 200 Line in Calcasieu Parish, Louisiana (Compressor Station 203-A). Trunkline also proposes to modify its existing Longville

Compressor Station in Beauregard Parish, Louisiana, by installing a new 15,900 HP compressor unit, abandoning an existing unit, and installing pipeline modifications for bi-directional flow.¹⁷ Additionally, Trunkline proposes to install piping modifications at the following existing compressor stations: Pollock Compressor Station in Grant Parish, Louisiana; Epps Compressor Station in West Carroll Parish, Louisiana; and Shaw Compressor Station in Bolivar County, Mississippi.

22. Lastly, the proposed Pipeline Modifications Project also includes the construction of five new meter stations in Calcasieu, Richland, and Beauregard Parishes, Louisiana,¹⁸

¹⁷ The Longville Compressor Station currently has 11 compressor units with a total of 36,750 HP. With the proposed new compressor unit and the abandonment of Unit No. 4521, the Longville Compressor Station will have a total of 49,650 HP. Upon completion of the Pipeline Modifications Project, Compressor Station 203-A and the Longville Compressor Station will have more than 15,000 HP. Trunkline states that it has reviewed the guidelines of waste heat recovery as discussed in the Interstate Natural Gas Association of America (INGAA) White Paper entitled “*Waste Energy Opportunities for Interstate Natural Gas Pipelines*” (February 2008). Trunkline states that it did not undertake a feasibility analysis for installing waste heat power generation facilities at these stations as part of the proposed project as the installation/operation of waste heat power generation is not part of its business model. The proposed Compressor Station 203-A is a greenfield station and thus, there is no operating experience available. It is also unknown at this time whether Compressor Station 203-A will have the sufficient load factor to meet the INGAA guidelines. Accordingly, Trunkline shall monitor this station and evaluate the potential for adding waste heat generation to the facilities and post this information to its electronic bulletin board.

¹⁸ Trunkline proposes to construct the following five new meter stations: (1) the Lake Charles LNG Export interconnection to allow Trunkline to deliver up to 2,600,000 Dth/d of natural gas to the Liquefaction Project; (2) the Columbia Gulf Transmission, LLC interconnection near Egan, Louisiana, to allow Trunkline to receive up to 300,000 Dth/d of natural gas at the intersection of Trunkline’s Kaplan 300 Line and the Columbia Gulf Transmission Pipelines in Acadia Parish, Louisiana; (3) the Gulf Crossing Pipeline Co., LLC interconnection near Rayland, Louisiana, to allow Trunkline to receive up to 500,000 Dth/d of natural gas at the intersection of its Mainline 100-3 and Gulf Crossing Pipeline in Richland Parish, Louisiana; (4) the Midcontinent Express Pipeline, LLC interconnection near Rayland, Louisiana, to allow Trunkline to receive up to 500,000 Dth/d of natural gas at the intersection of its Mainline 100-3 and the Midcontinent Express Pipeline in Richland Parish, Louisiana; and (5) the Kinder Morgan Louisiana Pipeline interconnection near Lake Charles, Louisiana, to allow Trunkline to

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and the modification of existing interconnections.¹⁹ Trunkline states that the new and modified meter stations will enable access to additional natural gas supplies and increase throughput at existing interconnects.

23. In its application, Trunkline states that, on February 25, 2014, it executed a precedent agreement with anchor shipper BG Energy Merchants, LLC (BG Energy) for 3,100,000 Dth/d of firm transportation service. Subsequently, Trunkline held an open season from February 28, 2014, to March 14, 2014, to solicit additional interest in firm transportation to be made available by the Pipeline Modifications Project, but no other requests were received. Trunkline states that it did not hold a reverse open season because no existing firm customer has capacity that flows in the southwesterly direction of the proposed service, and, therefore, no turnback could have obviated any of the proposed facilities. Trunkline states that it will also provide service to BG Energy from existing receipt points where capacity is available and for which no reverse open season is required.

24. Trunkline requests a pre-determination of rolled-in rate treatment. Trunkline states that BG Energy has agreed to a discount rate that is designed to recover at least the cost of service associated with the Pipeline Modifications Project. Trunkline estimates the cost of the Pipeline Modifications Project to be approximately \$579.2 million.

II. Notice, Interventions, and Protests

25. Notice of the applications was published in the *Federal Register* on April 10, 2014, with comments, protests, and interventions due on April 24, 2014.²⁰ Numerous parties filed timely, unopposed motions to intervene.²¹

receive up to 500,000 Dth/d of natural gas at the intersection of the Trunkline laterals with Kinder Morgan Louisiana Pipeline in Calcasieu Parish, Louisiana.

¹⁹ Trunkline proposes to modify the following existing interconnections: Texas Gas Woodlawn, NGPL Lakeside, Kaplan, Ragley, and TETCO Allen Parish. Trunkline also proposes to modify an existing meter station and expand an existing interconnection with Creole Trail Pipeline, if necessary.

²⁰ 79 Fed. Reg. 19,894 (2014).

²¹ Timely, unopposed motions to intervene are granted automatically pursuant to Rule 214 of the Commission's Rules of Practice and Procedure. 18 C.F.R. § 385.214(c) (2015).

26. The Missouri Public Service Commission filed an untimely, unopposed motion to intervene in the Liquefaction and Conversion Dockets, Nos. CP14-120-000 and CP14-122-000, respectively.²²

27. Magnolia LNG, LLC (Magnolia) filed untimely motions to intervene in all three dockets.²³ Trunkline opposed Magnolia's late intervention in the Certificate Docket. Trunkline argues that Magnolia claims it has an interest in the Liquefaction Project, but that Magnolia provides no explanation of its interest in the Pipeline Modifications Project. On August 5, 2014, Magnolia filed an answer to Trunkline's answer.²⁴ Magnolia states that the Pipeline Modifications Project is inextricably related and functionally part of the Liquefaction Project; therefore, the Commission should grant Magnolia's intervention in both the Liquefaction and the Certificate Dockets. Further, Magnolia states that Trunkline and Kinder Morgan Louisiana Pipeline, which will deliver gas to Magnolia's terminal, currently interconnect, and that Trunkline proposes to construct an additional interconnect as part of the Pipeline Modifications Project. For these reasons, Magnolia believes it has shown sufficient interest in the Pipeline Modifications Project.

28. We find that the Missouri Public Service Commission and Magnolia have shown an interest in these proceedings, and that granting the late interventions at this stage will not disrupt the proceedings or place additional burdens on existing parties.²⁵ Thus, we will grant the late motions to intervene. All parties to these proceedings are listed in Appendix A.

²² On April 24, 2014, the Missouri Public Service Commission filed a timely motion to intervene in the Certificate Docket, No. CP14-119-000.

²³ Magnolia is proposing an LNG export terminal across the Calcasieu River Industrial Canal from the Lake Charles LNG terminal in Docket No. CP14-347-000. In Docket No. CP14-511-000, Kinder Morgan Louisiana Pipeline, LLC (Kinder Morgan) filed a companion application proposing to expand its system to deliver gas to Magnolia's terminal. Kinder Morgan did not intervene in any of these proceedings.

²⁴ Although the Commission's Rules of Practice and Procedure do not permit answers to answers, we will accept the answer because it clarifies the concerns raised and provides information that has assisted in our decision making. 18 C.F.R. § 385.213(a)(2) (2015).

²⁵ 18 C.F.R. § 385.214(d) (2015).

29. Laclede Gas Company's (Laclede) April 24, 2015 motion to intervene in the Certificate Docket included a protest and a request for a technical conference. As an existing firm transportation customer of Trunkline, Laclede is concerned that the reliability of its service will be impaired due to the alteration in gas flows that will occur on the Trunkline system as a result of the Pipeline Modifications Project. Laclede also opposes Trunkline's request for a pre-determination of rolled-in rate treatment for the cost of service associated with the Pipeline Modifications Project. We find that the record is sufficient to adjudicate the issues in these proceedings without a technical conference. Therefore, Laclede's request is denied.

30. Sierra Club's April 24, 2015 motion to intervene also included a protest. Sierra Club argues that the proposed proposals covered by Liquefaction Docket, the Conversion Docket, and the Certificate Docket will have significant adverse environmental effects, including both direct environmental impacts, as well as indirect impacts related to the increase in domestic natural gas production as a result of the facilities' exports, the increase in domestic gas prices, and the combustion of LNG in importing markets.

31. On May 9, 2014, Trunkline filed a motion for leave to answer and answer to the protests. Although the Commission's Rules of Practice and Procedure do not permit answers to answers, we will accept the answer because it clarifies the concerns raised and provides information that has assisted in our decision making.²⁶

32. Additionally, various parties filed comments in support of the proposals. Other parties raised various environmental issues. We addressed these concerns in the Final Environmental Impact Statement (final EIS) and discuss the Liquefaction Project's and the Pipeline Modification Project's major environmental issues in the environmental analysis of this order.

III. Discussion

A. Lake Charles LNG Export and Lake Charles LNG's Liquefaction Project, Docket No. CP14-120-000

33. Since the proposed LNG Liquefaction and Terminal Facilities will be used to export natural gas to foreign countries, the siting, construction, and operation of the facilities require Commission approval under NGA section 3. Section 3 of the NGA provides, in part, that "no 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

²⁶ 18 C.F.R. § 385.213(a)(2) (2015).

secured an order of the [Federal Power Commission] authorizing it to do so.”²⁷ Congress transferred the regulatory functions of section 3 of the NGA to the Secretary of Energy in 1977 pursuant to section 301(b) of the Department of Energy Organization Act.²⁸ The Secretary subsequently delegated to the Commission authority to “[a]pprove or disapprove the construction and operation of particular facilities, the site at which such facilities shall be located, and with respect to natural gas that involves the construction of new domestic facilities, the place of entry for imports or exit for exports....”²⁹ However, the Secretary has not delegated to the Commission any authority to approve the import or export of the commodity itself.³⁰ Applications for authorization to import or export natural gas must be submitted to DOE.

34. In its protest, Sierra Club argues that the Liquefaction Project will have significant adverse environmental effects, and that the export of natural gas will cause economic harm by increasing domestic gas prices. Environmental issues raised by Sierra Club are addressed in the draft and final EIS, as well as in the environmental section of this order below. We decline to address Sierra Club’s economic claims, as they concern impacts associated with the exportation of the commodity of natural gas, which DOE is authorized to analyze.³¹

35. While NGA section 3(a) provides that an application shall be approved unless the proposal “will not be consistent with the public interest,” section 3 also provides that an application may be approved “in whole or in part, with such modification and upon such

²⁷ 15 U.S.C. § 717b(a) (2012).

²⁸ Pub. L. 95-91, 42 U.S.C. § 7101 *et. seq.*

²⁹ DOE Delegation Order No. 00-004.00A (effective May 16, 2006).

³⁰ *See National Steel Corp.*, 45 FERC ¶ 61,100, at 61,332-33 (1988) (observing that DOE, “pursuant to its exclusive jurisdiction, has approved the importation with respect to every aspect of it except the point of importation” and that the “Commission’s authority in this matter is limited to consideration of the place of importation, which necessarily includes the technical and environmental aspects of any related facilities”).

³¹ Sierra Club also raised its economic harm arguments before DOE in connection with the pending application for authority to export LNG from the project to non-FTA nations. *See* Sierra Club’s Motion to Intervene, Protest, and Comments filed in DOE/FE Docket No. 13-04-LNG, attached as Exhibit 2 to Sierra Club’s April 24, 2014 Motion to Intervene.

terms and conditions as the Commission may find necessary or appropriate.”³² NGA section 3(a) also provides that for good cause shown, the Commission may make supplemental orders as it may find “necessary or appropriate.”

36. In 2011, DOE authorized LCE, and subsequently Lake Charles LNG Export, to export up to 15.0 MTPA (equivalent of 730 Bcf/y) of domestically-produced natural gas by vessel to FTA nations for a 25-year term.³³ In August 2013, DOE authorized LCE to export up to 15.0 MTPA of natural gas to non-FTA nations for a 20-year term, finding the potential export of such volumes to be not inconsistent with the public interest.³⁴ Lake Charles LNG Export’s application to export to non-FTA nations remains pending.

37. In conditionally granting LCE long-term authorization to export LNG from the terminal, DOE recognized substantial evidence of economic and other public benefits, concluding that the authorization was not inconsistent with the public interest. We recognize DOE’s public interest findings in issuing our order. Among other things, DOE found that exporting natural gas will lead to net benefits to the U.S. economy and can counteract concentration within global LNG markets, thereby diversifying international supply options and improving energy security for U.S. allies and trading partners. On balance, DOE found that the likely net economic benefits and other non-economic or indirect benefits outweighed the potential negative impacts of the proposed exports.

38. The proposed Liquefaction Project is located on, and adjacent to, the footprint of the previously-approved, existing terminal. Much of the land in the area was previously disturbed during construction of the terminal and, as a result, we concur with the findings set forth in the final EIS that most of the proposed project’s environmental impacts would be reduced to less than significant levels with the implementation of Lake Charles LNG’s proposed mitigation and the conditions required in this Order.

39. As discussed further in the environmental section below, we conclude that, with the conditions required herein, the environmental impacts of the Liquefaction Project will

³² For a discussion of the Commission’s authority to condition its approvals of LNG facilities under section 3 of the NGA, *see, e.g., Distrigas Corporation v. FPC*, 495 F.2d 1057, 1063-64 (D.C. Cir. 1974), *cert. denied*, 419 U.S. 834 (1974) and *Dynegy LNG Production Terminal, L.P.*, 97 FERC ¶ 61,231 (2001).

³³ *See supra* notes 11 and 12.

³⁴ *See supra* note 11; *Lake Charles Exports, LLC*, DOE/FE Docket No. 11-59-LNG, Order No. 3324 (August 7, 2013).

be appropriately and reasonably reduced and the Liquefaction Project can be constructed and operated safely. Accordingly, we find that, subject to the conditions imposed in this order, the proposal is not inconsistent with the public interest.

B. Lake Charles LNG's Section 3 Conversion, Docket No. CP14-122-000

40. Because Lake Charles LNG has been granted NGA section 7(c) certificate authority for the construction and operation of its terminal facilities, Lake Charles LNG's request for abandonment authority is subject to section 7(b). Additionally, since Lake Charles LNG's facilities will continue to be used to import and export natural gas from and to foreign countries, the operation of its terminal is subject to NGA section 3.

1. Abandonment Authority

41. Section 7(b) of the NGA allows a natural gas pipeline to abandon jurisdictional facilities or services if the abandonment is permitted by the "public convenience or necessity."³⁵ When a pipeline proposes to abandon facilities, the continuity and stability of existing services are the primary considerations in assessing whether the public convenience or necessity permit the abandonment.

42. As described more fully in *Distrigas of Massachusetts LLC*,³⁶ at the time it authorized the first LNG terminals, the Commission considered the offloading of LNG from a ship to be the end of foreign commerce subject to NGA section 3 and the beginning of transportation in interstate commerce subject to NGA section 7. The Commission has since adopted the position that foreign commerce encompasses all terminal operations, including onshore storage of LNG to be transferred to, or transferred from, a ship. Lake Charles LNG states that the regulatory conversion will not adversely affect its existing customer, BG LNG, because Lake Charles LNG will provide services under new negotiated service agreements. The conversion will allow Lake Charles LNG to enter into new agreements which will allow the suspension of the import services during the construction and operation of the Liquefaction Project and export of LNG. Given that there are no comments in opposition to Lake Charles LNG's proposal, we do not anticipate any adverse impacts to the current customer or the market.

³⁵ 15 U.S.C. § 717f (b) (2012).

³⁶ 124 FERC ¶ 61,039 (2008) (order approving Distrigas's request to abandon its section 7 import facilities and cancel its tariff, and granting its request to operate under section 3).

43. Furthermore, since the change from NGA section 7 to section 3 authority will not result in any construction, we find that the requested abandonment will not result in any adverse impact on the environment or landowners. We find that our plenary and elastic authority under NGA section 3 will allow us to exercise oversight equivalent to that under section 7 to enable us to ensure the continued safe operation of the terminal. Accordingly, we will approve Lake Charles LNG's request to abandon its section 7(b) certificate authorizations for its LNG facilities and services.

44. We will also grant Lake Charles LNG's request to cancel its tariff, *Fourth Revised Volume No. 1-A*. The tariff will be cancelled upon its fulfillment of the provisions of section 154.602 of our regulations,³⁷ which provides that when an effective tariff on file with the Commission is proposed to be canceled and no new tariff is to be filed in its place, the company must notify the Commission of the proposed cancellation using the appropriate form in Part 250 of the regulations and provide such other information as required by section 154.602 at least 30 days prior to the proposed effective date of such cancellation.

2. NGA Section 3 Authorization

45. Because the abandoned facilities will be used to import and export natural gas from and to foreign countries, the siting, construction, and operation of the proposed facilities require approval by the Commission under section 3 of the NGA. In conjunction with our abandonment approval, we find that Lake Charles LNG's operation of its terminal is consistent with the public interest. Therefore, we will authorize Lake Charles LNG's terminal under section 3 effective as of the start of construction.

46. Any and all outstanding conditions relating to the operations of Lake Charles LNG's LNG facilities previously ordered by the Commission shall remain in full force and effect.³⁸

C. Trunkline's Pipeline Modifications Project, Docket No. CP14-119-000

47. Since Trunkline's proposed facilities will be used to transport natural gas in interstate commerce, subject to the jurisdiction of the Commission, the abandonment,

³⁷ 18 C.F.R. § 154.602 (2015).

³⁸ To the extent previously-stated conditions conflict with conditions in this order, the most recent conditions apply.

construction, and operation of the Pipeline Modifications Project are subject to subsections (b), (c), and (e) of section 7 of the NGA.

1. Application of Certificate Policy Statement

48. The Certificate Policy Statement provides guidance for evaluating proposals to certificate new pipeline construction.³⁹ The Certificate Policy Statement establishes criteria for determining whether there is a need for a proposed project and whether the proposed project will serve the public interest. The Certificate Policy Statement explains that in deciding whether to authorize the construction of major new natural gas facilities, the Commission balances the public benefits against the potential adverse consequences. The Commission's goal is to give appropriate consideration to the enhancement of competitive transportation alternatives, the possibility of overbuilding, subsidization by existing customers, the applicant's responsibility for unsubscribed capacity, the avoidance of unnecessary disruptions of the environment, and the unneeded exercise of eminent domain in evaluating new pipeline construction.

49. Under this policy, the threshold requirement for pipelines proposing new projects is that the pipeline must be prepared to financially support the project without relying on subsidization from its existing customers. The next step is to determine whether the applicant has made efforts to eliminate or minimize any adverse effects the project might have on the applicant's existing customers, existing pipelines in the market and their captive customers, or landowners and communities affected by the route of the new pipeline. If residual adverse effects on these interest groups are identified after efforts have been made to minimize them, the Commission will evaluate the project by balancing the evidence of public benefits to be achieved against the residual adverse effects. This is essentially an economic test. Only when the benefits outweigh the adverse effects on economic interests will the Commission proceed to complete the environmental analysis where other interests are considered.

50. As noted above, the threshold requirement is that the applicant must be prepared to financially support the project without relying on subsidization from its existing customers. Generally this requires that a pipeline charge its existing system rates as initial rates for an expansion project if those rates are higher than what the incremental

³⁹ *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227 (1999), *order on clarification*, 90 FERC ¶ 61,128, *order on clarification*, 92 FERC ¶ 61,094 (2000) (Certificate Policy Statement).

rates for the project would be.⁴⁰ As discussed below, since Trunkline's incremental rate would be less than its existing system rate, we approve the use of Trunkline's system rate as the initial recourse rate for firm transportation services. As discussed in the Rates section below, Trunkline projects a revenue shortfall of approximately \$56 million in the first year of service. Trunkline could time a future NGA section 4 general rate case filing to include a test period that overlaps the Pipeline Modification Project's first year of operation when a significant loss would be incurred. This raises the possibility of unwarranted cost shifting to existing customers in a future Trunkline general rate case. Therefore, we are not granting Trunkline a predetermination of rolled-in rate treatment for the Pipeline Modifications Project's costs. Thus, Trunkline's existing customers will be protected and the Pipeline Modification Project satisfies the no-subsidy threshold requirement.

51. Laclede, an existing firm transportation customer of Trunkline, is concerned that the Pipeline Modifications Project may affect gas flows and operating pressures throughout the Trunkline system, therefore negatively impacting the reliability of firm transportation service for its existing customers. Laclede distributes natural gas to its customers in Missouri and relies on the delivery of its natural gas supply through Enable Mississippi River Transmission, LLC's west/east East Line. Laclede states that it sources its natural gas upstream from Trunkline's system, which interconnects with Mississippi River Transmission's East Line (MRT Interconnect), one of only two upstream pipelines on Mississippi River Transmission's East Line. Laclede holds two firm transportation contracts with Trunkline providing for delivery of gas during November through March from receipt points, most of which are in Trunkline's Field Zone.⁴¹ Laclede protests Trunkline's Pipeline Modifications Project because of the potential effects it believes may occur from transporting large quantities of natural gas in a southerly direction in Trunkline's Field Zone and Zone 1A, to the Gulf Coast for export, instead of the historical northerly flow of gas from the producing regions in the Gulf Coast to the Midwest.

52. In Trunkline's answer to Laclede's protest, Trunkline states that the operating pressures on its system at the MRT Interconnect will not change as a result of the Pipeline Modifications Project. Further, it states that Trunkline and Mississippi River Transmission have entered into an Operational Balancing Agreement at the MRT Interconnect. Trunkline states there is not a specific delivery pressure obligation in its

⁴⁰ See *Sabine Pass Liquefaction Expansion, LLC*, 1501 FERC ¶ 61,012, at P 34 (2015).

⁴¹ See *infra* note 42.

agreement with Laclede or its FERC Gas Tariff. Trunkline asserts that none of the primary receipt points identified in Laclede's agreements on the southern end of Trunkline's system would be affected by the Pipeline Modification Project.

53. Our review of the engineering data provided by Trunkline confirms that service to Laclede will not be impacted by the proposed expansion. After the Pipeline Modifications Project is in-service, Trunkline's system will continue to provide its firm shippers with the same level of service they currently receive. Specifically, the Pipeline Modification Project will not affect Trunkline's ability to make deliveries at the MRT Interconnect, where Laclede receives its gas. We are satisfied that the Pipeline Modifications Project will not degrade service to Trunkline's existing customers.

54. Further, the Pipeline Modifications Project will not adversely affect other pipelines and their customers. The proposed project is designed to meet demand for additional transportation capacity to deliver natural gas to the Terminal. The Pipeline Modifications Project will not replace any existing service provided by another pipeline.

55. Finally, we find that Trunkline has taken steps to minimize any adverse impacts on landowners and surrounding communities. The proposal to loop existing pipeline and to utilize existing rights-of-way reduces the need for new rights-of-way.

56. Based on the benefits that the Pipeline Modifications Project will provide to the market, and the minimal adverse effects on existing shippers, other pipelines and their captive customers, and on landowners and surrounding communities, we find, consistent with the criteria discussed in the Certificate Policy Statement and subject to the environmental discussion below, that the public convenience and necessity requires approval of Trunkline's proposal, as conditioned in this order.

2. Abandonment

57. Trunkline requests authorization to abandon one of its eleven compressor units, a 3,000 HP unit (Unit 4521), at the Longville Compressor Station, in order to install a new 15,900 HP unit to enable bi-directional flow. Trunkline states that the replacement of Unit 4521 with a larger unit will enable the increased volume and change in flow patterns to occur at the Longville Compressor Station.

58. We find that the abandonment will not cause any detriment to Trunkline's customers. Therefore, the proposed abandonment is permitted by the public convenience or necessity, as a necessary component of the Pipeline Modifications Project.

3. Rates

59. Trunkline's Pipeline Modifications proposal will enable bi-directional transmission on portions of its pipeline system in rate zones Field Zone and Zone 1A, which will increase the total physical transportation capacity in those zones.⁴²

Initial Rates

60. Trunkline did not propose initial recourse rates in its application.⁴³ On February 12, 2015, Commission staff issued Data Requests No. 1 through 4, directing Trunkline to calculate incremental maximum recourse reservation and usage rates for service utilizing the Pipeline Modifications Project's capacity, by zone and transportation path. In Data Response No. 1,⁴⁴ Trunkline calculated the Year 1 incremental monthly firm transportation (FT) reservation recourse charges for the Project of \$3.4868 per Dth for transportation solely within the Field Zone (referred to in the tariff as Field Zone Only transportation), and \$3.3926 per Dth for a transportation path from receipt points in Zone 1A to delivery points in the Field Zone.⁴⁵ The incremental reservation charges are based on \$129,076,069 in total annual estimated fixed costs allocated between the two transportation paths and the 1.50 percent depreciation rate, 12.56 percent return on

⁴² Trunkline has four rate zones: the Field Zone located primarily in southern Louisiana; Zone 1A from southern Louisiana to northwest Tennessee; Zone 1B from Tennessee to east central Illinois; and Zone 2 from Illinois to the Indiana-Michigan state line.

⁴³ All pipeline certificate applications made pursuant to the Commission's Regulations, 18 C.F.R. 157.14 (2015), are required to address the issue of cost recovery, not only with regard to shippers who have already committed to use the capacity (§ 157.14(a)(11) Exhibit I – Market Data), but also rates that would be applicable to customers that may use the capacity under the applicant's open access transportation authority (§ 157.14(a)(18) Exhibit P - Tariff).

⁴⁴ All data responses referred to herein are dated February 27, 2015.

⁴⁵ See Attachment to Data Request No. 1. In its application and data responses, Trunkline expresses its reservation charges on a daily basis. We have converted the calculated reservation charges to monthly charges for comparison with Trunkline's currently effective system reservation charges set forth in Trunkline Gas Company, LLC, FERC NGA Gas Tariff, *Fourth Revised Volume No. 1*, Rate Schedule FT, Currently Effective Rates, 13.0.0.

equity, and 8.25 percent long-term debt cost approved in Trunkline's last general rate case.⁴⁶ These illustrative rates are lower than Trunkline's currently effective FT base reservation charges of \$3.7001 per Dth for Field Zone Only transportation, and \$7.3683 per Dth for transportation from the Field Zone to Zone 1A. Also in Data Response No. 1, Trunkline calculated separate illustrative usage charges of \$0.0003 per Dth for Zone 1A to Field Zone and Field Zone Only transportation utilizing the Pipeline Modifications Project based on an allocation of variable costs to each path.

61. For service utilizing integrated mainline expansion facilities, such as the Pipeline Modifications Project, Commission policy requires pipelines to charge a cost-based incremental rate for firm service if such rate is higher than the currently-approved applicable system rate.⁴⁷ However, pipelines are required to charge the applicable system rate if the incremental rate is lower than the system rate. As Trunkline has shown that incremental reservation and usage charges would be lower than its system rates, we direct Trunkline to use its currently effective system reservation charges for FT services utilizing the new capacity.

62. Trunkline did not propose interruptible transportation rates for the Pipeline Modifications Project. Trunkline is directed to implement interruptible rates that are consistent with Commission policy requiring a pipeline to charge its currently effective system IT rates for any interruptible service rendered on additional capacity made available as a result of an expansion that is integrated with existing pipeline facilities.⁴⁸

Fuel

63. Trunkline did not propose specific initial fuel rates. However, when requesting a predetermination to roll-in the Pipeline Modifications Project's costs, Trunkline argued that the project would reduce its overall system fuel use, benefitting existing customers.⁴⁹

64. In Exhibit Z-1, as supplemented by Data Response No. 3d, Trunkline projects a reduction in overall system fuel use from 1.96 percent to 0.83 percent per Dth after the

⁴⁶ *Trunkline Gas Co.*, 90 FERC ¶ 61,017 (2000).

⁴⁷ Certificate Policy Statement, 88 FERC at 61,745.

⁴⁸ *See, e.g., Texas Eastern Transmission, LP*, 139 FERC ¶ 61,138, at P 31 (2012); and *Gulf South Pipeline Co., LP*, 130 FERC ¶ 61,015, at P 23 (2010).

⁴⁹ Application at 16.

Pipeline Modifications Project is placed in service.⁵⁰ According to Trunkline, this reduction justifies rolling the Pipeline Modification Project's fuel requirements into existing shippers' fuel rates. However, Trunkline's study utilized a single, system-wide retainage percentage. That assumption is not consistent with Trunkline's currently effective fuel retention rate design, which assesses fuel retention charges based on the capacity path. According to Data Response No. 3c, the Pipeline Modification Project would not impact fuel use uniformly across such transportation paths. Specifically, Trunkline projects that fuel retention percentages will decline over seven transportation paths where no transportation utilizing the Pipeline Modification Project will be performed. However, Trunkline projects that fuel use will increase over the Field Zone Only, Zone 1A Only, and Field Zone to Zone 1A transportation paths. These transportation paths are where the Pipeline Modifications Project's incremental transportation capacity will be utilized and where, according to Trunkline's Index of Customers, the majority of existing shippers' deliveries is currently performed.⁵¹

65. The Commission therefore finds that existing shippers in the Field Zone and Zone 1A may subsidize or be adversely affected by the fuel usage changes resulting from the Pipeline Modification Project. In view of these considerations, the Commission will require Trunkline to separately identify the incremental fuel requirements for the zoned transportation paths associated with the Pipeline Modifications Project and to charge incremental fuel rates as initial rates for service utilizing the project. This determination is without prejudice to Trunkline proposing to roll the Pipeline Modifications Project's fuel costs into its system fuel retention rates in a general or limited NGA section 4 filing.

66. Also, since Trunkline did not expressly propose initial fuel rates, we will require initial fuel rates of zero for service utilizing the Pipeline Modifications Project facilities. However, Trunkline may file to change such initial fuel rates through an out-of-cycle fuel adjustment filing under Section 22 of its General Terms and Conditions after the Pipeline Modifications Project is placed in-service.

⁵⁰ According to Trunkline, the overall system rates exclude the South Texas Modifications System which is operationally separate from the remainder of Trunkline's system.

⁵¹ According to Data Response No. 3c, Attachment at 1, after the Pipeline Modification Project is placed in service, increases in fuel use will occur for Field Zone Only transportation from 0.39 to 0.58 percent, Zone 1A Only transportation from 1.81 to 1.86 percent, and Field Zone to Zone 1A transportation from 2.20 to 2.44 percent per Dth.

Agreements with BG Energy

67. Trunkline states that BG Energy executed a precedent agreement for all of the Pipeline Modifications Project's capacity at a discounted rate "that is designed to recover at least the cost of service associated with the proposed pipeline modifications."⁵² However, because Trunkline filed a redacted version of the precedent agreement with BG Energy on a confidential and privileged basis under section 388.112 of the Commission's regulations,⁵³ there is nothing in the public record to support Trunkline's characterization of BG Energy's rates as discounted.

68. The Commission has previously explained that discounted rates must remain within the range established by the pipeline's maximum and minimum tariff rates and must reflect the same rate design as its recourse rates, whereas negotiated rates are not subject to either of those restrictions.⁵⁴ Trunkline is therefore, directed to review its rate-related agreements with BG Energy in order to determine whether the rate to be paid by BG Energy would be considered negotiated rather than discounted according to the aforementioned Commission criteria. If these rates are negotiated rates, Trunkline must comply with the Commission's negotiated rate policy. Such policy requires a pipeline to file either its negotiated rate agreements or tariff records setting forth the essential terms of the agreements associated with the project, in accordance with the Alternative Rate Policy Statement⁵⁵ and the Commission's negotiated rate policies.⁵⁶ Such filing must be

⁵² Application at 14. Also, Exhibit N at page 9 represents that BG Energy's rates will be discounted.

⁵³ 18 C.F.R. § 388.112 (2015).

⁵⁴ *See Northern Natural Gas Co.*, 105 FERC ¶ 61,299, at P16 (2003).

⁵⁵ *Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines; Regulation of Negotiated Transportation Services of Natural Gas Pipelines*, 74 FERC ¶ 61,076, *reh'g and clarification denied*, 75 FERC ¶ 61,024 (1996), *reh'g denied*, 75 FERC ¶ 61,066 (1996), *petition for review denied sub nom. Burlington Resources Oil & Gas Co. v. FERC*, 172 F.3d 918 (D.C. Cir. 1998) (Alternative Rate Policy Statement).

⁵⁶ *Natural Gas Pipelines Negotiated Rate Policies and Practices; Modification of Negotiated Rate Policy*, 104 FERC ¶ 61,134 (2003), *order on reh'g and clarification*, 114 FERC ¶ 61,042, *reh'g dismissed and clarification denied*, 114 FERC ¶ 61,304 (2006).

made at least 30 days, but not more than 60 days, before the in-service date of the proposed facilities.

69. Finally, Trunkline is directed to review the executed and unexecuted agreements with BG Energy that it filed on a confidential and privileged basis under section 388.112 of the Commission's regulations,⁵⁷ in order to determine whether such agreements incorporate non-conforming provisions constituting material deviations from Trunkline's *pro forma* FT service agreement. At least 30 days, but not more than 60 days, before providing service to any project shipper under a non-conforming agreement, Trunkline must file an executed copy of any such non-conforming agreement disclosing and reflecting all non-conforming language, and file a tariff record identifying each such agreement as a non-conforming agreement consistent with section 154.112 of the Commission's regulations.⁵⁸ This requirement applies to any precedent agreement containing non-conforming provisions that survive the execution of the service agreement.

Request for Pre-determination of Rolled-in Rate Treatment

70. Trunkline requests a pre-determination of rolled-in rate treatment for the Pipeline Modifications Project's costs. Trunkline argues that "[w]hen . . . expansion customers will take service pursuant to a discount rate, the pipeline must show that the incremental rate for service on the expansion is less than the existing recourse rate for the same service and the discount rate will fully recover the cost of service associated with the expansion."⁵⁹ Therefore, Trunkline asserts that a rolled-in pre-determination is justified because the Pipeline Modification Project will generate an estimated \$387.1 million in revenues during the first three years of its operation which, according to Trunkline, is greater than the project's total estimated cost of service during the same three-year period.

71. In its protest, Laclede opposes Trunkline's requested predetermination of rolled-in rate treatment, arguing that the Pipeline Modification Project's costs are large in contrast to Trunkline's existing costs, and that it would be premature to pre-approve rolling-in costs of this magnitude "years before the first shipment of LNG leaves Lake Charles,

⁵⁷ 18 C.F.R. § 388.112 (2015).

⁵⁸ 18 C.F.R. § 154.112 (2015).

⁵⁹ Application at 16.

Louisiana.”⁶⁰ Laclede also asserts that the bulk of the costs that would be rolled-in are associated with compression needed solely for southbound transportation of gas from Zone 1A and the Field Zone to the Terminal. Laclede argues that if the LNG market does not materialize as projected, existing shippers like Laclede, who take deliveries in the Midwest and do not need such compression, would have to absorb future stranded costs.

72. In its answer, Trunkline maintains that Laclede’s arguments are irrelevant to the Commission’s policy under which a rolled-in pre-determination is granted where “projected revenues for the project exceed its estimated incremental cost of service.”⁶¹ As further discussed below, Trunkline also states that Laclede ignores the fact that all customers will receive operational benefits from the Pipeline Modifications Project.

73. The Commission will deny Trunkline’s request for a pre-determination of rolled-in rate treatment, without prejudice to Trunkline arguing in its next general rate case that rolling the Pipeline Modifications Project’s costs into its system rates is appropriate. According to the “Comparison of Proposed Revenues to Cost of Service” (Cost/Revenue Comparison),⁶² Trunkline estimates that Pipeline Modification Project revenues will total approximately \$387 million during the first three years of operation, and costs will total approximately \$373 million during same period, a difference of approximately \$14 million in excess revenues. However, the Cost/Revenue Comparison also shows that the Pipeline Modification Project will incur an operating loss of approximately \$56 million during the first year of operation.⁶³

74. A projected loss of this magnitude during the first year of operation is problematic for granting a pre-determination of rolled-in rate treatment. Trunkline could time a future NGA section 4 general rate case filing to include a test period that overlaps the Pipeline Modification Project’s first year of operation when a significant loss would be incurred. This raises the possibility of unwarranted cost shifting to existing customers in a future

⁶⁰ Protest at 7-8.

⁶¹ Trunkline Answer at 6 (citing *Dominion Transmission, Inc.*, 144 FERC ¶ 61,182, at P19 (2013), and *Cheniere Creole Trail Pipeline, L.P.*, 142 FERC ¶ 61,137, at P 37 (2013)).

⁶² Application, Exhibit N at 9.

⁶³ *Id.* Also, the Cost/Revenue Comparison shows that annual revenues will exceed costs by \$32,539,405 in the second year of the Pipeline Modification Project’s operation and by \$37,370,543 in the third year.

Trunkline general rate case. For this reason alone, we cannot issue the requested pre-determination.

75. Trunkline also asserts that a rolled-in pre-determination is justified because existing customers will benefit from the enhanced reliability of its South Louisiana system provided by the Pipeline Modifications Project's pipeline looping, metering facilities, and new and increased compression.⁶⁴ Trunkline states that:

[I]t will operate the [Project] as an integral part of its existing facilities to provide service to all customers in the most efficient manner. Replacement pipeline, looped pipeline, and new, increased compression will improve system reliability and potentially increase secondary and interruptible capacity on the system.⁶⁵

76. In its protest, Laclede expresses concern that the Pipeline Modification Project will cause changes in flow patterns on Trunkline that may alter Trunkline's operating pressures so as to negatively impact the reliability of Laclede's service. Laclede's concern is also prompted by what it describes as Trunkline's slim margin of unsubscribed capacity that would remain after Trunkline has abandoned a major portion of its on-shore system as authorized by the Commission in Docket No. CP12-491.⁶⁶

77. In its answer, Trunkline states that when Laclede raised the same reliability concerns in Docket No. CP12-491, the Commission found that "Trunkline has demonstrated that its post-abandonment system will still be able to maintain flexibility and reliability for its existing customers."⁶⁷ Trunkline further states that the Pipeline Modification Project is "*designed primarily to meet the demand for additional transportation capacity to deliver natural gas to certain liquefaction facilities being constructed in the Louisiana Gulf Coast area*"⁶⁸ [emphasis supplied] and that the project's

⁶⁴ Application at 3.

⁶⁵ Application at 16.

⁶⁶ Laclede Protest at 6, referring to *Trunkline Gas Company, LLC*, 145 FERC ¶ 61,108 (2013) (*Trunkline*).

⁶⁷ Trunkline Answer at 4 (citing *Trunkline*, 145 FERC ¶ 61,108 at P 32).

⁶⁸ Trunkline Answer at 5.

compression “*will ensure the deliverability of increased volumes, and reduce the possibility of service disruptions.*”⁶⁹ [Emphasis supplied]

78. The Commission’s Certificate Policy Statement recognizes that increasing the costs of existing customers to pay for a project designed to improve reliability or flexibility of service for existing customers is not a subsidy.⁷⁰ However, in this context, Trunkline’s reliance on arguments that the Pipeline Modifications Project will be integrated with its existing system and will improve the efficiency and reliability of existing service is misplaced. The Commission rejected similar arguments in *Southeast Supply Header, LLC*⁷¹ and *ANR Pipeline Co.*⁷² where, as here, the purpose of the proposed project was to expand capacity to serve new load, not to improve the service of existing customers. In particular, the Commission stated in *SESH*:

It may be true, as it is for most pipeline projects, that existing customers might experience some increased level of flexibility or reliability as a result of this project. However, this project is not being proposed to improve the service of existing customers. For pipeline projects such as *SESH*’s, the purpose of which is to expand capacity of the existing system to serve new load, our policy requires there be no subsidization from existing customers.⁷³

79. Trunkline does not provide any data to support its assertion that the Pipeline Modifications Project will increase the reliability of existing customers’ service, nor does it claim that its existing system has experienced capacity constraints or other operational issues that would require an improvement in the reliability of such service. In fact, the Commission held in *Trunkline* that:

concerns over Trunkline’s operational flexibility are not compelling. As noted above, Trunkline has demonstrated that its post-abandonment system will still be able to maintain flexibility and reliability for its existing customers.⁷⁴

⁶⁹ *Id.*

⁷⁰ *See* Certificate Policy Statement, 88 FERC ¶ 61,227 at n.12.

⁷¹ 148 FERC ¶ 61,121 (2014), *order on reh’g*, 151 FERC ¶ 61,032 (2015) (*SESH*).

⁷² 152 FERC ¶ 61,021 (2015) (*ANR*).

⁷³ *SESH*, 151 FERC ¶ 61,032 at P 13.

⁷⁴ *Trunkline*, 145 FERC ¶ 61,108 at P 64.

80. Thus, because there is no demonstrated need to improve the reliability and flexibility of existing customers' service, there is no justification for granting a pre-determination of rolled-in rate treatment on that basis.

81. Moreover, while it is true that Trunkline's ability to physically transport natural gas in a southward direction using the Pipeline Modifications Project's capacity would theoretically be more reliable than its current method of transporting gas in that direction by backhaul exchange or displacement, such level of reliability would be available on a firm basis only to the expansion shipper BG Energy, as it has contracted for all of the Pipeline Modification Project's capacity. Also, the fact that Trunkline did not receive any bids in the open season from other shippers requiring north to south service indicates that they believe the reliability of their service is sufficient without the Pipeline Modification Project.

82. Finally, regarding Trunkline's assertion that it will operate the Pipeline Modifications Project facilities to provide service to all customers in the most efficient manner, the Commission presumes that all pipelines will operate their systems in the most efficient manner in order to maximize profit while providing service at just and reasonable rates.

Record Keeping

83. To assure that costs are properly allocated between Trunkline's existing shippers and the services proposed in this proceeding, the Commission directs Trunkline to keep separate books and accounting of costs attributable to the Pipeline Modifications Project. The books should be maintained with applicable cross-references, as required by section 154.309 of the Commission's regulations.⁷⁵ This information must be in sufficient detail so that the data can be identified in Statements G, I, and J in any future NGA section 4 or 5 rate case, and the information must be provided consistent with Order No. 710.⁷⁶ Such measures protect existing customers from cost overruns and from subsidization that might result from under-collection of the Pipeline Modification Project's incremental cost of service as well as assist the Commission and parties to the rate proceedings in determining the costs of the project.

⁷⁵ 18 C.F.R. § 154.309 (2015).

⁷⁶ See *Revisions to Forms, Statements, and Reporting Requirements for Natural Gas Pipelines*, Order No. 710, FERC Stats. & Regs ¶ 31,267 (2008).

Tariff Records

84. In Data Response No. 4, Trunkline states that in order to clarify the change in flow patterns due to the Pipeline Modification Project and future projects, it will add new definitions to Section 1 (Definitions) of its General Terms and Conditions regarding forward haul and backhaul. Trunkline is directed to file such tariff revisions not less than 30 days, or more than 60 days, before the date the Pipeline Modifications Project is placed in-service.

D. Environmental Analysis

1. Pre-Filing Review

85. On April 6, 2012, Commission staff granted the Applicants' requests to use the pre-filing process in Docket No. PF12-8-000. On September 14, 2012, the Commission issued a *Notice of Intent to Prepare an Environmental Impact Statement for the Planned Lake Charles Liquefaction Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Meeting (NOI)*.⁷⁷ The NOI was published in the *Federal Register* on September 20, 2012, and mailed to over 300 interested parties on the environmental mailing list, including federal, state, and local officials; agency representatives; conservation organizations; Native American tribes; local libraries and newspapers in the project areas; and property owners in the vicinity of planned project facilities.⁷⁸ On March 21, 2013, the Commission issued a supplemental NOI for the projects to describe planned, non-liquefaction facilities that were added after the initial NOI was issued. This notice was published in the *Federal Register* on March 28, 2013, and sent to about 340 interested parties on the environmental mailing list.⁷⁹

86. On October 3, 2012, Commission staff held a public scoping meeting in Sulphur, Louisiana, to provide an opportunity for the public to learn more about the project and provide comments on environmental issues to be addressed in the environmental document. No oral comments were provided at the scoping meeting. Twelve comment

⁷⁷ The environmental analysis considered the environmental impacts related to the construction and operation of both the Liquefaction Project and the Pipeline Modifications Project. Hereinafter, "project" or "projects" refers to both the Liquefaction Project and the Pipeline Modifications Project.

⁷⁸ 77 Fed. Reg. 58,373 (2012).

⁷⁹ 78 Fed. Reg. 18,970 (2013).

letters were filed by federal and state agencies, Native American tribes, and non-government organizations in response to the initial and supplemental NOIs during the public scoping period. A transcript of the scoping meeting and all written comments received were entered into the public record in Docket No. PF12-8-000.

87. In June 2013, Commission staff mailed a project update to the environmental mailing list. The update provided project information, a list of the primary concerns raised during scoping, the status and next steps of the environmental review process, and information on how to stay informed about the progress of the review process. In October 2013, Commission staff mailed another project update to the environmental mailing list providing the status of the environmental review process.

2. Application Review

88. After Applicants filed the project applications on March 25, 2014, Commission staff evaluated the potential environmental impacts of the proposed facilities in the draft and final EIS in accordance with the requirements of the National Environmental Policy Act of 1969 (NEPA).⁸⁰ The U.S. Army Corps of Engineers (Army Corps), U.S. Coast Guard, DOE, U.S. Fish and Wildlife Service (FWS), and U.S. Department of Transportation (DOT) participated as cooperating agencies in the preparation of the EIS.

89. On April 10, 2015, Commission staff issued the draft EIS, which addressed the substantive issues raised during the scoping period.⁸¹ The document was mailed to the Commission's environmental mailing list and a 45-day public comment period followed notice of the draft EIS. Commission staff held a public comment meeting on the draft EIS on May 7, 2015, in Sulphur, Louisiana. No oral comments were provided at the comment meeting. Seven written comment letters were submitted in response to the draft EIS, including four from federal and state agencies and three from other interested parties.⁸² The transcript of the public comment meeting and all written comments on the

⁸⁰ 42 U.S.C. §§ 4321 *et seq.* (2012). *See* 18 C.F.R. Part 380 (2014) (Commission's regulations implementing NEPA).

⁸¹ The Commission published notice of the draft EIS in the *Federal Register* on April 16, 2015. 80 Fed. Reg. 20,489 (2015).

⁸² U.S. Department of Interior stated that it had no comment on the draft EIS. NMFS, EPA, and the Louisiana Department of Wildlife and Fisheries filed comments in response to the draft EIS. Magnolia LNG, Sierra Club, and, jointly, Margaret Kuttner, Thomas M. Bergstedt, and John E. Bergstedt also filed comments.

draft EIS are part of the public record for the project in Docket Nos. CP14-119-000, CP14-120-000, and CP14-122-000.

90. Concerns raised in the comments included impacts on geology, water quality, wetlands, vegetation, wildlife and aquatic resources, threatened and endangered species, land use, socioeconomics, cultural resources, air quality and noise, safety, and cumulative impacts.

91. On August 14, 2015, Commission staff issued the final EIS for the proposed project. The final EIS addresses comments received on the draft EIS.⁸³ The final EIS was mailed to the same parties as the draft EIS, as well as to those who commented on the draft EIS.⁸⁴ The final EIS addresses geology; soils; water resources; wetlands; vegetation; wildlife and aquatic resources; threatened, endangered, and other special status species; land use, recreation, and visual resources; socioeconomics; cultural resources; air quality and noise; safety; cumulative impacts; and alternatives.

3. Major Environmental Issues Addressed in the Final EIS

92. The final EIS concludes that if the project is constructed and operated in accordance with applicable laws and regulations, the project will result in adverse environmental impacts. However, the impacts described in the final EIS will be adequately minimized with the implementation of the Applicants' proposed mitigation and Commission staff's recommendations (now adopted as the 95 conditions in the attached Appendix B of this order).⁸⁵ Based on Commission staff's analysis, public scoping, and agency consultation, the major issues associated with the project that are addressed in the EIS include impacts on water quality, wetlands, vegetation, wildlife and aquatic resources, threatened and endangered species, housing and traffic, air quality and noise, GHG emissions, safety, cumulative impacts, and indirect impacts. We summarize these major issues below.

⁸³ Appendix L of the final EIS includes responses to comments on the draft EIS.

⁸⁴ The distribution list is provided in Appendix A of the final EIS.

⁸⁵ The final EIS contained 96 recommended conditions. Recommended Condition 32 in the final EIS is not included in Appendix B of this order because Trunkline has since filed the required information.

a. Water Resources

93. As stated in the final EIS, the Industrial Canal/Turning Basin is designated as essential fish habitat (EFH) and a Navigable Waterway under section 10 of the Rivers and Harbors Act. The primary impacts on water quality within this area will be from dredging during construction of the marine facilities at the existing terminal. These effects will be minor because they will be temporary and localized, and Lake Charles LNG Export will minimize water quality impacts by using a hydraulic dredge with a suction cutter head. Reynolds Metals is currently dredging and disposing of contaminated sediments associated with historical operations of its Lake Charles Carbon Company at certain locations in the dock work area as part of a remediation effort approved by the Louisiana Department of Environmental Quality (Louisiana DEQ). Removal of the affected sediment is anticipated to be completed prior to any construction activities associated with the Liquefaction Project.

94. During construction of the Liquefaction Project, barges and support vessels will deliver equipment and materials to the temporary construction docks at the terminal, which may increase shoreline erosion and temporarily increase turbidity levels along vessel transit routes. However, the final EIS concludes that use of the Calcasieu Ship Channel by these vessels during Liquefaction Project construction will be consistent with the planned purpose and use of this active shipping channel, and associated impacts on water quality within the channel will be minor.⁸⁶

95. Construction of the Liquefaction Facilities will require filling of 14 waterbodies and armoring and realignment of an additional waterbody. Construction of Trunkline's Pipeline Modifications Project will affect 104 waterbodies. To minimize impacts on surface waters, Trunkline will conduct six horizontal directional drill (HDD) operations that will avoid instream impacts at a total of 22 waterbodies, including the Calcasieu River, which is a Louisiana Natural and Scenic River. Both Lake Charles LNG Export and Trunkline will mitigate impacts on surface waters through the implementation of the Commission's *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures) and the final Compensatory Mitigation Plan, which is being developed in coordination with the Army Corps. As recommended in the final EIS and required by Environmental Condition 22 of this order, Lake Charles LNG Export and Trunkline will file the final Compensatory Mitigation Plan and documentation of Army Corps approval of the plan prior to construction. With implementation of Lake Charles LNG Export's and Trunkline's construction and mitigation plans and the environmental conditions in Appendix B of this order, we support the conclusions of the final EIS that impacts on

⁸⁶ See Final EIS at 5-5.

water resources will be adequately minimized.⁸⁷

b. Wetlands

96. Construction of the Liquefaction Facilities will result in the permanent loss of 215.4 acres of wetlands within the liquefaction facility site and additional construction workspaces. The majority of the wetlands affected will be forested wetlands or forested wetland mosaics (pimple-mounds). Lake Charles LNG Export will be required to mitigate these wetland impacts as part of its Compensatory Mitigation Plan. We agree with the conclusion in the final EIS that the Liquefaction Facilities's impacts on wetlands due to construction and operation will be mitigated to less-than-significant levels.⁸⁸

97. Impacts on wetlands from construction and operation of Trunkline's Pipeline Modifications Project will be mostly temporary. Less than one acre of forested wetland will be permanently converted to emergent or scrub-shrub wetland within the maintained pipeline right-of-way or aboveground facility sites, and 0.5 acre of wetland will be permanently filled at meter station sites. Trunkline's plans to co-locate and overlap the right-of-way for the Mainline 200-3 Loop with an existing right-of-way and the use of the HDD method for certain crossings will minimize impacts on wetlands. Additionally, Trunkline modified its plans for the Mainline Connector and Compressor Station 203-A to minimize or avoid impacts on certain wetlands. Unavoidable wetland impacts will be mitigated through the implementation of the Commission's Procedures and the project-specific Compensatory Mitigation Plan. We agree with the conclusion in the final EIS that the Pipeline Modification Project's impacts on wetlands due to construction and operation will be minor.⁸⁹

c. Vegetation

98. Construction and operation of the Liquefaction Facilities will require the clearing of 568.3 acres of vegetation, resulting in the loss or conversion of 261.7 acres of forested uplands, 158.6 acres of forested wetlands, 56.9 acres of non-forested wetlands, and 91.1 acres of herbaceous upland. The greatest permanent impact on vegetation will be the loss of upland forest at the Liquefaction Project site. Impacts on herbaceous upland vegetation will be permanent but not significant because similar vegetative

⁸⁷ See Final EIS at 5-3 – 5-6.

⁸⁸ See Final EIS at 5-7.

⁸⁹ See Final EIS at 5-6 through 5-7.

communities occur within the surrounding area. As previously stated, impacts on wetland vegetation will be mitigated to less than significant levels through the implementation of the project-specific Compensatory Mitigation Plan.

99. To minimize impacts of the Pipeline Modifications Project on vegetative communities, Trunkline will conduct much of the work within or adjacent to existing maintained rights-of-way and facility sites, and will construct and operate the facilities in accordance with the Commission's *Upland Erosion Control, Revegetation, and Maintenance Plan* and Procedures. With the implementation of Trunkline's construction and mitigation measures and the environmental conditions in Appendix B of this order, we agree with the conclusion in the final EIS that construction and operation of the Pipeline Modifications Project will not have a significant impact on vegetation communities in the project area.⁹⁰

d. Wildlife and Aquatic Resources

100. The greatest impact on wildlife habitat will result from the loss or conversion of forested land within the liquefaction facility site and additional construction workspaces. The permanent reduction in forested habitat in the general vicinity of the Liquefaction Facility will have long-term and permanent impacts on wildlife species that use this habitat. Operation of the Liquefaction Facility will result in increased noise, lighting, and human activity that could disturb wildlife in the area. However, due to current industrial activities at the existing terminal and other industrial facilities in the vicinity, most wildlife in the area are acclimated to the noise and artificial lighting associated with these activities. Therefore, the final EIS concludes that wildlife impacts due to noise, light, and human activity during operation of the Liquefaction Facility will be negligible.⁹¹

101. The vegetative communities in the project area provide potential habitat for migratory bird species, and the FWS commented that the Liquefaction Facility site is expected to provide nesting habitat for bird species of concern. To minimize impacts from vegetation clearing on migratory birds, Lake Charles LNG Export and Trunkline will conduct all clearing of forested areas outside of the migratory bird nesting season in accordance with FWS recommendations that no habitat alteration work be performed during the nesting period. If the construction schedule changes such that clearing during migratory bird nesting season is necessary, the Applicants agreed to obtain written approval from the FWS prior to clearing. As recommended in the final EIS and required

⁹⁰ See Final EIS at 5-7 through 5-8.

⁹¹ See Final EIS at 5-8.

by Environmental Condition 24 of this order, Lake Charles LNG Export and Trunkline will also consult with the FWS if clearing during the migratory bird nesting season is necessary in non-forested areas, and will file with the Commission written documentation of FWS approval prior to construction in those areas.⁹²

102. During consultation with Trunkline, the Louisiana Department of Wildlife and Fisheries (Louisiana DWF) identified records of two colonial waterbird rookeries within one mile of certain project facilities, and the Louisiana DWF and FWS recommended spatial buffers and timing restrictions to minimize disturbance of colonial nesting birds, if present. To ensure that the FWS and Louisiana DWF recommendations are fully implemented, the final EIS recommended, and we are requiring in Environmental Condition 25 of this order, that Trunkline provide documentation that the FWS and the Louisiana DWF agree on the approach for addressing colonial waterbirds prior to construction of the facilities in question. The documentation will include agreed-upon mitigation measures that Trunkline would implement if construction of facilities within one mile of the recorded rookeries would occur during the colonial waterbird nesting seasons. With the environmental conditions in this order and implementation of the measures recommended by the FWS and Louisiana DWF, we agree with the conclusion in the final EIS that impacts on migratory birds, including colonial waterbirds, will be avoided or minimized.⁹³

103. Potential project impacts on aquatic resources primarily include those associated with construction of the two temporary construction docks and berthing dock modifications at the terminal. Lake Charles LNG Export's use of a cutter head suction dredge will minimize resuspension of sediments and the resulting increases in turbidity and suspended sediment levels. Due to the small volume of materials being dredged, short duration of dredging activities, and limited deepening of the existing open water habitat, the final EIS concludes that impacts on aquatic resources from dredging will be localized, temporary, and minor. Sound waves from pile driving also have the potential to affect aquatic resources. Therefore, as recommended in the final EIS and required by Environmental Condition 26 of this order, Lake Charles LNG Export will file a description of the in-water pile installation process and anticipated underwater sound pressure levels. If the peak or cumulative noise levels exceed the thresholds for injury to fish identified in the National Oceanic and Atmospheric Administration, National Marine

⁹² See Final EIS at 5-9.

⁹³ See Final EIS at 5-8 through 5-10.

Fisheries Service's (NMFS) interim guidelines, Lake Charles LNG Export will file proposed measures to minimize impacts.⁹⁴

104. The only area classified as EFH within the project area is the Industrial Canal/Turning Basin. Based on the largely temporary nature of project-related impacts and communications between Lake Charles LNG Export and the NMFS' Southeast Regional Office, the draft EIS determined that the project will not have a significant adverse impact on EFH. Commission staff requested that NMFS consider the draft EIS as its EFH Assessment. In a letter dated May 21, 2015, and as documented in the final EIS, NMFS concurred with the determination in the draft EIS and confirmed that no further EFH consultation is required.⁹⁵

e. Threatened and Endangered Species

105. Based on input from the FWS and NMFS, 23 federally listed threatened and endangered species, two species that are candidates for listing under the Endangered Species Act, and one species proposed for listing under the Endangered Species Act, may occur within the parishes or counties affected by the project. The final EIS concludes that the project would have no effect on 22 of the federally listed species, is not likely to jeopardize the one proposed species, and would not contribute to the trend toward federal listing for the two candidate species.⁹⁶

106. The draft EIS concluded that the project *may affect, but is not likely to adversely affect* the federally listed red-cockaded woodpecker. The FWS concurred with the findings in the draft EIS on July 16, 2015; therefore, consultation with the FWS under the Endangered Species Act is concluded. The project would have no effect on listed species under the jurisdiction of NMFS; therefore, no formal section 7 consultation between the Commission and NMFS is required.

f. Housing and Traffic

107. Construction of the Liquefaction Facilities will increase the local population during the 5-year construction period. Outside of the time when the workforce peaks, the final EIS concludes that the impact on transient housing will be minor. However, the

⁹⁴ See Final EIS at 5-10 through 5-11

⁹⁵ See *id.*

⁹⁶ See Final EIS at 5-11.

currently-available transient housing in Calcasieu Parish may not be sufficient to accommodate the maximum peak non-resident workforce, which may result in temporary impacts on housing availability in the project area during peak construction. To ensure adequate available housing for non-resident workers, Lake Charles LNG Export will require its contractor to develop a plan for addressing worker housing and monitoring availability of housing from the start of construction through the workforce peak.⁹⁷

108. Construction of the Liquefaction Facilities will result in a substantial increase in traffic due to worker vehicles, construction vehicles, and trucks taking materials and equipment to and from the site. Lake Charles LNG Export proposes to consider bussing of construction workers to and from the site and expects truck deliveries to occur during off-peak traffic period. A majority of the large deliveries of equipment and construction materials are anticipated to be via barge, reducing the number of truck trips to and from the Liquefaction Facility, the potential for damage to local roadways, and traffic congestion.⁹⁸ As recommended in the final EIS, and required by Environmental Condition 29 of this order, Lake Charles LNG Export will file a traffic management plan detailing specific measures that it will implement to minimize impacts on traffic near the Liquefaction Facility.

109. Construction of the Pipeline Modifications Project will not result in significant impacts on transient housing in the project area because the majority of the workforce will be local hires. Similarly, construction of the Pipeline Modifications Project will result in only minor, temporary impacts on traffic in the project area.

g. Air Quality and Noise

110. Air quality impacts due to construction of the project facilities will generally be temporary and localized, and are not expected to cause or contribute to a violation of applicable air quality standards. Most project-related air emissions will be produced by operation of the Liquefaction Facility, Compressor Station 203-A, and the modifications at the Longville Compressor Station. Lake Charles LNG Export will minimize air quality impacts from operation of the Liquefaction Facility by adhering to applicable federal and state regulations and installing Best Available Control Technology as required by the air permit issued by the Louisiana DEQ in May 2015. Trunkline's dispersion modeling results demonstrate that the emissions from Compressor Station 203-A and from the

⁹⁷ See Final EIS at 5-15 through 5-16.

⁹⁸ See *id.*

modifications at the Longville Compressor Station will not significantly impact the air quality in the surrounding area. As recommended in the final EIS and required by Environmental Condition 31 of this order, Trunkline will provide further analysis of the incremental increase in emissions of criteria pollutants from the Longville Compressor Station modifications prior to construction. Lake Charles LNG Export and Trunkline will comply with all applicable air permit requirements for project facilities. We support the conclusions of the final EIS that the project will not result in a significant adverse impact on regional or local air quality.⁹⁹

111. The final EIS documents the noise assessments for each of Trunkline's proposed HDD locations associated with pipeline construction with the exception of the Calcasieu River crossing.¹⁰⁰ Due to a change in the design of the Calcasieu River HDD crossing that was identified after the draft EIS was issued, the final EIS recommended that Trunkline file an updated acoustical assessment for this crossing. Trunkline filed this assessment on August 3, 2015, after the final EIS had gone to print. The assessment determined that the HDD at the Calcasieu River would not exceed the Commission's noise guidelines at any of the nearby noise sensitive areas. Therefore, Environmental Condition 32 recommended in the EIS is no longer warranted and is not included as a condition in this Order.

112. As stated in the final EIS, Trunkline's acoustical assessment determined that noise from HDD operations at Indian Bayou Canal could exceed the Commission's day-night sound level criterion of 55 decibels on the A-weighted scale (dBA) and/or result in a greater than 10 decibel increase over ambient conditions at the nearest noise sensitive areas.¹⁰¹ If drilling does exceed 55 dBA, Trunkline will implement additional noise mitigation measures. To ensure that HDD-related noise does not exceed 55 dBA or result in a greater than 10 decibel increase over ambient noise, the final EIS recommends and Environmental Condition 32 of this order requires, that Trunkline file in its biweekly construction status reports information for the Indian Bayou Canal HDD entry and exit points. The status reports will include noise measurements from the nearest noise sensitive area obtained at the start of drilling operations, the noise mitigation implemented at the start of drilling operations, and any additional mitigation measures Trunkline will implement if the initial noise measurements exceed Commission guidelines.

⁹⁹ See Final EIS at 5-17.

¹⁰⁰ See Final EIS at 4-143.

¹⁰¹ See Final EIS at 4-144 through 4-145.

113. During operation of the project, potential noise impacts will be limited to the vicinity of the Liquefaction Facility, Compressor Station 203-A, and the modified Longville Compressor Station. These facilities will include design measures to minimize sound generation at full load. The final EIS concludes that normal operation of the Liquefaction Facility, Compressor Station 203-A, and the compressor unit replacement at the Longville Compressor Station, with Lake Charles LNG Export's and Trunkline's proposed noise mitigation measures, will comply with the Commission's day-night sound level criterion of 55 dBA at the nearest noise sensitive areas. Noise levels during certain flaring events at the Liquefaction Facility will exceed the Commission's criteria at some noise sensitive areas, but most of these events will be of short duration, and Lake Charles LNG Export will notify nearby landowners in advance.¹⁰² As recommended in the final EIS and required by Environmental Conditions 33 through 36 of this order, Lake Charles LNG Export and Trunkline will conduct noise surveys during operation of each facility to ensure that noise levels meet our noise level criterion. We support the conclusions of the final EIS and find that construction and operation of the project facilities will not significantly affect air quality and noise.

h. Greenhouse Gas Emissions

114. EPA filed comments on the draft EIS requesting that the final EIS include an analysis of GHG emissions associated with the construction of the project, annual emissions from the operations, as well as GHG emissions associated with the production, transport, and combustion of the natural gas proposed to be exported. Section 4.11.1 of the final EIS discusses air quality, including GHG emissions associated with the construction and operation of the project. In response to EPA, the final EIS stated that Commission staff considered the GHG emissions associated with the project and the potential impacts related to climate change, but noted that there is no methodology to determine how the project's incremental contribution to GHGs would affect climate change. The final EIS recognized that end users would also emit GHGs; however, the final EIS stated that the emissions could not be attributed to the project because fuel-supply is demand-driven. In other words, end users would have a need for fuel without the exported natural gas from this project and would obtain gas from another source or another fuel.¹⁰³

115. After issuance of the final EIS, EPA submitted further comments stating that although the final EIS included a helpful discussion of GHG emissions associated with

¹⁰² See Final EIS at 4-146 through 4-149.

¹⁰³ See Final EIS at L-6.

construction and operation of the project, the climate change impacts associated with additional GHG emissions from the production, transport, and combustion of the exported natural gas should also be considered.¹⁰⁴ EPA recommended that the environmental analysis of the project include calculations of GHG emissions from end use of the gas exported by the facility, noting that the draft EIS for the Jordan Cove Energy and Pacific Connector Gas Pipeline Project (Jordan Cove Project)¹⁰⁵ included calculations for GHG emissions from end use of the gas to be exported by the facility, based on information provided by the State of Oregon. The EPA also recommended the DOE reports, “Addendum to Environmental Review Documents Concerning Exports of Natural Gas from the United States”¹⁰⁶ and “Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States,”¹⁰⁷ be considered as part of the decision-making process for the Project and incorporated by reference.

116. We do not believe the potential increase of GHG emissions associated with the production, transport, and combustion are causally related to our action in approving this project, nor are the potential environmental effects reasonably foreseeable as contemplated by the Council on Environmental Quality’s (CEQ) regulations. Moreover, as the Commission has previously stated, there is no standard methodology to determine whether, and to what extent, a project’s incremental contribution to GHG emissions would result in physical effects on the environment, either locally or globally.¹⁰⁸ In addition, countries seeking to import natural gas will continue to negotiate and find

¹⁰⁴ See EPA’s September 28, 2015 comments.

¹⁰⁵ Jordan Cove Energy Project’s Docket No. CP13-483-000 and Pacific Connector Gas Pipeline Project’s Docket No. CP13-492-000.

¹⁰⁶ See U.S. Department of Energy, *Addendum to Environmental Review Documents Concerning Exports of Natural Gas From The United States* (August 2014), <http://energy.gov/sites/prod/files/2014/08/f18/Addendum.pdf> (“DOE Addendum”).

¹⁰⁷ See U.S. Department of Energy’s National Energy Technology Laboratory, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States*, <http://energy.gov/sites/prod/files/2014/05/f16/Life%20Cycle%20GHG%20Perspective%20Report.pdf> (“Life Cycle Report”).

¹⁰⁸ See, e.g., *Sabine Pass Liquefaction Expansion, LLC*, 151 FERC ¶ 61,012 at P 97, *on reh’g*, 151 FERC ¶ 61,253 (2015).

natural gas supplies. Therefore, end use consumption of natural gas will likely occur regardless of whether the project before us is approved.

117. Each project the Commission reviews is evaluated for its site-specific impacts. Simply because one project includes unique information does not mean that the same can be provided for all projects. Unlike Oregon, Louisiana did not undertake and file a life-cycle GHG analysis to supplement the Commission's environmental review. Because we do not have, as we did in Jordan Cove, information regarding the destination of the LNG, which in turn would allow us to estimate the emissions that would occur while transporting the gas, we cannot provide the same analysis we included in the Jordan Cove draft EIS. Moreover, as explained in the final EIS for Jordan Cove, any life-cycle analysis of the emissions from LNG vessel transits to possible markets or the emissions resulting from the end use combustion of natural gas are too speculative to permit any meaningful consideration. Therefore, we disagree with EPA's suggestion as it would require us to engage in speculative analyses and provide information that will not meaningfully inform the decision-making process.

118. The DOE Addendum and Life Cycle Report similarly provide certain general estimates about the environmental impacts associated with natural gas production and end use. Those impacts are not specific to the proposal before us. And, as the DOE explained, in the absence of information regarding where and when additional gas production will arise, the environmental impacts of such production "are not 'reasonably foreseeable' within the meaning of the CEQ's NEPA regulations," and "cannot [be] meaningfully analyze[d]." ¹⁰⁹

119. Although not directly relevant to the proposal before the Commission, and not required by NEPA, the Commission notes the DOE Addendum's conclusion that natural gas development leads to both short-and long-term increases in local and regional air emissions. ¹¹⁰ It also found that such emissions may contribute to climate change. But to the extent that natural gas production replaces the use of other carbon-based energy sources, DOE found there may be a net positive impact in terms of climate change. ¹¹¹ The Life Cycle Report concludes that U.S. LNG exports for power production in

¹⁰⁹ DOE Addendum at 2. The Life Cycle Report similarly acknowledged the limitations and uncertainty in the underlying modeling data. *See* Life Cycle Report at 18.

¹¹⁰ DOE Addendum at 32.

¹¹¹ *Id.* at 44.

European and Asian markets will not increase life-cycle GHG emissions, when compared to regional coal extraction and consumption for power production.¹¹²

i. Safety and Reliability

120. The Liquefaction Project will be designed, constructed, operated, and maintained to meet or exceed the U.S. Coast Guard Safety Standards,¹¹³ the DOT Minimum Federal Safety Standards,¹¹⁴ and other applicable federal and state regulations. The final EIS evaluates the safety of the proposed Liquefaction Facility and LNG Terminal modifications, including assessments of hazards, preliminary engineering design, siting, emergency response, and security systems. The final EIS concludes that with the proposed mitigation measures and staff's additional recommendations included as conditions in Appendix B of this order, acceptable layers of protection or safeguards will be included in the liquefaction facility designs to reduce the risk of a potentially hazardous scenario from developing into an event that could impact the off-site public.¹¹⁵

121. The DOT assisted Commission staff in evaluating whether Lake Charles LNG Export's proposed design would meet the DOT siting requirements. In a September 19, 2014 letter, the DOT stated that it had no objection to Lake Charles LNG Export's methodology for determining the single accidental leakage sources for candidate design spills to be used in establishing the Part 193 siting requirements for the proposed liquefaction facilities. Additionally, on January 30, 2015, the DOT indicated that it has no objection to Lake Charles LNG Export's use of the proposed vacuum insulated piping in the methodology for determining single accidental leakage sources.¹¹⁶

122. In a letter dated March 5, 2012, the U.S. Coast Guard stated that the existing Waterway Suitability Assessment and Letter of Recommendation for the existing LNG terminal are adequate for the service associated with the proposed modifications. The proposed terminal modifications will occur outside of the Marine Transfer Area and Lake Charles LNG is not proposing to increase the size or frequency of LNG carrier traffic at

¹¹² See Life Cycle Report at 18.

¹¹³ See 33 C.F.R. pts. 105 and 127 (2015)

¹¹⁴ See 49 C.F.R. pts 192 and 193 (2015).

¹¹⁵ See Final EIS 5-19 through 5-20.

¹¹⁶ See *id.*

the terminal. Based on Commission staff's engineering design analysis and recommendations for the LNG Terminal, the final EIS concludes that the Liquefaction Project will not result in significantly increased public safety risks.¹¹⁷ We agree with this conclusion.

123. As stated in the EIS, the pipeline facilities will comply with DOT regulations at 49 C.F.R. Part 192. These regulations specify material selection, design criteria, corrosion protection, and qualifications for welders and operation personnel. The EIS concludes that Trunkline's compliance with the DOT's safety standards will ensure that Trunkline's construction and operation of the facilities will not have a significant impact on public safety.¹¹⁸ We agree with this conclusion.

j. Cumulative Impacts

124. The cumulative impacts identified in section 4.13 of the final EIS will be minor or insignificant.¹¹⁹ The cumulative impacts analysis considered the proposed project along with past, present, and reasonably foreseeable projects including existing LNG terminals, future liquefaction projects, oil and gas facilities, other industrial facilities, utility and transportation projects, commercial and residential developments, and government facilities and activities. Potential cumulative impacts were analyzed for geologic conditions and soils; water resources and wetlands; vegetation, wildlife, and aquatic resources; threatened and endangered species; land use, recreation, and visual resources; socioeconomics; cultural resources; air quality and noise; and safety.

125. As described in section 4.13 of the final EIS, the greatest potential for cumulative impacts is on socioeconomic conditions and land transportation. Concurrent construction of the proposed project and other projects in the area would result in increased workers in the area, which could exceed available housing and result in impacts on public services.¹²⁰ As a result, some members of the workforce and others seeking transient housing may be forced to obtain housing in more distant parishes with longer

¹¹⁷ *See id.*

¹¹⁸ *See id.*

¹¹⁹ *See* Final EIS at 5-20 through 5-22.

¹²⁰ *See* Final EIS at 4-205 through 4-214. Table 4.13.1 in the final EIS lists those projects that are most likely to contribute to the cumulative impacts within the vicinity of the proposed Project.

commutes. A large workforce for the simultaneously constructed projects would also have a beneficial cumulative effect on revenues for the state and the affected parishes due to expenditures for services and materials for the projects, increased expenditures by local workers, and expenditures by the non-local workforce. The parishes would also receive a substantial increase in property taxes from the projects.

126. The final EIS recognizes that concurrent construction and operation of the Liquefaction Project and other projects in the vicinity of the proposed liquefaction facility will increase traffic, which could result in deficiencies in area roadway capacities. However, with the implementation of the mitigation measures, as well as the implementation of the environmental and engineering conditions in Appendix B of this order, we concur with the final EIS' conclusion that impacts of the project, when added with other projects' impacts, will not result in any significant cumulative impacts.

k. Indirect Effects of Increased Natural Gas Production

127. EPA and Sierra Club filed comments stating that the Commission should consider the environmental impacts associated with increased natural gas production that would be induced by operation of the project. In its comments on the draft EIS, Sierra Club asserted that there are reliable predictions to show that project will induce additional natural gas production and that there are available tools to predict where the production increases will occur.¹²¹ Sierra Club argued that the increased production will impose significant environmental harms, such as various air pollution problems.

128. EPA also filed comments on the draft EIS recommending that the final EIS consider the environmental impacts associated with increased natural gas production.¹²² Specifically, EPA stated that a study released by DOE's National Energy Technology Laboratory (NETL) should be considered in the Commission's analysis, as it includes an analysis of the potential impacts likely to occur from increased production.¹²³

¹²¹ See Sierra Club's April 24, 2014 comments on the application and May 29, 2015 comments on the draft EIS. Sierra Club cites to the U.S. Energy Information Administration's (EIA) National Energy Modeling System (NEMS) and Deloitte Marketpoint's World Gas Model.

¹²² See EPA's June 9, 2015 comments on the draft EIS.

¹²³ See *id.* (citing DOE Addendum).

129. In response to the comments, the final EIS stated that an analysis of increased natural gas production would be too speculative because the impacts cannot be described with sufficient specificity to make such an analysis useful. The final EIS stated that the environmental impacts associated with natural gas production from shale sources are not reasonably foreseeable, because the project does not depend on the development of natural gas from shale resources, and determining the well and gathering line locations and environmental impacts is not feasible, as the market at any given time would determine the source of natural gas.¹²⁴ With regard to the DOE's Addendum, the final EIS stated that the Addendum included a broad analysis about the types of resources from which additional production would occur, and did not specifically relate to impacts from the Liquefaction and Pipeline Modifications Projects. Therefore, the final EIS did not include an analysis of the indirect impacts of induced natural gas production.

130. On September 28, 2015, the EPA filed comments stating that the final EIS did not fully address its concerns regarding indirect effects of natural gas production. EPA asserted that despite the fact that DOE's Addendum recognizes that the potential impacts from additional gas development will likely vary by production location, the study provides a conceptual level analysis of the types of impacts that are likely to occur from increased production.

131. The CEQ regulations direct federal agencies to examine the indirect impacts of proposed actions.¹²⁵ Indirect impacts are defined as those "which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems."¹²⁶ Accordingly, to determine whether an impact should be studied as an indirect impact, the Commission must determine whether it: (1) is caused by the proposed action; and (2) is reasonably foreseeable.

132. With respect to causation, "NEPA requires 'a reasonably close causal relationship' between the environmental effect and the alleged cause"¹²⁷ in order "to make an agency

¹²⁴ See Final EIS, Appendix L at L-29.

¹²⁵ See 40 C.F.R. § 1508.25(c) (2015).

¹²⁶ See 40 C.F.R. § 1508.8(b) (2015).

¹²⁷ *Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752 at 767 (2004) (quoting *Metro. Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 774 (1983)).

responsible for a particular effect under NEPA.”¹²⁸ As the Supreme Court explained, “a ‘but for’ causal relationship is insufficient [to establish cause for purposes of NEPA].”¹²⁹ Thus, “[s]ome effects that are ‘caused by’ a change in the physical environment in the sense of ‘but for’ causation,” will not fall within NEPA if the causal chain is too attenuated.¹³⁰ Further, the Court has stated that “where an agency has no ability to prevent a certain effect due to its limited statutory authority over the relevant actions, the agency cannot be considered a legally relevant ‘cause’ of the effect.”¹³¹

133. An effect is “reasonably foreseeable” if it is “sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision.”¹³² NEPA requires “reasonable forecasting,” but an agency is not required “to engage in speculative analysis” or “to do the impractical, if not enough information is available to permit meaningful consideration.”¹³³

134. The Commission does not have jurisdiction over natural gas production. The potential impacts of natural gas production, with the exception of GHG and climate change, would be on a local and regional level. Each locale includes unique conditions and environmental resources. Production activities are thus regulated at a state and local level. In addition, EPA regulates deep underground injection and disposal of wastewaters and liquids under the Safe Drinking Water Act, as well as air emissions under the Clean Air Act. On public lands, federal agencies are responsible for the enforcement of regulations that apply to natural gas wells.

135. As we have previously concluded in natural gas infrastructure proceedings, the environmental effects resulting from natural gas production are generally neither caused by a natural gas infrastructure project nor are they reasonably foreseeable consequences

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ *Metro. Edison*, 460 U.S. at 774.

¹³¹ *Dep’t of Transp. v. Pub. Citizen*, 541 U.S. 752 at 770.

¹³² *Sierra Club v. Marsh*, 976 F.2d 763, 767 (1st Cir. 1992). *See also City of Shoreacres v. Waterworth*, 420 F.3d 440, 453 (5th Cir. 2005).

¹³³ *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1078 (9th Cir. 2011).

of our approval of an infrastructure project, as contemplated by the CEQ regulations.¹³⁴ A causal relationship sufficient to warrant Commission analysis of the non-pipeline activity as an indirect impact would only exist if the proposed pipeline would transport new production from a specified production area and that production would not occur in the absence of the proposed pipeline (i.e., there will be no other way to move the gas).¹³⁵ To date, the Commission has not been presented with a proposed project that the record shows will cause the predictable development of gas reserves. In fact, the opposite causal relationship is more likely, i.e., once production begins in an area, shippers or end users will support the development of a pipeline to move the produced gas. It would make little economic sense to undertake construction of an infrastructure project in the hope that production might later be determined to be economically feasible and that the producers will choose the previously-constructed facilities as best suited for moving their gas to market.

136. Even accepting, *arguendo*, that a specific infrastructure project will cause natural gas production, we have found that the potential environmental impacts resulting from such production are not reasonably foreseeable. As we have explained, the Commission generally does not have sufficient information to determine the origin of the gas that will be transported on a pipeline. It is the states, rather than the Commission, that have jurisdiction over the production of natural gas and thus would be most likely to have the information necessary to reasonably foresee future production. We are aware of no forecasts by such entities, making it impossible for the Commission to meaningfully predict production-related impacts, many of which are highly localized. Thus, even if the Commission knows the general source area of gas likely to be transported on a given pipeline, a meaningful analysis of production impacts would require more detailed

¹³⁴ See, e.g., *Central New York Oil and Gas Co., LLC*, 137 FERC ¶ 61,121, at PP 81-101 (2011), *order on reh'g*, 138 FERC ¶ 61,104, at PP 33-49 (2012), *petition for review dismissed sub nom. Coalition for Responsible Growth v. FERC*, 485 Fed. Appx. 472, 474-75 (2012) (unpublished opinion).

¹³⁵ See *c.f. Sylvester v. U.S. Army Corps of Engin'rs*, 884 F.2d 394, 400 (9th Cir. 1989) (upholding the environmental review of a golf course that excluded the impacts of an adjoining resort complex). See also *Morongo Band of Mission Indians v. F.A.A.*, 161 F.3d 569, 580 (9th Cir. 1998) (concluding that increased air traffic resulting from airport plan was not an indirect, "growth-inducing" impact); *City of Carmel-by-the-Sea v. United States Dept. of Transp.*, 123 F.3d 1142, 1162 (9th Cir. 1997) (acknowledging that existing development led to planned freeway, rather than the reverse, notwithstanding the project's potential to induce additional development).

information regarding the number, location, and timing of wells, roads, gathering lines, and other appurtenant facilities, as well as details about production methods, which can vary per producer and depending on the applicable regulations in the various states. Accordingly, the impacts of natural gas production are not reasonably foreseeable because they are “so nebulous” that we “cannot forecast [their] likely effects” in the context of an environmental analysis of the impacts related to a proposed interstate natural gas pipeline.¹³⁶

137. Here, the potential environmental impacts associated with additional natural gas production are not sufficiently causally related to the Liquefaction and Pipeline Modifications Projects to warrant a detailed analysis, nor are the potential environmental impacts reasonably foreseeable, as contemplated by the CEQ regulations. As stated in the final EIS and discussed above, the projects do not depend on additional shale gas production, and no specific production area has been identified as a source of natural gas for the projects. The studies and reports that the parties cite are broad and do not show where or when additional development will occur if the project is approved.¹³⁷ There is no showing that there is a sufficient causal link between authorization of this LNG project and any additional production. Given that it is not known whether the Liquefaction and Pipeline Modifications will use natural gas derived from new

¹³⁶ *Habitat Educ. Ctr.*, 609 F.3d 897, 902 (7th Cir. 2010) (finding that impacts that cannot be described with specific specificity to make their consideration meaningful need not be included in the environmental analysis).

¹³⁷ In its comments on the draft EIS, Sierra Club maintained that the Energy Information Administration’s (EIA) 2012 “Effect of Increased Natural Gas Exports on Domestic Energy Markets” study (EIA LNG Export Study) predicted that 63 percent of the demand created by U.S. LNG exports will come from increased natural gas production, with about three quarters of the increase production from shale sources. *See* Sierra Club’s May 29, 2015 Letter at section VI. A. Sierra Club further stated that the majority of this additional production is likely to occur in the Gulf Coast region and surrounding states. However, the study makes general projections that do not assist the Commission with estimating how much, if any, of Lake Charles LNG Export’s natural gas export volumes will come from increased natural gas production, or information on when, where, and how future gas production that may be tied to the Lake Charles terminal will ultimately occur. Moreover, the EIA report includes the caveat that projections involving energy markets are “highly uncertain and subject to many events that cannot be foreseen, such as supply disruptions, policy changes, and technological breakthroughs.” EIA LNG Export Study at 3.

production, and that the amount, timing, and location of any development activity is also unknown, the impact from induced natural gas production is not an indirect effect of the projects.

138. Nonetheless, we note that, although not required by NEPA, a number of federal agencies have examined the potential environmental issues associated with unconventional natural gas production in order to provide the public with a more complete understanding of the potential impacts. DOE has concluded that such production, when conforming to regulatory requirements, implementing best management practices, and administering pollution prevention concepts may have temporary minor impacts to water resources.¹³⁸ The EPA has reached a similar conclusion.¹³⁹

4. Environmental Conclusions

139. We have reviewed the information and analysis contained in the record, including the final EIS, regarding the potential environmental effects of the Lake Charles LNG Liquefaction Project and Trunkline's Pipeline Modifications Project. Based on our consideration of this information and the discussion above, we agree with the conclusions presented in the final EIS and find that approval of the proposed facilities, if constructed and operated as described in the final EIS, is an environmentally acceptable action. Thus, in Appendix B, we are including the environmental mitigation measures as conditions to the authorizations granted by this order for the project.

140. Any state or local permits issued with respect to the jurisdictional facilities authorized herein must be consistent with the conditions of this authorization. We encourage cooperation between interstate pipelines and local authorities. However, this

¹³⁸ See DOE Addendum at 19.

¹³⁹ See EPA, *Draft Assessment of the Potential Impacts of Hydraulic Fracturing for Oil and Gas on Drinking Water Resources*, at ES-6, http://cfpub.epa.gov/ncea/hfstudy/recordisplay.cfm?deid=244651#_ga=1.161236345.552502682.1445635975. See also Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands, 80 Fed. Reg. 16128, (Mar. 26, 2015) (Bureau of Land Management promulgates regulations for hydraulic fracturing on Federal and Indian lands to "provide significant benefits to all Americans by avoiding potential damages to water quality, the environment, and public health").

does not mean that state and local agencies, through application of state or local laws, may prohibit or unreasonably delay the construction or operation of facilities approved by this Commission.¹⁴⁰

IV. Conclusion

141. At a hearing held on December 17, 2015, the Commission on its own motion received and made a part of the record in this proceeding all evidence, including the application, as supplemented, and exhibits thereto, submitted in support of the authorizations sought herein, and upon consideration of the record,

The Commission orders:

(A) In Docket No. CP14-119-000, a certificate of public convenience and necessity is issued to Trunkline authorizing it to construct and operate the Pipeline Modifications Project, as more fully described in this order and in its application.

(B) The certificate authority issued in Ordering Paragraph (A) shall be conditioned on the following:

(1) Trunkline's completion of the authorized construction of the proposed facilities and making them available within four years from the date of this order, pursuant to section 157.20(b) of the Commission's regulations;

(2) Trunkline's compliance with all applicable regulations under the NGA including, but not limited to, Parts 154 and 284, and paragraphs (a), (c), (e), and (f) of section 157.20 of the Commission's regulations;

(3) Trunkline's compliance with the environmental conditions listed in Appendix B to this order; and

(4) Trunkline's execution, prior to commencement of construction, of a firm service agreement equal to the level of service and in accordance with the

¹⁴⁰ See, e.g., *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293 (1988); *Dominion Transmission, Inc. v. Summers*, 723 F.3d 238, 243 (D.C. Cir 2013) (holding state and local regulation is preempted by the NGA to the extent they conflict with federal regulation, or would delay the construction and operation of facilities approved by the FERC); and *Iroquois Gas Transmission System, L.P.*, 52 FERC ¶ 61,091 (1990) and 59 FERC ¶ 61,094 (1992).

terms of service represented in its precedent agreement.

(C) Permission and approval are granted to Trunkline to abandon the requested facilities, as more fully described in this order and in its application.

(D) Trunkline shall notify the Commission within 10 days of the effective date of the abandonment of the facilities referenced in Ordering Paragraph (C).

(E) Trunkline is directed to implement initial transmission and fuel rates as discussed in this order.

(F) Trunkline's request for a predetermination supporting rolled-in rate treatment of the Pipeline Modifications Project's costs is denied, without prejudice to Trunkline arguing in its next general rate case, or in a limited NGA Section 4 filing in the case of fuel, that rolling such costs into its system rates is appropriate.

(G) Trunkline is directed to file actual tariff records to implement rates, terms and conditions, and fuel retainage percentages associated with the Pipeline Modifications Project, as described in this order, not less than 30 days, or more than 60 days, before the date the Project is placed in service.

(H) As described in this order, Trunkline shall keep separate books and accounting of costs, including incremental fuel costs, associated with the Pipeline Modifications Project.

(I) As described in this order, not less than 30 days and not more than 60 days prior to the commencement of service on the Pipeline Modifications Project, Trunkline must file an executed copy of any non-conforming service agreement associated with the Project as part of its tariff, disclosing and reflecting all non-conforming language, and a tariff record identifying each such agreement as a non-conforming agreement consistent with section 154.112 of the Commission's regulations.

(J) As described in the body of this order, Trunkline must file any negotiated rate agreement or tariff record setting forth the essential terms of the agreement associated with the Pipeline Modifications Project at least 30 days, but not more than 60 days before the proposed effective date of such rates.

(K) In Docket No. CP14-120-000, Lake Charles LNG Export and Lake Charles LNG are authorized under section 3 of the NGA to site, construct, and operate its proposed Liquefaction Project as described and conditioned herein, and as more fully described in the application, subject to the environmental conditions in Appendix B to this order.

(L) All phases of the Liquefaction Project must be completed and in-service within five years of the date of this order.

(M) Permission and approval are granted to Lake Charles LNG to abandon its NGA section 7 certificate authorizations, as more fully described in this order and in its application.

(N) Lake Charles LNG shall notify the Commission within 10 days of the effective date of the abandonment of the facilities referenced in Ordering Paragraph (M).

(O) Lake Charles LNG's request to cancel NGA Gas Tariff, *Fourth Revised Volume No. 1-A* is granted, subject to conditions discussed in this order.

(P) Lake Charles LNG's LNG facilities and operations are authorized under NGA section 3, as more fully described in this order and in its application.

(Q) The Applicants shall notify the Commission's environmental staff by telephone or facsimile of any environmental noncompliance identified by other federal, state, or local agencies on the same day that such agency notifies the Applicants. The Applicants shall file written confirmation of such notification with the Secretary of the Commission within 24 hours.

(R) The late motions to intervene are granted.

(S) The request for a technical conference is denied.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

Appendix A

CP14-119-000:

Timely, Unopposed Motions to Intervene

- Atmos Energy Corporation
- BG Energy Merchants, LLC and BG LNG Services, LLC
- Consumers Energy Company
- DTE Gas Company
- Laclede Energy Resources, Inc.
- Laclede Gas Company
- Missouri Public Service Commission
- The Peoples Gas Light and Coke Company
- NJR Energy Services Company
- PSEG Energy Resources & Trade LLC
- Sierra Club
- Tennessee Valley Authority

Late, Opposed Motion to Intervene

- Magnolia LNG, LLC

CP14-120-000:

Timely, Unopposed Motions to Intervene

- Atmos Energy Corporation
- BG Energy Merchants, LLC and BG LNG Services, LLC
- Consumers Energy Company
- Laclede Energy Resources
- Laclede Gas Company
- The Peoples Gas Light and Coke Company
- PSEG Energy Resources & Trade LLC
- Sierra Club

Late, Unopposed Motions to Intervene

- Magnolia LNG, LLC
- Missouri Public Service Commission

CP14-122-000:

Timely, Unopposed Motions to Intervene

- Atmos Energy Corporation
- BG Energy Merchants, LLC and BG LNG Services, LLC
- Consumers Energy Company
- Laclede Energy Resources, Inc.
- Laclede Gas Company
- The Peoples Gas Light and Coke Company
- PSEG Energy Resources & Trade LLC
- Sierra Club

Late, Unopposed Motions to Intervene

- Magnolia LNG, LLC
- Missouri Public Service Commission

Appendix B

Environmental Conditions

As recommended in the final Environmental Impact Statement (EIS), and modified by the order, this authorization includes the following conditions:

1. Lake Charles LNG Export Company, LLC and Lake Charles LNG Company, LLC (collectively, Lake Charles LNG) and Trunkline Gas Company, LLC (Trunkline) shall follow the construction procedures and mitigation measures described in their applications and supplements (including responses to staff data requests) and as identified in the EIS, unless modified by the Order. Lake Charles LNG and Trunkline must:
 - a. request any modification to these procedures, measures, or conditions in a filing with the Secretary of the Commission (Secretary);
 - b. justify each modification relative to site-specific conditions;
 - c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
 - d. receive approval in writing from the Director of the Office of Energy Projects (OEP) **before using that modification.**
2. For the liquefied natural gas (LNG) facilities, the Director of OEP has delegated authority to take all steps necessary to ensure the protection of life, health, property, and the environment during construction and operation of the project. This authority shall include:
 - a. stop-work authority and authority to cease operation; and
 - b. the design and implementation of any additional measures deemed necessary to assure continued compliance with the intent of the conditions of the Order.
3. For the non-liquefaction facilities, the Director of OEP has delegated authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of the project. This authority shall allow:
 - a. the modification of conditions of the Order; and
 - b. the design and implementation of any additional measures deemed

necessary (including stop-work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from construction and operation of the project.

4. **Prior to any construction**, Lake Charles LNG and Trunkline each shall file affirmative statements with the Secretary, certified by senior company officials, that all company personnel, environmental inspectors (EIs), and contractor personnel will be informed of the EIs' authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities for the project.
5. The authorized facility locations shall be as shown in the EIS, as supplemented by filed alignment sheets. **As soon as they are available and before the start of construction**, Lake Charles LNG and Trunkline shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by the Order. All requests for modifications of environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

Trunkline's exercise of eminent domain authority granted under Natural Gas Act section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized facilities and locations. Trunkline's right of eminent domain granted under Natural Gas Act section 7(h) does not authorize it to increase the size of its natural gas pipeline or facilities to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

6. Lake Charles LNG and Trunkline shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. All areas must be approved in writing by the Director of OEP **before construction in or near that area**.

This requirement does not apply to extra workspace allowed by the FERC *Upland Erosion Control, Revegetation, and Maintenance Plan* and/or minor field realignments per landowner needs and requirements that do not affect other landowners or sensitive environmental areas such as wetlands.

Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

- a. implementation of cultural resources mitigation measures;
- b. implementation of endangered, threatened, or special concern species mitigation measures;
- c. recommendations by state regulatory authorities; and
- d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.

7. **Within 60 days of the acceptance of the Order and before construction begins**, Lake Charles LNG and Trunkline shall file Implementation Plans with the Secretary for review and written approval by the Director of OEP. Lake Charles LNG and Trunkline must file revisions to the plans as schedules change. The plans shall identify:

- a. how Lake Charles LNG and Trunkline will implement the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests), identified in the EIS, and required by the Order;
- b. how Lake Charles LNG and Trunkline will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to on-site construction and inspection personnel;
- c. the number of EIs assigned per spread and/or facility, and how Lake Charles LNG and Trunkline will ensure that sufficient personnel are available to implement the environmental mitigation;
- d. company personnel, including EIs and contractors, who will receive copies of the appropriate material;
- e. the location and dates of the environmental compliance training and instructions Lake Charles LNG and Trunkline will give to all personnel

- involved with construction and restoration (initial and refresher training as the project progresses and personnel changes), with the opportunity for OEP staff to participate in the training session(s);
- f. the company personnel (if known) and specific portion of Lake Charles LNG's and Trunkline's organizations having responsibility for compliance;
 - g. the procedures (including use of contract penalties) Lake Charles LNG and Trunkline will follow if noncompliance occurs; and
 - h. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:
 - i. the completion of all required surveys and reports;
 - ii. the environmental compliance training of on-site personnel;
 - iii. the start of construction; and
 - iv. the start and completion of restoration.
8. Lake Charles LNG and Trunkline shall employ a team of EIs, including at least one EI for the liquefaction facility/LNG terminal modifications, and one or more EIs per pipeline spread. The EIs shall be:
- a. responsible for monitoring and ensuring compliance with all mitigation measures required by the Order and other grants, permits, certificates, or other authorizing documents;
 - b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 7 above) and any other authorizing document;
 - c. empowered to order correction of acts that violate the environmental conditions of the Order, and any other authorizing document;
 - d. a full-time position, separate from all other activity inspectors;
 - e. responsible for documenting compliance with the environmental conditions of the Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and
 - f. responsible for maintaining status reports.

9. Beginning with the filing of the Implementation Plans, Lake Charles LNG and Trunkline shall file updated status reports with the Secretary on a **monthly** basis for the LNG facilities and a **biweekly** basis for the non-liquefaction facilities until all construction and restoration activities are complete. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:
 - a. an update on Lake Charles LNG's and Trunkline's efforts to obtain the necessary federal authorizations;
 - b. the current construction status of the liquefaction facility/LNG terminal modifications and non-liquefaction facilities, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally sensitive areas;
 - c. a listing of all problems encountered and each instance of noncompliance observed by the EIs during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);
 - d. a description of the corrective actions implemented in response to all instances of noncompliance, and their cost;
 - e. the effectiveness of all corrective actions implemented;
 - f. a description of any landowner/resident complaints that may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and
 - g. copies of any correspondence received by Lake Charles LNG and Trunkline from other federal, state, or local permitting agencies concerning instances of noncompliance, and Lake Charles LNG's and/or Trunkline's response.
10. **Prior to receiving written authorization from the Director of OEP to commence construction of any project facilities**, Lake Charles LNG and Trunkline shall file with the Secretary documentation that they have received all applicable authorizations required under federal law (or evidence of waiver thereof).

11. Lake Charles LNG must receive written authorization from the Director of OEP **prior to introducing hazardous fluids into the liquefaction facilities.** Instrumentation and controls, hazard detection, hazard control, and security components/systems necessary for the safe introduction of such fluids shall be installed and functional.
12. Lake Charles LNG and Trunkline must each receive written authorization from the Director of OEP **before placing into service** the liquefaction facility/LNG terminal modifications and the non-liquefaction facilities. Such authorization will only be granted following a determination that the facilities have been constructed in accordance with FERC approval and applicable standards, can be expected to operate safely as designed, and the rehabilitation and restoration of the right-of-way and other areas affected by the project are proceeding satisfactorily.
13. **Within 30 days of placing the authorized facilities in service,** Lake Charles LNG and Trunkline each shall file an affirmative statement with the Secretary, certified by a senior company official:
 - a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or
 - b. identifying which of the conditions of the Order Lake Charles LNG and Trunkline have complied with or will comply with. This statement shall also identify any areas affected by the projects where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.
14. **Prior to construction,** Lake Charles LNG shall file with the Secretary a plan for periodic monitoring and reporting of ground subsidence and foundation settlement for the design life of the liquefaction facility.
15. Lake Charles LNG shall file with the Secretary the following information, stamped and sealed by the professional engineer-of-record:
 - a. site preparation drawings and specifications;
 - b. LNG liquefaction facility structures and foundation design drawings and calculations; and
 - c. quality control procedures to be used for civil/structural design and construction.

In addition, Lake Charles LNG shall file, **in its Implementation Plan**, the schedule for producing this information.

16. **Prior to construction**, Trunkline shall file with the Secretary the geotechnical investigations, stamped and sealed by the professional engineer-of-record, which are necessary to evaluate the suitability of the proposed horizontal directional drill (HDD) crossings.
17. **Prior to construction**, Lake Charles LNG shall file with the Secretary, for review and written approval by the Director of OEP, final design plans for the additional construction workspaces (ACWs) that detail how each ACW will be stabilized after construction is complete to prevent off-site erosion impacts on the surrounding areas, and any planned mitigation to address altered drainage patterns resulting from the modified elevation and clearing of these sites.
18. **Prior to construction**, Lake Charles LNG and Trunkline shall file with the Secretary an updated Spill Prevention and Response Plan that includes project-specific emergency contacts and local authorities, and the project-specific Spill Prevention, Control, and Countermeasure Plan(s) for review and written approval by the Director of OEP.
19. **Within 30 days of placing facilities in service**, Lake Charles LNG and Trunkline shall file with the Secretary a report identifying all public or private water supply wells/systems damaged by construction and how they were repaired. The report shall also include a discussion of any other complaints concerning well yield or water quality and how each problem was resolved.
20. **Prior to construction**, Trunkline shall file with the Secretary copies of the final HDD plan and profile drawings for review and written approval by the Director of OEP.
21. **Prior to construction**, Trunkline shall file its final HDD Contingency Plan with the Secretary for review and written approval by the Director of OEP.
22. **Prior to construction**, Lake Charles LNG and Trunkline shall file with the Secretary a copy of the final Compensatory Mitigation Plan and documentation of U.S. Army Corps of Engineers approval of the plan.
23. **Prior to construction**, Lake Charles LNG and Trunkline shall coordinate with the Natural Resources Conservation Service and Louisiana Department of Wildlife and Fisheries (LDWF) to develop a project-specific noxious weed control plan. The plan shall be filed with the Secretary for review and approval by the Director of OEP.

24. If clearing during the migratory bird nesting season is necessary in non-forested vegetated habitat, Lake Charles LNG and Trunkline shall consult with the U.S. Fish and Wildlife Service (FWS) and file with the Secretary written documentation of FWS approval **prior to construction in those areas.**
25. **Prior to construction of the Mainline 200-3 Loop and the Natural Gas Pipeline Company of America-Lakeside Meter Station,** Trunkline shall file with the Secretary documentation that the FWS and LDWF are in agreement with Trunkline's proposed approach for addressing colonial waterbirds, including a description of the final agreed-upon mitigation measures that Trunkline would implement if construction of these facilities will occur during the colonial waterbird nesting seasons identified by the FWS and LDWF.
26. **Prior to construction,** Lake Charles LNG shall file with the Secretary, for review and written approval by the Director of OEP, a description of the proposed in-water pile installation process, including the number and type of pile driver(s) (e.g., impact or vibratory hammer) and duration of in-water pile driving activities, and an analysis of anticipated peak and cumulative underwater sound pressure levels. If the analysis determines that pile driving activities will exceed a peak sound pressure of 206 decibels (dB) re: 1 microPascal (μPa) or a cumulative sound pressure level of 183 dB re: 1 μPa , Lake Charles LNG shall provide a description of measures it would implement to minimize impacts on aquatic resources in the vicinity of on-land and in-water pile driving activities.
27. **Prior to construction,** Trunkline shall file with the Secretary an updated Blanket Clearance regarding federally listed species under the Endangered Species Act and/or, if an updated Blanket Clearance is not issued or the stipulations of the Blanket Clearance change, updated documentation from the FWS that the previous determinations of effect are still current. Trunkline shall not begin construction activities **until** it receives written notification from the Director of OEP that construction or use of mitigation may begin.
28. **Prior to construction,** Lake Charles LNG shall file with the Secretary, for review and written approval of the Director of OEP, visual screening plans for ACWs A and D. At a minimum, each plan shall include the retention of a forested buffer of sufficient width to provide an effective visual screen between the liquefaction facilities or ACW and the nearest residences located to the east (for ACW A) and to the north (for ACW D).

29. **Prior to construction**, Lake Charles LNG shall file with the Secretary, for review and written approval by the Director of OEP, a traffic management plan that details specific measures that will be implemented to minimize impacts on traffic. The traffic management plan shall identify off-site vehicle parking areas, alternative worker transportation methods, traffic control measures, infrastructure improvement, traffic control personnel, and construction and delivery areas.
30. **Prior to construction**, Lake Charles LNG and Trunkline shall file with the Secretary, for review and written approval by the Director of OEP, a *Fugitive Dust Control Plan* that includes a description of mitigation measures they will implement to minimize fugitive dust emissions from construction activities, including measures to reduce particulate matter less than 10 microns in aerodynamic diameter (PM₁₀) and particulate matter less than 2.5 microns in aerodynamic diameter (PM_{2.5}) emissions. The plan shall clearly explain how Lake Charles LNG and Trunkline will implement such measures and specify the individuals that will have the authority to determine the need for implementation of dust control measures, and to stop work if the contractor does not comply. In developing the plan, Lake Charles LNG and Trunkline shall consider and incorporate as appropriate the recommendations provided by the U.S. Environmental Protection Agency (EPA) in Attachment 1 of its June 1, 2015 comment letter.
31. **Prior to construction of modifications to the Longville Compressor Station**, Trunkline shall file the results of an air quality screening (AERSCREEN), or refined modeling analysis (AERMOD or EPA-approved alternative) for all of the emission generating equipment (including existing equipment) at the Longville Compressor Station. The results shall demonstrate that the modeled existing emissions, plus the modeled incremental increase in emissions of criteria pollutants from the modifications either:
 - a. results in local concentrations below the National Ambient Air Quality Standards (NAAQS) where current modeled concentrations from the existing compressor station (existing and ambient background) are below the NAAQS; or
 - b. does not cause or contribute to significantly increased local area concentrations above the NAAQS where the current ambient background concentrations are currently above the NAAQS.
32. Trunkline shall file **in the biweekly construction status reports** the following for the Indian Bayou Canal HDD entry and exit points:
 - a. the noise measurements from the nearest noise sensitive area (NSA), obtained at the start of drilling operations;

- b. the noise mitigation that Trunkline implemented at the start of drilling operations; and
 - c. any additional mitigation measures that Trunkline will implement if the initial noise measurements exceeded a day-night sound level (L_{dn}) of 55 decibels using the A-weighted scale (dBA) at the nearest NSA and/or increased noise more than 10 dBA over ambient conditions.
33. Lake Charles LNG shall file a full load noise survey with the Secretary for the liquefaction facility **no later than 60 days** after each liquefaction train is placed into service for the first and second liquefaction train. If the noise attributable to the operation of the equipment at the liquefaction facility exceeds an L_{dn} of 55 dBA at the nearest NSA, Lake Charles LNG shall reduce operation of the liquefaction facilities or install additional noise controls until a noise level below an L_{dn} of 55 dBA at the nearest NSA is achieved. Lake Charles LNG shall confirm compliance with the above requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls.
34. Lake Charles LNG shall file a noise survey with the Secretary **no later than 60 days** after placing the entire liquefaction facility into service. If a full load noise survey is not possible, Lake Charles LNG shall provide an interim survey at the maximum possible load and provide the full load survey **within 6 months**. If the noise attributable to the operation of all of the equipment at the liquefaction facility under interim or full load conditions exceeds an L_{dn} of 55 dBA at the nearest NSA, Lake Charles LNG shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within 1 year** of the in-service date. Lake Charles LNG shall confirm compliance with the above requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls.
35. Trunkline shall file a noise survey for Compressor Station 203-A **no later than 60 days** after placing the station into service. If a full power load condition noise survey is not possible, Trunkline shall file an interim survey at the maximum possible power load **within 60 days** of placing the station into service and file the full power load survey **within 6 months**. If the noise attributable to operation of all equipment at the station under interim or full power load conditions exceeds an L_{dn} of 55 dBA at any nearby NSA, Trunkline shall:
- a. file a report with the Secretary, for review and written approval by the Director of OEP, on what changes are needed;

- b. install additional noise controls to meet that level **within 1 year** of the in-service date; and
 - c. confirm compliance with this requirement by filing a second full power load noise survey with the Secretary for review and written approval by the Director of OEP **no later than 60 days** after it installs the additional noise controls.
36. Trunkline shall conduct noise surveys at the Longville Compressor Station to verify that the noise from all the equipment operated at full power load does not exceed the predicted noise levels above an L_{dn} of 55 dBA at any nearby NSAs. The results of the noise surveys shall be filed with the Secretary **no later than 60 days** after placing the new compressor unit in service. If a full load condition noise survey is not possible, Trunkline shall provide an interim survey at the maximum possible horsepower load **within 60 days** of placing the new compressor unit into service and provide the full load survey **within 6 months**. If the noise attributable to the operation of the modified compressor station at full or interim power load conditions exceeds predicted noise levels at any nearby NSAs, Trunkline shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within 1 year** of the in-service date. Trunkline shall confirm compliance with this requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls.

Recommendations 37 through 92 shall apply to the Lake Charles Liquefaction Project LNG facilities. Information pertaining to these specific recommendations shall be filed with the Secretary for review and written approval by the Director of OEP either: **prior to initial site preparation; prior to construction of final design; prior to commissioning; prior to introduction of hazardous fluids; or prior to commencement of service**, as indicated by each specific condition. Specific engineering, vulnerability, or detailed design information meeting the criteria specified in Order No. 683 (Docket No. RM06-24-000), including security information, shall be submitted as critical energy infrastructure information (CEII) pursuant to 18 CFR 388.112. See Critical Energy Infrastructure Information, Order No. 683, 71 Fed. Reg. 58,273 (October 3, 2006), FERC Stats. & Regs. ¶31,228 (2006). Information pertaining to items such as: offsite emergency response; procedures for public notification and evacuation; and construction and operating reporting requirements, would be subject to public disclosure. All information shall be filed **a minimum of 30 days** before approval to proceed is requested.

37. **Prior to initial site preparation**, Lake Charles LNG shall provide procedures for controlling access during construction.

38. **Prior to initial site preparation**, Lake Charles LNG shall file the quality assurance and quality control procedures for construction activities.
39. **Prior to initial site preparation**, Lake Charles LNG shall file a plot plan of the final design showing all major equipment, structures, buildings, and impoundment systems.
40. **Prior to initial site preparation**, Lake Charles LNG shall file the updated emergency response plan (ERP) to include the Liquefaction Facilities as well as instructions to handle on-site refrigerant and natural gas liquids-related emergencies.
41. **Prior to initial site preparation**, Lake Charles LNG shall file an ERP that includes a Cost-Sharing Plan identifying the mechanisms for funding all project-specific security/emergency management costs that would be imposed on state and local agencies. In addition to the funding of direct transit-related security/emergency management costs, this comprehensive plan shall include funding mechanisms for the capital costs associated with any necessary security/emergency management equipment and personnel base.
42. The **final design** shall include information/revisions pertaining to Lake Charles LNG's response to the Engineering Information Requests identified in table 4.12.3-1 of the EIS.
43. The **final design** shall include change logs that list and explain any changes made from the front-end engineering design (FEED) provided in Lake Charles LNG's application and filings. A list of all changes with an explanation for the design alteration shall be provided and all changes shall be clearly indicated on all diagrams and drawings.
44. The **final design** shall provide up-to-date Process Flow Diagrams with heat and material balances and piping and instrumentation diagrams (P&ID), which include the following information:
 - a. equipment tag number, name, size, duty, capacity, and design conditions;
 - b. equipment insulation type and thickness;
 - c. storage tank (i.e., condensate) pipe penetration size or nozzle schedule;
 - d. valve high pressure side and internal and external vent locations;
 - e. piping with line number, piping class specification, size, and insulation type and thickness;

- f. piping specification breaks and insulation limits;
 - g. all control and manual valves numbered;
 - h. relief valves with size and set points; and
 - i. drawing revision number and date.
45. The **final design** shall provide P&IDs, specifications, and procedures that clearly show and specify the tie-in details required to safely connect the project to the existing facility.
46. The **final design** shall provide an up-to-date complete equipment list, process and mechanical data sheets, and specifications.
47. The **final design** shall include three-dimensional plant drawings to confirm plant layout for maintenance, access, egress, and congestion.
48. The **final design** shall provide complete drawings and a list of the hazard detection equipment. The drawings shall clearly show the location and elevation of all detection equipment. The list shall include the instrument tag number, type and location, alarm indication locations, and shutdown functions of the hazard detection equipment.
49. The **final design** shall provide complete plan drawings and a list of the fixed and wheeled dry-chemical, hand-held fire extinguishers, and other hazard control equipment. Drawings shall clearly show the location by tag number of all fixed, wheeled, and hand-held extinguishers. The list shall include the equipment tag number, type, capacity, equipment covered, discharge rate, and automatic and manual remote signals initiating discharge of the units.
50. The **final design** shall provide facility plans and drawings that show the location of the firewater and foam systems. Drawings shall clearly show: firewater and foam piping; post indicator valves; and the location, and area covered by, each monitor, hydrant, deluge system, foam system, water-mist system, and sprinkler. The drawings shall also include P&IDs of the firewater and foam system.
51. The **final design** shall include an updated fire protection evaluation of the proposed facilities carried out in accordance with the requirements of National Fire Protection Association (NFPA) 59A 2001, chapter 9.1.2 as required by 49 CFR Part 193. The evaluation shall consider the need for clean agent fire suppression in the new switchgears and motor control centers. A copy of the evaluation, a list of recommendations and supporting justifications, and actions taken on the recommendations shall be filed.

52. The **final design** shall specify that for hazardous fluids, piping and piping nipples 2 inches or less in diameter are to be no less than schedule 160 for carbon steel and no less than schedule 80 for stainless steel, or are designed to withstand external loads, including vibrational loads in the vicinity of rotating equipment and live loads of operators in areas accessible by operators.
53. The **final design** shall include drawings and details of how process seals or isolations installed at the interface between a flammable fluid system and an electrical conduit or wiring system meet the requirements of NFPA 59A.
54. The **final design** shall provide an air gap or vent installed downstream of process seals or isolations installed at the interface between a flammable fluid system and an electrical conduit or wiring system. Each air gap shall vent to a safe location and be equipped with a leak detection device that: shall continuously monitor for the presence of a flammable fluid; shall alarm the hazardous condition; and shall shutdown the appropriate systems.
55. The **final design** shall provide electrical area classification drawings.
56. The **final design** shall provide spill containment system drawings with dimensions and slopes of curbing, trenches, and impoundments.
57. The **final design** of the hazard detectors shall account for the calibration gas when determining the lower flammable limit set points for methane, propane, ethane, and condensate.
58. The **final design** shall include a hazard and operability review of the completed design prior to issuing the P&IDs for construction. A copy of the review, a list of recommendations, and actions taken on the recommendations, shall be filed.
59. The **final design** shall include the cause-and-effect matrices for the process instrumentation, fire and gas detection system, and emergency shutdown system. The cause-and-effect matrices shall include alarms and shutdown functions, details of the voting and shutdown logic, and setpoints.
60. The **final design** shall include a drawing showing the location of the emergency shutdown buttons. Emergency shutdown buttons shall be easily accessible, conspicuously labeled, and located in an area that would be accessible during an emergency.
61. The **final design** shall specify that all emergency shutdown valves are to be equipped with open and closed position switches connected to the Distributed Control System/Safety Instrumented System.

62. The **final design** shall include a plan for clean-out, dry-out, purging, and tightness testing. This plan shall address the requirements of the American Gas Association's Purging Principles and Practice required by 49 CFR 193, and shall provide justification if not using an inert or non-flammable gas for cleanout, dry-out, purging, and tightness testing.
63. The **final design** shall include the sizing basis and capacity for the final design of pressure and vacuum relief valves for major process equipment, vessels, and storage tanks.
64. The **final design** shall provide the procedures for pressure/leak tests that address the requirements of American Society of Mechanical Engineers (ASME) VIII and ASME B31.3, as required by 49 CFR 193.
65. The **final design** shall include a structural evaluation of each LNG storage tank that accounts for the modifications to the tanks, internal pump columns, and piping systems. The evaluation shall include the following:
 - a. modification details;
 - b. structural design loading and acceptance criteria used to evaluate the structural integrity of the LNG storage tanks, internal pump columns, piping and associated supports;
 - c. effects of the modifications on the tanks' structural design; and
 - d. review and approval by the tank manufacturer to verify the structural integrity of the tank is adequate to support the modifications and proposed operating conditions and other design loadings.
66. The **final design** of the thermal relief valve PSV-880 discharge shall not be directed downstream of emergency shutdown valve ESDV-510.
67. The **final design** shall specify that the design pressure of the Hot Oil Expansion Drum, A801-F, shall be consistent with the design pressure of the hot oil system.
68. The **final design** of the inlet and discharge piping to/from PSV-060A/B on the Rich Amine Flash Drum shall be stainless steel and shall discharge to the low pressure flare header to be consistent with the flare pressure design philosophy.
69. The **final design** shall include a piping specification that applies to the design conditions of the regeneration piping systems associated with the dehydrators.

70. The **final design** of the discharge from pressure controlled vents PV-144 and PV-124 on the mixed refrigerant system shall be directed to the low pressure cold flare header.
71. The **final design** shall include a full evaluation and justification for the exclusion of suction drums for the medium pressure and high pressure stages of the medium and high pressure mixed refrigerant compressors. The evaluation shall include consideration for settle out condensation under all conditions.
72. The **final design** of the firewater pump testing system shall include flow and pressure transmitters that connect to the distributed control system. The P&IDs shall show the test piping from the discharge of each pump connecting to a common header upstream of the flow and pressure transmitters.
73. The **final design** shall provide details of the heating element for the Flare Knockout Drums and the method of insertion and removal.
74. The **final design** shall evaluate the installation of a forward pressure control valve with flow reset, rather than a flow control valve (i.e., FV-82127), on the regeneration stream to the Ethane Treatment Beds.
75. The **final design** shall demonstrate that the design pressure of the Propane Transfer Pump, 8202-J, and the set pressure of the discharge relief valve PSV-82087 would be consistent with the propane transfer pump shutoff pressure conditions.
76. The **final design** shall provide procedures for how to prevent the flare system from overloading due to excessive intentional and inadvertent venting from the blowdown valves.
77. The **final design** of the refrigerant storage system shall allow the isolation of individual pressure relief valves while providing full relief capacity, during pressure relief valve maintenance or testing.
78. Lake Charles LNG shall certify that the **final design** is consistent with the information provided to U.S. Department of Transportation (DOT) as described in the design spill determination letter dated September 19, 2014 (Accession Number 20140919-4005). In the event that any modifications to the design alters the candidate design spills on which the Title 49 CFR Part 193 siting analysis was based, Lake Charles LNG shall consult with DOT on any actions necessary to comply with Part 193.

79. The **final design** shall include the details of how the vacuum insulated piping account for mechanical stress and thermal movements of the outer piping under cryogenic conditions.
80. The **final design** shall include the procedures to maintain and inspect the vapor barriers provided to meet the siting provisions of 49 CFR 193.2059.
81. **Prior to commissioning**, procedures shall be developed for providing the facility with fire water coverage during such times as the fire water system would be out of service, in particular for removing and flushing brackish water from the system.
82. **Prior to commissioning**, Lake Charles LNG shall file plans and detailed procedures for: testing the integrity of on-site mechanical installation; functional tests; introduction of hazardous fluids; operational tests; and placing the equipment into service.
83. **Prior to commissioning**, Lake Charles LNG shall provide a detailed schedule for commissioning through equipment startup. The schedule shall include milestones for all procedures and tests to be completed: prior to introduction of hazardous fluids; and during commissioning and startup. Lake Charles LNG shall file documentation certifying that each of these milestones has been completed before authorization to commence the next phase of commissioning and startup would be issued.
84. **Prior to commissioning**, Lake Charles LNG shall tag all equipment, instrumentation, and valves in the field, including drain valves, vent valves, main valves, and car-sealed or locked valves.
85. **Prior to commissioning**, Lake Charles LNG shall file a tabulated list and drawings of the proposed hand-held fire extinguishers. The list shall include the equipment tag number, extinguishing agent type, capacity, number, and location. The drawings shall show the extinguishing agent type, capacity, and tag number of all hand-held fire extinguishers.
86. **Prior to commissioning**, Lake Charles LNG shall file updates addressing the liquefaction facilities in the operation and maintenance procedures and manuals, as well as safety procedures.
87. **Prior to commissioning**, Lake Charles LNG shall maintain a detailed training log to demonstrate that operating staff has completed the required training.

88. **Prior to introduction of hazardous fluids**, Lake Charles LNG shall complete a firewater pump acceptance test and firewater monitor and hydrant coverage test. The actual coverage area from each monitor and hydrant shall be shown on facility plot plan(s).
89. **Prior to introduction of hazardous fluids**, Lake Charles LNG shall complete all pertinent tests (Factory Acceptance Tests, Site Acceptance Tests, Site Integration Tests) associated with the Distributed Control System and the Safety Instrumented System that demonstrates full functionality and operability of the system.
90. **Prior to commencement of service**, Lake Charles LNG shall label piping with fluid service and direction of flow in the field in addition to the pipe labeling requirements of NFPA 59A.
91. **Prior to commencement of service**, Lake Charles LNG shall notify FERC staff of any proposed revisions to the security plan and physical security of the facility.
92. **Prior to commencement of service**, progress on the construction of the proposed systems shall be reported in **monthly** reports filed with the Secretary. Details shall include a summary of activities, problems encountered, contractor non-conformance/deficiency logs, remedial actions taken, and current project schedule. Problems of significant magnitude shall be reported to the FERC **within 24 hours**.

In addition, recommendations 93 through 95 shall apply throughout the life of the LNG facility:

93. The facility shall be subject to regular FERC staff technical reviews and site inspections on at least an **annual basis** or more frequently as circumstances indicate. Prior to each FERC staff technical review and site inspection, Lake Charles LNG shall respond to a specific data request, including information relating to possible design and operating conditions that may have been imposed by other agencies or organizations. Up-to-date detailed P&IDs reflecting facility modifications and provision of other pertinent information not included in the semi-annual reports described below, including facility events that have taken place since the previously submitted semi-annual report, shall be submitted.
94. Semi-annual operational reports shall be filed with the Secretary to identify changes in facility design and operating conditions, abnormal operating experiences, activities (including ship arrivals, quantity and composition of imported and exported LNG, liquefied and vaporized quantities, boil-off/flash gas, etc.), plant modifications, including future plans and progress thereof. Abnormalities shall include, but not be limited to: unloading/loading/shipping

problems, potential hazardous conditions from off-site vessels, storage tank stratification or rollover, geysering, storage tank pressure excursions, cold spots on the storage tanks, storage tank vibrations and/or vibrations in associated cryogenic piping, storage tank settlement, significant equipment or instrumentation malfunctions or failures, non-scheduled maintenance or repair (and reasons therefore), relative movement of storage tank inner vessels, hazardous fluids releases, fires involving hazardous fluids and/or from other sources, negative pressure (vacuum) within a storage tank and higher than predicted boil-off rates. Adverse weather conditions and the effect on the facility also shall be reported. Reports shall be submitted **within 45 days after each period ending June 30 and December 31**. In addition to the above items, a section entitled "Significant Plant Modifications Proposed for the Next 12 Months (dates)" also shall be included in the semi-annual operational reports. Such information would provide FERC staff with early notice of anticipated future construction/maintenance projects at the LNG facility.

95. Significant non-scheduled events, including safety-related incidents (e.g., LNG, condensate, refrigerant, or natural gas releases, fires, explosions, mechanical failures, unusual over pressurization, and major injuries) and security-related incidents (e.g., attempts to enter site, suspicious activities) shall be reported to FERC staff. In the event an abnormality is of significant magnitude to threaten public or employee safety, cause significant property damage, or interrupt service, notification shall be made **immediately**, without unduly interfering with any necessary or appropriate emergency repair, alarm, or other emergency procedure. In all instances, notification shall be made to FERC staff **within 24 hours**. This notification practice shall be incorporated into the LNG facility's emergency plan. Examples of reportable hazardous fluids related incidents include:
- a. fire;
 - b. explosion;
 - c. estimated property damage of \$50,000 or more;
 - d. death or personal injury necessitating in-patient hospitalization;
 - e. release of hazardous fluids for five minutes or more;
 - f. unintended movement or abnormal loading by environmental causes, such as an earthquake, landslide, or flood, that impairs the serviceability, structural integrity, or reliability of an LNG facility that contains, controls, or processes hazardous fluids;

- g. any crack or other material defect that impairs the structural integrity or reliability of an LNG facility that contains, controls, or processes hazardous fluids;
- h. any malfunction or operating error that causes the pressure of a pipeline or LNG facility that contains or processes hazardous fluids to rise above its MAOP (or working pressure for LNG facilities) plus the build-up allowed for operation of pressure limiting or control devices;
- i. a leak in an LNG facility that contains or processes hazardous fluids that constitutes an emergency;
- j. inner tank leakage, ineffective insulation, or frost heave that impairs the structural integrity of an LNG storage tank;
- k. any safety-related condition that could lead to an imminent hazard and cause (either directly or indirectly by remedial action of the operator), for purposes other than abandonment, a 20-percent reduction in operating pressure or shutdown of operation of a pipeline or an LNG facility that contains or processes hazardous fluids;
- l. safety-related incidents to hazardous fluids vessels occurring at or en route to and from the LNG facility; or
- m. an event that is significant in the judgment of the operator and/or management even though it did not meet the above criteria or the guidelines set forth in an LNG facility's incident management plan.

In the event of an incident, the Director of OEP has delegated authority to take whatever steps are necessary to ensure operational reliability and to protect human life, health, property, or the environment, including authority to direct the LNG facility to cease operations. Following the initial company notification, FERC staff would determine the need for a separate follow-up report or follow-up in the upcoming semi-annual operational report. All company follow-up reports shall include investigation results and recommendations to minimize a reoccurrence of the incident.